ASSET CAPITALISATION AND FIRM PERFORMANCE: A COMPARATIVE STUDY OF SELF-EMPLOYED VOCATIONAL AND NON-VOCATIONAL GRADUATES IN ARUSHA AND DAR ES SALAAM, TANZANIA

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Abstract
Despite the importance of assets capitalisation, studies show doubts whether such capitalisation contributes to business performance. This paper thus, determines the performance of businesses owned by Vocational and non-Vocational graduates, compares performance in terms of revenue and net worth, and determines the assets capitalization effect on revenue. The study adopted a descriptive cross-sectional survey design and the sample size was 384 respondents. Descriptive statistics, independent samples t-test and multiple linear regression were used to analyse data. With descriptive statistics, results indicated that Vocational graduates' performance was numerically higher than non-Vocational graduates. However, independent samples t-test results indicated F (382) = 0.579, p = 0.563 and F (382) = 0.801, p = 0.422 for revenue and net worth respectively, indicating insignificant difference in performance between the groups. The results deviate from the Human Capital Theory, probably due to the facts that vocational graduates in the country are said to be partially trained as compared with developed nations. Multiple linear regression results indicate that property, plant and equipment (β = 0.500, p = 0.000), total business' assets (β = 0.090, p = 0.046), years' experience in business (β = 0.379, p = 0.000) and education level of business owner (β = -0.065, p = 0.025) had a significant influence on revenue. These findings help to conclude that there is no significant difference in performance between Vocational and non-Vocational graduates. However, both groups were able to utilize assets and their experience in business to generate more revenue, thus a need to extend the Human Capital Theory to include tangible capital to fit the new context is inevitable. Therefore, it is recommended that experience in business and investment in assets should be given priority by policy makers and self-employed.

Key words: *Capitalisation, Business performance, Self-employment, Vocational, non-Vocational graduates*

1. INTRODUCTION
The global economic problems experienced in recent years and the increasing world population have led to the failure of many countries to absorb the increasing demand for wage employment in the labour market (Palaskasy, *et al.*, 2015; Choudhry, *et al.*, 2012 and Junankar, 2011). Specifically, youth unemployment has become one of the major policy challenges facing many nations across the globe (ILO, 2015). Youth unemployment and poverty, not only affect the economic growth potential of a country, but can also create the conditions for social-political unrest, and cause a negative influence upon the social and political stability of countries (Hicks *et al*., 2016; Maduka, 2015 and IOM, 2009). Moreover, the increasing intensities of unemployment decrease prospects for getting paid employment among graduates; as a result majority of the graduates resort to enter into self-employment activities (Kautonen, et *al.*, 2010; Dawson, *et al.*, 2009 and Hughes, 2006). Self-employment in business (Micro, Small, or Medium Enterprises) plays an important role of reducing poverty and unemployment in the majority of developing nations (Wekesa, *et al.*, 2016; Islam *et al.*, 2011 and Okpara, 2011).

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Self-employment in business is linked to job and wealth creation and thus poverty reduction among poor and disadvantaged communities in developing countries (Sagire, 2017).

Several studies have reported that Vocational Education and Training (VET) play a major role in reducing unemployment and improved business performance in comparison to the general education system, as it imparts handson technical education and skills relevant for self-employment to artisans and entrepreneurs (Agrawal, 2013, DeJaeghere, 2013 and Sabates *et al.*, 2012). VET was intended to prepare its graduates to have passions for a vocation or a specialist career and so it is directly linked to a nation's productivity in various sectors of the economy (Nkebukwa and Luambano, 2018). Therefore, it is argued that VET can reduce the unemployment challenge, one of the most pressing social and economic problems facing less developed countries today through self-employment (Hicks *et al*., 2016).

Performance of businesses owned by the self-employed has been given a crucial and significant attention by many international and government institutions in the emerging economies as a strategy to achieve sustainable economic development and poverty reduction (URT, 2012 and Ihua, 2009). In Tanzania, more than 850,000 graduates enter the labour market annually, however the formal sector can only absorb 50,000 to 60,000 of the graduates (LO/FTF, 2018). The low absorption rate of graduates in the formal sector raises unemployment condition and thus force a large number of the graduates to opt for self-employment in the informal sector as an alternative. It is estimated that about 95% of the informal sector businesses are Micro, Small and Medium Enterprises (MSMEs) and have contributed to the Gross Domestic Product (GDP) growth from 27% in 2010 to 35% in 2016 (TanzaniaInvest, 2019 and URT, 2012). It is approximated that there are more than 3 million MSMEs in the country, employing more than 5 million people with a large proportion of the businesses operating in the informal sector and employing 62.5% of the yearly urban labour force, which is higher than the estimated 8.5% by the formal sector (ESRF, 2016).

