



## **ROLE OF ENTREPRENEURSHIP TRAINING ON FARMERS' INTENTIONS AND PERFORMANCE**

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Received: May 20, 2024

Accepted: August 09, 2024

Published: December 01, 2024

### **Abstract:**

*This paper examines the effect of entrepreneurship training on orange farmers' entrepreneurial intention and performance. The theory of planned behaviour (TPB) was adopted to test the interactional effect between entrepreneurship training and TPB constructs (attitudes, subjective norms, perceived behaviour control and entrepreneurial intention). The study's intentional entrepreneurship training model was built showing several relationships between entrepreneurship training, attitudes, subjective norms, perceived behaviour control, entrepreneurial intention and performance. The survey was conducted to 245 small scale orange farmers in Mubeza. To test the model, the study's constructs were validated followed by factor analysis and structural equation modelling. Results show the significant influence of entrepreneurship training in the development of orange farmers' entrepreneurial intention. Further, the findings validate the developed entrepreneurship training model and enhance the body of knowledge by highlighting the key skills required by farmers in entrepreneurship training programmes.*

### **Keywords:**

Entrepreneurial Intention, Entrepreneurship Training, Farmers, Performance, Tanzania

### **1. Introduction**

Entrepreneurship training has emerged as a potential remedy for stagnant or declining economic activity in both developed and developing nations (Loi et al., 2017). Studies (Hu, et al., 2021; Paudel et al., 2020; Murtisari, 2022; Yuan, Qalati, Iqbal, Hussain, & Ali, 2019; Mamun, et al., 2016; Staniewski & Awruk, 2016) show a significant impact of such training on farmers' intentions and performance. Entrepreneurial education enhances farmers' intentions to become entrepreneurs, subsequently influencing their entrepreneurial behaviours and creative agricultural production. For instance, in Nepal, education improves decision-making abilities, albeit at the expense of technical efficiency (Paudel et al., 2020). Similarly, in China, entrepreneurship and personal attributes positively affect rice farming performance (Hu, et al., 2021). Indonesian dairy farmers with more training exhibit greater entrepreneurial traits, competencies, business performance, skills acquisition, and intention to become entrepreneurs (Murtisari, 2022).

Despite its importance, the framework of entrepreneurship training remains disputed in the literature (Akhmetshin, et al., 2019; Mamun, et al., 2016). While various studies (Ndofirepi, 2020; Dinc & Budic, 2016) have explored entrepreneurial competence, intention, knowledge, and skills, the recognition of entrepreneurship among poor rural families remains overlooked. Previous research primarily focused on entrepreneurial behaviour, farmer empowerment tactics, training, and performance, leaving gaps in understanding the antecedents of entrepreneurial intention.

Studies conducted in Mali (Konte, Ayuya, and Gathungu, 2019) and Kenya (Titianne, 2013) highlight the positive impact of entrepreneurship training on small-scale farmers' performance. However, despite numerous studies in the field, the pace of development in entrepreneurship training remains modest, with ongoing challenges and areas requiring further investigation. Therefore, this study aims to examine the influence of entrepreneurship training on orange farmers' performance and intentions. By addressing these gaps and exploring the nuances of entrepreneurship training, this research seeks to contribute to a deeper understanding of its role in fostering entrepreneurial activity and economic growth.

## 2. Theoretical Framework And Hypotheses

Numerous models and theories have been developed to study entrepreneurship, including psychological models explaining the motivations and behaviours of entrepreneurs. The Theory of Planned Behaviour (TPB) stands out as one of the most significant frameworks in this regard. Entrepreneurship training (ET) plays a vital role in cultivating the attributes and skills necessary for entrepreneurship. Studies (An et al., 2021; Thomas, 2021; Ndofirepi, 2020) have successfully linked ET with entrepreneurial intention (EI) and entrepreneurial performance (EP).

In this study, a combined theoretical framework, integrating TPB and the entrepreneurial performance model, was formulated to create an intentional entrepreneurship training model. This model posits that the knowledge gained from ET significantly impacts the entrepreneurial intention and performance of orange farmers. Six hypotheses were formulated based on this model:

H<sub>1</sub>: Entrepreneurship training positively influences the entrepreneurial performance of orange farmers.

H<sub>2</sub>: Attitudes affect the relationship between entrepreneurship training and the intention of orange farmers.

H<sub>3</sub>: Subjective norms moderate the relationship between entrepreneurship training and entrepreneurial intentions.

H<sub>4</sub>: Perceived behavioural control moderates the association between entrepreneurial training and the intention of orange farmers.

H<sub>5</sub>: Entrepreneurial intention significantly affects the performance of Tanzanian orange producers.

H<sub>6</sub>: Entrepreneurship training significantly influences the entrepreneurial performance of orange farmers.

These hypotheses are depicted in Figure 1, illustrating the relationships between variables based on the integrated theory of planned behaviour and entrepreneurial performance model.

