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Characteristics, Determinants, Challenges and Performance of Self-employment among the Youth in Uganda

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ABSTRACT

This study examined the characteristics, determinants, challenges and performance of self-employment among the youth in Uganda using the School-to-Work Transition survey data for 2015 collected by the Uganda Bureau of Statistics. We employed two analytical approaches: descriptive statistics and binary and multivariate probit models. We found that most employed youths are self-employed. The majority of the youth were poor and had acquired primary education or less. Econometric estimations indicate that self-employment is determined by age, the number of children, financial status, education, high-income motive and flexible work hours. Most youth started businesses with individual savings or family money but not bank loans. Most youth faced unique problems, but financial constraints followed by market competition were the main challenges faced by the self-employed youth. Self-employment is not lucrative, and 20.29% of self-employed youths do not make profits from their entrepreneurial efforts. Moreover, 78.83% of the self-employed youths live below the poverty line.

Keywords: Self-employment, Binary and Multivariate Probit Models, Youth, Uganda

JEL Classifications: J24, J30, O10, C13

1. INTRODUCTION

Self-employment and entrepreneurship are increasingly vital issues for every country's economic development. This is because they boost the country's economic growth and standard of living. Self-employment and entrepreneurship stimulate economic expansion due to their association with innovation, productivity, competition, profit orientation, capital investment, job creation and creation of new markets (Kritikos, 2014; Schumpeter, 1934). Parker (2004) defines self-employment as people who earn no wage or salary but derive their income by exercising their profession or business on their own account and at risk. The self-employed as a percentage of total employment in Uganda stood at 78.21% in 2020, according to the World Bank development indicators (Trading Economics, 2022). Therefore, in Uganda, Self-employment remains the most predominant occupation, as in most developing countries.

According to the data from the Uganda Bureau of Statistics (2014), the youth (aged between 18 and 30 years) form 21% of the total population of Uganda. Sadly, the youth unemployment rate rose from 13% in 2016/17 to 18% in 2017/18 (Uganda Bureau of Statistics, 2018). These figures are much higher if we include the underemployed youth. In agreement, Magelash and Ntambirweki-Karugonjo (2014) report that youth unemployment in Uganda stands at between 64% and 70%, and about 400,000 youths are released annually into the job market to compete for approximately 9,000 available jobs. The youth are the most unemployed in Uganda, accounting for a percentage (64%) of the total unemployed people in Uganda in 2012 (Uganda Bureau of Statistics, 2012); that is, they are without work but available for or actively seeking employment. This is because the government and private enterprises have limited capacity to employ the rising numbers of Uganda's youth.

Self-employment is becoming one of the few viable options for the massive youth population. The government of Uganda recognises this state of affairs and has initiated programmes to enable youth to go into self-employment in recent years. Such programs include the Youth venture capital fund, the Graduate venture capital venture fund, Skilling Uganda, and the Youth opportunities programme.

Youth self-employment in Uganda may not be a choice but a necessity to mitigate the effects of unemployment. Similarly, Kingdon et al. (2006) point out that the failure of African labour markets to create good-paying jobs has translated into increased unemployment or a growing self-employment sector. However, several demographic, psychological and economic factors determine self-employment. These factors may include but are not limited to age, gender, marital status, number of children, family background, risk attitude, health condition, financial situation, wealth, education, access to financial resources, profit motivation and desire for independence. Nevertheless, for some determinants, the expected impact is predominantly confirmed, but for many determinants, the empirical evidence is insufficient, non-conclusive, or mixed (Simões et al., 2016). The contradicting empirical findings may be due to differences in country contexts, data quality and econometric methods. Therefore, this study focused on youth self-employment in Ugandan to identify its uniqueness in terms of characteristics and determinants.

