The Effectsof Entrepreneurial competencies on Start-up Success of Graduate Business Owners: The Case of Entrepreneurship Development Centre Trainees

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Abstract: *The purpose of this study was to investigate entrepreneurial competencies of graduate business ownersof EDC trainees (Entrepreneurship Development Centre of Ethiopia) and its effect on startup success. Descriptive and explanatory method was applied. The population of the study included all the four-round trainee of the Entrepreneurship workshop training of the November and Dec, 2019 hosted by the EDC of Ethiopia in partnershipwith Federal Urban Job Creation and Food Security Agency, Ministry of Urban Development and Housing and UNDP. Using random sampling technique 202 trainee's country wide were selected using yemane's sample size calculation formula from the total population of 410. The required data is obtained through structured questionnaires and it was adopted from two prior related studies: The questionnaire was based the personal entrepreneurial competencies (PECs), adopted from four research works. To check the reliability and validity of the adopted instruments the Cranach's coefficient alpha test and the content validity test was carried out. In the analysis descriptive statistics, correlation analysis and multiple regression analysis was performed. The descriptive finding of the study shows that that the development of personal entrepreneurial competencies of graduate business owners are moderate. The correlation analysis revealed that all the alternative hypotheses were supported. Based on the findings of the study, the researcher recommends that trainer organizations and the government should work on developing and equipping graduated business owners with competencies in a way that they can able to succeed in their respective business.*

Key Words: Entrepreneurship, Entrepreneurial Competency, Startup Success, Graduate business owners

Introduction

This study addressed the effects of personal entrepreneurial competencies on startup success of graduate business ownersof EDC trainees in Ethiopia. For a nation which is expected to be more than one hundred million nowadays, relying largely on government provided job opportunities is not sufficient to address the growing number of graduates under the ongoing expansion of private and public higher education institutions. Governments and policymakers emphasize the important role of universities in promoting start-up intentions among students in many countries, (Zarefard and Cho, 2018). It is believed that innovative start-ups can boost economies and, in turn, decrease the unemployment rate (Backes-Gellner & Werner, 2007; Mueller, 2011). The findings of Pihie&Arivayagan (2016) suggests

that, many employers are seeking for students with entrepreneurial mindset because students who have an entrepreneurial mindset are accountable for their own actions, brings new perspectives and youthful ideas into the workplace. With growing education particularly, the technical education, a big mass of youth turns to new business ventures (Asvoll 2012). Entrepreneurship education is essential not only to shape the mind sets of young people but also to create opportunity, ensure social justice, install confidence and to stimulate the economy (Shahiwala 2017).

Entrepreneurial competencies are a constellation of factors that are required by an entrepreneur to generate a business venture. These entrepreneurial competencies determine the success or failure of a business. Entrepreneurial competency is a wide-ranging concept which deals with knowledge, ability, skill, aptitude, entrepreneurial motivation, and so on which help the entrepreneur to transform his/ her ideas into a successful business venture. Entrepreneurial competencies as clusters of associated knowledge, attitudes, and skills which an entrepreneur must obtain through managerial training and development that will enable him to produce outstanding performance and maximize profit while managing a business venture or an enterprise. They pointed out that entrepreneurial competencies consist of time management, marketing management, business ethics, leadership, decision-making, and financial management (Inyang &Enuoh, 2009).

Modak et al., 2018 studied entrepreneurial competencies of post graduate students in agriculture and concluded that Among different component traits of entrepreneurial competency, information seeking behavior, concern for high quality work and efficiency orientation were important. Socio-personal characters like knowledge of different languages, fathers' education and risk orientation had positive impact and academic performance and agricultural business anxiety had negative impact on possession of entrepreneurial competency

Entrepreneurship competencies combine creativity, a sense of initiative, problem-solving, the ability to marshal resources, and financial and technological knowledge. These competencies enable entrepreneurs and entrepreneurial employees to provoke and adapt to change. They can be developed through entrepreneurship education and training that focus on promoting an entrepreneurial mindset and behaviors (OECD, 2018).