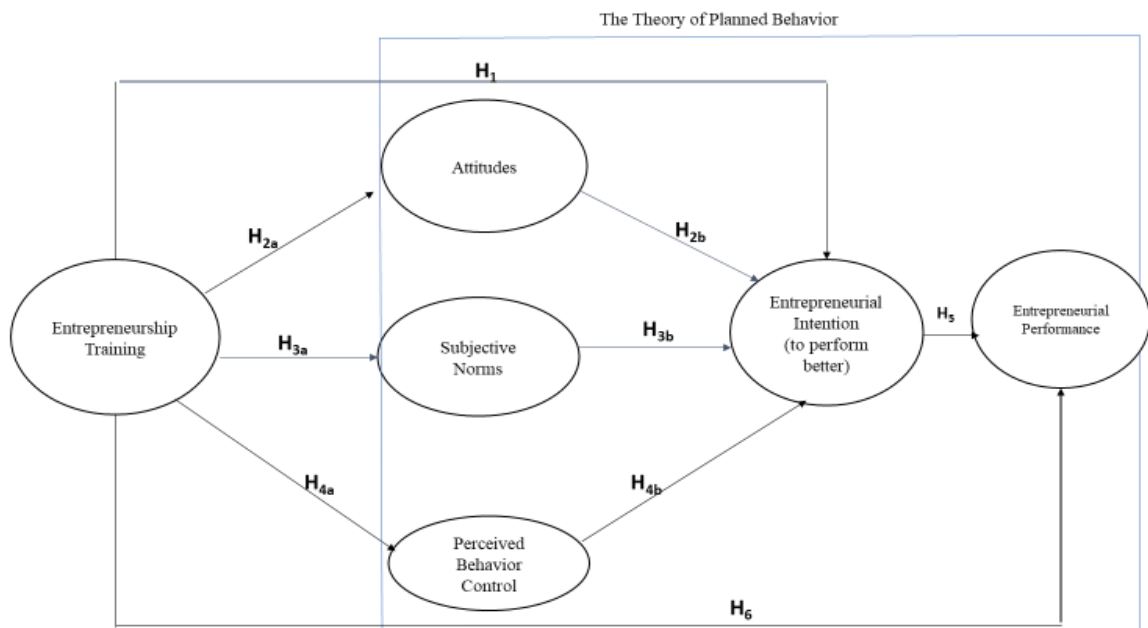


Figure 1 The study's Integrated Conceptual Model  
Source: Developed by the Author (2023)

## 3. Methodology

This study employed a deductive approach, drawing on planned behaviour theory to formulate hypotheses and using quantitative data collection and analysis methods for validation. Conducted in the Muheza district of Tanzania, known for its significant orange production, the study targeted small orange growers with 1 to 10 acres of land. The

population was determined from district census data and the District Agriculture and Livestock Development Officer's list, totalling 6,674 registered farmers.

To ensure representativeness, a probability sampling technique, including multi-stage (cluster) and random sampling, was employed. Three layers of multi-stage cluster sampling were utilized to assemble the study sample. The sample size was determined using the Slovin formula due to the author's unfamiliarity with population behaviour.

The questionnaire, based on Ajzen's Theory of Planned Behaviour model and adapted from the Entrepreneurial Activity scale (EIQ v.7), measured entrepreneurial ambitions. It was adjusted for the study's context, focusing on the impact of entrepreneurship training on entrepreneurial intent and performance. Variable measurements are detailed in Appendix 1.

The questionnaire's introductory section ensured respondent confidentiality and outlined the study's significance. Divided into seven parts, it covered demographic information in Part A and measured six constructs: entrepreneurship training, attitudes, subjective norms, perceived behaviour control, entrepreneurial intention, and entrepreneurial performance. Each construct was evaluated using a Likert-type scale ranging from 1 to 7. Part B contained six items on entrepreneurship training, while Parts C to G measured attitudes, subjective norms, perceived behaviour control, entrepreneurial intention, and entrepreneurial performance, respectively. Data analysis employed IBM SPSS version 25 for preliminary analysis and structural equation modelling with IBM Amos v.23 for correlation testing. Assumptions were verified before analysis, including normality, linearity, multicollinearity, and reliability tests. Validity testing confirmed the authenticity and construction of the questionnaire.

Table 1 displays the mean and standard deviation of the six variables. Using a Likert scale from 1 to 7, responses indicated agreement or disagreement with statements. Mean values above 4 suggest both groups engaged in entrepreneurship education with intentions to start businesses, notably higher in the test group.

**Table 1 Descriptive Statistics of the Variables**

Variable	Attended (N=145)	
	Mean	SD
ET	5.748	0.633
ATT	6.901	0.389
SN	6.917	0.412
PBC	6.931	0.380
EI	6.922	0.394
EP	6.932	0.378

Tables 2 show the relationships between the six variables. Entrepreneurial intention has a statistically significant link with attitudes, subjective norms, and perceived behavioral control, suggesting further analysis of these correlations.