Despite the increasing contribution of the MSMEs to the country's GDP, the majority of them (66.4%) (URT, 2012) are excluded from access to finance, which is essential for business asset capitalisation and working capital purposes, both in urban and rural areas. Asset capitalisation is the investment or expenditure on long term assets used in business for the purpose of enhancing business performance by supporting high output rates and generation of revenue. It is argued that business performance is an important factor in order to gain competitive advantage and superior productivity (Shaffril and Uli, 2010). Without superior performance businesses cannot survive (Sulaiman *et al.*, 2015). Herciu and Ogrean (2008) argue that business performance is influenced by an optimal combination of assets, both tangible and intangible. Tangible capital includes current and non-current assets (known as property, plant and equipment), which may include land, buildings, equipment, automobiles and furniture (Mawih, 2014). Intangible capital (IC) refers to human capital, software, consumer networks, rights related to intangible property, research and development, process technology, business and owner preparation (Matarneh, 2014; Cooper *et al.*, 1994). Intangible capital has been defined as things that can be formalized, captured and exploited to produce higher value assets. In a similar way, Osinski *et al*. (2017), OECD (2008), and Edvinsson and Malone (1997) define IC as knowledge that can be converted into value. Small businesses with high amounts of these resources are in a better position to survive environmental shocks and have better performance than those without such resources.

For a business to achieve a desired performance level, it needs tangible assets appropriately combined with human capital to convert raw materials into finished goods or services (Mawih, 2014). Business performance can be captured by the output rates, the amount of revenues, reduction in operational costs used to achieve target levels of earnings by using a given level of assets well combined with human capital over a given period of time (Shaffril and Uli, 2010;

Coleman, 2007). Net profits are the standard measure of a business's ability to generate revenues in excess of operational costs (Okafor, 2012). This achievement is very essential for continued existence and growth of a small business (Fatoki, 2011; Harber and Reichel, 2005; Rodriquez *et al.*, 2003). Human capital comprises various factors, including education, relevant business experience and skills (Okafor, 2012). It also includes factors such as family background, and direct presence of the owner (s) /partners in the business. In fact, the educational level of the owner-manager and that of employees have a significant effect on the survival and growth of a firm (Okafor, 2012; Bashir *et al.*, 2011, Coleman, 2007; Pena, 2002).

Several authors have revealed that asset capitalisation has a positive influence on small business performance (Wakesa *et al.*, 2016; Sulaiman *et al.*, 2015; Shaffril and Uli, 2010). Fabling and Grime, (2007) argued that appropriately combined business assets have strong relationships with the success rate of businesses and their earnings levels. In order to achieve desired earnings, a business needs to create and gain competitive advantages in regard to business competitors (Barney and Arikan, 2001). Competitive advantage is associated with how a business utilizes its resources within the business and in the market (Barney, 2002). Within the business assets, utilization refers to maximum usage of assets to produce appropriate products and services in the industry in which the business operates, while in the market, resource utilization refers to marketing strategies used to get items or services produced sold to customers (Fabling and Grime, 2007).

Studies indicate that besides the contribution of VET to self-employment and better business performance, such as improved profitability, productivity for businesses and more economic growth for countries at large (Cedefop, 2013), VET has also proved to have a number of non-economic benefits, such as greater job satisfaction for individuals, lower absenteeism for employed graduates and low crime rate in societies (Lochner, 2010). Despite the growing economic and social significance of VET elsewhere in the world (Cedefop, 2011; Carneiro *et al.*, 2010; Ryan, 2002; Heckman, 2000; Acemoglu and Pischke, 1999), studies in Tanzania, mainly have focused on women's participation in vocational studies, vocational graduates' tracer studies and employer's survey with regard to employability and the performance of individual graduates in wage employment in different sectors of the economy (Luoga, 2017; VETA, Enclude, Cinop and Nuffic, 2013 and VETA, 2010). Cedefop, (2013) notes that from a policy viewpoint, it is useful to know the different types of benefits brought by VET and general education. However, lack of adequate studies and relevant data on the majority of the countries pose a challenge. Thus, a study to compare how various assets employed in businesses owned by VET and non-VET graduates have potential to increase business performance in terms of revenue and business net worthiness between VET and non-VET graduates was necessary.