Although there is a rising number of self-employed youth in Uganda, there is little knowledge regarding their performance, general characteristics and the determinants of self-employment. This study looks at self-employment as an essential option for reducing youth unemployment in Uganda. It examines the characteristics, performance and determinants of self-employed youth in the country. The youth are the focus since they are the country's most unemployed, yet they are the country's future. The following questions guided the study: (i) What are the characteristics of the self-employed youth in Uganda? (ii) What determines self-employment among the youths in Uganda? (iii) what are the sources of finance for self-employment activities? (iv) What challenges do self-employed youth face? (v) Compared to paid-employed youth, what is the financial performance of self-employed youth?

A review of related literature indicates that the subject of self-employment concerning the youth has not received adequate attention in research (there are few studies on the subject, which are even limited in scope). An example is the case study by (Blattman et al., 2014) that analysed the impact of the youth opportunities program, a government program designed to help the poor and unemployed young adults in Northern Uganda become self-employed. The authors found that the youth opportunities program significantly increased business assets and earnings. However, one major limitation of this study is that it is not nationally representative nor provides a complete description of the self-employed youth and the determinants of self-employment in Uganda. It is important to profile the youth so that government and development partners can know whom to target better if they wish to improve the self-employed youth's profitability and

sustainability of jobs. Thus, the focus of the current study is to profile self-employed youth and determine the predictors of self-employment.

This study is unique on at least three important grounds. First, there are very few previous studies investigating issues of youth self-employment in a developing country's context, particularly in Uganda's case. Second, this study uses a unique micro-level data set, the School-to-Work Transition survey data collected in 2015 by the Uganda Bureau of Statistics in 88 districts of Uganda, which has not been used previously to study this topic. Third, the study employs an empirical methodology (Multivariate probit model). This model is used to estimate more than one correlated binary dependent variable. The model is the most appropriate for analysing self-employment's determinants since we believe that self-employment is correlated with paid employment and other forms of employment. Therefore, we estimate Multivariate Probit model analysis with three binary outcome choice variables: self-employment, paid employment, and others (none of the mentioned two).

The remainder of the paper is organised as follows: Section 2 briefly reviews the relevant literature, section 3 provides the research methodology, section 4 presents and discusses the empirical results, and section 5 presents the conclusion and policy implications.

2. LITERATURE REVIEW

Different factors influence individuals' choice of self-employment; hence, the self-employed are highly heterogeneous. The literature focuses on some important micro-level determinants of self-employment in different contexts. Most of these studies examine self-employment issues in the context of developed countries.

The literature is not conclusive, focusing on the impact of education on self-employment. Tamvada (2010) points out that education expands an individual's knowledge base and increases exposure to new opportunities, but it also increases the opportunity cost of self-employment. As per capita income grows, the return from salaried/paid employment increases faster than from entrepreneurship (Lucas, 1978). This implies that educated people will opt for paid employment rather than self-employment over time (Van der Sluis et al., 2005). This may indicate a negative impact of education on self-employment. In agreement, (Blanchflower et al., 2001; Livanos, 2009; Tamvada et al., 2022) found that education reduces the likelihood of self-employment. Also, Van der Sluis et al. (2005) concur that more educated individuals engage in paid employment.

However, (Blanchflower, 2000; Taylor, 1996) find a positive effect of education on self-employment. Also, in the United States of America, Blanchflower and Meyer (1994) found that education increases the likelihood of being self-employed. The positive effect of education on self-employment may be because education enhances an individual's knowledge base and skills necessary for successful self-employment ventures. Nevertheless, according to (Evans and Leighton, 1989; Johansson, 2000), education has no significant effect on the probability of engaging

in self-employment. Similarly, Blanchflower and Meyer (1994) found that schooling/education did not impact self-employment in Austria. Moreover, the relationship between education may be U-shaped. For example, Blanchflower (2000) reported that the least educated have the highest probability of being self-employed; however, evidence shows that the most highly educated also have relatively high chances.