**Table 2 Correlation among Variables for the Attended (N=245)**

Variable	ET	ATT	SN	PBC	EI	EP
ET	1	0.260**	0.183*	0.201*	0.199*	0.297**
ATT	0.260**	1	0.559**	0.455**	0.693**	0.513**
SN	0.183*	0.559**	1	0.657**	0.548**	0.673**
PBC	0.201*	0.455**	0.657**	1	0.549**	0.700**
EI	0.199*	0.693**	0.548**	0.549*	1	0.761**
EP	0.297**	0.513**	0.673**	0.700**	0.761**	1

\* Correlation is significant at the 0.05 level (2-tailed)

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

#### 4. Structural Equation Modelling (SEM)

To use structural equation modelling (SEM), certain assumptions must be met, including addressing missing data, outliers, normality, multicollinearity, and variable variances. The second step is model specification.

*Model Specification and Exploratory Factor Analysis Results*

The model was specified using SPSS v.25 and exploratory factor analysis (EFA). The Keiser-Meyer-Olkin (KMO) sampling adequacy was high (0.905), and the Bartlett sphericity test was highly significant ( $p < 0.000$ ), indicating that factor analysis was appropriate. The total variance explained was 65.21%, indicating satisfactory results.

Table 3 shows the factor analysis identified six factors: entrepreneurial performance (EP) explained 4.57% of the variance, entrepreneurial training (ET) 31.96%, attitudes (ATT) 10.82%, social norms (SN) 6.19%, perceived behaviour control (PBC) 5.69%, and entrepreneurial intention (EI) 5.98%. The results support a clear factor solution despite high inter-correlations. Only loadings over 0.5 were considered, following Hair et al. (2016). Criteria for item retention were based on Yong and Pearce (2013).

**Table 3: Retained Factors and their Loadings (N=245)**

Variables	1	2	3	4	5	6
Et1	.702					
Et2	.532					
Et3	.648					
At3		.689				
At4		.614				
At5		.727				
Sn1			.593			
Sn4			.637			
Sn5			.523			
Pbc1				.515		
Pbc2				.550		
Pbc3				.663		
EI1					.785	
EI2					.711	
EI3					.730	
EPI1						.830
EPI2						.876
EPI3						.840
EPI4						.758
EPI5						.826
EpP1						.746
EpP2						.820
EpP3						.763
EpP4						.740
EpP5						.877

*Measurement Model and Confirmatory Factor Analysis (CFA) Results*

The third step in SEM is model identification. This study used CFA to examine theoretical constructs by measuring item loadings, error variances, and covariance, after removing items with low loadings (Civelek, 2018). A measurement model was created to check for specification error and latent variable correlation (Hair et al., 2016).

The model was initially tested by evaluating all components and assessing the model's fit. Low-loading components were then removed, and the fit was reassessed. Finally, the entire model was integrated and adjusted. Reliability evidence for the variables and indicators is shown in the updated initial measurement models.

Model evaluation, the final SEM stage, was done using composite scale indicators to calculate component loadings and error variances (Table 4). Results indicated a positive, significant relationship between observed and unobserved variables, with critical values (C.R) significant at  $p < 0.05$  and standardized coefficients of at least 0.2. These findings provide a robust framework for further study.

Table 4: The Measurement Model Results

Relations			Estimate	S.E.	C.R.	P	Label	Standardized	Results
Et1	<---	ET	.518	.170	3.047	.002	par_1	.490	Significant
Et2	<---	ET	1.000					.679	Significant
Et3	<---	ET	.192	.088	2.174	.030	par_2	.199	Significant
At3	<---	ATT	1.000					.782	Significant
At4	<---	ATT	1.009	.144	7.018	***	par_3	.459	Significant
At5	<---	ATT	.813	.073	11.110	***	par_4	.825	Significant
Sn5	<---	SN	.960	.115	8.312	***	par_5	.633	Significant
Sn4	<---	SN	.705	.079	8.971	***	par_6	.711	Significant
Sn1	<---	SN	1.000					.644	Significant
Pcb1	<---	PBC	.781	.073	10.674	***	par_7	.725	Significant
Pcb2	<---	PBC	.510	.052	9.783	***	par_8	.656	Significant
Pcb3	<---	PBC	1.000					.738	Significant
Ei1	<---	EI	.942	.055	17.267	***	par_9	.821	Significant
Ei2	<---	EI	.953	.050	19.148	***	par_10	.875	Significant
Ei3	<---	EI	1.000					.872	Significant
EpI1	<---	EP	1.000					.846	Significant
EpI2	<---	EP	.988	.046	21.367	***	par_11	.917	Significant
EpI3	<---	EP	.725	.041	17.687	***	par_12	.826	Significant
EpI4	<---	EP	.825	.058	14.250	***	par_13	.719	Significant
EpI5	<---	EP	.800	.041	19.636	***	par_14	.877	Significant
EpP1	<---	EP	.788	.045	17.711	***	par_15	.827	Significant
EpP2	<---	EP	.813	.042	19.222	***	par_16	.867	Significant
EpP3	<---	EP	1.003	.063	15.974	***	par_17	.776	Significant
EpP4	<---	EP	.912	.061	15.009	***	par_18	.745	Significant
EpP5	<---	EP	.876	.044	19.775	***	par_19	.880	Significant

