

# The Contribution of Innovation Spaces Processes on The Performance of Early-Stage Enterprises in Iringa-Tanzania

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## ABSTRACT

This study examines the relationships between crowdsourcing, ideation, and business plan competitions to evaluate the effect of innovation spaces on early-stage enterprises performance. 150 participants were chosen for the study via convenience sampling from hubs in Iringa like SIDOTLED Hub, RLabs, Kiota Hub, and Agriedo Hub. Three goals were pursued: determining the impact of crowdsourcing on performance, examining the influence of ideation, and evaluating the contribution of business plan competitions. Factor analysis evaluated validity while Cronbach's Alpha verified dependability. Both multiple regression analysis and Pearson correlation were used to analyze the data. Results reveal that ideation/business plan competitions and performance are positively correlated, whereas crowdsourcing has a negative link. Recommendations: Early-stage companies should partner with spaces for resources and growth; innovation spaces should improve processes and support enterprises. decrease medical as well as financial burden, hence improving the management of cirrhotic patients. These predictors, however, need further work to validate reliability.

*Keywords:* crowdsourcing, ideation, and business plan competitions

## 1. INTRODUCTION

17

18 The business environment is increasingly competitive, agile, and rapidly evolving, which  
19 creates a demand for firms and entrepreneurs to remain innovative (Chesbrough, 2003; Tidd  
20 & Bessant, 2014). The emergence of global markets and technological advancements further  
21 intensifies competition, putting pressure on entrepreneurs to fully exploit their resources and  
22 competencies to foster innovation (Dodgson et al., 2018; Teece, 2018). Open innovation is a  
23 relatively new strategy for achieving this, which involves collaboration with other businesses  
24 and entrepreneurs, knowledge sharing, and collective intelligence creation (Chesbrough,  
25 2003; Dahlander & Gann, 2010).

26

27 This study explores the potential of innovation spaces as a strategy to empower entrepreneurs  
28 by providing Business Support Services (BSS) for innovation and business growth. Innovation  
29 spaces offer guidance and support to entrepreneurs in their vulnerable start-up phase, thus  
nurturing the growth of entrepreneurial firms (Roy, 2011).

30

31 The concept of innovation spaces is relatively new in Tanzania, with the first spaces, including  
32 BunHub, KinuCo-create Hub, and MaraSpace, opening in Dar-Es-Salaam in 2011. Kiota  
33 Innovation Hub at the University of Iringa, where this study is conducted, was the first  
34 innovation hub to open in the Iringa region in 2016. Despite the emergence of more innovation  
spaces in Tanzania, the country still has a relatively small number of such spaces in the global

35 innovationecosystem(Dahmen&Schwittay,2021;OECD,2019).

36 Innovationspaces,alsoknownasinnovationhubs,arephysicalorvirtualenvironments  
37 fostercollaboration between various stakeholders, such as industry, government,  
38 researchers,entrepreneurs,andend-users,todevelopnewsolutionstogether(Bretschneider  
39 etal.,2021).Thesespacesofferacommunal,collaborative,andadaptiveatmospherefor  
40 innovatorstodevelop,test,andbringnewproductsandservicesto themarket(McGahanet  
41 al.,2020).Innovationspacesutilizevariousapproaches,includinginnovationjams,  
42 hackathons,pitches,challenges,competitions,andbrainstormingsessionstoengageand  
43 supportyoungentrepreneursandbusinesses(Butter,2019).

44 Moreover,innovationspacespromotecomunitybuildingandintensivecollaborative  
45 innovationbyenablingco-location,co-working,crowdsourcing,co-creation,designthinking,  
46 andopeninnovationpractices(Schaffersetal.,2020).TheprovisionofBusinessSupport  
47 Services(BSS)byinnovationspacesisbasedonthefactthatmanyyoungentrepreneurslack  
48 thenecessaryresourcesandfactorsforbusinesssuccess(Shaneetal.,2018;Rattenetal.,  
49 2019).Establishingsustainableandsuccessfulenterprisesby youngentrepreneursiscrucial  
50 forcreatingadditional employmentandpromotingcountydevelopment.Accordingtoarecent  
51 report bytheKauffmanFoundation(2019),newfirms inthe UnitedStates createthemajority  
52 ofemployment, and public policies have been actively promoting new business  
53 establishments.Similarly,inTanzania,thereisaneedtopromoteentrepreneurshipand  
54 supportnewbusinessowners.

55 Start-upentrepreneursoftenfacechallenges relatedtoinadequateaccesstobusiness  
56 supportservices(BSS)duringtheearlystagesofbusinessdevelopment(Baines&Wheelock,  
57 2018).Thesechallengescanincludeinsufficientinitialcapital,limitedaccesstofinancial  
58 sources,shortagesinmanagerialandtechnicalskills,lackofaccesstotechnicalassistance  
59 andmarketinformation,timepressures,andadynamicbusinessenvironment(Storey,2016).

60 InnovationspacesareatypeofBSSthatcanaddressthe needsofnewstart-upbusinesses  
61 andsupporttheirinitiation,survival,andgrowthinentrepreneurialways.Innovationspaces  
62 provideofficespace,flexibleleaseterms,accesstotechnology,financing,andtechnical  
63 supportsuchasmarketing,finance,legal,humanresources,andotherbusinessdevelopment  
64 services(Lerneretal.,2020).Byofferingtheseservices,innovationspacescanplayacrucial  
65 roleinresourceutilization,knowledgeelevation,andskillstransfer,bothformallyand  
66 informally(Woolley &Stacey,2019).

67 Provisionofbusinesssupportservices(BSS)toentrepreneurscanbeachievedthrough  
68 innovationspaces,whichactasasupportmechanismandvitalresourcetomeettheneeds  
69 ofSmallandMediumEnterprises (SMEs) (Alakbarov,2010).Duetothechanginginnovation  
70 landscape, internalR&Dhasoftenneededtobe improvedto create enoughinnovativeideas  
71 togainacompetitiveadvantageinever-morecompetitiveandchangingmarkets.  
72 Consequently,firmsandentrepreneursareincreasinglyturningtowardsopeninnovation,a  
73 strategyofinnovativeactivities thatinvolvesdecentralizedcollaborationswithexternal  
74 partners,includinguniversities,peerfirms,suppliers,andcompetitors.Furthermore,SMEs,  
75 frequentlyformedbyentrepreneurs,havebeencherishedasacriticalstrategyinanycounty's  
76 economicgrowthanddevelopment(Ferguson&Olofsson,2004).

77 To ensure the creation and survival of the business, BSS offered by innovations spaces should  
78 be accessible with the lightest conditions, such as fair entry and exit policies. Inadequate  
79 BSS (usually obtainable and accessible by innovations spaces) are among the most cited  
80 reasons for the failure to survive of numerous firms (MIT, 2003).

81 Although the government of Tanzania and development allies made various interventions to  
82 ensure up-and-coming business establishment, growth, and development, most  
83 entrepreneurs still need more access to BSS (Olomi & Issack, 2020). To safeguard the  
84 performance of early-stage enterprises and SME growth in Tanzania, this study becomes  
85 necessary to assess the innovations space processes in boosting early-stage enterprises'  
86 performance.