Statement of the Problem

Entrepreneurship is currently regarded as a solution for socio-economic development given the growth of new business worldwide, Global Entrepreneurship Monitor, 2019. Regardless of graduates' career options (being self- employed or get hired by organizations), governments are keen to equip them with entrepreneurial competencies as the employment choice of present-day businesses are inclined to graduates who are having entrepreneurial mindset. Thus, study was carried out in response for some theoretical and empirical suggestions by previous researchers regarding the positive relationship that personal entrepreneurial competencies have on startup success. The European commission enterprise directorate general, (2002) found out that the importance of entrepreneurship is widely recognized today as a basic skill to be provided through life-long learning, and interesting experiences exist already in all countries. Hofer et al., 2013, added also that, successful entrepreneurs follow a learning journey, which starts in education and continues with learning-by doing processes; both formal and informal learning inside and outside the firm. Furthermore, there is a theoretical and empirical support that has been given for the positive association between personal entrepreneurial competencies and business startup success (Chandler and Jansen, 1992; Bird, 2002; Turker et al., 2005; Bautista, et al. 2007 and Mitchelmore & Rowley 2010;Patricia, et al., 2019). Moreover, there is also evidence that developing entrepreneurial skills among entrepreneurs contributes to profitability and growth (Chandler and Jansen,

1992). Likewise, Onstenk (2003) and Modac et al., (2018), maintains that proper entrepreneurial competencies are required to successfully start, operate and ensure the survival of a new business in the marketplace.

Personality traits, organizational factors, and environmental factors have been studied by entrepreneurship researchers as causes of new venture success; (Aldrich &Wiedenmayer, 1993, Baum and Locke 2004). In recent years, significant relationship between entrepreneurial competencies and firm performance has been reported in empirical studies (Xiang, 2009). But, the role of skills developed through training gets fewer attention in prior studies becoming the focus area of the researcher in the field.

Objectives of the Study

The main objective of this study was to investigate personal entrepreneurial competencies of graduate business owners and its effect on startup success. Specifically, it was designed to assess:

- The development of personal entrepreneurial competencies of graduate business owners EDC trainees.

- To what extent their business is succeed.

- To assess the relationship between personal entrepreneurial competencies of graduate business owners and their startup successof EDC trainees.

- To assess the effect of personal entrepreneurial competencies of graduate business owners on startup successof EDC trainees.

Research Hypothesis

In order to answer the third and the fourth objectives, the researcher hypothesized the objectives as follows. For simplicity, only null hypothesis is written.

- H_0: There is no significant relationship between entrepreneurial competencies (i.e. persuasion and networking, independence and self-confidence, opportunity identification and taking initiative, persistence, commitment

to work contract, demand for quality and efficiency and risk taking) on startup success of graduate business owners of EDC trainees.

- H0: Personal entrepreneurial competencies (i.e. persuasion and networking, independence and self-confidence, opportunity identification and taking initiative, persistence, commitment to work contract, demand for quality and efficiency and risk taking) have an effect on startup success of graduate business owners of EDC trainees.

Research Methodology

The population of the study included all the four-round trainees of the Entrepreneurship workshop training on the months of November and December, 2019 hosted by the Entrepreneurship development Center (EDC) of Ethiopia in partnership with Federal Urban Job Creation and Food Security Agency, ministry of urban development and housing and UNDP. The total population of the study was taken from the EDC trainees in four consecutive schedules, 202 samples are taken using systematic random sampling techniques from the total population of 410 trainee's country wide. The required data is obtained through structured questionnaires and it was adopted from two prior related studies: The questionnaire was based the personal entrepreneurial competencies (PECs), was adapted from the work of McClelland (1987) and Management Systems International (MSI) and McBer Team as cited by Azarcon and Roy (2008). Descriptive and explanatory method was applied. The study endeavored to answer the research questions through employing quantitative research method. Both descriptive survey and explanatory research designs were employed. The reason for planning to use a descriptive survey was to assess the selected personal entrepreneurial competencies and its effect on startup success of graduates who trained by EDC of Ethiopia. Explanatory research design, on the other hand, was used to understand the effect and relationship of such competencies on Startup success of graduate trainees. The dependent

variable is startup success and the independent variables are: persuasion and networking; independent and self-confidence;opportunity identification and taking initiative; persistence; commitment to work contract;risk taking and demand for quality and efficiency. Here, it is important to note that not all items were adapted from previous established studies; efforts were made to ensure their reliability and validity. Prior to the main study a pilot test was conducted and Cronbach's alpha computed is .825 for all and it is above 0.70 for each item. These scale reliabilities were considered acceptable based on Nunnally's (1978) criterion of 0.70 or greater.

Analysis of the data was carried out using both descriptive (mean and percentage from central tendency and standard deviation from dispersion) and inferential statistics (correlation and regression). Statistical software named statistical package for social science (SPSS) was applied for statistical calculations.

