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Original Article

Influence of Entrepreneurship Knowledge on Employability of TVET Graduates in Tanzania: The Moderating Role of Self-Efficacy

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Keywords:
Entrepreneurship Knowledge, Employability of TVET Graduates, Self-Efficacy

ABSTRACT

This paper is based on the study aimed to examine the influence of entrepreneurship knowledge on employability among TVET graduates in Tanzania and the moderating role of Self-Efficacy. The study was guided by human capital and self-efficacy theories. An explanatory research design was employed, and data was collected using a structured questionnaire administered on a sample of 353 graduates from TVET institutions by a Kobo toolbox. Structural Equation Modelling was used for data analysis. The finding of the study revealed a positive and significant relationship between entrepreneurship knowledge and employability of graduates. Furthermore, a multi-group moderation analysis indicated that, the relationship was positive and significantly stronger in the group with high self-efficacy but it was insignificant relationship in the group with low self-efficacy. Therefore, the education policy makers, curriculum developers and TVET institutions in Tanzania should emphasize on programs that will improve graduates' entrepreneurship knowledge such as recognizing business resources, financial resources, and use of technology in business, ability to target customers, understanding of tax laws and regulations in business as well as improving sales and creation of market plan. The study also concluded the effect on entrepreneurship knowledge on employability is improved when self-efficacy is increased, calling for measures to raise graduates' self-efficacy.

APA CITATION

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INTRODUCTION

Employability is described as a situation in which an individual, in particular, graduate possesses a set of skills, knowledge, understanding and personal attributes (Mgaiwa, 2021). Such set of skills and knowledge should enable a graduate to choose and secure occupations that are deemed fit for her/his career satisfaction and success (Okafor & Enemuo, 2022). In the context of this study, graduate, is referring to the workforce who completed their college and university programme, from diploma level and above. Over the past two decades, the number of unemployed graduates has increased tremendously (Wei et al., 2023). This has raised a serious concern across the globe on the set of employability packages possessed by graduates, in both developed and developing countries (Hosain et al., 2021).

According to Jafari-Sadeghi et al., (2020), employability among graduates depends on the level of formal education, which Berker (1964) consider to be essential and necessary to improve human labor as an input to the productive capacity of a population concerning employability. Along the same thinking, proponents of the human capital theory view formal education such as entrepreneurship education in terms of knowledge, training and competence as factors that increase graduate employability (Aboobaker, 2020; Jafari-Sadeghi et al., 2020). Therefore, holding other factors of entrepreneurship education constant, entrepreneurship knowledge is among the factors, that may influence the employability trend of graduates (Liao et al., 2022), while self-efficacy can be used as a moderator variable. Several scholars proclaim that entrepreneurial education stimulates individual employment (Blokker et al., 2019; Rauch & Hulsink, 2015; Utomo et al., 2019). Furthermore, some of the studies confirmed that knowledge about entrepreneurship impacts the establishment of start-ups and the development of new businesses (Ni & Ye, 2018; Tshikovhi & Shambare, 2015; Yaghoubi Farani *et al.*, 2017). Furthermore, Karyaningsih (2020) considers entrepreneurial knowledge as the combination of practical know-how and theoretical insights that entrepreneurs and aspiring business founders acquire to establish and operate successful businesses.

Furthermore, Aboobaker (2020) described entrepreneurial knowledge as understanding of issues related to recognizing market gaps, developing innovative solutions, securing resources, and navigating the complex landscape of entrepreneurship. It involves a deep understanding of market trends, customer behavior, financial management, and risk assessment to foster successful entrepreneurial endeavors. Preceding studies such as Al Mamun *et al.*, (2019) and Roxas (2014) conceptualize entrepreneurship knowledge as legal knowledge, resources knowledge, and marketing knowledge.

Additionally, the Human Capital Theory postulates that formal education is essential to improve the productive capacity of a population. As human labor becomes a capital good, the productivity of human labor in terms of employability can be improved

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through formal education. Proponents of the theory have viewed formal education such as entrepreneurship knowledge; training and competence can help to increase graduate employability (Aboobaker, 2020; Jafari-Sadeghi, 2020). Employability depends on entrepreneurial knowledge. However, in this study entrepreneurship training and competence are deployed to address the employability of graduates but they used as control variables.

Furthermore, Self-efficacy theory was used to moderate the relationship between the entrepreneurship knowledge and graduates' employability. Studies conducted by (Doanh, 2021) and Wang *et al.,* (2023) insisted that high self-efficacy levels can enhance graduates' confidence in their abilities, leading to more proactive engagement in job search activities, networking, and entrepreneurial endeavors which facilitates employability. Schunk & DiBenedetto (2021) argue that individuals with less self-efficacy level are unlikely to persevere and exert effort to overcome obstacles and enhance their employability prospects. This argument, as encouraged by previous scholars, Doanh (2021) and Wang *et al.*, (2023), claimed that the influence of entrepreneurship knowledge, training and competence on employability could either be moderated or mediated by different variables.

Therefore, the need to analyze the influence of entrepreneurship knowledge (EKN) on the employability of TVET graduates in Tanzania was triggered by contradictory empirical evidence. Literature by Kozlinska *et al.,* (2020) established the effect of entrepreneurship knowledge on the employability of university business graduates. The results show that entrepreneurship knowledge and employability are positively and significantly related. Furthermore, Indrayani et al., (2023) assessed the influence of entrepreneurship knowledge, financial literacy, and motivation on university students' interest in building a start-up business. The findings show that entrepreneurship knowledge has a positive and significant effect on students' interest in building a startup business. Similarly Hutasuhut, (2018) conducted research at the faculty of economics at the university to understand the roles of entrepreneurship knowledge, self-efficacy, family, education, and gender on entrepreneurial intention on students of economics. It was revealed that the research finding is entrepreneurial knowledge, self-efficacy, and family factor have a significant impact on students' entrepreneur intention respectively.

Contrary to the aforementioned findings, Hidayah & Rodhiah, (2023) assessed the influence of entrepreneurial knowledge, competence, and information technology development on small medium enterprises success. The findings rejected the hypothesis that "there is a significant positive influence between entrepreneurial knowledge on the success of small medium enterprises".