## 87 **1.2 Statement of the Problem.**

88 The role of early-stage enterprises in shaping the world's economy is clear (Lovell, 2017).  
89 Young entrepreneurs are essential assets for the economic, political, and social life of our  
90 communities (Montgomery, 2001). Throughout history, young people have actively pursued to  
91 bring social, political, and economic change to their countries. Early-stage enterprises are  
92 today's and tomorrow's visionaries, educators, innovators, health professionals, and political  
93 and civic leaders vital to economic growth and well-being (Montgomery, 2001). Globalization,  
94 technological advances, and the spread of social networking offer new opportunities for youth  
95 entrepreneurs to connect and become more active participants in development (Clinton,  
96 2012).

97 In the initial stages of their business development, enterprises often need more access to  
98 Business Support Services (BSS) (Ratten, 2015; Baker & Nelson, 2005). These BSS  
99 inadequacies comprise limited initial capital and financial resources, a lack of business  
100 management and technical know-how expertise, and a need for more access to technical  
101 assistance and market information. Early-stage enterprises also face challenges associated  
102 with time pressure and an unpredictable business environment (Shepherd & Shanley, 2015;  
103 Van Auken, 2009).

104 Furthermore, early-stage enterprises in countless sectors in Tanzania are faced with a range  
105 of challenges, from business creation survival and growth. Several students, graduates, and  
106 entrepreneurs are enthusiastic to start their businesses. Nonetheless, they have a partial  
107 capability of undertaking that creatively and innovatively, inconveniencing their ideas' scaling  
108 up.

109 This suggests a need for entrepreneurship promotion programs such as innovations spaces  
110 through which the accurate set of resources (tangible and intangible) are accessible by start-  
111 ups). In Iringa, the entrepreneurship and innovation ecosystem keeps growing. Innovation  
112 spaces such as Kiota Innovation Hub, SIDOT LED Hub, RLabs, and Agriedo Hub have been  
113 operating in the region for a while now. Although innovations spaces promote entrepreneurship  
114 and innovation through several processes and support services, more is needed to know  
115 about the processes and support services offered by the innovations spaces and their  
116 contribution to the performance of early-stage enterprises.

117 This motivates the research to conduct a study that assesses the innovations space's  
118 processes' contribution to the performance of early-stage enterprises in Iringa and fill the  
119 existing knowledge gap.

## 120 **2. MATERIAL AND METHODS/EXPERIMENTAL DETAILS /METHODOLOGY**

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### 122 **2.1 Study Area**

123

124 The research was conducted in four innovation spaces in Iringatown: SIDOTLED Hub, RLabs  
125 Tanzania, Kiota Hub, and Agriedo Hub. These selected innovation spaces were considered  
126 suitable for the study, as they comprised a mix of incubators, co-working spaces, living labs,  
127 and innovation hubs, and they actively catered to different groups of entrepreneurs at various  
128 stages of start-up development. Additionally, the researcher found these innovation spaces  
129 convenient for the study, as they provided easy access to a diverse group of participants at a  
130 low cost. Therefore, including these four innovation spaces was considered appropriate and  
131 relevant to the study's objectives.

### 132 **2.2 The Research Approach**

133

134 The research approach utilized in this study aligns with Kothari's (2004) classification of two  
135 fundamental research approaches: quantitative and qualitative. The primary objective of this  
136 study was to explore the contribution of innovation space processes on the performance of  
137 early-stage enterprises. Considering the nature of the research question, a quantitative  
138 approach was chosen. This approach involves collecting and analyzing numerical data to  
139 provide insights into the correlation between innovation space processes and the performance  
140 of early-stage enterprises. This quantitative approach systematically examines the  
141 relationship between variables through statistical analysis, contributing to a more objective  
142 understanding of the phenomenon under investigation.

### 143 **2.3 Research Design**

144 The research design employed in this study is a descriptive cross-sectional research design.  
145 As defined by Burns and Grove (2003), descriptive research design aims to provide an  
146 accurate portrayal of a situation as it naturally unfolds. This study specifically adopted a  
147 descriptive cross-sectional research design to facilitate the researcher's ability to generalize  
148 findings to a broader population. This design was selected due to its capacity to gather  
149 quantitative data that can be subjected to descriptive and inferential statistical analysis  
150 (Saunders et al., 2009).  
151 The utilization of descriptive research in this study allows for an exploration of the contribution  
152 of innovation space processes to the performance of early-stage enterprises. This approach  
153 enables the examination of the current state of the phenomenon, shedding light on the extent  
154 to which innovation spaces contribute to the performance of these entrepreneurs. The  
155 descriptive cross-sectional research design aligns with the study's aim to capture a snapshot  
156 of the relationship between innovation spaces and early-stage enterprises' performance.

### 157 **2.4 Population and Sampling Procedures**

158

#### 159 **2.4.1 Population**

160 As defined by Cooper and Schindler (2006), the term "population" encapsulates the entirety  
161 of elements around which a study intends to derive specific inferences. Within the scope of  
162 this research, the study population encompassed the youth beneficiaries of the various  
163 innovation spaces. Drawing from data collected across the three innovation spaces, the study  
164 population was comprised of a total of 240 beneficiaries. Among this group, 31 beneficiaries  
165 were associated with SIDOTLED Hub, 21 with RLabs, 100 with Agriedo Hub, and 88 with  
166 Kiota Hub.

## 167 2.4.2 Sampling Technique

168

169 The sampling technique is the method by which a researcher selects individual together  
170 information from a studied population (Kumar, 2011). In the context of this study, which  
171 involves beneficiaries from three distinct innovation spaces, a stratified sampling approach  
172 was employed. As Kumar (2011) outlined, stratification involves a two-step process where the  
173 population is divided into distinct sub-groups, each possessing equal and independent  
174 opportunities for selection in the sample. Furthermore, Kothari (2004) expounded that the  
175 principle of equality signifies that the probability of selecting any given element within the  
176 population is uniform, meaning that an element's inclusion in the sample remains uninfluenced  
177 by external factors such as personal preferences. Therefore, for this study, the utilization of  
178 stratified sampling was deemed appropriate due to the presence of beneficiaries from multiple  
179 innovation spaces.

180

## 181 2.4.3 Sampling Frame

182 The sampling frame has a closer relationship with the population. It involves attributes from  
183 which the sample of interest is drawn (Cooper & Schindler, 2006). According to Babbie  
184 (2002), sampling frame means the list of elements in which a sample is selected under  
185 probability bases. In this study, the sampling frame was made of a list of beneficiaries of the  
186 four innovation hubs: SIDOTLED Hub, RLabs, Kiota Hub, and Agriedo Hub.

## 187 2.4.4 Sample Size

188

189 Sample size refers to the number of elements to be included in the study (Kumar, 2011). For  
190 any sample design, deciding upon the appropriate sample size depends on five key factors:  
191 (1) Margin of error or precision, (2) Amount of variability in the population, (3) Confidence  
192 level, (4) Population size, and (5) Proportion of the population. It is essential to consider  
193 these factors together to achieve the right balance and ensure that the sample objectives are  
194 met.

195 From the population size of 240, the sample size of 150 respondents will be used based on  
196 Yamane's (1973) sample size formula as follows;

197 Where:

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## 2.5 Types of Data and Data Collection Techniques

### 2.5.1 Types of Data

According to Kothari (2004), there are two types of data, which are primary and secondary.  
Primary data are those which are collected directly for the field. On the other hand,

218 secondary data are those that have already been collected by someone else and passed  
219 through the statistical process. Based on this study, the researcher used both primary and  
220 secondary data.