Another factor influencing self-employment is wealth/financial status. The financially well-off individuals are more likely to engage in self-employment than the poor ones since they have more “safety net” when embarking on new business ventures. Wealth is not only a source of finance for establishing businesses but also wealthy individuals have easy access to credit finance. Besides, Carroll (2000) finds that wealthy individuals have a high-risk tolerance. Indicating that financially well-off individuals are more likely to engage in self-employment than poor ones. In agreement, (Dunn and Holtz-Eakin, 2000; Johansson, 2000) found that financial capital increased the chances of being self-employed. This suggests that liquidity constraint challenges enterprise development and, thus, self-employment. Moreover, Blanchflower and Oswald (1998) report that the probability of being self-employed increases with inheritance.

Concerning age, literature generally documents a positive effect of age on self-employment (Blanchflower, 2000; Blanchflower and Meyer, 1994; Blanchflower et al., 2001). These studies explain that as people grow older, they tend to engage in livelihood activities to sustain the household burden. Besides, given that it takes time to acquire the experience needed to successfully engage in self-employment and accumulate capital for business establishment and maintenance, considering the presence of liquidity constraints, the transition into self-employment will increase with age (Henrard, 2003). However, according to the human-capital theory, older people may have less incentive to enter into self-employment, given that the earnings of salaried workers increase with age.

Regarding gender, males are more likely to engage in self-employment than females (Blanchflower and Meyer, 1994; Dawson et al., 2009; Livanos, 2009; Parker, 2004). This may imply that males are more risk tolerant and engage in risky ventures such as self-employment. In contrast, females may prefer paid employment with a stable income, given their risk-averse nature. However, Georgellis and Wall (2005) find that women find self-employment more desirable than men since, for women, self-employment is a closer substitute for part-time work and unemployment than it is for men. Moreover, (Evans and Leighton, 1989) found that the gender disparity in self-employment is narrowing.

Regarding marital status, married individuals are more likely to engage in self-employment than their unmarried counterparts (Blanchflower and Oswald, 1998). This may suggest that the married have more family support which reduces the inherent risk associated with self-employment, thus, making it easier to start up businesses. However, the married may have more children; therefore, more family responsibility may prevent them from being self-employed since they may not be willing to take on risky ventures.

Also, an individual’s family background may impact the choices of self-employment. Individuals have a high propensity to follow their parents’ careers. This indicates that individuals with self-employed parents are more likely to be self-employed. This view is supported by Nguyen (2018), who found that individuals with self-employment parents have high entrepreneurial intention scores. Additionally, Dunn and Holtz-Eakin (2000) found that parents’ self-employment experience increases the probability of an individual engaging in self-employment.

Also, earnings or profit motive influences self-employment. Taylor (1996) found that high expected earnings compared to paid employment positively influenced self-employment. Destre and Henrard (2004) concur that relative potential earnings is the major factor influencing employment choice. Concerning the desire for independence, Taylor (1996) found this factor to positively influence the probability of engaging in self-employment. Also, Blanchflower (2000) found that self-employed individuals had more job satisfaction than paid employees.

There are mixed views on the impact of unemployment on self-employment. Dawson et al. (2009) hypothesise that, given that unemployment reduces the demand for goods of the self-employed, it poses a high risk of failure for the self-employed. This suggests a negative impact of unemployment on self-employment. The findings of (Blanchflower, 2000; Blanchflower and Meyer, 1994) support this view. However, the choice of self-employment may be forced by a necessity to start up survival activities rather than a choice since it may be the only available alternative to unemployment and limited prospects of finding paid employment (Dawson et al., 2009).

Moreover, Carrasco (1999) argues that poverty and unemployment make self-employment preferable to the available wage work. This suggests that unemployment positively influences self-employment. In support of this view, Dawson et al. (2009) found significant numbers of individuals who appear to have chosen self-employment out of necessity because of loss of previous paid employment and a lack of other paid alternatives in the UK. In conclusion, Carrasco (1999) found that unemployment raises the probability of being self-employed but also increases the hazard of leaving self-employment, especially into unemployment.