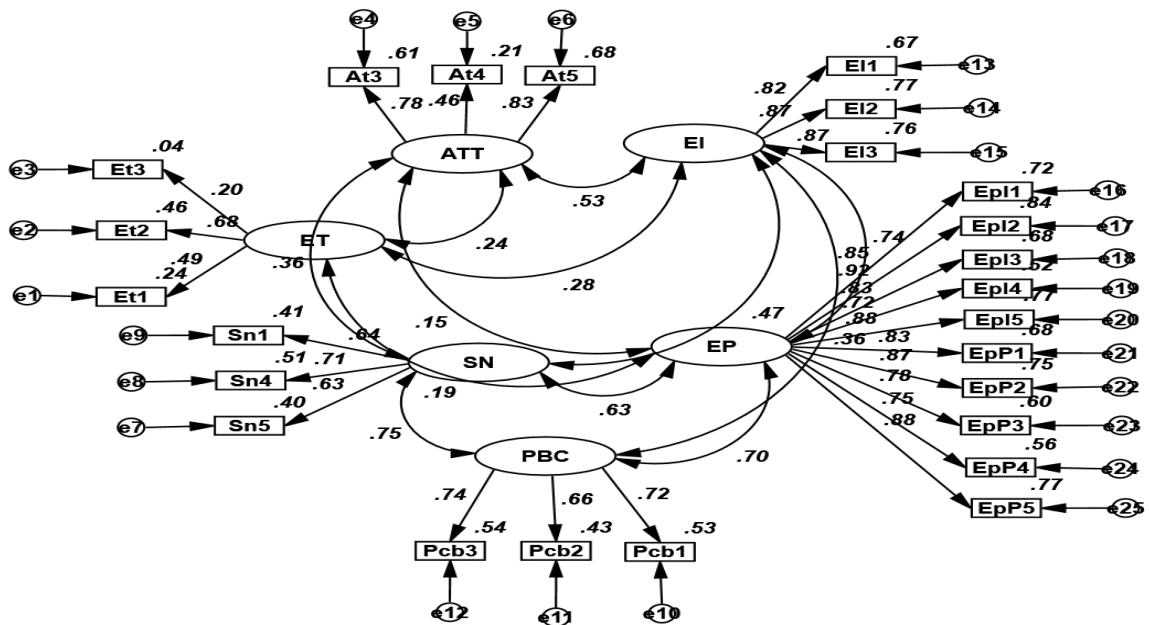


Figure 2 Results of the Study's Measurement Model

As shown in Table 5, the measurement model fits the majority of the goodness-of-fit indices, making it a good fit. RMR = .028; GFI = .969; NFI = .989 CFI = .963  $\chi^2 = 704.203$ ; Df = 315; Cmin/Df = 1.883; RMR = .028; CFI = .963; and p = .000.

**Table 5: The Measurement Model Goodness-of-fit Results**

	$\chi^2$	Df	Cmin/Df	RMR	GFI	NFI	CFI	RAMSEA	P
1 <sup>st</sup> round before modification	1251.656	378	3.234	.037	.767	.768	.826	.089	.000
2 <sup>nd</sup> round after the 1 <sup>st</sup> modification	704.203	315	1.883	.028	.969	.980	.939	.056	.000

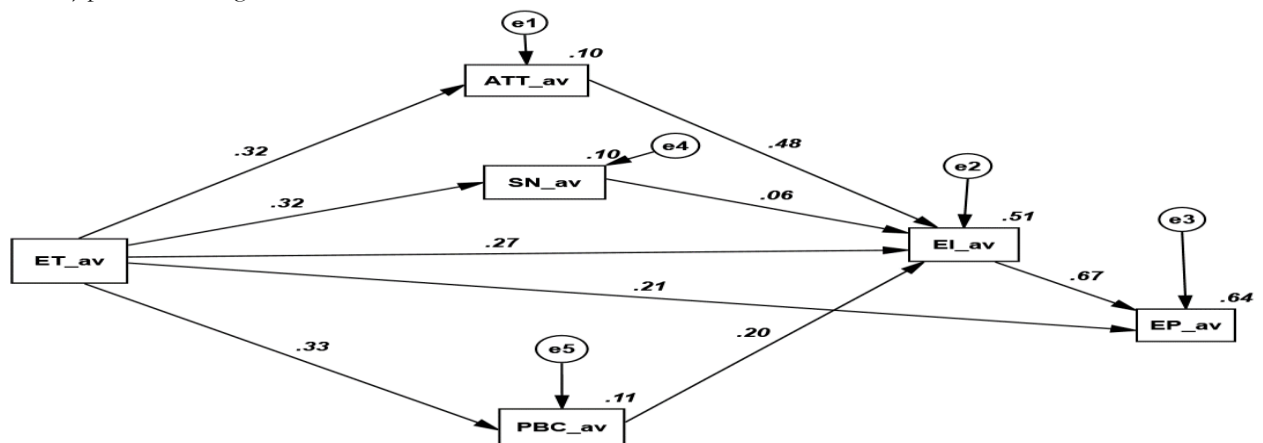
As a result, keeping a strong measurement model does not guarantee that the structural model will also change. The structural model must then be built and evaluated.