### **221 2.5.1.1 Primary Data**

222  
223 Primary data are the information gathered directly from participants (Mlyuka, 2015).  
224 Primary data for this research was obtained using questionnaires shared with respondents  
225 to assess the contribution of innovation space processes in providing business supporting  
226 services on the performance of early-stage enterprises.  
227

### **228 2.5.1.2 Secondary Data**

229  
230 Secondary data analysis can be defined as second-hand information used for analysis  
231 that was either gathered by someone else, for some other purpose, or often a combination  
232 of the two (Bryman & Bell, 2011). Secondary data can be classified into two sources,  
233 which are electronic-based sources and paper-based sources. Based on this, the  
234 researcher used electronic and paper-based sources to get the secondary data needed  
235 for this study.  
236

### **237 2.5.2 Data Collection Techniques**

238 This segment explains the particulars of the instrument which used to conduct this study.  
239

#### **240 2.5.2.1 Questionnaire**

241  
242 A questionnaire consists of several questions printed or typed in a defined order to be sent  
243 to respondents (Kothari, 2004). In this study, 150 questionnaires were distributed to  
244 beneficiaries from the four selected innovation spaces. The questionnaires included  
245 closed-ended questions designed in a way that they would produce relevant, valuable  
246 data.  
247 According to Kothari (2004), the Likert scale consists of several statements that explain  
248 either favorable or unfavorable attitudes, and the respondents are asked to respond to the  
249 statement with a degree of either agreement or disagreement, and there are three to seven  
250 degrees. As for this study, six degrees were used. Respondents were required to circle  
251 out one answer among (1) strongly disagree, (2) disagree, (3) somehow disagree, (4)  
252 strongly agree, (5) agree (6) somehow agree. Thus, in this section, a six-point Likert scale  
253 was used.  
254

### **255 2.6 Data Analysis**

256  
257 In data analysis, some of the most common ways of simplifying data are calculating the  
258 mean, percentage distribution, frequency distribution, etc. The researcher used the  
259 Statistical Package for Social Sciences (IBM SPSS v.20) to process the quantitative data  
260 in this study. Data analysis begins after the data have been collected and processed. In  
261 this study, the researcher adopted several types of analysis to analyze the findings, such  
262 as frequency distribution, Pearson Correlation Coefficient for correlation, and Multiple  
263 Regression Analysis.  
264

### **265 2.7 Validity and Reliability of Data**

#### **266 267 2.7.1 Validity Analysis**

268  
269 The researcher ensured that the questions or information sought in the instruments

270 addressed all the study objectives. After collecting data, the research tested the validity  
 271 of the data through Principal Component Analysis by factor analysis using the Kaiser-  
 272 Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's test of Sphericity.

273 According to the research model, four factors with 16 observed variables align with the  
 274 effect of innovation space's processes on the performance of early-stage enterprises.  
 275 After surveying, the research tested the validity of the data through Principal Component  
 276 Analysis by factor analysis using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling  
 277 Adequacy and Bartlett's test of Sphericity. The extracted factors were rotated using the  
 278 variance maximizing method (Varimax) at a factor loading of 0.45, which enabled the  
 279 process of excluding all misunderstood factors.

**280 Table 1 KMO and Bartlett's Test**

281

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.732
Bartlett's Test of Sphericity	Approx. Chi-Square	1896.067
	Df	120
	Sig.	.000

282 **Source:** Analysis of survey data (2023)

283

284 According to Table 1, the KMO and Bartlett's Test of sphericity showed that the data  
 285 variables obtained after the data reduction process were significant (0.000) to measure  
 286 the dependent variable. Furthermore, the research model remained with 16 variables  
 287 extracted to 4 factors after removing less-than-0.45 factor loading variables. It revealed  
 288 that the KMO values of all factors were more significant than 0.7, and Bartlett's Test  
 289 significance was smaller than 0.05 (.000). The result of factor analysis for 16 observed  
 290 variables is shown in the table below. This meant that the observed variables correlated  
 291 with each other, and PCA factor analysis was appropriate.

**292 Table 2 Rotated Component Matrix**

	Rotated Component Matrix <sup>a</sup>			
	Component			
	1	2	3	4
C1	.752			
C2	.787			
C4	.737			
C5	.710			
C6	.771			
I1			.793	
I2			.824	
I3			.840	
I6			.777	
BPC1		.884		
BPC2		.770		
BPC3		.797		
BPC4		.747		
PYE2				.811
PYE3				.853
PYE5				.677

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 5 iterations.

Table 3. Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.421	40.130	40.130	3.270	20.439	20.439
2	2.188	13.672	53.802	3.205	20.033	40.471
3	1.864	11.649	65.450	3.152	19.698	60.170
4	1.425	8.904	74.354	2.269	14.184	74.354
5	.886	5.540	79.894			
6	.707	4.419	84.313			
7	.633	3.958	88.271			
8	.568	3.551	91.822			
9	.295	1.845	93.667			
10	.254	1.585	95.252			
11	.188	1.177	96.429			
12	.164	1.027	97.456			
13	.152	.950	98.406			
14	.102	.640	99.046			
15	.089	.556	99.602			
16	.064	.398	100.000			

Extraction Method: Principal Component Analysis

293

294

295 All Eigenvalues values are larger than 1, and the percentage of cumulative variance is  
 296 74.354% means that factors could explain 74.354% the variance of observed variables.  
 297 The result of PCA showed that there were 3 factors underlying this construct in which each  
 298 factor represented each independent variable in the research model. Therefore, Cronbach's  
 299 alpha would be tested with final observed variables to ensure the reliability of using  
 300 measurement scale.

301

### 302 2.7.2 Reliability Analysis

303

304 According to Bryman & Bell (2011), the reliability of measurement is established by  
 305 examining the stability and consistency of the data. In this research, Cronbach's Alpha  
 306 coefficient will be used for estimating the internal consistency and reliability for a set of  
 307 two or more construct indicators. A computed alpha coefficient will vary between 1  
 308 (denoting perfect internal reliability) and 0 (denoting no internal reliability). The reliability  
 309 test providing Cronbach's alpha that is less than 0.70 is considered to have poor reliability  
 310 (Hair et al., 2010), and variables are acceptable when the corrected item-total correlation  
 311 coefficient is 0.3 or more.

312 According to Bryman & Bell (2011), the reliability of measurement is established by  
 313 examining the stability and consistency of the data. This research used Cronbach's Alpha  
 314 coefficient to estimate the internal consistency and reliability for a set of two or more  
 315 construct indicators. A computed alpha coefficient varied between 1 (denoting perfect  
 316 internal reliability) and 0 (denoting no internal reliability). The reliability test providing  
 317 Cronbach's alpha that was less than 0.70 is considered poor reliability (Hair et al., 2010),  
 318 and variables are acceptable when the corrected item-total correlation coefficient is 0.3

319 or more. Cronbach's Alpha reliability test was calculated for each composite variable  
 320 based on 150 respondents after the principal Component Analysis method with Varimax  
 321 rotation, which had the factor loading equal to or larger than 0.5 (50%). The below table  
 322 is Cronbach's Alpha result.

323 **Table 4. Cronbach's Alpha Reliability Test Result**

FACTORS	OBSERVED VARIABLES	CORRECTED ITEM-TOTAL CORR RELATION	CRONBACH'S ALPHABASE DONSTANDARDIZED ITEMS	NUMBER OF ITEMS
CROWDSOURCING	C1	.521	.842	5
	C2	.451		
	C4	.449		
	C5	.669		
	C6	.527		
IDEATION	I1	.783	.887	4
	I2	.834		
	I3	.734		
	I6	.673		
BUSINESS PLAN COMPETITION	BPC1	.745	.874	4
	BPC2	.765		
	BPC3	.638		
	BPC4	.760		
PERFORMANCE OF EARLY STAGE ENTREPREISES	PYE2	.827	.827	3
	PYE3	.561		
	PYE5	.677		

324

Reliability Statistics for All Variables			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	
.890	.894	16	

325 Since Cronbach's Alpha coefficients of factors after adjusting by PCA were quite high (all  
 326 much more than 0.7) and Corrected Item-Total Correlation were all larger than 0.3.  
 327 Therefore, it was still meaningful and reliable.