In the context of Tanzania however, some businesses run by self-employed graduates have been reported not to perform well in terms of revenue and earnings (Haji, 2015; VETA, 2010 and Shitundu, 2003). In view of this situation, it is questionable whether investment in assets for small businesses in the country contributes significantly to the better business financial performance of self-employed VET and non-VET graduates. Thus, the study intended to determine the performance of businesses owned by VET and non-VET graduates, compare business performance in terms of revenue and net worth, and determine asset capitalisation and selected socio-demographic variables effect on revenue. Based on the study objective, it was hypothesised that performance of businesses owned by self-employed VET and non-VET graduates significantly differ in performance. Therefore, the scope of this paper is limited to performance comparison between VET and non-VET graduates and how asset capitalisation and socio-demographic factors as inputs influence revenues as an output for businesses owned by VET and non-VET graduates in the study areas.

2. THEORETICAL REVIEW

The paper was guided by the theory of Human Capital, which states that the more one invests in their education, the more returns they should receive in the form of earnings (Brixy and Hessels, 2010). The Human Capital Theory states that skills obtained through education and experience in one's lifetime are what develop an intuition for successful business behaviour due to a broad set of skills that are transferable among occupations (Schultz, 1993). Moreover, the theory suggests that individuals possess skills that are directly relevant to their occupations (OECD, 2001 & Rastogi, 2000). For example, having education and work experience in the auto mechanic field should result in higher economic success for an individual starting an auto shop compared to having an education and experience in music trying to start the same auto shop. In this sense, VET graduates with specific vocational educational skills and experience in particular fields should theoretically have more advantages compared to those with general educational skills and experience doing a similar business when looking at the success of the business. In the context of this study, the physical capital and human capital were factors considered to influence business performance. However, human capital in terms of educational skills, business experience, sex, age and marital status were given precedence as they are considered the main drivers that make capitalised physical assets either perform better or not. Thus, the theory of human capital is tested in this paper by examining the extent to which asset capitalisation influenced business performance between self-employed vocational and non-vocational education graduates in the study areas.

3. METHODOLOGY

The study was conducted in Dar es Salaam and Arusha Cities, Tanzania. Dar es Salaam was chosen because it had the highest record of VET centres with more than 75 VET centres and 263,574 VET graduates over a period of four (4) years from 2012 to 2015. Arusha was chosen because it was among the major cities in Tanzania with 52 VET centres which is more than other comparable major cities in Tanzania (URT, 2016), both privately and publicly owned. In comparison with other major cities, the total number of VET graduates in Arusha was 100,642 which is higher than other major cities such as Tanga (24,208 graduates), Mwanza (17,994 graduates) and Mbeya (11,349 graduates) over a period of four years from 2012 to 2015 (URT, 2016). The study adopted a cross-sectional research design since it facilitated collection of data more or less simultaneously, examined once at a single point in time, and it was possible to determine relations among business asset capitalization, socio-demographic factors and performance indicators (Bryman and Bell, 2011). The design also enabled to measure the effect of vocational education training on the performance of business by comparing performance of businesses owned by VET graduates with those of non-VET graduates. The study population was VET graduates with different vocational skills, and non-VET graduates with a general education background, who were self-employed in Arusha and Dar es Salaam Cities while the unit of analysis was the owner of the businesses under self-employment. VET graduates were vocational education alumni, and non-VET graduates were those without any formal vocational education training. A total of 384 respondents were involved in this study, a half of whom were VET graduates and the other half were non-VET graduates. The sample size was determined by using Cochran (1977) formula. Cochran (1977) argues that the formula is appropriate in arriving at an adequate sample size if the population is infinite and its degree of variability is not known.

Snowball sampling was employed to collect data from individual graduates in Arusha and Dar es Salaam Cities for interview. The snowball sampling technique was used in finding and recruiting "hidden populations," that is, VET and non-VET graduates who were not easily accessible through other sampling strategies (Babbie and Mouton, 2007). From a total sample of 384 respondents, the proportions of Arusha VET graduate to the total number of VET graduates

from the two regions were computed and yielded approximately 28% (106 respondents) from Arusha and 72% (278 respondents) from Dar es Salaam.