*Structural Model Results*

The structural model was evaluated to confirm that the theoretical model is supported by the data. The effectiveness of each structural path, combined predictiveness (R2), and the divergence of endogenous constructs were examined to determine the model's goodness-of-fit (Chin, 1998). Bootstrap resampling techniques checked estimation robustness.

*Testing the Hypothesized Entrepreneurship Training – Entrepreneurial Intention Model*

The structural model assessment began by identifying each model's ability to explain the variance of each dependent variable. Entrepreneurial training was classified as an exogenous variable, while attitudes, subjective norms, perceived behavioral control, entrepreneurial design, and performance were endogenous. The model's connection between these factors influencing entrepreneurial intention and performance of orange farmers was examined. Figure 3 illustrates the analysis's findings using AMOS version 20, with goodness-of-fit indices (CMIN/DF, CFI, AGFI, RMSEA) provided in Figure 3.



**Figure 3 The Results of the Hypothesized Entrepreneurship Training Entrepreneurial Intention Model**

*Goodness-of-Fit Index*

The initial model goodness-of-fit indices were  $\chi^2 = 553.487$ ; Df = 18; Cmin/Df = 30.749; RMR = 0.026; GFI = 0.755; NFI = 0.614; CFI = 0.615; RMSEA = 0.230; p = 0.000. After adjustments, the second-round results improved to  $\chi^2 = 30.823$ ; Df = 3; Cmin/Df = 1.274; NFI = 0.979; CFI = 0.980; GFI = 0.982; RMR = 0.002; RMSEA = 0.029; p = 0.000. The normed chi-square value of 1.274 is within the acceptable range of 2 or 3 (Hair et al., 2016).

GFI of 0.96, CFI of 0.98, and GFI of 0.98 are all within acceptable ranges, suggesting a satisfactory fit (Hair et al., 2016). An RMSEA value of 0.029 indicates the model fits the data well (Civelek, 2018). The hypothesized entrepreneurship training-entrepreneurial intention model is accurate for assessing causal effects and can be applied to larger samples after establishing goodness-of-fit.

*Testing Mediating Variables*

Mediation was tested according to the four stages described by Baron and Kenny (1986).

**Table 6: Model 1 Prior to the mediator's entrance**

Relationship								
			Estimate	S.E.	C.R.	P	Standardized Coefficient	Results
EI	<---	ET	<b>.151</b>	.040	3.786	***	<b>.220</b>	<b>Sig</b>

**Table 7: Model 2 After attitudes enter as a mediator 1**

Relationship								
			Estimate	S.E.	C.R.	P	Standardized Coefficient	Results
EI	<---	ET	<b>.087</b>	.037	2.333	***	<b>.127</b>	<b>Sig</b>
Att	<---	ET	.153	.040	3.888	***	.225	Sig
EI	<---	Att	.418	.055	7.627	***	.415	Sig

**Table 8: Model 3 After Subjective Norm enter as mediator 2**

Relationship								
			Estimate	S.E.	C.R.	P	Standardized Coefficients	Results
EI	<---	ET	<b>.052</b>	.036	1.441	.150	<b>.078</b>	<b>Ns</b>
Att	<---	ET	.153	.040	3.880	***	.225	Sig
EI	<---	Att	.280	.051	5.456	***	.289	Sig
SN	<---	ET	.161	.039	4.107	***	.238	Sig
EI	<---	SN	.348	.052	6.736	***	.358	Sig

**Table 9: Model 4 After perceived behavior control enter as mediator 3**

Relationship			Estimate	S.E.	C.R.	P	Standardized Coefficient	Results
EI	<---	ET	<b>.039</b>	.036	1.095	.275	<b>.062</b>	Ns
Att	<---	ET	.153	.040	3.880	***	.225	Sig
EI	<---	Att	.243	.050	4.867	***	.260	Sig
SN	<---	ET	.161	.039	4.107	***	.238	Sig
EI	<---	SN	.206	.050	4.102	***	.220	Sig
Pbc	<---	ET	.145	.036	4.035	***	.234	Sig
EI	<---	Pbc	.285	.055	5.174	***	.277	Sig

Findings for H2 through H4

Table 7 presents the findings for H2 through H4. According to Hu et al. (2018), partial mediation occurs if adding a mediator significantly reduces the c' path, whereas full mediation occurs if the reduction is negligible.

When Model 1 was tested without mediators, entrepreneurial training (ET) had a large and direct impact on entrepreneurial intention (EI). The substantial difference in parameter estimates between models 1 and 2 (p-values of 0.151 and 0.087) indicates partial mediation.

For the attitude (ATT) variable, partial mediation is supported. Including subjective norms (SN) and perceived behavioural control (PBC) mediators nullifies these effects. The difference between model 2 ( $\beta = 0.087, p = 0.001$ ) and model 3 ( $\beta = 0.052, p = 0.150$ ) suggests full mediation by SN. Similarly, the difference between models 3 ( $\beta = 0.052, p = 0.150$ ) and 4 ( $\beta = 0.039, p = 0.275$ ) indicates PBC fully mediates the link between EI and training. SN ( $\beta = 0.052$ ) and PBC ( $\beta = 0.039$ ) have no effect on EI if ATT is a mediator.