328

### 329 3. RESULTS AND DISCUSSION

330

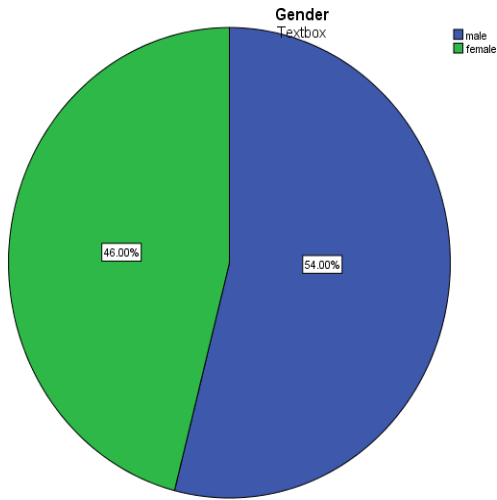
#### 331 3.1 Descriptive Analysis

332 Descriptive analysis is a branch of analysis that focuses on the summarization and description  
 333 of data that was collected from the survey (Weiers, 2008). This part was used to provide an  
 334 analysis of the demographic characteristics of the respondents obtained from the survey and  
 335 used the analysis to make general observations on the data, such as gender, age, and marital  
 336 status.

##### 337 3.1.1 Respondent Demographic Profile

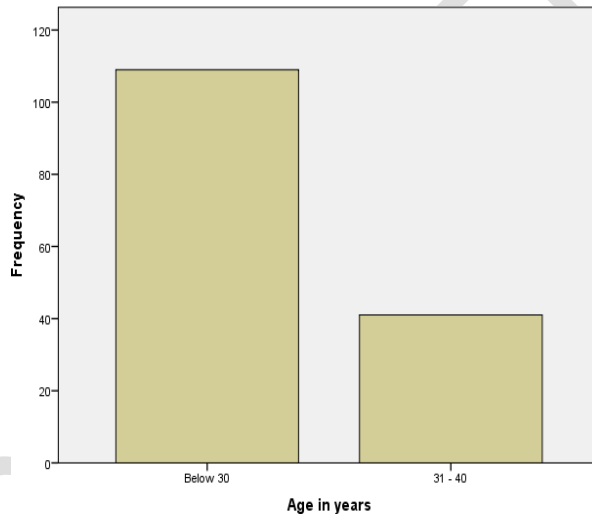
338 The researcher had distributed 150 copies of the survey questionnaires and had received  
 339 a 100% response from respondents. Among the respondents, 69 were female and 81  
 340 were male. Regarding age, the most were below 30, and the least were between 31-40.  
 341 Also, regarding the level of education, we had nine secondary-level respondents, 124

342 bachelordegreeholderrespondents,and17masterdegreeholderrespondents.The  
343 researcherfullyutilizedand analysedthe150copiesofthesurveyquestionnaires..  
344



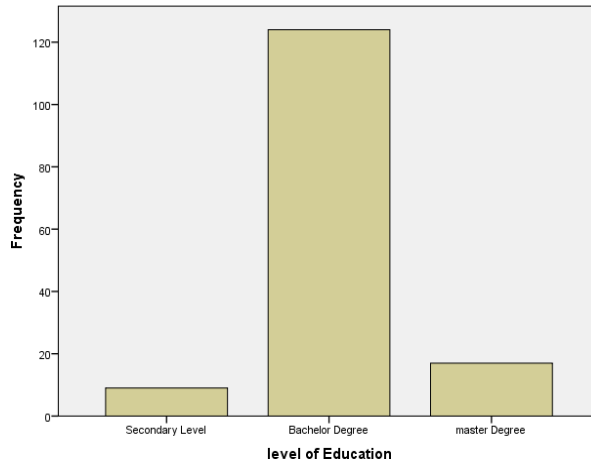
345  
346 **Figure1 Respondents Gender**

347  
348 Figure 1 shows that there were 150 respondents who participated in the survey  
349 questionnaires. The result of gender analysis consisted of 69 Female and 81 Male whose  
350 percentage was 46.0% and 54.0% respectively and the difference was 8%.



351  
352 **Figure2 Respondents Age group.**

353 Figure 2 above showed the respondents age groups. Based on the data collected, most of the  
354 respondents were below 30 years old, and very few ranked from 31-40 years of age.  
355



**Figure 3 Level of Education**

356  
357  
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359 Figure 3 above shows that most of the respondents were bachelor degree holders. Master's degree holders  
360 were the second and secondary level were the least group.

### 361 3.2 Pearson Correlation Coefficient Test

362 Pearson Correlation Coefficient is a method that measures the strength of the linear  
363 relationship between two variables. Hair et al. (2007) noted that the Pearson Correlation  
364 Coefficient indicates the direction, strength and significance of the bivariate relationships  
365 among all the variables that were measured on an interval scale.

366 It also indicates the direction, the strength and significance of the relationship among all  
367 variables. The value of a Pearson's correlation can fall between 0.00 and 1.00. The value of  
368 0.00 means there is no correlation whereas 1.00 means that is a perfect correlation. Ho is  
369 rejected when, P value < 0.05, otherwise accepted.

370 **Table 5. 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	SMALL BUT DEFINITE RELATIONSHIP
±0.00 to ±0.20	SLIGHT, ALMOST NEGLIGIBLE

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

373  
374

		Crowdsour cing	Idea tion	Busines s	Performanc e of Earl y stage enterprises
Crowdsourc ing	Pearson C orrelation				

	Sig.(2-tailed)				
	N	150			
Ideation	Pearson Correlation	.349**			
	Sig.(2-tailed)	.000			
	N	150	150		
Business	Pearson Correlation	.448**	.485**		
	Sig.(2-tailed)	.000	.000		
	N	150	150	150	
Performance of Early stage enterprises	Pearson Correlation	.288**	.476**	.478**	
	Sig.(2-tailed)	.000	.000	.000	
	N	150	150	150	150
**.Correlation is significant at the 0.01 level (2-tailed).					

375

### 376 3.2.1 Discussion of the Correlations Coefficients

377 Table 6 shows Pearson Coefficients Correlations between dependent variables  
 378 (Performance of early stage enterprises) and each independent variable (Crowdsourcing,  
 379 Ideation, and Business Competition).

### 380 3.2.3 Crowdsourcing and performance of early stage enterprises.

381 Table 6 shows that there is a significant relationship between crowdsourcing and  
 382 performance of early stage enterprises. This is because the P-Value is equal to 0.000 and less  
 383 than the alpha value 0.05. The value of the correlation coefficient, which is 0.288, falls under  
 384 the coefficient range  $\pm 0.21$  to  $\pm 0.40$ . As Hair et al (2007) addressed the strength of  
 385 relationship between such coefficient ranges as small but definite, there is thus a small but  
 386 definite relationship between crowdsourcing and performance of early stage enterprises.