On the other hand, the study by Rahmat et al., (2012) from Malaysia, examined the effect of entrepreneurship knowledge on employability of university graduates. The study found that there is positive and insignificant relationship between knowledge and employability. Moreover, the study by Ibrahim et al., (2015) from Malaysia, investigated the influence of entrepreneurship knowledge on employability in TVET. The study indicates existence of positive and insignificant relationship between entrepreneurship knowledge and employability.

Consequently, this study builds on the Human Capital theory and applies the self–efficacy to moderate the relationship between entrepreneurship knowledge and employability of graduates from TVET institutions in Tanzania.

> *H_1: Entrepreneurship knowledge will positively influence the employability of TVET graduates in Tanzania*
>
> *H_2: Self-efficacy will positively moderate the relationship between entrepreneurship*

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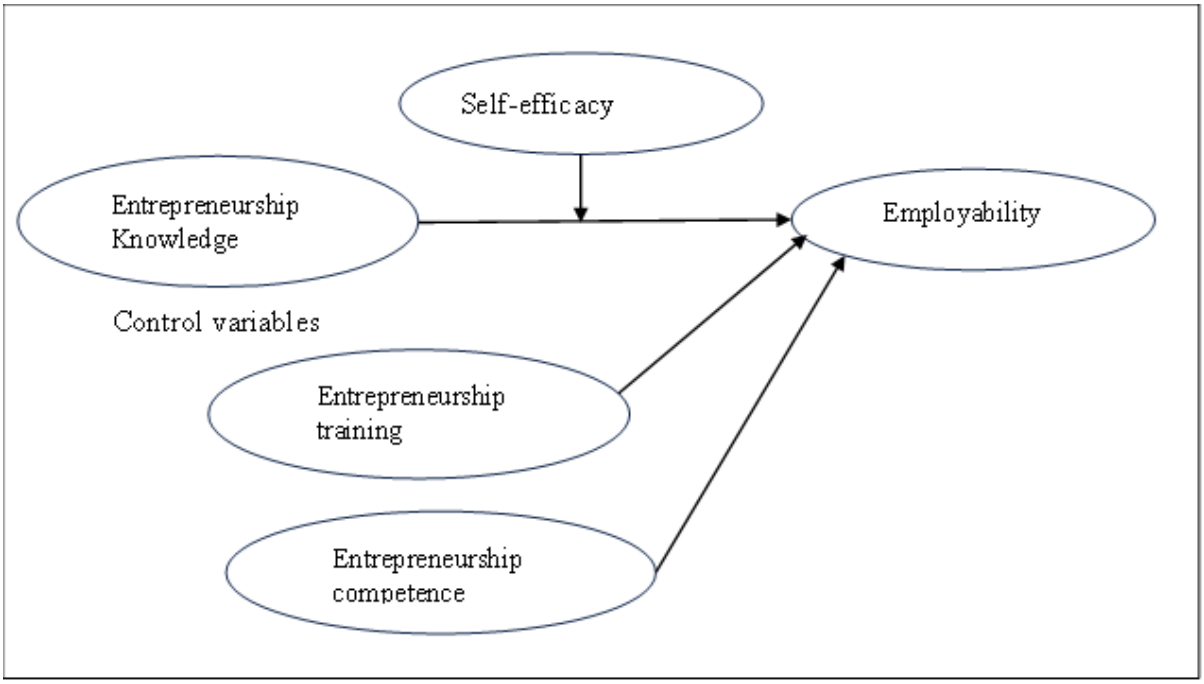
knowledge, and employability of TVET graduates.in Tanzania

Figure 1: Conceptual Framework



METHODOLOGY

The study was guided by the positivism philosophy due to its ability to associate the deductive approach, the use of large sample size and the adoption of quantitative methods (Arbale & Mutisya, 2024). The explanatory research design was applied in line with the cross-sectional survey strategy. The study, employed snowball, a non-probability sampling procedure (Etikan et al., 2016) to get graduates from Dar es Salaam Institute of Technology (DIT) and Institute of Accountancy Arusha (IAA) as units of analysis. DIT is a technical science curriculum-based college and IAA is a business curriculum-based college. The population was drawn from the graduates of 2017/2018, 2018/2019 and 2019/2020 from DIT and IAA.

Sample Size

According to Etikan *et al.*, (2016) sample size estimation is required to be derived from a specific formula. Therefore, Taro Yamane formula was used to estimate sample size. According to Yamane (1967) the sample size of the study is calculated as follows:

$$n = \frac{N}{1+N(e)^2} \quad \text{Eqn. 1}$$

Where;

n = sample size

N = total number population

e = margin of error with confidence level of 5%

Therefore, the total sample size can be estimated as follows:

$$n = \frac{3042}{1+3042(0.05)^2} = \frac{3042}{1+3042(0.0025)} \quad \text{Eqn. 2}$$

$$n_1 = \frac{3042}{1+7.61} = \frac{3042}{8.61} = 353 \quad \text{Eqn.3}$$

Therefore, the total sample size for this study was 353 graduates from DIT and AIA.

$$\text{Sample size for DIT} = \frac{1469}{3042} \times 353 = 170 \quad \text{Eqn.4}$$

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$$\text{Sample size for AIA} = \frac{1573}{3042} \times 353 = 183$$

Eqn.5

Variables

The dependent variable in this study was EMP which was measured using seven items adopted from Hosain *et al.,* (2021), Matonya (2018), and Okafor & Enemuo (2022). The independent variable of EKN which was measured by ten items as adapted from Al Mamun *et al.,* (2019) and Karyaningsih (2020). SEC which was a moderating variable measured using six items adopted from Bai & Wang (2023) and Schunk & DiBenedetto (2021). All these items were measured using a five-point Likert-like scale ranging from 1 = Strongly disagree to 5 = strongly agree (Table 1). The unit of analysis was graduates from identified TVET institutions.