**Table 10: Results from the Mediation Effects Tests (N=282)**

Steps	Attitudes (H <sub>2</sub> )	Subjective Norms (H <sub>3</sub> )	Perceived Behaviour Control (H <sub>4</sub> )
1: X → Y	c= 0.151 p=0.000	c= 0.087 p=0.020	c= 0.052 p=0.150
2: X → M	a= 0.153 p=0.000	a= 0.161 p=0.000	a= 0.145 p=0.000
3: M (and X) → Y	b= 0.418 p=0.000	b= 0.348 p=0.000	b= 0.285 p=0.000
4: X (and M) → Y	<b>c'= 0.087 p=0.020</b>	<b>c'= 0.052 p=0.150</b>	<b>c'=0.039 p=0.275</b>
Results	<b>Partial mediation</b>	<b>Full mediation</b>	<b>Full mediation</b>

Preacher and Hayes (2014) developed a bootstrapping model for parallel mediators to clarify mediator effects. This method assesses the significance of point estimates by examining the effect's 95% confidence interval (CI). Mediation is confirmed if the CI does not include zero. The study found that the 95% CI for the indirect effect of ET on EI in the attended model is 0.299 (0.158; 0.486),  $p = .000$ , indicating significant mediation. This suggests ATT, SN, and PBC mediate the relationship between ET and EI.

Significance Test of Path Coefficient and Hypotheses Testing

The structural model evaluated potential connections using standardized pathways coefficient, critical value (C.R), and significance level (p). Table 8 presents the ET-EI model outcomes.



**Table 11: The Relationships between the Constructs in the Model**

Relationship			Model					
			Estimate	S.E.	C.R.	P	Standardized	Results
Att	<---	ET	.197	.049	4.047	***	.319	Sig
Sn	<---	ET	.281	.068	4.113	***	.324	Sig
Pbc	<---	ET	.266	.063	4.233	***	.332	Sig
EI	<---	ET	.151	.040	<b>0.579</b>	***	.220	Sig
EI	<---	Pbc	.252	.061	4.126	***	.264	Sig
EI	<---	Att	.703	.079	8.936	***	.569	Sig
EI	<---	Sn	.080	.056	<b>1.418</b>	.156	<b>.090</b>	Ns
EP	<---	ET	.171	.043	3.936	***	.223	Sig
EP	<---	EI	.666	.057	11.725	***	.664	Sig

\*\*\*Significant at the 0.001 level (two-tailed)

The study hypotheses are compared against the findings in the next part to determine which of these theories is accepted as the analysis's conclusion. Based on the outcomes of the model test, Table 12 lists the presumptions made for this survey and the statistical questions. Seven of the nine assumptions were verified by the model, as shown in Table 12, while two was not verified and was thus eliminated.

**Table 12: Summary of the Results of Hypothesis Testing**

Hypotheses	Relationship			Research Hypothesis	Model Results
H <sub>1</sub>	EI	<---	ET	The entrepreneurial intention of orange growers is positively and significantly influenced by entrepreneurship training.	<b>Not Supported</b>
H <sub>2a</sub>	ATT	<---	ET	The attitudes of orange growers in Muheza are strongly and favorably correlated with entrepreneurial training.	supported
H <sub>2b</sub>	EI	<---	ATT	Orange growers in Muheza's attitude is strongly and favorably correlated with their goal to become entrepreneurs.	supported

Hypotheses	Relationship			Research Hypothesis	Model Results
H <sub>3a</sub>	SN	<---	ET	The subjective norms of orange growers in Muheza are positively and strongly correlated with entrepreneurial training.	supported
H <sub>3b</sub>	EI	<---	SN	Orange farmers in Muheza's subjective norm is considerably and favorably correlated with their intention to become entrepreneurs.	<b>Not supported</b>
H <sub>4a</sub>	PBC	<---	ET	Entrepreneurship training has a favorable and significant relationship with orange farmers' perceptions of behavior control (PBC).	supported
H <sub>4b</sub>	EI	<---	PBC	The entrepreneurial intention of Muheza's orange growers is positively and strongly correlated with perceived behavioral control.	supported
H <sub>5</sub>	EP	<---	EI	Entrepreneurial performance of orange growers is positively and significantly correlated with entrepreneurial intention.	supported
H <sub>6</sub>	EP	<---	ET	Entrepreneurship training significantly and favorably affects the entrepreneurial performance of Muheza's orange growers.	supported

### 5. Discussion on Hypothesis Findings

#### *Influence of Entrepreneurship Training:*

This study examined the effect of entrepreneurship training on orange growers' entrepreneurial intent. The model results showed that the hypothesis was not supported ( $Y = 0.041$ ,  $C.R = 0.579$ ,  $p = 0.563$ ), indicating a positive but non-significant connection between ET and EI. These findings align with another research (Iwu et al., 2021; Fretschner & Weber, 2013).