Results and Discussion

Out of the 202 questionnaires prepared and distributed, 184 of them were returned successfully and found usable for analysis. Thus, response rate of the questionnaire was 91.1%. For the purpose of descriptive statistics, the researcher used a Likert scale of 1 - 5 where 1 is never (N), 2 is rarely (R), 3 is sometimes (S), 4 is usually (U) and 5 is always (A) the researcher also pre-assumes the value of mean and standard deviation as follows: Where a mean score<1.50 means never, 1.51 – 2.50 means rarely, 2.51–3.49 means sometimes, 3.50 – 4.49 means usually and >4.50 always. The strength of category response was supported by Zedatol and Bagheri (2009) mean score 3.80 and above is consider high, 3.40-3.79 is moderate and 3.39 and below is low. On the other hand, a less than 1 standard deviation is considered.

Table 1 descriptive statistics for independent and dependent variables (n=184)

Variables	Minimum	Maximum	Mean	Std. Deviation
Persuasion and networking	1.94	4.24	3.1341	.34518
Independence and self-confidence opportunity identification	2.01	4.30	3.4812	.40265
and taking initiative	2.00	4.10	3.1325	.39659
Persistence	2.00	4.30	3.2775	.36847
Commitment to work contract	2.40	4.10	3.2887	.32453
Demand for quality and efficiency	1.80	4.42	3.1285	.50372
Risk taking	2.20	4.80	3.5254	.44414
Startup success	2.00	4.75	3.5227	.51156

Source: primary survey, 2019

Table1demonstrates that, central tendencies measurement and dispersion of constructs for dependent variable i.e. startup success and independent variables i.e. persuasion and networking; independence and self-confidence opportunity identification and taking initiative; persistence, commitment to work contract; demand for quality and efficiency and risk taking that results from different items in each variable according to respondents. According to table 1 respondents overall mean of entrepreneurial competencies falls below 3.50 which is under the category of sometimes. According to Zedatol and Bagheri (2009) a mean score 3.39 and below is low. The mean score of independence and self-confidence and risk taking is 3.48 and 3.52 respectively. According to Zedatol and Bagheri (2009) mean score falls in between 3.40-3.79 is considered moderate. This result is supported by

the finding of Zhao et al. (2010) conducted a study to predict the factors that influenced entrepreneurial intention in doing business. In addition, standard deviation of each independent variables is in between 0.3 and 0.6 which shows that over all variation of respondent from mean is low. In addition, the overall mean value of startup success is 3.52, implies startup success as a result of the entrepreneurship training is good.

Inferential Analysis

For Pearson's correlation and linear regression, in particular, the parametric ones presume for this study and pre-test is done to fulfil assumption of parametric statics which is not violated.

Correlation Analysis

According to Zou, et al., (2003), the degree of correlation is determined as follows: when r is in between .10 to .29 or –.10 to –.29 the relationship is low. When r is in between .30 to .49 or –.30 to –.49 the relationship is considered medium and finally when r is in between .50 to 1.0 or –.50 to –1.0 indicates strong relationship.

Bivariate correlations which test the strength of the relationship between two variables without giving any consideration to the interference some other variable might cause to the relationship between the two variables being tested.

Table 2 Pearson's product moment correlation between study variables (n=184)

Variables	CSS	CPN	CISC	COI	CPR	CCWC	CDQC	CRT
CSS	-							
CPN	.435	-						
CISC	.486.	.459						
COI	446	.371	.365	-				
CPR	.424	.245	.435	.451	-			
CCWC	.546	.564	.372	.287	.266	-		
CDQE	.441	.586	.367	.238	.204	.236	-	
CRT	.365	.375	.357	.224	.254	.269	.196	-
Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.000

Source: survey result, 2019

Hypothesis 1 (A) – H_0: There is no relationship between persuasion and networking and startup success of graduate business owners of EDC trainees.

As indicated on the table above there is a direct correlation between the two hypothesized variables, (R=435, n=184, P<.05) showing a moderate relationship according to Zou, et al., (2003). The result suggested that the more we train them the better we get in terms of entrepreneurial success during startups.

Hypothesis 1 (B) - There is no relationship between independence and self-confidence startup success of graduate business owners of EDC trainees.

The result of the above hypothesis from the table showed that there is a direct correlation between the two hypothesized variables, (R=486, n=184, P<.05) showing a high relationship according to Zou, et al., (2003). The result suggested that the more we train them the better we get in terms of entrepreneurial success during startups.