Blanchflower and Oswald (1998) found that capital constraint was a major challenge for being self-employed. Moreno, Evans and Jovanovic (1989) concur that capital for business establishment and liquidity constraints hinder those with insufficient funds from engaging in self-employment. Additionally, Holtz-Eakin et al. (1994) reported that the size of the inheritance positively impacts the likelihood of becoming an entrepreneur, thus signalling the presence of liquidity constraints. On a related note, Blanchflower and Oswald (1998) reported that individuals started businesses with individual savings or family money but not bank loans.

3. METHODOLOGY

3.1. Model Specification and Econometric Methodology

The study carried out two econometric analyses; (i) using binary probit regression and (ii) multivariate probit (MVP) models to

analyse the major factors that are influencing engagement in self-employment among the youths in Uganda. Binary probit regression models examine the relationship between a binary dependent variable y and one or more explanatory variables X . This study's dependent variable " y " represents the individual's choice to engage in self-employment. ($y = 1$, self-employed; $y = 0$, otherwise). Meanwhile, the explanatory variables can take any form (discrete, continuous).

The binary regression is specified as:

$$y_i^* = X\beta + \epsilon \quad (1)$$

$$y_i = \begin{cases} 1 & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases} \quad (2)$$

Where y_i^* is a latent (unobserved) variable, y_i is the observed variable that takes on the value of 1 if an individual i is self-employed and zero otherwise. X is a vector of independent variables that determine self-employment. Importantly, we also employ a multivariate probit model to examine the determinants of employment choices among the youths in Uganda. Multivariate probit models are used to estimate more than one correlated binary dependent variables jointly. This model is the most appropriate for analysing the choice of self-employment among the youth in Uganda since we believe that self-employment correlates with paid/salaried employment and other employment forms. Therefore, we estimate Multivariate Probit model analysis with three binary outcome choice variables: Self-employment, paid employment and others (none of the mentioned two). Following (Mullahy, 2016), the multivariate probit model in this paper was formulated as follows:

$$y_{ij}^* = X_i\beta_j + u_{ij} \quad (3)$$

$$y_{ij} = \begin{cases} 1 & \text{if } y_{ij}^* > 0 \\ 0 & \text{if } y_{ij}^* \leq 0 \end{cases} \quad (4)$$

In this model, y represents the three binary outcomes (employment choices among the Uganda youths): Self-employment, paid employment and other employment. The individual is faced with a binary choice for each type of employment choice (1 = engage in the employment type, or 0 = otherwise).

$i=1, 2, 3 \dots N$ indexes observations, $j = 1, 2, 3$ index outcome

Where X is a matrix of the explanatory variables; β_1, β_2 and β_3 are parameter estimates and u_{ij} are assumed to be independent and identically distributed across i but correlated across j for any i . The model is estimated using the maximum likelihood estimation.

Also, descriptive statistics (percentages, means, standard deviations, minimum and maximum values) have been generated and used to characterise the self-employed youth.

3.2. Data

The paper uses the School-to-Work Transition survey data collected in 2015 by the Uganda Bureau of Statistics in 88 districts

of Uganda. The survey is nationally representative because it covered about 79% of all districts in the country, and from every selected household, data was gathered from all persons aged 15-30 years, however, the current study uses data from a sample of employed youth only. Data was collected on the age, gender, marital status, number of children, financial status, level of formal education, employment status in the main job/activity, reasons for choosing self-employment, the main source of funding for start-up, estimates of income earned from the main activity in the last month, and most crucial problem faced.

The study uses a Multivariate Probit (MVP) Model. The model consists of three outcome choice variables; self-employment, paid employment and other employment. The dependent variables (the choice to engage in a given employment type) are binary outcomes that take on the values of 1= engaged in that employment type and 0= otherwise.