Table 1: Measurement of Variables

SN	Variables	No. of Items	Code	Measurement Item	Measurement	Sources
1	Entrepreneurship Knowledge	10	EK	EKN1= resource for business EKN2=Financial resources, EK3= Use of technology, EKN4= Work on team EKN5=Target customers, EKN6=Create market plan EKN7=Increase sales, EKN8=Commercialization business idea, EKNN9=intellectual property right EKN10 =Tax laws and regulations,	Five-point Likert scale. 1 =Strongly disagree 2 = Disagree 3 = Neutral 4 =Agree 5= Strongly agree	(Al Mamun et al., 2019; Karyaningsih, 2020)
2	Self-efficacy	6	SEC	SEC1=doing well tasks related to business, SEC2=doing well complex business problems, SEC3=Motivated by success of others SE4=Admiring Colleagues and peers, SEC5= interested by others' success stories, SEC6=Motivated by Friends and family,	Five-point Likert scale. 1 =Strongly disagree 2 = Disagree 3 = Neutral 4 =Agree 5= Strongly agree	(Bai & Wang, 2023; Schunk & DiBenedetto, 2021)
3	Employability	7	EMP	EMP1=Communication skills, EMP=2Problem-solving skills, EMP3=Analytical skills, EMP4=Adaptable to changes, EMP5=Meet deadlines, EMP6=Proactive person, EMP7=Completed studies	Five-point Likert scale. 1 =Strongly disagree 2 = Disagree 3 = Neutral 4 =Agree 5= Strongly agree	(Hosain et al., 2021; Matonya, 2018; Okafor & Enemuo, 2022) (Matonya, 2018)(Matonya, 2018)(Matonya, 2018)(Matonya, 2018)

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Data Analysis

IBM SPSS Statistics software version 26 was used in performing descriptive analysis and evaluating Exploratory Factor Analysis (EFA) to determine the validity and reliability of constructs as well as evaluating the assumptions of a structural equation model. IBM AMOS software version 23 was used during the construction of measurement and structural models through Confirmatory Factor Analysis (CFA). The goodness of fit indices with their acceptable threshold level were adapted from Gupta (2015), Hair Jr *et al.,* (2006), Hooper *et al.,* (2008) and Naresh *et al.,* (2017) as follows: CMIN/DF (X2/df) ≤ 3, RMR ≤ 0.08, GFI ≥ 0.90, CFI ≥ 0.90, NFI ≥ 0.90, TLI ≥ 0.90, RFI ≥ 0.90, PCFI ≥ 0.50, and RMSEA ≤ 0.08. The study employed a variety of indicator statements to quantify the employability of graduates, making it a latent construct. In light of this, the study by Awang (2011) issues a caution that, the moderation analysis for a model with a latent component is extremely challenging, because it may result to issues with model convergence and standard error, the conventional modeling technique employing interaction terms does not apply to latent constructs. Instead, Multi-Group CFA was used in the study to examine the influence of the moderator variable's latent nature. As a result, this study examined the moderating hypothesis (H2) using a step-by-step Multi-Group CFA approach.

FINDINGS AND DISCUSSION

Demographic profile of respondents

The study enrolled 353 participants to determine the influence of entrepreneurship knowledge on the employability of TVET graduates in Tanzania. In response to this, descriptive and inferential analyses were carried out. Descriptively, the findings revealed that the majority of respondents were males 216 (61.2%), while 173(49%) were aged between 20 – 30 years, 206 (58.4%|) held bachelor's level of education, 183(51.8%) were IAA graduates and 189 (53.5%) were employment seekers. Out 164 employed graduates, 105 (64.0%) spent 4-5 years to be employed.

Table 2: Distribution of participant demographic characteristics (N=353)

Variable	Frequency	Percent
Gender		
Male	216	61.2
Female	137	38.8
Age		
20 – 30	173	49
31 – 40	161	45.6
41 – 50	17	4.8
51+	2	0.6
Level of education		
Bachelor	206	58.4
Masters	129	36.5
PhD	18	5.1
Institution of study		
DIT	170	48.2
IAA	183	51.8
Employment status		
Employed	108	30.6
Self employed	56	15.9
Seeking employment	189	53.5
Duration to employment		
1 – 3 years	44	26.8
4 – 5 years	105	64.0
6+	15	9.1

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Testing Assumptions for SEM

The model assumptions underlying SEM were evaluated before drawing any conclusions about the relationship between the variables. The results of the study demonstrated the validity of the SEM assumptions, which included linearity via scatter plots, multicollinearity via VIF and tolerance levels, and homoscedasticity via plots of the regression standardized residuals versus the regression standardized predicted residuals. In addition to these assumptions, the skewness and kurtosis were found to be within the ±2 and ±3 limits, respectively (Cangur & Ercan, 2015), indicating that the multivariate normality assumption was met.

Validity and reliability testing

The study constructs' validity and reliability were evaluated. Because the Cronbach's Alpha (CA) values exceeded the suggested threshold of 0.7 (Palos-Sanchez & Saura, 2018; Vaske et al., 2017). The measurement scales for the four constructs demonstrated acceptable level of internal consistency (reliability). The average variance extracted (AVE) and composite reliability (CR) were used to evaluate validity of the constructs' measurement scales (Fornell & Larcker, 1981). The findings showed that the correlation between constructs and the Average Variance Extracted (AVE) values of above 0.5 indicating the attainment of convergent, discriminant, and construct validity.

Additionally, the model fit indices in the recommended measurement models for each construct were found to lie within the designated cut-off points, indicating the attainment of construct validity. Because the internal reliability's composite reliability (CR) was higher than the suggested cut-off point of 0.6 (Lam, 2012), the researcher felt confident in the internal reliability (Table 3).

Table 3. Validity and reliability of study constructs

Construct	No. items	Cronbach's Alpha	AVE
EKN	10	0.952	0.613
ETR	8	0.948	0.599
SEC	6	0.968	0.784
EMP	7	0.927	0.505
EOC	7	0.938	0.513

Bivariate correlation analysis

The bivariate correlation coefficient was calculated to evaluate the degree of relationship between the study constructs and provide support for the discriminant validity. The results showed that the correlation of the paired variable ranged between 0.299 and 0.704. Tabachnick and Fidell (2019) argued that, the correlation of any paired independent variable should not exceed 0.9 (Table 4).

Table 4: Bivariate correlation analysis between study variables

Variable	EMP	SEC	EKN	EOC
EMP	1			
SEC	.420**	1		
EKN	.544**	.299**	1	
EOC	.704**	.554**	.477**	1
ETR	.602**	.275**	.571**	.552**

** $p < .001$ two tailed

Model Formulation and Validation

Exploratory Factor Analysis

Evaluation of the number and set of items forming a particular construct was performed using exploratory factor analysis. The exploratory factor analysis EFA was conducted in order to assess the

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total number constructs; the perceived items formed the particular construct and the extent of correlations between study items. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test revealed the presence of sampling adequacy and enough correlation between study items. This was evidenced by the KMO value above 0.7 and the statistically significant ($p < 0.001$) (Table 5).