Hypothesis 1(C) -H_0: There is no relationship between opportunity identification and taking initiative and startup success of graduate business owners of EDC trainees.

As it is showed in table 2, there is direct correlation between the two variables [R=.446, n=184, p<.05]. According to Zou, et al., (2003), the degree of relationship is almost considered as high. This indicates that with high efforts are made by graduates in identifying opportunities and taking initiative is associated with higher chance of success during startups. Thus, according to respondents result of null hypothesis is rejected and alternative hypothesis is accepted.

Hypothesis 1(D) - H_0: There is no relationship between persistence and startup success of graduate business owners of EDC trainees.

Table 2 also shows that Pearson Correlation, R-value between persistence and startup success is 0.424 whereas n=184 and p<.05, this represent that there is a positive relationship between persistence andstartup success of graduate business owners in Ethiopia. According to Zou, et al., (2003), the degree of relationship is considered as moderate because the value of (R = .424) is in between the coefficient range of .30 - .49. Thus, persistence leads to increase in the chance of business success.

Hypothesis1(E) - H_0: There is no relationship between commitment to work contract and startup success of graduate business owners of EDC trainees.

Table 2 shows that Pearson Correlation between commitment to work contract and startup success of graduate business owners in Ethiopia, (R= 0.546, n=184, and p<.05).This implies that there is a positive relationship between commitment to work contract and startup success. According to Zou, et al., (2003), the degree of relationship is considered high because the value of (R = .585) is above the coefficient range of .50. As such, commitment to work contract leads to increase in the chance of succeeding in business.

Hypothesis 1(F) - H_0: There is no relationship between demand for quality and efficiency startup success of graduate business owners of EDC trainees.

Pearson Correlation between demand for quality and efficiency and startup success of graduate business owners in Ethiopia, R-value is 0.441, n=181, p <. 05) as shown in table 2 above implies that there is a positive relationship between demand for quality and efficiency and startup success. According to Zou, et al., (2003), the degree of relationship is considered as moderate because the value of (R = .441) is in between the coefficient range of .30 - .49. As a result, demand for quality and efficiency leads to increase in startup success of graduate business owners of EDC trainees.

Hypothesis 1(G) - H_0: There is no relationship between risk taking and startup success of graduate business owners of EDC trainees.

As it is shown above there is direct correlation between the two variables [R=.365, n=184, p<.05]. According to Zou, et a.l., (2003), the degree of relationship is considered as moderate because the value of (R = .365) is in between the coefficient range of .30 - .49. Thus, according to respondents result of null hypothesis is disproved and alternative hypothesis is accepted.

Multiple Regression Analysis

The researchers used Multiple Regression Analysis to determine the significant relationships or impact between independent variables (opportunity identification and taking initiative, persistence, commitment to work contract, demand for quality and efficiency and risk taking) and dependent variable (startup Success).

Hypothesis 2(A) - H_0: selectedpersonal entrepreneurial competencies have no effect on the startup success of graduate business owners of EDC trainees.

Table 3 multiple regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.784[a]	.521	.536	.34431

a. Predictors: (Constant), Independence and self-confidence, Persuasion and networking, Risk taking, Demand for quality and efficiency, Persistence, Commitment to work contract, opportunity identification and taking initiative
b. Dependent Variable: Startup Success
Source: Ownsurvey, 2019

Based on the Model Summary in table 3, the correlation coefficient (R value) for this research is 0.784. This means that there is a positive and significant relationship between dependent variable (startup success) and independent variables (Independence and self-confidence, Persuasion and networking,opportunity identification and taking initiative, persistence, Commitment to work contract, Demand for quality and efficiency and Risk taking because R value is positive value and 0.784 is fall under coefficient range 0.40 to 0.80. The R Square indicates the extent orpercentage the independent variables can explain the variations in the dependent variable. In this research, independent variablescan explain 52.1 %(0.521) of variationsin dependent variable. However, it is still leave 47.9% (100% - 52.1%) unexplained in this study. In other words, there are other additional variables that are important in explaining startup success that have not been considered in this research.