Qualitative data were collected using Key Informant Interviews (KIIs) whereby a total of seven (7) KIIs were conducted with key informants (technical and administrative personnel) who were selected based on their being regarded as having knowledge on vocational education and employment status of VET and non-VET graduates. For the VET institutions that were involved, the retired VETA Director General, College Principals, academic Heads of Department, representatives of the Directorate of Labour Market Planning and Development (DLMPD) at VETA Head Office Dar es Salaam were interviewed. Qualitative and quantitative methods of data collection complemented each other and thus increased the overall validity of the study. The qualitative approach allowed for an in-depth probing and yielded detailed information (Saunders *et al.,* 2009). Qualitative data recorded in notebooks were transcribed, categorised, coded and thereafter grouped into themes in relation to the objective of the study. The data were analysed using a constant comparison technique by comparing occurrences applicable to each category and restricting data to the theory as proposed by Kolb (2012).

For quantitative data analysis, descriptive statistics were used to analyse business performance indicators in terms of revenues and business net worth between VET and non-VET graduate. Frequencies, means, standard deviations, minimum and maximum values were computed to compare numerical differences between the two groups. In determining whether there was any differences in performance in terms of revenues and net worth between VET and non-VET graduates, an independent samples t-test was conducted. Thereafter, in order to determine the influence of business assets and social demographic factors on the revenue, a multiple linear regression was employed. The analysis was appropriate since the dependent variable was measured at the scale level. Accordingly, the model was adopted because the variables used to meet the basic assumptions that all predictor variables were quantitative or dummy, and the outcome variables were quantitative, continuous and unbounded (Field, 2018). The assumptions of the model, among others, included sample size adequacy, linearity, normality, outliers and multicollinearity (Pallant, 2011). The sampling adequacy assumption was tested using Tabachnick and Fidell (2007) formula according to which the minimum sample size is given by 50 + 8 (m) where "m" is the number of variables and at least there should be 20 responses per variable. Thus, with 8 independent variables in the model, the minimum sample size (50 + 8 (8)) equals to 114 was needed. For this analysis the study used a sample 359 which was over and above the minimum recommended number. A total of 25 outlier variables was identified and removed from the sample of 384 respondents through obtaining the standardised residual values, and none of them had a value above 3.3 or less than -3.3 as recommended by Tabachnick and Fidell (2007). Thus, there were no outliers for the remaining variables used in the multiple linear regression model.

Normality check on the variables that were entered in the multiple linear model was tested by using the Kolmogorov-Smirnov test of normality. The test is used when a sample is greater than 50 cases, and the variables that are checked for normality are said to have normal distributions, if the test is non-significant ($p > 0.05$) and *vice versa* (Field, 2018). The p-values for property, plant and equipment, initial capital financing, age of business owner and education were greater than 0.05, indicating the variables were normally distributed. However, the p-values for revenue, total business assets and experience in business were all less than 0.05, indicating that the variables were not normally distributed. Since the variables were positively skewed, base ten logarithm function was used to transform them as it is recommended by Field (2018) for transforming positively skewed variables to normal distributions. After the transformation of the variables, they were checked again for normality using the same test (Kolmogorov-Smirnov) and all of them had insignificant p-values ($p > 0.05$) indicating that they had normal

distributions. All independent variables were checked for correlation among themselves to achieve an acceptable tolerance level of multicollinearity effect (r - value $\geq$ 0.80 (Field, 2018). Multicollinearity was further checked during data analysis by computing variance inflation factors (VIFs), tolerance levels (Table 4) and inter-correlation among all the independent variables (Table 1). A VIF factor value of not more than 10 and a tolerance level of greater than 0.1 indicates the absence of strong relationships between the independent variables (no multicollinearity) (Landau and Everitt, 2004). Thus, the findings shown in Table 1 and Table 4 confirm absence of multicollinearity. The interpretation of regression analysis was based on group statistics (means and standard deviation), Pearson's correlations, Beta Coefficients, t-values, R square value, adjusted R square values, F statistics and significance (p-values).