Souritas et al. (2007) noted the challenge in explaining the insignificant influence. The results support the Theory of Planned Behaviour (Ajzen, 1991), suggesting that intention is influenced by environmental beliefs. However, these findings contrast with other studies (Li & Wu, 2019; Mohammed et al., 2017) that found significant positive effects. Differences in methodologies, variables, and participant types may account for these discrepancies (Lorz, 2011).

Despite the non-significant hypothesis test, correlations indicated a significant positive link between ET and EI (0.199,  $p < 0.05$ ). The model's mean and SD are above average (mean: 5.7483; SD: 0.63312), suggesting that entrepreneurship training impacts orange farmers' business intentions. These findings could motivate orange producers to pursue entrepreneurship after training.

#### *Influence of Attitudes*

This study explored the mediating role of attitudes between entrepreneurship training (ET) and entrepreneurial intention (EI), addressing a gap noted by Karali (2013). Hypothesis H2 posited that attitudes mediate the ET-EI relationship. The findings, shown in Table 9, support H2 and align with other research (Hardie et al., 2022; Soomro et al., 2020; Karali, 2013). However, they contrast with Tan et al. (2016), who found attitudes do not mediate this relationship.

The study demonstrated that attitudes partially mediate between ET and EI. Orange farmers who attended ET showed higher EI due to the crucial role of attitudes in developing EI. This supports the idea that cognitive

behaviours, like attitudes, link ET to EI. Fallenhofe (2017) noted the lack of research on how TPB components mediate ET-EI links, emphasizing ET's importance in shaping attitudes.

Attitudes significantly impact responses and behaviour (Liu et al., 2019). Entrepreneurship education influences attitudes and entrepreneurial intention. The study confirmed a strong positive association between ET and attitudes ( $\beta = 0.319$ , C.R = 4.047,  $p = 0.000$ ), consistent with Tshikovhi and Shambare (2015), and Alhaj et al. (2015). These findings suggest ET should aim to foster positive attitudes by providing essential knowledge and skills, equipping orange farmers for success and enhancing their entrepreneurial intentions.

According to Ajzen (1991), positive outcomes increase the likelihood of action. H2b findings show a significant relationship between attitudes and entrepreneurial intention ( $\beta = 0.569$ , C.R = 8.936,  $p = 0.000$ ), consistent with prior research (Kum and Loo, 2013; Yaqub et al., 2015; Ajzen and Fishbein, 2001). These results suggest that possessing positive attitudes positively influences entrepreneurial intentions in orange farming. While entrepreneurship training contributes to good attitudes, it explains only 31.9% of attitudes and 56.9% of entrepreneurial intention, indicating other factors, such as contextual factors, also play a role.

#### *Influence of social norms*

Social relationships, rich in information and experiences, influence emotional intelligence (EI) (Nade, 2017). This study's results, as in Table 9, confirm subjective norms (SN) moderate entrepreneurship training's impact on entrepreneurial intention, validating H3. H3a shows a significant positive association between ET and SN ( $\beta = 0.324$ , C.R = 4.113,  $p = 0.000$ ), aligning with prior research (Pratiwi & Suzuki, 2017; Welsh et al., 2016).

However, H3b posits a significant positive impact of SN on EI, as per Ajzen (1991). Close contacts shape SN, but the association between SN and EI in the model is marginally positive and not significant ( $\beta = 0.090$ , C.R = 1.418,  $p = 0.156$ ). This is supported by studies (Ridha et al., 2017; Robledo et al., 2015; Mwasalwiba, 2010) suggesting minimal influence of relatives, colleagues, and friends on orange growers' entrepreneurial intention. Yet, other research (Shiri et al., 2012; Arisandi, 2016) affirms significant positive impact of subjective norms on entrepreneurial inclination, recognizing society's influence on individual decisions.

#### *The effect of Perceived Behaviour Control*

Hypothesis 4 posited that perceived behavioral control (PBC) mediates the impact of entrepreneurship training (ET) on entrepreneurial intention (EI), consistent with findings presented in Table 9 and supported by previous research (Karali, 2013; Carr and Sequeira, 2007). However, these findings contrast with Tan et al. (2016), who found no mediating effect of attitudes.

H4a suggests a significant positive association between ET and PBC, supported by empirical research (Fallenhofe, 2017; Bird et al., 2012; Linan et al., 2013). ET significantly influences orange farmers, with a 33.2% effect, suggesting other factors, likely social and cultural environments, may explain the remaining percentage. Enhanced perception of capacity due to ET significantly increases PBC (Fallenhofe, 2017).

Similarly, H4b predicts a significant positive impact of PBC on EI, consistent with the theory of planned behavior. Control beliefs, influenced by experiences, knowledge, and perceived opportunities, determine PBC (Nade, 2017).

H4b is supported by empirical data, consistent with previous studies (Iqbal et al., 2013; Masalwiba, 2010), showing a strong PBC-EI association. In contrast, Ridha et al. (2017) and Mohammed et al. (2017) found no PBC-EI link. PBC had a 26.4% influence on EI, possibly due to ET's content and suitability for farmers. Other unexamined characteristics may explain the remaining percentage.