Table 5: KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.966
Bartlett's Test of Sphericity:	
Approx. Chi-Square	12731.533
Df.	703
Sig.	.000

Following the fact that, the study items were correlated enough to form different constructs as evidenced by KMO and Bartlett's Test, the results of the distribution of items per corresponding constructs were presented using the rotated component matrix following principal component analysis (PCA) (Table 6). As expected, 5 factors were formed out of 38 study items, and no cross-loading items were observed. The first factor was EKN formed by 10 items, the second was ETR formed by 8 items, the third was SEC formed by 6 items, and the fourth was EMP formed by 7 items, while the fifth was EOC formed by 7 items. Each of the items had the recommended factor loading for SEM of at least 0.5.

Table 6: Factor pattern Matrix

	Factors				
Indicators	**1**	**2**	**3**	**4**	**5**
EKN8	.841				
EKN2	.824				
EKN3	.815				
EKN5	.809				
EKN1	.796				
EKN7	.794				
EKN4	.788				
EKN10	.776				
EKN6	.774				
EKN9	.580				
ETR3		.805			
ETR6		.792			
ETR2		.785			
ETR1		.784			
ETR7		.770			
ETR8		.762			
ETR4		.757			
ETR5		.736			
SEC5			.898		
SEC2			.889		
SEC1			.883		
SEC6			.883		
SEC4			.878		
SEC3			.876		
EMP6				.743	
EMP2				.727	
EMP7				.721	
EMP5				.715	

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EMP3	.704	
EMP1	.703	
EMP4	.659	
EOC5		.746
EOC2		.738
EOC1		.721
EOC7		.720
EOC6		.719
EOC4		.707
EOC3		.670

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was carried out to evaluate the study hypotheses. The measurement and structural models were built as part of the CFA. The models were approved using the following fit indices, with their cut-off points being CMIN/DF (X2/df) ≤ 3, RMR ≤ 0.08, GFI ≥ 0.90, CFI ≥ 0.90, NFI ≥ 0.90, TLI ≥ 0.90, RFI ≥ 0.90, PCFI ≥ 0.50, and RMSEA ≤ 0.08. The results show that each study construct obtained the necessary model fit indices (Figures 1-5). For example, it was found that the SEC, as assessed by six observable items, had CFI, TLI, and RFI above 0.9 and a RAMSEA below 0.08.