Table 1: Variables correlation matrix

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
X_1		0.595	-0.018	0.585	-0.009	0.008	0.102	0.020
X_2			0.043	0.529	0.076	0.106	0.051	0.058
X_3				-0.004	0.191	0.144	0.062	0.213
X_4					0.000	0.009	0.143	-0.039
X_5						0.014	-0.104	0.415
X_6							-0.050	0.060
X_7								-0.059
X_8								

The multiple regression formula and variables description (Table: 2) were given by:
$Q_{it} = \alpha_0 + \alpha_1 PPE(x_1) + \alpha_2 TBA(x_2) + \alpha_3 ICFIN(x_3) + \alpha_4 EXP(x_4) + \alpha_5 AGE(x_5) + \alpha_6 BOS(x_6) + \alpha_7 EDU(x_7) + \alpha_8 MAR(x_8) + \varepsilon$ (Landau and Everitt, 2004), where:
Q_{it} = Total predicted revenue attained by VET and non-VET graduates;
α_0 = The value of revenue attained when all of the independent variables (X_1 through X_8) are equal to zero;
α_1 to α_8 = estimated regression coefficients (Change in outcome variable resulting from a unit change in predictor variables);
x_1 to x_8 = predictor/independent variables entered into the model
ε = Error term which represents a proportion of the variance in the dependent variable unexplained by the regression equation.

Table 2: Description of the model variables and measurement levels

Variables	Variable definition and unit of measure used	Level of measurement
Qit	Total predicted revenue attained (shillings)	Ratio
PPE (X_1)	Property, plant and equipment (Tanzania shillings)	Ratio
TBA (X_2)	Total business assets (Tanzania shillings)	Ratio
ICFIN (X_3)	Initial capital financing (Tanzania shillings)	Ratio
EXP (X_4)	Owner experience in business (Number of years)	Ratio
AGE (X_5)	Age of business owner (years)	Ratio
BOS (X_6)	Business owner sex (being a male (1) or female (0) biologically)	Binary
EDU (X_7)	Business owner years of schooling (years)	Ratio
MAR (X_8)	Marital status (1 = Married; 0 = Otherwise)	Binary

4. FINDINGS AND DISCUSSION

4.1 Performance of businesses owned by VET and non-VET graduates

Descriptive and independent samples t-test analyses were conducted to compare descriptively and inferentially the levels of performance and any statistical difference in performance, respectively, between VET and non-VET graduates in terms of revenue and business net worth. Results on them are presented in the sub-sections 4.1.1 to 4.1.2.

4.1.1 Business performance descriptive comparison among VET and non-VET

In order to compare performance between VET and non-VET, two performance indicators were considered, namely, business revenue and net worth. The two indicators revenue (income) and net worth are closely related in that net worth of the business is used in generating revenues, of which the later after reduction of production and operating expenses yield a net income which in turn increase the business net worthiness if revenues are higher than total expenses and vice versa. The results are as detailed in the Table 3.

Table 3: Business performance descriptive comparison among VET and non-VET

Performance Indicators	Performance Measure	VET (n=192) (TZS)	Standard deviation	Non-VET (n= 192) (TZS)	Standard deviation
Revenue	Mean	10 479 093.75	11 343 288.10	9 798 908.85	11,685,064.58
	Minimum	600 000.00		550 000.00	
	Maximum	67 200 000.00		69 500 000.00	
Net worth	Mean	4 676 776.04	5,205,966.25	4 272 270.83	4,630,825.75
	Minimum	150 000.00		250 000.00	
	Maximum	34 500 000.00		31 600 000.00	

The findings revealed that businesses owned by VET graduates showed a numerically higher mean annual revenue (TZS 10 479 093.8), and mean net worth (TZS 4 676 776.0) respectively, while non-VET graduates experienced lower mean revenue (TZS 9 798 908.9) and mean net worth (TZS 4 272 271.8) respectively. Moreover, relatively higher maximum business net worth (TZS 34 500 000.0) was observed among VET graduates as compared with non-VET graduates whose maximum business net worth was TZS 31 600 000.0). However, non-VET graduates recorded the highest revenue (TZS 69 500 000.0) in comparison to VET graduates whose maximum revenue were TZS 67 200 000.0. Generally, findings for comparison of means indicate that in numerical terms VET graduates performed slightly better compared with non-VET in terms of revenue and business net worth as indicated in Table 3.