Self-employed people run any kind of business, big or small, for themselves or with one or more people. The decision to engage in self-employment depends on many factors, including demographic, economic and non-economic factors. Therefore, the determinants of self-employment may include;

- **Age.** A positive coefficient is expected since with age comes vast experience, knowledge base and accumulated capital for establishing businesses. Moreover, (Blanchflower, 2000; Blanchflower and Meyer, 1994; Blanchflower et al., 2001) argue that as people grow older, they tend to engage in livelihood activities to sustain the household burden. However, the effect of age on self-employment may be negative, given that the earnings of salaried workers increase with age, according to the human-capital theory. Thus, less incentive to engage in self-employment, which is also risky.
- **Gender.** It's a dummy variable that takes on 1 for males and 0 for females. A negative coefficient is expected. This is because males are more likely to be self-employed than females since males are more risk tolerant and hence engage in risky ventures such as self-employment. Still, females may prefer paid employment with a stable income, given their risk-averse nature. This view is supported by (Blanchflower and Meyer, 1994; Dawson et al., 2009; Livanos, 2009; Parker, 2004).
- **The number of children.** We expect a negative coefficient because more children mean more dependents. Therefore, more family responsibility may prevent them from being self-employed since they may not be willing to take on risky ventures.
- **Marital status.** It's a dummy variable that takes on 1 for married and 0 for otherwise. A positive coefficient is expected because marriage may provide more family support, reducing the inherent risk associated with self-employment and thus making it easier to start businesses.
- **Wealth/financial status.** It is measured by three dummy variables (well-off, average and poor), each taking on 1 if an individual falls in that category and zero otherwise. The omitted wealth category is the average category to avoid the dummy variable trap in the regressions. We expect financially well-off individuals to have a higher chance of being self-employed than poor ones since wealth is a source of business

finance and an elimination factor for liquidity constraints that the poor face.

- **Education.** It takes on three dummy variables (completed primary or less; completed secondary; and completed higher education), each taking on 1 if an individual falls in that category and zero otherwise. Consistent with the literature, the return from salaried/paid employment increases faster than the return from entrepreneurs implying that educated people will opt for paid employment rather than self-employment over time (Van der Sluis et al., 2005). Hence may indicate a negative coefficient. However, a positive coefficient may be expected since education enhances an individual's knowledge base and skills necessary for successful self-employment ventures. Nevertheless, Blanchflower (2000) reported that the least educated have the highest probability of being self-employed. However, evidence is found that the most highly educated also have a relatively higher likelihood of being self-employed. In the regressions, the omitted education category is higher education to avoid a dummy variable trap.
- **The desire for greater independence.** This is a dummy variable that takes on 1 for the desire for greater independence and 0 otherwise. We expect a positive coefficient. The desire for greater independence should positively influence the probability of engaging in self-employment.
- **Higher-income expectation.** We expect high expected earnings compared to paid employment to positively influence self-employment; hence a positive coefficient is expected.
- **Unemployment.** We use a dummy variable for failure to get a salary job as a proxy for unemployment. The variable takes on 1 if the most important reason for self-employment is lack of a salary job and 0 otherwise. A positive coefficient is expected since the lack of salary jobs will likely push the youth into self-employment. However, Carrasco (1999) found that although unemployment rises the likelihood of self-employment, it also increases the hazard of leaving self-employment, especially into unemployment. Hence a negative coefficient may be expected.
- **Flexible work hours.** This is a dummy variable taking on 1 if the most important reason for self-employment is the need for more flexible work hours and 0 otherwise. A positive coefficient is expected since more flexible work hours are more likely to be associated with self-employment than paid employment where there are time contracts to be adhered to.