Figure 1: Measurement modal for EKN

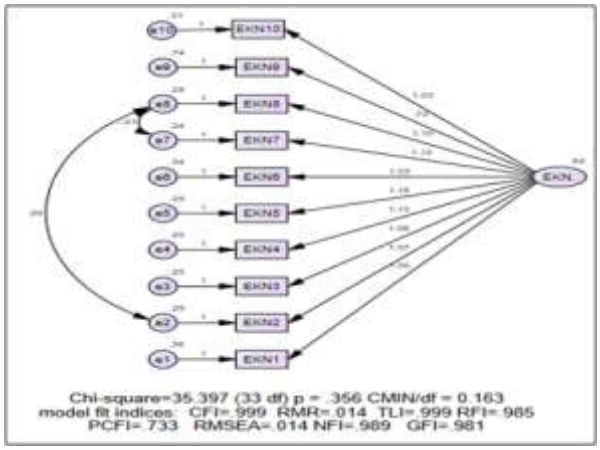

Figure 2: Measurement modal for ETR

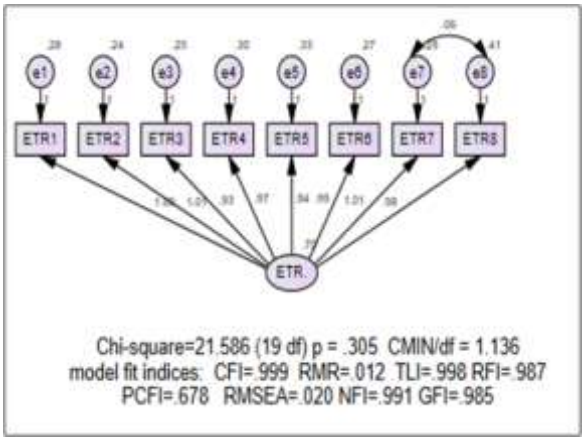

Figure 3: Measurement modal for EOC

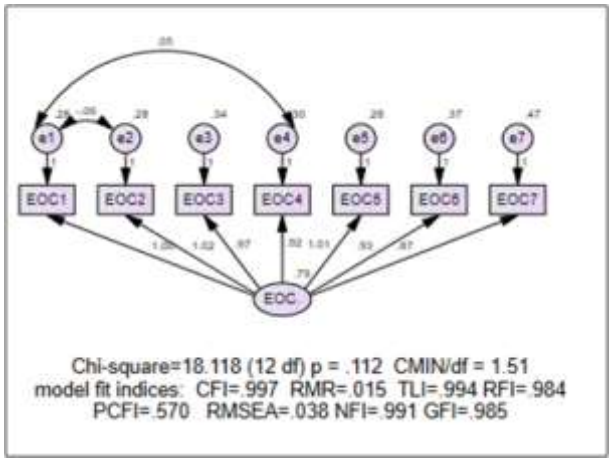

Figure 4: Measurement modal for SEC

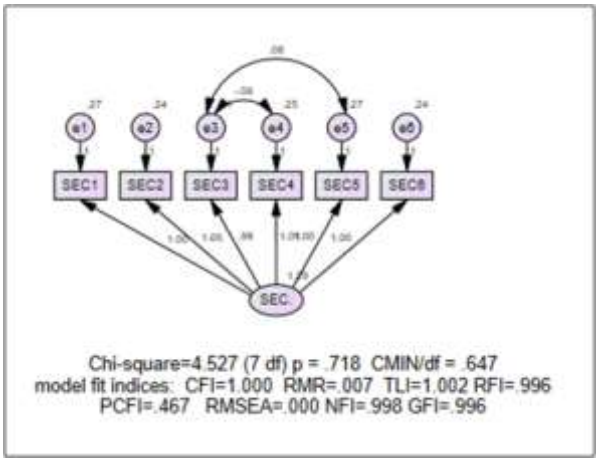

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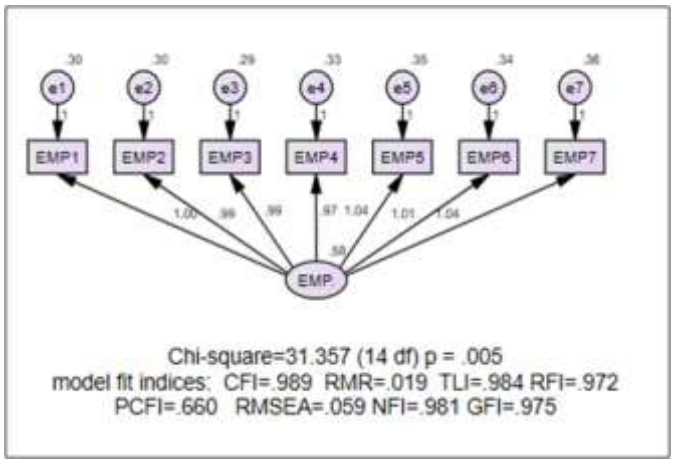
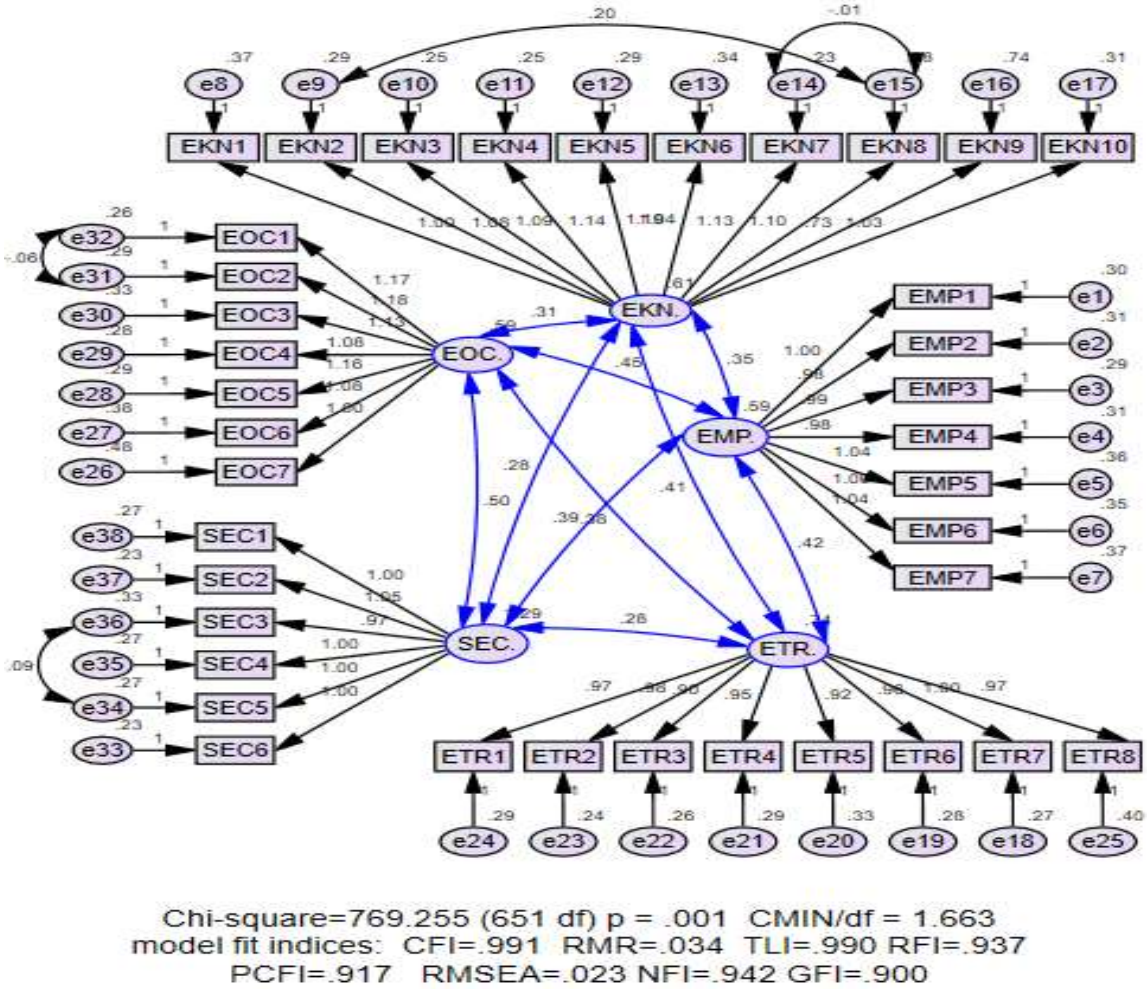
Figure 5: Measurement modal for EMP



Then, the overall measurement model was constructed (Figure 6). The model met the stipulated model fit indices, implying that, the data fitted well with the specified modal as expected, by the cut-off points being above 0.9 for TLI, CFI, RFI and GFI. Similarly, the RMR was below the recommended cut-off of 0.08 while the CMIN/df was below 3.