#### *The influence of entrepreneurial intention to performance*

Hypothesis 5 is affirmed by this study, showing a positive correlation between orange producers' entrepreneurial performance and intention. This aligns with prior research (Martin, 2012; Van Gelderen et al., 2010; Souritas et al., 2007), indicating a significant relationship. An entrepreneurial mindset aids farmers in making successful decisions, adapting to challenges, and seizing opportunities. Liu et al. (2019) suggest entrepreneurial intent can mitigate risks and capitalize on opportunities in production and marketing.

#### *The effect of entrepreneurship training on entrepreneurial Performance*

Hypothesis 6 is supported: orange farmers' entrepreneurial intention positively correlates with entrepreneurship training. This aligns with prior studies (Mayuran, 2016; Heenkenda and Chandrakumar, 2016; Kumar et al., 2013; Lazim, 2015; Titianne, 2013; Taghibeygi et al., 2015; Muhara, 2012; Mwasalwiba, 2010; Rokani et al., 2014; Onyango, 2014; Noor and Dola, 2011). However, Simon's (2004) research found no significant impact on performance. Entrepreneurship training boosts income and productivity, corroborating Elert et al.'s (2014) findings on income increase and business performance enhancement.

Hypothesis 6 is confirmed: orange farmers' entrepreneurial intention is significantly linked with entrepreneurship training, consistent with various studies. Simon (2004) found no significant impact on performance. Entrepreneurship training has mixed effects on performance, per Zampetakis, Anagnosis, and Anagnosis (2014). The study also found that it enhances entrepreneurial performance by increasing income and productivity, aligning with Elert et al.'s (2014) findings. However, while training boosts revenue and profitability, it doesn't guarantee business survival, according to Elert et al.'s study.

The study aligns with Van Vuuren and Nieman's (1994) model, suggesting entrepreneurial skills, gained through training, influence performance. Entrepreneurship training significantly boosts orange producers' performance, with participants demonstrating 64% performance ( $R^2 = .640$ ), validating Hypothesis 6. The findings indicate that training benefits farmers, fostering independence, creativity, and competitiveness, thereby improving performance. Offering such training enables farmers to creatively address agricultural challenges, engage in commercial farming, and achieve sustainable development. Additionally, the study validates the conceptual model, revealing entrepreneurship training's direct and indirect support for farmers' entrepreneurial intention and performance, with implications discussed in subsequent sections.

## 6. Study's Implication

The study reveals that entrepreneurship training directly and indirectly impacts orange farmers' intention, emphasizing the significance of integrating ET, EI, and EP in this context. It confirms the mediating role of ATT, SN, and PBC in linking ET to EI, expanding prior research focused on TPB antecedents. By elucidating the mediating effects of cognitive determinants, the study contributes to entrepreneurship literature. The framework developed can be applied in various farmer settings and business sizes, offering insights into how ET influences EI and EP. The findings advocate for an intention-focused approach to entrepreneurship training, aligning with Kuratko (2005). They inform the design of strategies to enhance farmers' entrepreneurial intention and performance. This study underscores the learnability of entrepreneurial skills, abilities, and attitudes, illustrating their impact on intention and performance.

This research emphasizes the importance of entrepreneurship education, filling a gap in understanding how it impacts attitudes, subjective norms, and perceived behaviour control. It highlights the significant and positive connection between entrepreneurship training and these variables, underscoring their relevance in shaping entrepreneurial intention and performance. By elucidating the role of cognitive variables in forming entrepreneurial hypotheses, it advances entrepreneurship research. The study's focus on orange growers in Muheza, Tanzania, adds practical significance, confirming that entrepreneurship training influences intention and performance among practicing entrepreneurs, especially in non-academic contexts like agricultural settings. This empirical evidence is particularly valuable given the scarcity of such studies outside developed nations and academic environments.

There's a gap between entrepreneurial intention (EI) and its practical application, especially among farmers. Tailored programs to enhance entrepreneurial intent and performance, particularly in agricultural techniques, could be beneficial. Farmers should adjust their attitudes toward entrepreneurship to boost intention and ultimately performance. Entrepreneurship training significantly impacts farmers' intention and performance, underscoring the need for supportive policies and legislation to encourage entrepreneurial activity. Policy interventions focusing on developing entrepreneurial skills and attitudes can bolster farmers' performance, contributing to sustainable agricultural development and economic growth. Access to entrepreneurship training should be facilitated through policy support to foster a culture of entrepreneurship among farmers and drive local economic development.

## 7. Conclusion And Recommendation

Orange farmers who undergo entrepreneurship training show positive entrepreneurial intention, indicating the efficacy of such programs. However, the study suggests further efforts to provide farmers with entrepreneurial

training. This training directly and indirectly influences farmers' intention and performance. Enhancing entrepreneurial performance through training is recommended. Academics should prioritize factors like entrepreneurial ambition. Government, policymakers, and trainers should intervene by improving access to entrepreneurship training, modern agricultural technologies, and farm management skills to bolster farmers' entrepreneurial intent, fostering sustainable economic practices in agriculture.

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