Table 1: Description and summary statistics of variables used in the analysis

Variable description	2015	
	Mean	SD
Employment status (1=employed; 0=unemployed)	0.5960	0.4907
Type of main job/activity		
Paid employee (working for someone else for pay in cash or kind) (1=yes)	0.3635	0.4470
Self-employed (employing one or more employees, Own-account worker, and Member of a producers' cooperative) (1=yes)	0.3849	0.4737
Other employment (helping without pay in the business of farm of a family member and other forms of employment) (1=yes)	0.2516	0.4131
Age (completed years lived at the time of the survey in 2015)	20.6075	4.8614
Sex (1=Male; 0=Female)	0.4949	0.5000
Marital status		
Married (1=yes)	0.3482	0.4764
Number of children currently living	1.0770	1.6686
Household's overall financial situation		
Well-off (1=yes)	0.1145	0.3185
Average (1=yes)	0.30.62	0.4609
Poor (1=yes)	0.5793	0.4937
Have ever attended formal schooling/training programme (1=yes)	0.9332	0.2496
Currently in school or attending training program		
Yes	0.4125	0.4923
No, I have completed my education	0.0724	0.2592
No, I left before completing	0.5151	0.4998
Highest level of completed formal education/training		
Primary education	0.8064	0.4396
Completed secondary (either S4 or s6 or both)	0.1321	0.3386
Completed tertiary/higher Education	0.0615	0.2402
Major reasons for self-employment		
Could not get a salary job (1=yes)	0.3370	0.4728
Greater independence (1=yes)	0.2167	0.4121
Flexible hours of work (1=yes)	0.0492	0.2162
High incomes (1=yes)	0.1222	0.3276
Family requirement (1=yes)	0.2261	0.4184
Other reasons (1=yes)	0.0488	0.2156

Source: Authors' calculations based on Uganda's 2015 School-to-Work Transition survey

only 11.4% of the youth are well-off. This corroborates the fact that Uganda is a developing country. Most Ugandan youths have attended formal schooling (93.3%), but the majority (51.51%) left school before completing, whereas 41.3% were still schooling, and only 7% of the youth had finished school. Most youths (80.6%) had primary education or less, 33.9% had completed secondary education, and only 2.4% had higher education qualifications. Considering the reasons for being self-employed, 33.75% were self-employed because they could not get a wage or salary job, while 21.7% desired greater independence, 4.9% desired flexible work hours, 12.2% were motivated by higher expected earnings, and 22.6% were required by their families.

Primary education is a dummy variable for completed primary education or less, and secondary education is a dummy variable for completed secondary education. The omitted category for education is those that have higher education qualifications. Well-off and poor are dummy variables for wealth/financial status. The omitted category of the wealth quintile is the average category. Lack of a salary job is a proxy for unemployment.

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 1 represents the descriptive statistics of the variables used in this study. Results from Table 1 show that 59.6% of the youth are employed. With a particular focus on the self-employed youth, the majority (38.5%) of the youth are engaged in self-employment as compared to paid employment (36.5%) and work without pay (25.2%). Because most youths fail to get paid employment, they engage in self-employment and other forms of employment, such as unpaid family activities. The average age of the youth is 20.6 years. 49.5% of the youth are male. The married youth constitute 34.8% of the youth. The average number of children per youth is one child. The majority of the youth are poor (57.9%), and

Table 2 reports the correlation matrix between the variables. Age, well-off, secondary education, desire for greater independence, higher-income motive and desire for flexible work hours are positively correlated with self-employment. Whereas gender, number of children, marital status, being poor, and lack of a salary job are negatively correlated with self-employment. However, lack of a salary job is wrongly signed since it is expected that failure to get salary jobs would push individuals into self-employment.

4.2. Determinants of Self-employment among the Youth in Uganda

Table 3 reports the results on the determinants of self-employment in Uganda using the probit model. The results show that engaging in self-employment increases with age. Older youth are 1.14% more likely to be self-employed than young youths, and this variable is significant at a 1% significance level. The results align with those of (Blanchflower, 2000; Blanchflower and Meyer, 1994; Blanchflower et al., 2001), who also document a positive effect of age on self-employment. The positive effects of age on self-employment may be that as people grow older, they tend to engage in livelihood activities to sustain the household burden. More so, older youth may have acquired the experience and accumulated capital necessary for successful engagement in self-employment.

Regarding the number of children, the probability of being self-employed reduces as the number of children increases. A unit increase in the number of children reduces the likelihood of being self-employed by 2.8%, and the variable is significant at a 1% significance level. This implies that youth with many children have more family responsibilities that may prevent them from being self-employed since they may not be willing to take on risky ventures.