### 387 3.2.4 Ideation and performance of early stage enterprises.

388 The table further indicates that as the P-Value is equal to 0.000 and less than the alpha value  
 389 0.05 which means there is a significant relationship between ideation and performance of early  
 390 stage enterprises. Furthermore, the value of the correlation coefficient, which is 0.476, falls  
 391 under the range  $\pm 0.41$  to  $\pm 0.70$  which Hair et al (2007) address such coefficient ranges as  
 392 moderate. Thus, there is a moderate relationship between ideation and performance of early  
 393 stage enterprises.

### 394 3.2.5 Business plan competition and performance of early stage enterprises.

395 Lastly, the table further indicates that as the P-Value is equal to 0.000 and less than the alpha  
 396 value 0.05 which means there is a significant relationship between business plan competition  
 397 and performance of early stage enterprises. Furthermore, the value of the correlation  
 398 coefficient, which is 0.478, falls under the range  $\pm 0.41$  to  $\pm 0.70$  which Hair et al (2007)  
 399 address such coefficient ranges as moderate. Thus, there is a moderate relationship  
 400 between business plan competition and performance of early stage enterprises.

### 401 3.3 Multiple Regression Analysis

402 A multiple regression analysis is an analysis which involves one or dependent variable and  
 403 two or more independent variables (Weiers, 2008). Zikmund et al (2010) further describes it  
 404 as an analysis of association in which the effects of two or more independent variables on a  
 405 single, interval-scaled dependent variable are investigated simultaneously.

406

**Table7: ModelSummary**

ModelSummary				
	R	RSquare	AdjustedRSquare	Std.Errorof theEstimate
	.555a	.308	.293	.70312
a.Predictors:(Constant),Business,Crowdsourcing,Ideation				

407

408 Basedonthetableabove,itshowsthatthevalueofcorrelationcoefficient(AdjustedRSquare  
409 value)is0.293whichindicateshatindependentvariablesouldexplain29.3%ofthevariation  
410 intheindependentvariable. However,itwasstillleft 70.7%unexplained inthestudy.

**Table8:ANOVA<sup>a</sup>**

Model	SumofSquares	df	MeanSqu are	F	Sig.
1 Regression	32.063	3	10.688	21.618	.000 <sup>b</sup>
Residual	72.179	146	.494		
Total	104.242	149			

a. DependentVariable:PerformanceofEarlystageenterprises

b. Predictors:(Constant),Business,Crowdsourcing,Ideation

411

412 Table8showsthatp-value(Sig0.000)islessthanalphavalue0.05. Thealternative  
413 hypothesisofthetwoindependentvariablesifsignificantexplainsthevarianceinthe  
414 performanceofearlystageenterprises.

415

**Table9:Coefficients**

Model	UnstandardizedC oefficients		Standardiz edCoefficie nts	t	Si g.	95.0% ConfidenceInte rvalforB	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.66 0	.417		3. 98 5	.0 0 0	.837	2.483
1 Crowdsour cing	.038	.073	.041	.5 26	.5 9 9	-.105	.182
Ideation	.246	.063	.312	3. 90 5	.0 0 0	.121	.370
Business	.358	.097	.308	3. 67 7	.0 0 0	.166	.551

a. DependentVariable:PerformanceofEarlystageenterprises

416

417 BasedonTable9,coefficientsshowthat:businessplancompetitionissignificanttopredict  
418 thedependentvariable.ThisisbecauseitsP-Values(0.000)arelessthanthealphavalue  
420 0.05.  
421

422 Also, from Table 9, coefficients show that: Ideation is significant to predict the dependent  
423 variable. Because its  $p$ -value (0.000) is less than the alpha value 0.05.

424

425 Again, from Table 9, coefficients show that: crowdsourcing has got negative significance to  
426 predict the dependent variable. This is because its  $p$ -values (0.599) are larger than the alpha  
427 value 0.05.

428 It is important to include the chi-square test of significance. It will add value to your results and  
429 discussion of the hypotheses

430

### 431 **3.4 Discussion of Major Findings.**

432 While the previous section of this chapter focused more on the summary description of the  
433 entire descriptive and inferential analyses, this section is more specifically into the discussion  
434 on major findings in order to validate the research objectives as well as hypotheses.

435

#### 436 **3.4.1 Relationship between crowd-sourcing and the performance of early stage** 437 **enterprises.**

438 Hypothesis 1 indicated that crowdsourcing has a significant influence on the performance of  
439 early-stage enterprises. The result showed that the  $P$ -value was 0.599 and the  $\beta$ -value was  
440 0.105, which expressed that  $H_1$  was not supported. There was a significant impact between  
441 crowdsourcing and the performance of early-stage enterprises, and this is supported by  
442 Girdauskiene et al. (2015), who conducted a study on "Crowdsourcing as a Key Method for  
443 Start-ups Overcoming Valley of Death," which revealed the critical features of crowdsourcing  
444 that make a significant impact on start-up performance.

445 "An article by Smith et al. (2013) titled 'How Can Entrepreneurs Motivate Crowdsourcing  
446 Participants' explore how entrepreneurs can motivate participants in crowdsourcing  
447 initiatives." At the same time, the author argues that technology entrepreneurs should consider  
448 crowdsourcing as a tactic to grow their technical community and get work done quickly, at low  
449 cost, and high quality.

450 Aburhama (2019) studied "Enhancing Entrepreneurial Abilities through Various Crowd-  
451 funding Models." The result showed an agreement from respondents on the importance of  
452 crowd-funding in enhancing entrepreneurs' abilities. Crowd-funding helps entrepreneurs  
453 obtain early-stage funding, connect with investors, and access investment for their enterprises.

454

#### 455 **3.4.2 Relationship between ideation and the performance of early stage enterprises.**

456

457 Hypothesis 2 indicated that ideation significantly influenced the performance of early-stage  
458 enterprises. The result showed that the  $P$ -value was 0.000 and the  $\beta$ -value was 0.121, which  
459 expressed that  $H_1$  was supported. The acceptance of this hypothesis supports the study of  
460 Mestrovic (2020), who revealed a significant favourable influence between ideation and overall  
461 SME performance.

462 Eesley (2014) conducted a study on "Entrepreneurial Ideation and Organizational  
463 Performance: Imprinting Effects," which disclosed that enterprise ideas from Labs are well-  
464 engineered in a way that they align with a competitive market environment. Moreover, Kock  
465 (2014) studied "How Ideation Portfolio Management Influences Front-End Success." The  
466 results revealed that ideation significantly contributes to the success of new products and  
467 enterprises.

468

469

#### 470 **3.4.3 Relationship between business plan competition and the performance of early** 471 **stage enterprises.**

472

473 Hypothesis3indicatedthatbusinessplancompetitionsignificantlyinfluencedtheperformance  
474 ofearly-stageenterprises.TheresultshowedthattheP-valuewas0.000andthe $\beta$ -valuewas  
475 0.166,whichexpressedthatH1wassupported.

476 AcceptanceofthishypothesisupportsthestudyofLeimeisteretal.(2009),whoconducted  
477 astudyon"LeveragingCrowdsourcing:Activation-SupportingComponentsforIT-BasedIdeas  
478 Competition."Thepaperconcludedthatideacompetitionscontributetoenterprises'  
479 successfulimplementationandmaintenancebecausetheyareprimarilycharacterizedby  
480 providingfurtherstupport todeveloppromisinginnovativeideas.