Figure 6: Overall Measurement Model



Source: Researcher, 2023

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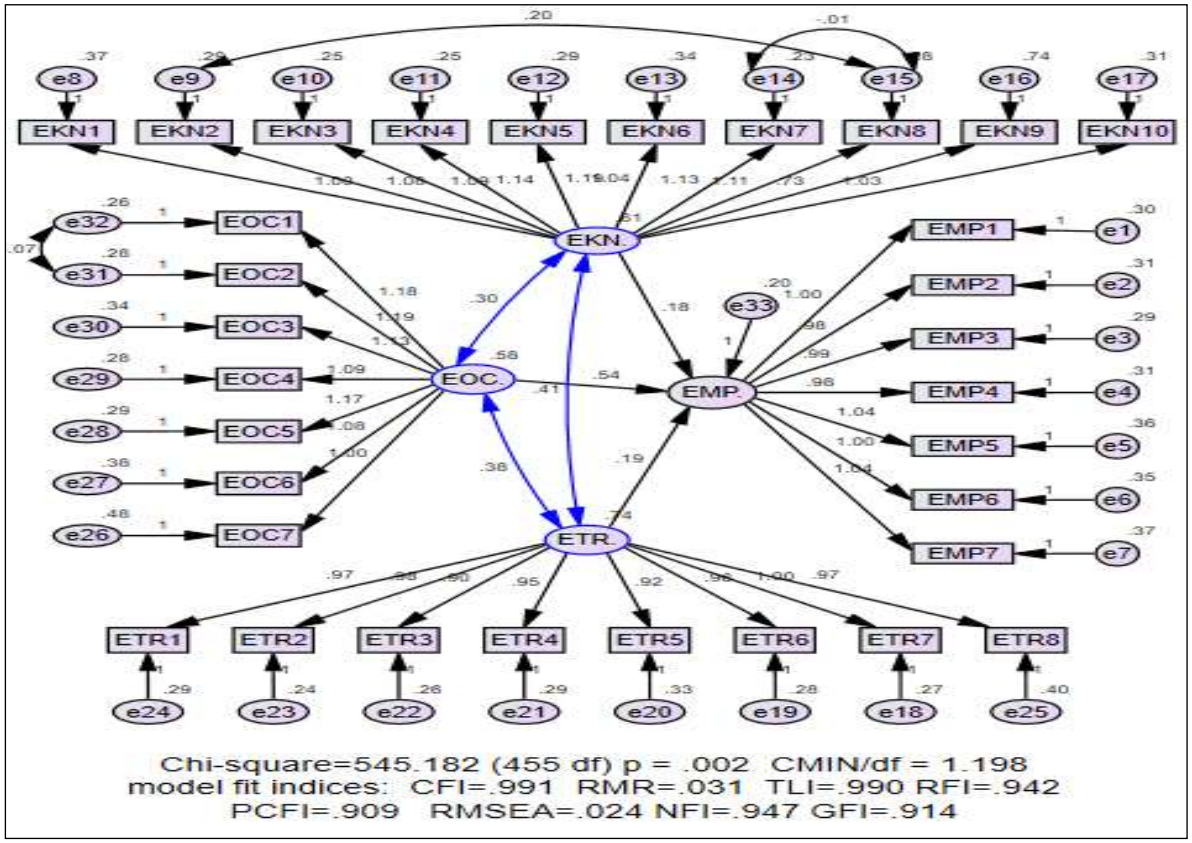
Evaluation of the Structural Model

An assessment of the structural model was conducted. As the model fit indices were reached, the structural model's results agreed with those of the overall measurement models (Figure 7). Likewise, the RAMSEA was less than 0.08, but the CFI, TLI, and RFI were all above 0.9.

Figure 7: Overall Structural Model



Source: Researcher, 2023

Hypothesis Testing

Having met all the SEM assumptions, regression estimates were obtained from the structural model. The results revealed that, controlling for ETR and EOC, for each unit increase in EKN the EMP increases by 0.181. The observed increase was statistically significant at $p < .001$. H1 which posited that entrepreneurship knowledge (EKN) will have a positive effect on the employability of graduates (EMP) was therefore supported (Table 6).

Table 6: Influence of EKN on EMP, controlling for ETR and ECO

Hypothesis.	Paths	Estimate		S.E.	C.R.	P	Remarks
		Unstandardized	Standardized				
H1	EMP <--- EKN	.181	.185	.048	3.769	***	Supported

Note: $*** p < .001$

Moderation analysis

The moderation analysis was carried out to determine whether the impact of EKN on EMP varied depending on the levels of SEC. The moderating variable was measured using 6 observable items on a five-point Likert-like Scale. Using the average point score, the SEC was grouped into three categories namely; low self-efficacy group, moderate self-efficacy group, and high self- efficacy group. The low self-efficacy group is when the point score was below 3, the moderate group was when the average group

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score was 3 and the high self–efficacy group is when the average score is above 3. Following this clustering, the study revealed that, the majority was 223 (63.2%) group with high SEC, while the minority was 9 (2.5%) moderate SEC group and 121(34.3%) was the low SEC group (Table 7). Kline (2023), states that for a group to be eligible for multi group analysis, it must contain a minimum of 100 cases. A two group moderation analyses was therefore considered into considered. The remaining cases 9 of the cases (2.5%) were discarded.

Table 7: Description of SEC in three groups

SEC	Frequency	Percent	Valid Percent
Low	121	34.3	34.3
Medium	9	2.5	2.5
High	223	63.2	63.2
Total	**353**	**100.0**	**100.0**

Measurement Invariance Testing

Measurement invariance was done to determine whether measures of the same underlying construct are being used in two distinct groups before conducting additional research on two-group moderation analysis. The purpose of conducting the measurement of the invariance test, according to Hair *et al.,* (2010), is to ascertain that measurement models run under different conditions yield a comparable representation of the same construct. In accordance with Xu & Tracey (2017) both the configured metric and scalar invariance were used to determine whether the measurement of a latent construct varied across groups.

Testing for Configural Invariance

When testing for the configural invariance, the freely unconstrained model was fitted for both low and high SEC constructs for EKN and EMP constructs. The study revealed that, the two models attained the configural non –invariance as evidenced by the model fit indices and corresponding CMIN values of 1140.988 which was statistically significant $p < .001$ level (Table 8).

Table 8: Assessment of the configural invariance model

Model	NPAR	CMIN	DF	P	CMIN/DF
Unconstrained	152	1140.988	904	.000	1.262
Measurement weights	124	1266.995	932	.000	1.359
Structural weights	121	1288.587	935	.000	1.378
Structural covariance's	115	1495.835	941	.000	1.590
Structural residuals	114	1531.058	942	.000	1.625
Measurement residuals	82	1631.579	974	.000	1.675
Saturated model	1056	.000	0		
Independence model	64	9999.279	992	.000	10.080

From Table 8, the multi- group CFA created the readings of TLI = 0.926, CFI = 0.927, RMSEA = 0.044, NFI = 0,837, PCFI = 0.910 GFI = 0.784 and CMIN/df = 1.675 (Figure 8) This affirms that, the goodness of fit indices was satisfactory and that, the configured model fit was accomplished. Therefore, the multi-group CFA model for both level of self- efficacy group had similar number and indicator variables related with each construct hence conformity of the model fit was declared.