These results are in tandem with previous studies by Cedefop (2011), Carneiro *et al*. (2010), Ryan (2002), Heckman (2000), and Acemoglu and Pischke (1999) who found that the returns of VET graduates are often higher than those of non-VET graduates for countries with well-established VET and apprenticeship systems. This implies that well established VET systems in terms of human resource capacity, appropriate training infrastructures and well established relationships with various industries and work place would provide appropriate practical training for the various trades offered by VET training institutions. The practical training is expected to enhance knowledge and skills acquired during lecture sessions in a classroom environment for self-employment activities in the labour market.

Notwithstanding the fact that VET graduates performance was numerically higher than that of non-VET graduates, however, the observed difference was not materially large, probably the reasons being that the Tanzania VET system is still less developed and need more infrastructural and technological improvement in comparison to some of the developed countries economies. For instance, findings by VETA (2010) established that inadequate relevant and realistic practical training, lack of systematic and firm partnership with industries in training are among the inhibiting factors to achieve necessary VET competencies for the vocational education systems in Tanzania. This was confirmed through an interview with the Principal at Keyfield Care Centre in Arusha who said:

> *"…The Tanzania VET system is less advanced in comparison to neighbouring country, Kenya, due to low technological investment, language problems amongst students and facilities for practical training programmes are inadequate. For instance VET graduate in hotel the industry from Kenya are doing well in the market in comparison to*

> *graduates from Tanzania partly, due to language barrier and lack of exposure to the industry…"* (Key informant at Keyfield Care Centre, Arusha – April, 2018).
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> Likewise, during an interview with another Key informant at VETA Chang'ombe in March, 2018 said: "… *despite the efforts by the government funding Vocational education in Tanzania, there are still budgetary constraints that inhibit full investment into various VET planned projects such as construction of more VET centres in various districts, human resources training and acquisition of training facilities..."* Similar results were found in Dar es Salaam where a self-employed VET graduates auto mechanics said: "… *I cannot accept to service a modern Toyota Land Cruiser engine which is very complicated compared to an engine I was trained for at Vocational Training Institution. Moreover, if any part gets damaged in the process of repair, I cannot afford to buy and replace it as modern car parts are very expensive…"* (Self-employed VET graduate at Kipawa, Dar es Salaam-March, 2018).

Observation of the products related to clothing and tailoring where most of the VET as well as non-VET graduates were self-employed indicated that they were not much appealing to warrant better prices and capture the interest of customers to purchase at higher prices. No new innovations were observed from the products and services produced by both VET and non-VET across the same or similar business categories. This implies that the Tanzania VET system still needs more improvement to achieve higher returns for its graduates as experience from other countries show.

4.1.2 Revenue and net worth comparison among VET and non-VET

An independent samples t-test was conducted to determine the existence of differences in mean revenue scores and net worth scores between VET and non-VET graduates. A confidence test score of revenue and net worth was conducted between VET and non-VET graduates who were conducting different types of business in Arusha and Dar es Salaam Cities. To test the hypothesis that VET and non-VET were associated with significantly different mean for revenue and net worth, an independent samples t-test was performed. The revenue and net worth distribution for VET and non-VET were sufficiently normal for the purpose of conducting a t-test (skew < |2.0| and kurtosis < |9.0|; Schmider *et al.*, 2010). Additionally, the assumption of homogeneity variance was not violated; the Levine's test $F(382) = 0.036$, $p = 0.849$ in revenue and $F(382) = 0.939$, $p = 0.333$ for net worth were observed, which indicates that the variances of the two populations were approximately equal; thus the standard t-test was proper. The results of independent samples t-test were not significant: $t(382) = 0.579$, $p = 0.563$ and $t(382) = 0.80$, $p = 0.422$ in revenue and net worth respectively. This indicates that there were no statistically significant differences between the mean revenue and net worth scores as indicated in Table 3 for VET and non-VET graduates respectively. Moreover, the effect size eta (squared) > 0.01 indicated a small effect. Thus, the computed effect sizes of 0.03 (3%) in revenue and 0.04 (4%) in net worth imply small effect size was observed in means differences for both revenue and net worth. Based on these results, the null hypothesis was not rejected as there was little evidence that mean revenue and net worth differed much among VET and non-VET graduates in the study areas. As it has been reported by VETA tracer study (VETA, 2010) among the issues related to unrealistic practical training and lack of systematic firm partnership for apprenticeship training in industries are among the inhibiting factors to achieve necessary VET competencies for the vocational graduates to perform better in the labour market in comparison with non-VET graduates.