481 Also,McKenzie(2015)conductedapolicy-changingresearchpaperon"Identifyingand  
482 SpurringHigh-GrowthEntrepreneurship:ExperimentalEvidencefromaBusinessPlan  
483 Competition."Theresearcherslaunchedabusinesscompetitiontostudydifferentvariables.  
484 Attheendofthecompetition,theyfindthatwinningbusinesscompetitions hassubstantial  
485 positiveimpactsonentrepreneurslookingtostartnewfirmsandthoseaimingtoexpand  
486 existingenterprises.Inaddition,McKenzie(2015)findsthisaboutcompetitionwinners:37%  
487 startabusiness.23%have a firmwithtenemployees.

488 Moreover,Thomas(2014)studied"BusinessPlanCompetitionsandTheirImpacton  
489 Ventures'BusinessModels."Thestudy'sfindingssuggestedthatparticipating inBPCs  
490 impactsthenewventures' businessmodel.

New

491

492

### 493 **TestofSignificant**

494

495 Hypothesis1

496 H0:Thereisnosignificancerelationshipbetweencrowd-sourcingandtheperformanceof  
497 earllystageenterprises.

498 H1:thereissignificancerelationshipbetweencrowd-sourcingandtheperformanceofearly  
499 stageenterprises.

500

501 RejectH0,ifp<0.05.Forcrowd-sourcing,thep-valueislargerthan0.05whichis0.000.Thus,  
502 H0isnotrejected.Itindicatesthatthecrowd-sourcinghasgotnegative(-)influenceonthe  
503 performanceofearllystageenterprises.

504

505

506 Hypothesis2

507 H0:there isnosignificancerelationshipbetweenideationandtheperformanceofearllystage  
508 enterprises.

509 H1:thereissignificancerelationshipbetweenideationandtheperformanceofearllystage  
510 enterprises.

511

512 RejectH0,ifp<0.05.Forideation,thep-valueislessthan0.05whichis0.000.Thus,H0is  
513 rejected.Itindicatesthatideationhasgotpositive(+)influenceontheperformanceofearly  
514 stageenterprises.

515

516 Hypothesis3

517 H0:thereisnosignificancerelationshipbetweenbusinessplanpetitionandthe  
518 performanceofearllystageenterprises.

519 H1:thereissignificancerelationshipbetweenbusinessplancompletionandtheperformance  
520 ofearllystageenterprises.

521

522 Reject  $H_0$ , if  $p < 0.05$ . For business plan competition, the p-value is less than 0.05 which is  
 523 0.000. Thus,  $H_0$  is rejected. It indicates that the business plan competition has got positive (+)  
 524 influence on the performance of early stage enterprises.

525  
 526

*Table 10. Summary of Statistical Analysis*

HYPOTHESIS	SIGNIFICANCE	CONCLUSION
<b>H0:</b> Crowdsourcing has no significant relationship on the performance of early stage enterprises.	0.000	Supported
<b>H1:</b> Ideation has significant relationship on the performance of early stage enterprises.	0.000	Supported
<b>H1:</b> business plan competition has got a significant relationship on the performance of early stage enterprises.	0.000	Supported

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 528

#### 529 **4. CONCLUSION**

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This study was conducted to measure the effect of innovations spaces' processes on the performance of early-stage enterprises. Specifically, the objectives of this study were to identify the contribution of crowdsourcing, to investigate the contribution of ideation, and to find the contribution of business plan competition to the performance of early-stage enterprises in Iringa.

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In this research, three critical factors were considered to run the whole research. The research assessed the factors (crowdsourcing, ideation, and business plan competition) on the performance of early-stage enterprises. A total of 150 questionnaires were distributed, and the data collected were processed and analyzed using SPSS v20.0, in which the outcome generated included both descriptive and inferential analysis. After the analysis, ideation, and business plan competition as innovations spaces' processes positively influenced the performance of early-stage enterprises. Meanwhile, crowdsourcing as innovations spaces process negatively influenced the performance of early-stage enterprises.

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Finally, innovations spaces must consider these factors, ideation, and business plan completion, as they are the best for advancing the performance of early-stage enterprises. Crowdsourcing has made no significant contribution to the performance of early-stage enterprises in Iringa. Also, ideation has significantly contributed to the performance of early-stage enterprises in Iringa. Finally, business plan competition significantly contributes to the performance of early-stage enterprises in Iringa. Thus, this research paves the way for how and where innovations spaces should put more effort into advancing the performance of early-stage enterprises in their endeavors.

552

#### ETHICAL APPROVAL

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 554  
 555  
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Ethics in research play a critical role in safeguarding the well-being and rights of research participants. In this study, ethical considerations were paramount, and several critical ethical principles were upheld to ensure that respondents did not suffer any adverse consequences due to the research. The study ensures that individuals clearly understand the study's purpose and voluntarily agree to participate. In this study, an introduction letter from the postgraduate

558 directory was used to request consent from organizations, aligning with the requirement for  
559 informed consent (World Medical Association, 2013). Respondents were informed that their  
560 participation was voluntary, and there were no repercussions for those who declined to  
561 participate (American Psychological Association, 2017). In the study, participants were  
562 guaranteed to keep their information confidential, aligning with ethical standards (National  
563 Institutes of Health, 2018). The data collected was used solely for academic purposes and not  
564 for undisclosed or harmful intentions by ethical guidelines (CIOMS, 2016).

565 The researcher ensured that the whole research was ethically guided and that respondents  
566 had the privilege of refusing to answer the questions being asked if they thought that it was  
567 no longer included in their participation. Lastly, any quotes and theories used by fellow  
568 researchers throughout the research report were accounted for by providing valid and genuine  
569 references of the researcher and source. This is to acknowledge the work of the researcher  
570 and the other contributors and thus avoid plagiarism.

571

572

### 573 REFERENCES

574

575 Aerts, S., Van Helden, J., Sand, O., & Hassan, B. A. (2007). Cistarget: Fine-Tuning Enhancer  
576 Models to Predict Transcriptional Targets Across Multiple Drosophila  
577 Genomes. *Europ. Dros. Res. Conf.* 20.

578

579 Alavi, M. & Leidner, D. E. (2001). *Knowledge Management and Knowledge Management* 601  
*Systems: Conceptual Foundations and Research Issues*. *MIS Quarterly*, 25, 107-602  
136. <http://dx.doi.org/10.2307/3250961>.