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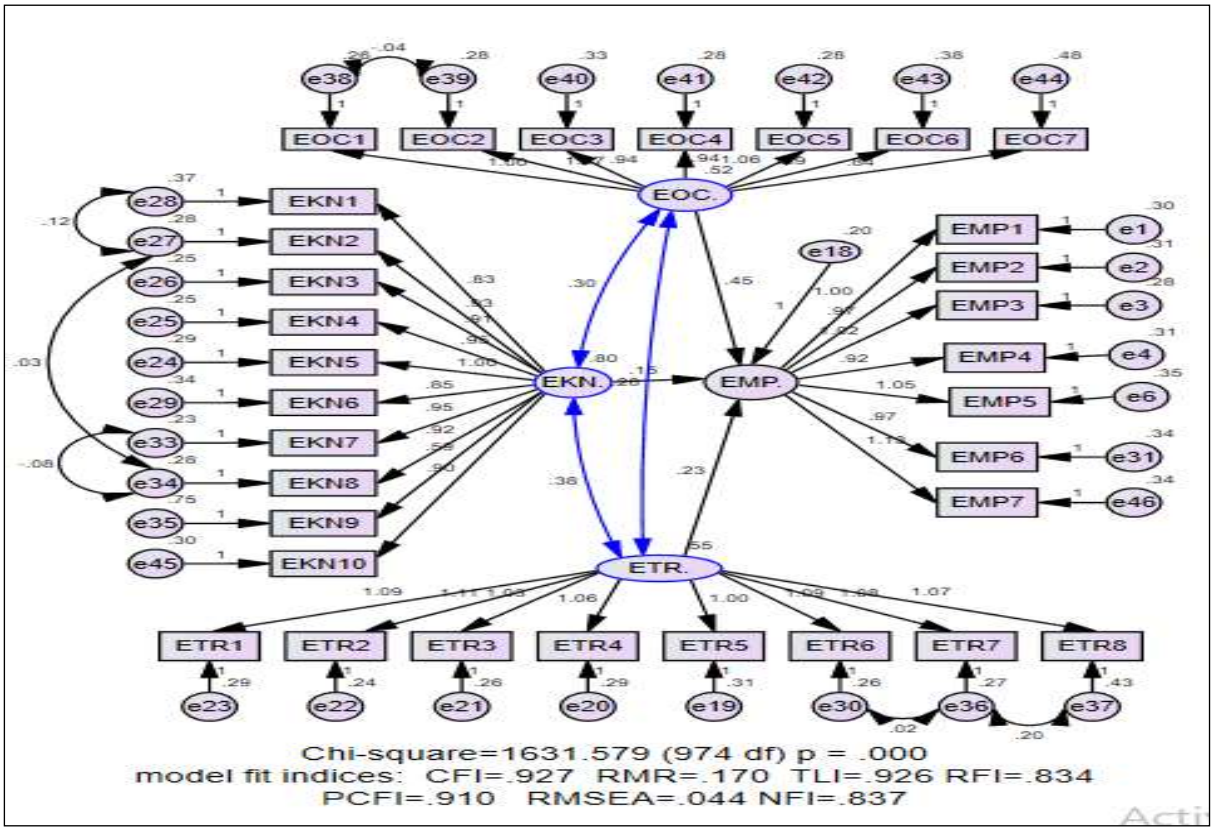
Figure 8: The Structural model for multi group CFA



(**Source**: Researcher, 2023)

Chi-Square Test Difference for Moderation

Besides, to evaluate the presence of non-invariance between groups, the Chi-square difference for moderation test was undertaken. The study revealed a strongly statistically significant Chi-square value at a 5% level ($p = 0.001$), implying the presence of non-invariance between the two models. The results (Table 9), indicate that there are model-level differences between the two groups, suggesting the possibility of moderation and opening the door for additional route by path analysis to identify the paths causing the moderating. The results are summarized in Table 9 and 10.

Table 9: Chi-square difference test for moderation analysis output from IBM Amos 23 (In an Unconstrained model)

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Measurement weights	28	126.007	.000	.013	.014	.010	.011
Structural weights	31	147.599	.000	.015	.016	.012	.013
Structural covariances	37	354.847	.000	.035	.039	.032	.036
Structural residuals	38	390.070	.000	.039	.043	.036	.040
Measurement residuals	70	490.591	.000	.049	.054	.041	.045

Source: Researcher 2023

From this perspective, moderation occurred as evidenced by the large Chi-square difference that was found between the constrained model and the unconstrained model. Consequently, in order to ascertain the precise path in which moderation occurred path by path analysis was carried out.

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Table 10: Statistical tool package Chi- square output

	Chi-square	Df	p-value	Invariant?
Overall Model				
Unconstrained	1288.587	935		
Fully constrained	1432.804	962		
Number of groups		2		
Difference	**144.217**	**31**	**.000**	**NO**
Constrained path				
EMP <--- EKN	1982.1	936	.000	
Chi-square Thresholds				
90% Confidence	991.86	936		
Difference	296.727	1	0.100	
95% Confidence	1,008.28	936		
Difference	280.307	1	0.050	
99% Confidence	1,039.58	936		
Difference	249.007	1	0.010	

Source: Field Data, 2023

Path by Path Moderation Analysis

The presence of non-invariance further suggests that the effect of independent variables on the dependent variable might be different hence necessitating for the further moderation analysis called path-by-path analysis.

The path analysis was conducted by constraining the EKN<--- EMP path and we revealed that the Computed Chi-squared values were larger (1982.1) as compared to the critical values (249.007) at a 99% level, then the presence of statistically significant moderation effect of SEC on the relationship between EKN and EMP.