4.2 Effect of assets capitalisation and socio-demographic factors on revenue

Multiple linear regression analysis was conducted to determine the best linear combination of business asset capitalisation and socio-demographic factors in predicting annual revenue levels as indicated in Table 4.

Table 4: Effect of business asset capitalisation and socio-demographic factors on revenue

Independent variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	β	S. E	Beta			VIF	Tolerance
(Constant)	4.206	0.314		13.393	0.000		
Property, Plant and Equipment	0.000	0.000	0.500	10.741	0.000	2.679	0.373
Total business assets	0.100	0.050	0.090	2.007	0.046	2.496	0.401
Initial capital finance	0.000	0.000	0.028	0.950	0.343	1.095	0.913
Experience in the business	0.302	0.029	0.379	10.558	0.000	1.591	0.628
Age of business owner	-0.001	0.001	-0.026	-0.810	0.419	1.252	0.799
Business owner sex	-0.022	0.023	-0.028	-0.949	0.343	1.048	0.954
Education level	-0.010	0.004	-0.065	-2.247	0.025	1.047	0.955
Marital status	0.016	0.024	0.021	0.651	0.515	1.246	0.802

a. Dependent variable: revenue, R = 0.847; adjusted R^2 = 0.711; ANOVA: MD = 4.481; F(8,350) = 110.862, p = 0.000

The results showed that the model had R = 0.847 (84.7%); R^2 = 0.717 (71.7%), adjusted R^2 = 0.711 (71.1%) and $p < 0.05$. The overall model fit was statistically significant ($p < 0.05$), which implies that the model had enough explanatory power to predict the effect of asset capitalisation and socio-demographic factors on the level of revenues attained by VET and non-VET graduates in the study areas. The coefficient of determination (R^2 = 0.717) means that the asset capitalisation and socio-demographic factors entered into the model accounted for 71.7% of the predicted revenues and the rest was contributed by other factors which were not covered by the current study (Field, 2018). The β-coefficient values indicate the relationship between revenue and each predictor variable. If the value is positive, it indicates a positive relationship between the predictor variable and revenue, whereas a negative coefficient represents a negative relationship (Field, 2018).

Among the predictor variables, property, plant and equipment, total business assets, experience in business and education level as indicated by the number of years of schooling were found to significantly influence revenue ($p < 0.05$) while initial capital financing, age, sex and marital status of the business owners' were not significant towards influencing revenue between VET and non-VET graduates ($p > 0.05$). However, among the significant variables, total business assets, property, plant and equipment and experience in business had the highest standardised coefficients; this means that they largely contributed to explain the revenue level when the variance explained by all other factors in the model were controlled (Pallant, 2011).

On the aspect of property, plant and equipment, the findings showed a positive significant influence ($\beta = 0.500$; $p \leq 0.001$) on revenue, indicating that each unit of shilling invested in property, plant and equipment in the business, with all other predictor variables being held constant, caused an increase of 0.500 in revenue to businesses owned by self-employed VET and non-VET graduates in study areas. The findings imply that a business owner who employed more additional property, plant and equipment in the business produced more goods or service and thus, attained higher revenue level. The findings support those of previous studies which established that in today's competitive business environment, it is prerequisite to manage assets

effectively and efficiently in order to get maximum return on investment (Jooste and Page, 2014, Mawih, 2014).

Experience of owner in business showed positive significant influence ($\beta = 0.379$; $p \leq 0.001$) on revenue, indicating that a unit increase in owners experience in business (number of years) led to a 0.379 unit increase in revenue if the effects of all other predictors were held constant. This can be explained by the fact that long-time experience in business is likely to provide VET and no-VET graduates with the advantage of having more contacts with customers, suppliers and other business associated aspects (Salia, 2015; Rauch and Frese, 2000) that would lead to improved business performance through growth in revenues. This finding was supported by one non-VET self-employed graduate in the carpentry business at Keko Dar es Salaam who said: "*… I have been in business for more than ten years, and as time goes, I learn from past mistakes, improve product quality and increase my customer base from new customers and referrals from existing customers, which improves my revenue level…"* (Self-employed non-VET graduate at Keko – March, 2018).