603

- 604 Allen, D. N., & Bazan, E. J. (1990). *Value added contributions of Pennsylvania's*  
605 *business incubatorstotenantfirmsandlocaleconomies.ReporttotheAppalachianRegional*  
606 *CommissionandthePennsylvania DepartmentofCommerce, Washington,DC.*
- 607
- 608 Ambrosini,E.,Véronique,D., Bowman,H.&Cliff,M.(2001).TacitKnowledge:Some  
609 SuggestionsforOperationalization.*JournalofManagementStudies*.38.811-829.  
610 10.1111/1467-6486.00260.
- 611
- 612 Babbie,E.R.(2002).*Thebasicsofsocialresearch.Belmont,CA:WadsworthThomson*  
613 *Learning.*
- 614
- 615 Barney,J.(1991).FirmResourcesandSustainedCompetitiveAdvantage.*Journalof*  
616 *Management*,17,99-120.<http://dx.doi.org/10.1177/014920639101700108>.
- 617Barrow,C.J.(2001).Environmentanddevelopment.pp.4566-4572InSmelser,N.J.and618 Baltes  
P.B. (eds.) *International Encyclopedia of the Social and Behavioral Sciences*.619  
Elsevier,NewYork.
- 620Bengesi, K., & Roux, I. (2014). Entrepreneurial response of small and medium enterprises in  
621 Developing Countries. *International Journal of Business and Management*, Vol.  
9,622 No.2.2014.ISSN1833-3850EISSN1833-8118...*InternationalJournalof*  
623 *BusinessandManagement*.Vol.9.
- 624
- 625 Birch,G. F.,(1979).PhosphaterocksonthewesternmarginofSouthAfrica.*Journal*  
626 *SedimentaryPetrology*, 49:93-110.
- 627Bo-Christer,B.DavidS.(2015).ArticleprocessingchargesinOAjournals:relationship628 between  
*price and quality*, *Scient metrics*, 10.1007/s11192-015-1556-z, 103, 2,629 (373-385).
- 630
- 631Bollingtoft,C.,Anne,K.&Ulhoi,M.JohnP.(2005)."Thenetworkedbusinessincubator--632  
leveraging entrepreneurial agency?," *Journal of Business Venturing*, Elsevier,  
vol.633 20(2),pages 265-290,March.
- 634
- 635Brush,C.G.,Greene,P.G.,Hart,M.M.&Haller,H.S.(2001).FromInitialIdeatoUnique636  
Advantage:*TheEntrepreneurialChallengeofConstructingaResourceBase*.637  
*AcademyofManagementExecutive*15,64-78.<https://doi.org/10.5465/AME>  
638 .2001.4251394.
- 639 Bryman,A.&Bell,E.(2011).*BusinessResearchMethods*.3rdEdition,OxfordUniversity  
640 Press,Oxford.
- 641
- 642 Carroll,A.B.(1981).*Businessandsociety: managingcorporate social performance*. Boston:  
643 Little,Brown.Carroll,A.B.(1983,July15).
- 644
- 645 Chrisman, J. J., & McMullan, W. (2004). Outsider Assistance as a Knowledge Resource for  
646 NewVenture Survival. *Journal of Small Business Management*,42,229-647  
648 244.<https://doi.org/10.1111/j.1540-627X.20.04.00109.x>.
- 649 Cohen,W., &Levinthal, D.(1990).Absorptive Capacity:A NewPerspectiveonLearning and  
650 Innovation.*AdministrativeScienceQuarterly*,35,128-152.<http://dx.doi.org/10>  
651 .2307/2393553.
- 652

- 653 Cooper, D. R., & Schindler, P. S. (2006) *Business Research Methods*. 8th Edition, McGraw  
654 Hill, Tata.  
655
- 656 Creswell, J. W., & Tashakkori, A. (2007). *Developing publishable mixed methods manuscripts*.  
657 *Journal of Mixed Methods Research*, 1, 107-111.  
658
- 659 Cromie, S. (1991). The problems experienced by small firms. In Davies, L. E., & Gibb, A. A. (Eds.), *Recent research in entrepreneurship*, pp. 115–134. Aldershot, U.K.: Avebury.
- 662 David, J. Teece, C. Gary, P., Amy S (1998). *Dynamic capabilities and strategic  
663 management* [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509  
664 ::AID-  
665 SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z).
- 666 Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 (667  
concerning the processing of personal data and the protection of privacy in the  
668 electronic communications sector (Directive on privacy and electronic  
669 communications)).
- 670 Chierichetti, F., Kumar, R. Lattanzi, S. & Vassilvitskii, S. (2017). *Advances in Neural  
671 Information Processing Systems*, 5029-5037.  
672  
673
- 674 Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman, Boston.  
675
- 676 Girdauskienė, L. & Eyvazzade, F. (2015). The Profile of an Effective Female Leadership in  
677 Multicultural Context. *Procedia-Social and Behavioral Sciences*. 210. 11-678  
20.10.1016/j.sbspro.2015.11.323.
- 679
- 680 Godwin-Jones, R. (2011). *Mobile Apps for Language Learning*. *Language Learning &  
681 Technology*, 15, 2-11.  
682
- 683 Grimaldi, R. & Grandi, A. (2005) *Business Incubators and New Venture Creation: An  
684 Assessment of Incubating Models*. *Technovation*, 25, 111-121.  
685 [https://doi.org/10.1016/S0166-4972\(03\)00076-2](https://doi.org/10.1016/S0166-4972(03)00076-2).  
686
- 687 Haas, M & Hansen, M. (2005). When Using Knowledge Can Hurt Performance: The Value of  
688 Organizational Capabilities in a Management Consulting Company. *Articles &  
689 Chapters*. 26. 10.1002/smj.429.
- 690
- 691 Hannan, M. T. & Freeman, J. (1984) *Structural Inertia and Organizational Change*. *American  
692 Sociological Review*, 49, 149-164. <http://dx.doi.org/10.2307/2095567>.
- 693 Hitt, et al., (2000). Guest Editors' Introduction to the Special Issue *Strategic Entrepreneurship: 694  
Entrepreneurial Strategies for Wealth Creation*. *Strategic Management Journal* 695  
*Strat. Mgmt. J.*, 22: 479–491 (2001) DOI: 10.1002/smj.196.
- 696
- 697 Hossain, M. & Hossain, Y. (2015). *Mobile banking and customer satisfaction: the case of 698 Dhaka  
City*, *World Review of Business Research*, Vol 5, N° 3, September Issue, 699 108-120.
- 700
- 701 Howe, J. (2008). *Crowdsourcing: How the Power of the Crowd is Driving the Future of  
Business*, Random House.

- 702 Jeff, H. (2008). *Crowdsourcing: Why the Power of the Crowd is Driving the Future of Business*,  
703 Crown Business, p.320.4.
- 704 Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd revised edition).  
705 New Delhi: New Age International (P) Limited, Publishers.  
706
- 707 Kumar, R. (2011). *Research Methodology: A Step-by-Step Guide for Beginners*. 3rd Edition.  
708 Sage, New Delhi.
- 709 Nickerson & Zenger, (2004). A Knowledge-Based Theory of the Firm—The Problem-Solving  
710 Perspective
- 711 Nonaka, I. (1994) A Dynamic Theory of Organizational Knowledge Creation. *Organization*  
712 *Science*, 5, 14-37. <http://dx.doi.org/10.1287/orsc.5.1.14>.  
713
- 714 Ogutveren Gonul, Ozlem & Litzky, Barrie. (2018). Achieving success or avoiding failure?  
715 Motivational Orientations of Entrepreneurship Students.  
716
- 717 Olomi, D., (2009). *African Entrepreneurship and Small Business Development*. Dares  
718 Salaam: Otme Publishers.
- 719 Ott, C., Amit, R. & Massa, L. (2011) The Business Model: Recent Developments and Future  
720 Research. *Journal of Management*, 37, 1019-1042. <http://dx.doi.org/10.1177/0149206311406265>.  
721  
722
- 723 Peters, E., Joseph, S., Day, S., & Garety, P. (2004). Measuring Delusional Ideation: The 21-724  
Item Peters et al. Delusions Inventory (PDI). *Schizophrenia Bulletin*, 30(4), 1005–  
725 1022. <https://doi.org/10.1093/oxfordjournals.schbul.a007116>.  
726
- 727 Qureshi W (2016) Laser Pointer Induced Foveal Injury. *Adv Ophthalmol Vis Syst* 4(5):00128.  
728 DOI:10.15406/aovs.2016.04.00128.  
729
- 730 Shepherd, D. A. 2004. Educating Students about Emotion and Learning from Failure.  
731 *Academy of Management Learning and Education* 3(3):274-288.
- 732 Smilor, R. W., George, K. & David V. G (Eds.) (1988). *Creating the Technopolis*. Cambridge,  
733 MA: Ballinger Publishing Company.  
734
- 735 Smith, P. R. & Chaffey, D. (2005) *E-Marketing Excellence: At the Heart of E-Business*.  
736 Butterworth Heinemann, Oxford, UK.  
737
- 738 Smith, S. (2013) *Determining Sample Size: How to Ensure You Get the Correct Sample Size*.  
739 E-Book (c) Qualtrics Online Sample.
- 740 Splender L (1996). Organizational knowledge, learning and memory: three concepts in search  
741 of a theory December 1996 *Strategic Management Journal* 17(S2):45-6742  
DOI:10.1002/smj.4250171106
- 743 Studdard, N. (2006). The effectiveness of an entrepreneurial firm's knowledge acquisition from  
744 a business incubator. *International Entrepreneurship and Management Journal*. 2.745 211-225.  
10.1007/s11365-006-8685-z.  
746
- 747 Terpstra, D. E., & Olson, P. D. (1993). *Entrepreneurial start-up and growth: A classification of*  
748 *problems*. *Entrepreneurship Theory & Practice*, 17(3), 5–20.