Focusing on wealth/financial status, well-off youth have about 6% chance of being self-employed, while being a poor youth reduces the chances of self-employment by 9.8%, and the variable is significant at a 1% significance level. This indicates that financial constraints are binding concerning engaging in self-employment. The results agree with (Dunn and Holtz-Eakin, 2000; Johansson, 2000), who reported that financial capital increased the chances of being self-employed. Similarly, Evans and Jovanovic (1989) concur that capital for business establishment and liquidity constraints hinder those with insufficient funds from engaging in self-employment.

Concerning education, the results revealed that primary education does not influence the choice of self-employment, but secondary education positively influences the choice of self-employment. Youth with secondary education have a 15.7% chance of engaging in self-employment. This may suggest that youths with secondary education have acquired knowledge, enabling them to start businesses and be self-employed. Similar results of a positive effect of education on self-employment are reported by (Blanchflower, 2000; Blanchflower and Meyer, 1994; Taylor, 1996). However, the results contradict those of (Blanchflower et al., 2001; Livanos, 2009; Tamvada et al., 2022; Van der Sluis et al., 2005), who found that education reduces the likelihood of engaging in self-employment. The results of primary education's effect on self-employment are closely similar to those of (Evans and Leighton, 1989; Johansson, 2000), who reported that education has no significant effect on the probability of self-employment.

Another significant determinant of self-employment among the youth in Uganda is the motive for higher-income expectations. The desire for higher-income increases the likelihood of being self-employed by 22.6%. And this variable is significant at a 1% level of significance. Taylor (1996) reported similar results that high expected earnings compared to paid employment positively influenced the choice of self-employment.

Also, the desire for more flexible work hours is another significant determinant of self-employment among the youth in Uganda. Youth who desire more flexible work hours have a 20.41% likelihood of being self-employed. The variable is significant at a 1% level of significance.

The results revealed that sex of the youth does not affect the choice of self-employment. This is contrary to the findings of (Blanchflower and Meyer, 1994; Dawson et al., 2009; Livanos, 2009; Parker, 2004), who reported that males are more likely to engage in self-employment compared to females. The view that males are more likely to be self-employed than females since males are more risk tolerant does not hold among the youth in Uganda.

The results showed that the marital status of the youth has no significant effect on the self-employment choice. Although Blanchflower and Oswald (1998) found that the married are more likely to be self-employed since the married have more

Table 2: Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) self-employment	1.000												
(2) age	0.026	1.000											
(3) gender	-0.007	0.031	1.000										
(4) No of children	-0.072	0.635	-0.049	1.000									
(5) Marital status	-0.031	0.388	0.006	0.514	1.000								
(6) Well-off	0.088	-0.048	0.012	-0.086	-0.062	1.000							
(7) Poor	-0.124	-0.041	-0.009	0.017	-0.085	-0.382	1.000						
(8) Primary education	-0.082	-0.084	-0.038	0.106	0.051	-0.108	0.166	1.000					
(9) Secondary education	0.090	0.061	0.031	-0.071	-0.048	0.053	-0.092	-0.799	1.000				
(10) Independence	0.002	0.028	0.023	0.001	-0.054	0.075	-0.172	-0.176	0.117	1.000			
(11) Higher-income motive	0.137	-0.072	0.028	-0.169	-0.132	0.056	-0.010	-0.037	0.015	-0.183	1.000		
(12) Flexible work hours	0.071	-0.010	-0.025	-0.043	-0.037	0.049	0.014	0.030	-0.009	-0.105	-0.071	1.000	
(13) Lack of a salary job	-0.045	-0.052	0.025	-0.064	-0.009	0.005	0.005	0.013	-0.011	-0.389	-0.261	-0.150	1.000

Table 3: Determinants of self-employment among the youth in Uganda-probit regressions