Total business assets were one among the findings that showed significant positive influence ($\beta = 0.090$; $p = 0.046$) indicating that a unit increase in total business assets led to a 0.090 unit increase in revenue if the effect of all other predictors were held constant. The findings imply that the more the total assets were employed in business, the more the revenue was realised and vice versa. Previously accumulated business earnings if are re-invested into the business by acquiring more assets is expected to create additional revenue thereby, improving business performance over time.

The education level of business owner had a negative significant influence ($\beta = -0.065$; $p = 0.025$) on revenue given that all other predictors were held constant. The findings imply that a unit increase in the level of education was found to decrease revenue by 0.065 units. This means that as self-employed business owners acquire more education with the existing education system negatively affects graduates revenue levels. The findings contradict with those by Brixy and Hessels (2010) with regard to the effects of education which indicated that educational level relevant to the occupation have a positive influence on business performance. The probable reason for this could be that the education system from which Brixy and Hessels was done differs from the current study.

Basing on the findings, the theoretical claim stated by Brixy and Hessels (2010) that the human skills obtained through education and experience in one's life time are what develop an intuition for successful business is positively related with the empirical findings of this paper with regard to business experience and negatively related with regard to education level. The business owner's experience proved to be one of the key factors that influenced revenue consistent with what was theorised by Brixy and Hessels (2010). However, education level did not agree with what was theorised by Brixy and Hessels (2010). Despite the fact that the theory was proved to be relevant in terms of intangible assets (Human Capital), there is a need for the theory to incorporate tangible capital (assets) of the business which were also proved to have a significant positive influence on revenues. Thus, this study suggest extension of the Human Capital Theory to include tangible capital combined with intangible capital as the two are inseparable for a business venture to attain the desired revenue level. Therefore, VET graduates, should consider the contribution of both tangible and intangible assets in revenue generation for their businesses success.

It is worth noting that, several studies have reported the contribution of VET in reduction of unemployment and improved business performance in comparison with the general education system in the majority of developed countries in Europe (Agrawal, 2013, DeJaeghere, 2013 and

Sabates *et al.,* 2012). In Tanzania there have been limited studies related to performance comparison between VET and general education graduates. As noted by Cedefop, (2013) that from a policy point of view, it was useful to know the different type of benefits brought by VET and general education system. Thus, this study provided an empirical comparative evidence between VET and non-VET graduate business performance, whereby the study found that there were no significant difference in performance for the selected performance indicators between the two groups. Weaknesses pointed out by VETA (2010) and some key informants in the study provide insights into the reasons why self-employed VET graduates were not performing well in comparison with self-employed graduates with general education as evidenced in some of the developed economies countries' economies.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the study conclude that in numerical terms VET graduates mean revenue and net worth is slightly higher than that of non-VET graduates. The paper further concludes that the observed mean difference in revenue and net worth is not significantly different between the two groups. This implies that VET education in Tanzania has not equipped graduates with the needed skills for them to be highly competitive in the labour market when comparing with the general education system graduates. This situation contradicts what is expected from the Human Capital Theory that the human skills obtained through education lead to one running a successful business compared with one who lacks such education. Thus, it is concluded that VET graduates businesses are not performing better than those owned by non-VET graduates as expected from the Human Capital Theory. From the multiple linear regression results it is concluded that tangible business assets, business net worth, experiences in business and years of education significantly influence business revenue, thus the variables are the major determinants of business performance in terms of revenue among the graduates.

Unless all the observed weakness in the VET system are effectively addressed by the responsible authorities, vocational education and training will continue to have low contribution to business performance among self-employed VET graduates. In order for VET graduates to realise full potential expected from vocational education, vocational institutions and and the government are obliged to ensure improvement in the vocational education system in the country . In that respect, the subsequent recommendations are set forward:

The Central government, through the Ministry of Education, Science and Technology should consider critically revamping VET curricular, particularly in terms of the syllabus, quality enhancement and control. This will need a thourogh retraining of VET instructors in new technologies, redefining education policy in terms of content and practicability. This is expected to equip graduates with the necessary knowledge and skills needed for self-employment in the labour market. This can be done by improving the budgetary allocation for more investment in the VET training institutions in order for the graduates to realise full potentials envisaged in the VET system. Moreover, both VET and non-VET graduates should invest more in business assets and utilize these resources to attain higher revenue and remain competitive in the market. They should also use their experience in business to explore more about customers' demand and preferences in order to match their needs in terms of the goods and services offered which will generate more revenue for their businesses.

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