749 Waldner, D. (2015). *Process Tracing and Qualitative Causal Inference*. *Security Studies*, 24.  
750 10.1080/09636412.2015.1036624.  
751  
752 Waslen, G. & Félix-André, T. (2012) The Canadian Society for Aesthetic Plastic Surgery 39th  
753 Annual Meeting, <https://doi.org/10.1177/229255031202000316>.  
754  
755 Zahra, S., (2006). *Entrepreneurship and Dynamic Capabilities: A Review, Model and Research*  
756 *Agenda* First published: 26 May 2006 <https://doi.org/10.1111/j.1467-7576.2006.00616.x>.  
758  
759 Zander, Udo & Kogut, Bruce. (1995). Knowledge and the Speed of the Transfer and Imitation  
760 of Organizational Capabilities: An Empirical Test. *Organization Science*, 6, 76-  
92. [10.1287/orsc.6.1.76](https://doi.org/10.1287/orsc.6.1.76).  
761  
762  
763 Zogaj, S & Bretschneider, U. (2014). Analyzing governance mechanisms for  
764 crowdsourcing information systems: A multiple case analysis. *ECIS 2014 Proceedings -*  
765 *22nd European Conference on Information Systems*.

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767

768 **DEFINITIONS,**

769 **Crowdsourcing**

770 Refer to obtaining services, ideas, or content by soliciting contributions from a large group of  
771 people, usually via the Internet (Howe, 2008).

772 Crowdsourcing involves harnessing the creativity and knowledge of a crowd to generate  
773 new ideas, solve complex challenges, or develop innovative solutions, often facilitated  
774 through online platforms (Brabham, 2008).

775 Also known as collective intelligence, crowdsourcing refers to the phenomenon where a  
776 diverse group of individuals collectively contribute ideas, insights, or solutions to a problem,  
777 often leading to accurate and valuable outcomes (Surowiecki, 2004).

778 Where tasks, challenges, or questions are presented to a diverse online community, enabling  
779 them to collectively contribute solutions, ideas, or content this is referred to as  
780 crowdsourcing (Doan, Ramakrishnan, & Halevy, 2011).

781 Crowdsourcing is often seen as a method of open innovation, where organizations tap into  
782 the creativity and expertise of a broader audience to address problems, develop products, or  
783 generate ideas, leveraging the power of collective intelligence (Nambisan & Nambisan, 2009).

784 Crowdsourcing can be used for various purposes, such as problem-solving, innovation, or to  
785 gather data.

784 In this study, "Crowdsourcing" pertains to acquiring services, ideas, or content by actively 785 seeking contributions from a diverse and widespread community. The variable explores how 786 crowdsourcing within innovation spaces impacts the overall performance of early-stage 787 enterprises in the I-ring region.

### 788 **Ideation**

789 This refers to generating, developing, and communicating new ideas (Cooper & Edgett, 2008). 790 Ideation involves conceptualizing and creating innovative ideas through a blend of creativity 791 and strategic thinking (Isaksen & Akkermans, 2011).

792 Ideation involves generating innovative and novel ideas through brainstorming, mind mapping, 793 and collaborative thinking (Salvador & Barr, 2014). This refers to the structured idea 794 generation and development process involving activities like idea selection, refinement, and 795 communication (Liedtka & Ogilvie, 2011).

796 Ideation can be defined as the dynamic process of generating fresh and inventive ideas, often 797 involving brainstorming and creative thinking techniques (Runco, 2010). Ideation can be used 798 in various contexts, such as product design, marketing, or business strategy development.

799 Within the research framework, ideation is a fundamental practice deployed within innovation 800 space to cultivate innovation, enhance product design, refine marketing strategies, and 801 formulate effective business strategies. This variable investigates how implementing ideation 802 processes within innovation spaces influence the overall performance of early-stage 803 enterprises in the I-ring region.

### 804 **Business Plan Competition**

805 A Business planning competition challenges participants to develop and present a business 806 plan for a new venture. These competitions can be organized by universities, non-profit 807 organizations, or private companies (Delmar & Shane, 2010).

808 A business planning competition is an entrepreneurial challenge event where participants 809 create and pitch comprehensive business plans for novel ventures, often receiving feedback 810 from judges or mentors (Kuratko & Goldsby, 2018).

811 Business planning competition involves a startup pitch contest where aspiring entrepreneurs 812 craft and present detailed business plans to a panel of experts or investors, aiming to secure 813 support or funding (Hansen & Nielsen, 2014).

814 A business planning competition is a new venture challenge that encourages participants to815 develop strategic business plans for innovative startups, fostering experiential learning and816entrepreneurialskilldevelopment(Woods,2010).

817 A business planning competition is a business idea contest in which participants create and818present well-defined business plans for potential new ventures to demonstrate feasibility and819 attractresources(Grimesetal.,2011).Thegoalofsuchcompetitions istofoster820entrepreneurshipandtoprovide participantswithfeedbackandnetworking opportunities.

821 In this study, the variable "Business Planning Competition" pertains to a competitive event822whereindividualsorteamsformulateandshowcaseacomprehensivebusinessplanforanew823or existing venture. This variable explores the significance of business planning competitions824 within the spectrum of innovation spaces and their impact on enhancing the performance of825early-stage enterprises intheIringaregion.

### 826 **Early-stageenterprises**

827 Early-stageenterprisesrefertonewlyestablishedbusinessesorstartupsintheinitial828developmentphases.The seenterprisesaretypicallycharacterizedbytheirearlyexistencein829thebusinesslifecycle,limitedoperationalhistory,andafocusonbuildingtheirproducts,830services,andcustomerbase.Theyareoftenrefiningtheirbusinessmodels,securingfunding,831andworking towards achievingustainablegrowthandprofitability(Kuratko, 2013).

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### 833 **ACRONYMS&ABBREVIATIONS**

834 BPC: BusinessPlanCompetition

835 BSS: BusinessSupportServices

836 COSTECH: CommissionforScienceandTechnology

837 ICT: InformationandCommunicationTechnology

838 IHs: Innovationhubs

839 KBV: KnowledgeBasedView

840 MFIs: MicrofinanceInstitutions

841 RBV: ResourceBasedView

842 SIDO:SmallIndustriesDevelopmentOrganization

843 SMEs: SmallandMediumEnterprises

844 UNDP: UnitedNationsDevelopmentProgram

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UNDER PEER REVIEW