Table 4 multiple regression ANOVA SPSS output

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	42.672	5	7.932	75.224	.000[b]
	Residual	36.623	296	.134		
	Total	74.725	301			
a. Dependent Variable: CSS						
b. Predictors: (Constant), CRT, CDQE, CPR, CCWC, COI, CISC, CPN						

Source: survey result, 2019

In the ANOVA table 4, it shows that the F value of 75.224 and the p-value is 0.000 which is less than 0.05 (p< 0.05) so significant at the 0.05 level. Overall, the regression model with those seven independent variableswas suitable (statically significant) in explaining the variation in startup

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1.352	.263		-5.641	.000	-1.999	-.965					
	PN	.224	.054	.287	3.543	.000	.127	.436	.547	.349	.235	.888	1.459
	ISC	.312	.072	.396	3.945	.000	.192	.324	.211	.326	.127	.821	1.432
	OI	.353	.058	.249	5.322	.000	.194	.422	.496	.296	.206	.749	1.336
	PR	.192	.062	.132	2.952	.003	.061	.305	.424	.169	.115	.756	1.322
	CWC	.571	.067	.391	9.238	.000	.485	.747	.585	.473	.358	.842	1.188
	DQE	.245	.042	.240	5.854	.000	.162	.326	.441	.322	.227	.896	1.116
	RT	.127	.048	.189	3.234	.003	.051	.239	.365	.174	.118	.875	1.142
a. Dependent Variable: Startup Success													

Source: from survey, 2019

To examine the effect of personal entrepreneurial competencies on startup success, multiple regression analysis has done.In order to see the contributions of the different variables it is important that to look at the standardized coefficients of the analysis in table 5.The Beta value for the predictor variable (Persuasion and networking) is .287 at (t=3.543, P=0.000), (Independence and self-confidence) is .396 at (t =3.945, P=.000), (opportunity identification and taking initiative) is .249 at (t = 5.322; p = 0.000), (persistence) is .132 at (t = 2.952.; p =0.003), (commitment to work contract) is .391 at (t =9.238; p = 0.000), (demand for quality and efficiency) is .240 at (t= 5.854; p=0.000), (risk taking) is .189 at (t=3.234; p=0.003). Here, the largest beta coefficient is .396, which is independence and self-confidence, makes the strongest unique contribution in explaining startup success.

In order to construct a regression equation, it is important to look at the unstandardized coefficient values listed on table 5 above. The regression equation for personal entrepreneurial competencies and startup success of graduates with r square of 52.1% is:

Startup Success = -1.352+.244 (PN) +.312(ISC)+.353 (OI) +.192(PR) +.571 (CWC) + .245(DWC) +.127 (RT)

The unstandardized coefficient of Persuasion and Networking (B=244) implies startup success of graduate business owners increased by 24.4% as their effort to persuade and networking with people increased by 1. The implication of Beta value is similar for the remaining variables.

Conclusions

Result from central tendency and dispersion shows that perceptions of the development of entrepreneurial competencies with respect to variables selected for this study purpose and their effect on startup success is low exception independence and self-confidence and risk taking which was moderate. On another hand, result from correlation show that there is positive relationship between the selected entrepreneurial competencies and startup success. Lastly, result from regression analysis reveals that each selected entrepreneurial competency has a power to influence startup success of graduate business owners. Generally, this research supported that all the variables considered in this research has an effect on startup success.

Recommendations

Since the findings of the study suggested, the government should focus on developing graduate business owner's potential through entrepreneurship competency training with different stakeholders (government agencies and concerned NGOs). The contents of the training should include: problem identification with seeing feasible solutions, taking initiation for actions, extend an opportunity in to new areas, products or service, seize unusual opportunities to start a new business, obtain financing, equipment, land, work space or assistance. Moreover, they should focus also on determination /persevere in the face of obstacles in a way that when most people tend to abandon an activity, they stick with it and taking personal responsibility for the performance necessary to achieve goals and objectives. They also need to be learned to keep their promises, no matter how great the personal sacrifice; doing things with passion, being obsessed by the need to improve quality, to do something better, faster or cheaper. Additionally, they also need to be independent to take actions by their own and confident for their own actions. Lastly, calculated risk-takingpropensity should be their life principles.

Entrepreneurial competencies are different categories, there are also functional competencies focusing on how to get and manage finance; managerial competencies that are important for potential entrepreneurs, such kind of studies should be conducted in consecutive researches.

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Declaration

I, Getnet Worke, declare that the research work entitled "The Effects of Entrepreneurial competencies on Start-up Success of Graduate Business Owners: The Case of Entrepreneurship Development Centre Trainees", is outcome of my own effort and all sources of materials used for the study have been duly acknowledged.

Getnet Worke Abate

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