Moderation Hypothesis Testing

Lastly, the effect of EKN on EMP was compared between the low and high SEC groups. The results (Table 11) show that in the low SEC group, for each unit increase in EKN, the EMP increased by 0.055 and that this increase was statistically insignificant ($p = 0.376$). Using the scandalized estimates the study revealed that for each unit score increase in EKN, the employability increased by 0.080. However, in the high SEC group, for each unit increase in ENK, the EMP increased by 0.186 and this increase was statistically significant ($\rho < .001$). The increase was also noticed on the standardized estimates where to every unit increase of EKN, the EMP increases by 0.22. It can be therefore concluded that the self-efficacy can fully moderate the relationship between entrepreneurship knowledge and employability of TVET graduates in Tanzania. Thus, hypothesis two (H_2) was supported. However, the relationship was insignificant on the path of entrepreneurship knowledge and employability in the low self-efficacy group.

Table 11: Moderating effect of SEC on the relationship between EKN and EMP

Variables			Unstandardized Estimate	Standardized estimate	S.E.	C.R.	P	Label
Low SEC Group								
EMP.	<---	EKN.	.055	.080	.062	.885	.376	b3_1
High SEC Group								
EMP.	<---	EKN.	.186	.222	.070	2.657	.008	b3_2

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Discussion of Findings

The results found evidence in support of H1 which hypothesized that EKN will have a positive influence on EMP. This result is consistent with those which were reported in previous studies such as Al Mamun *et al.,* (2019), Malhotra *et al.,* (2022) and Sehgal & Nasim (2018) who reported entrepreneurship knowledge to have a positive and significant relationship with employability of graduates. The findings indicate that graduates with entrepreneurial knowledge are more likely to secure employment.

Likewise, Kozlinska *et al.,* (2020) established the effect of entrepreneurship knowledge on the employability of university graduates. The results show that entrepreneurship knowledge and employability are positively and significantly related. The finding also implies that individuals with a high level of education will potentially have a higher chance of employability. Entrepreneurship knowledge will provide various skills in developing products or services to meet market demand; will also provide chances to explore opportunities, the ability to utilize resources to organize business, commercialization of marketing, knowledge of financial resources, the ability to work as a team ability to create a market plan (Al Mamun et al., 2019; Karyaningsih, 2020).The findings of the study also support a prior study by Ni & Ye (2018) who confirmed that entrepreneurship knowledge influences start-up and new business development for graduate employability. Additionally, According to Human Capital Theory (EHC), education can increase students' knowledge related to entrepreneurship which results on the improvement of performance.

Moreover, this study found contradictory findings to those reported by Rahmat *et al.,* (2012) who examined the effect of entrepreneurship knowledge on the employability of university graduates, using multiple regression analysis, showing a positive but insignificant relationship between entrepreneurship knowledge and employability. Additionally, the study by Ibrahim *et al.,* (2015) from Malaysia, examined the influence of entrepreneurship knowledge on employability in TVET and reported a positive but insignificant relationship between entrepreneurship knowledge and employability. These contradictory findings could be caused either by the studies being conducted in a different country with diversity in social, political, and economic factors as well as sectorial differences. Furthermore, the contradicting finding may also result from the interaction of EKN with other variables in the development of employability.

Undeniably, the findings of moderation analysis revealed that for the group with high self-efficacy, EMP increased by 0.186 for every unit score increase in EKN. A statistically significant increase was observed ($\rho = .008$). The finding suggests that graduates with a entrepreneurship knowledge are more likely to secure employment if they have higher levels of self-efficacy because they will have the ability to perform well their task, will be able to perform complex business, ability to be motivated by succeeded entrepreneurs, ability to admire peers, hence being influenced by the work of others (Bai & Wang, 2023; Schunk & DiBenedetto, 2021). Subsequently, for the group with low self-efficacy, the association was statistically insignificant at $\rho =,$ indicating that when graduates' level of self-efficacy is low, their level of employability is unexplained by EKN. Therefore, self-efficacy moderates the strength of the link between EKN and employability of TVET graduates.

Theoretical and practical implications

The theoretical contribution is further demonstrated by the confirmation that the relationship between entrepreneurship knowledge and the employability of graduates was moderated by self-efficacy. Thus, to the best of the authors' knowledge, no moderator variable testing human capital theory has employed self-efficacy. Consequently, by demonstrating that self-efficacy strengthens the relationship between entrepreneurship knowledge and the employability of graduates the findings filled a theoretical gap in the literature. Practically, the

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results advocates that there is a need to adopt measures of raising graduates' self-efficacy as it strengthens the effect that the EKN they acquire from the training programs will have on their employability. Put differently, EKN is not as fruitful as when it is in line with efforts to raise the trainees' self-efficacy level.

CONCLUSIONS AND RECOMMENDATIONS

The paper analyzed the effect of EKN on EMP of graduates from TVET institutions in Tanzania with the moderation of SEC. The findings revealed that entrepreneurship knowledge has a positive and significant effect on the employability of TVET graduates in Tanzania. The second major finding is that this statistically significant effect is stronger in the group with higher self-efficacy but insignificant in the group with low self-efficacy. Thus, it is concluded that EKN is a predictor of EMP of TVET graduates in Tanzania but this prediction is moderated by the graduates' self-efficacy. The findings also suggest that the ministry of Education, the regulator, the curriculum developer and all practitioners of TVET institutions, should focus on TVET curriculum that could implement practical instead of theory (knowledge-based) furthermore the colleges should have incubation centers to raise those students with a high level of self-efficacy to help those with low level get induced. Practically, they can also develop content to raise graduates' self-efficacy, so that the benefits of EKN on EMP are more realized.

Study Limitations and Area for Future Research

The purpose of this study was to examine the influence of entrepreneurship knowledge on the employability of TVET graduates using self–efficacy as a moderating variable. The study used graduates from TVET institutions who were trained in entrepreneurship education formally ignoring those who were trained in entrepreneurship under short courses programme. As a result, the study findings are only applicable to those graduates trained under TVET institutions ignoring other higher education institutions like universities, the study recommends more studies in higher education institutions and short courses offered programme of entrepreneurship education. Also, the study used entrepreneurship knowledge as an independent variable and employability as the dependent variable, employing self–efficacy as a moderating variable. The study suggests that future studies should investigate additional variables to improve the predictive power of the model. In an effort to understand how EKN affects EMP, more moderators but also mediators can be investigated.

In addition, despite the study's generalization, the researcher found that self–efficacy had a significant moderating effect on the relationships between entrepreneurship knowledge and the employability of TVET graduates in Tanzania. The study suggests that more research be done using different methodologies and applying self–efficacy in different contexts to see if similar conclusions can be drawn.

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