Variables	(Self-employment) dy/dx
Age	0.0114*** (0.0031)
Gender	-0.0197 (0.0191)
No of children	-0.0276*** (0.0076)
Marital status	0.0030 (0.0257)
Well-off	0.0599* (0.0337)
Poor	-0.0979*** (0.0210)
Primary education	0.0455 (0.0440)
Secondary education	0.1565*** (0.0513)
Independence	0.0105 (0.0282)
Higher-income motive	0.2256***
Flexible work hours	0.2041*** (0.0541)
Lack of a salary job	0.0041 (0.0242)
n	2574
Log pseudolikelihood	-1660.93
Chi ² (12) (P-value)	138.97 (0.000)

Note: dy/dx refers to marginal effects from the probit regression. Figures in parentheses stand for Robust standard errors, ***, **, * stand for statistical significance at 1%, 5%, and 10% levels, respectively. Primary education is a dummy variable for completed primary education or less, and secondary education is a dummy variable for completed secondary education. The omitted category for education is those that have higher education qualifications. Well-off and poor are dummy variables for wealth/financial status. The omitted category of the wealth category is the average category. Lack of a salary job is a proxy for unemployment

family support, reducing the inherent risk associated with self-employment, this is not true among the youth in Uganda.

The desire for greater independence, although positively signed, is insignificant. Implying that desire for greater independence has no impact on the self-employment choice. Focusing on unemployment, we used a dummy variable of lack of a salary job as a proxy. Even though positively signed as expected, the lack of a salary job is insignificant. The explanation here may be that, as argued by Carrasco (1999), although unemployment rises the likelihood of self-employment, it also increases the hazard of leaving self-employment, especially into unemployment. Hence, the positive and negative effects of unemployment on self-employment may neutralise each other, resulting in insignificant impacts of unemployment on self-employment.

Table 4 reports the results from the multivariate probit regression. Focusing on self-employment, the results from the multivariate model are similar to those reported in Table 3 (binary probit model) in terms of significance. Being self-employed is positively related to age, being well-off, having secondary education, high-profit motive and the desire for more flexible work hours. Whereas being poor and having many children reduces the chances of being self-employed.

Regarding paid employment, being well-off and educated increases the chances of paid employment but the desire for greater independence, high-income motive, desire for flexible work hours and lack of salary job (a proxy for unemployment) are negatively related to the chances of engaging in paid employment. Other employment (unpaid employment) is negatively associated with being married, being poor, the desire for greater independence, and a lack of salary job, but positively related to education.

4.3. Sources of Finance for Self-employment Activities

The self-employed youth were asked to state their primary source of funds to start their businesses and their primary source of funding for sustaining their businesses. The findings are presented in Figure 1. Most (54.7%) of the self-employed youth used their own savings to start their business, while a reasonable proportion (40.5%) of the self-employed youth say they used money from family and friends to start their businesses. A small proportion (2.3%) of self-employed youth had their initial funding source as loans from both formal and informal financial institutions; this low percentage can be attributed to the high-interest rates associated with these loans and the sometimes unexplained bank charges. Only 0.66% of the self-employed youth started businesses with assistance from government institutions, and about 0.5% got money from NGOs and donor projects to start businesses. Thus, businesses are mainly financed and maintained by the owners and family money (about 54.7% and 40.5%, respectively). The results align with Blanchflower and Oswald (1998), who reported that individuals started businesses with individual savings or family money but not bank loans.

4.4. Challenges of Self-employment

Most of the self-employed youth face a problem of insufficient financial resources (about 24.2%), as noted earlier, most businesses are financed mainly by their owners. Lack of sufficient financial resources can be attributed to high-interest rates associated with loans which would have been an alternative source of finance, as well as limited access to finance by the youth due to lack of collateral and unexplained bank charges. Similar results are reported by Blanchflower and Oswald (1998), who found that capital constraint was the major challenge for being self-employed. Competition in the market is also a significant problem faced in business, and about 13.2% of self-employed youths cite this as their major challenge. The most frequently cited problem the self-employed face is under others (45.2%). This means many youths face unique problems other than those already alluded to in Figure 2.

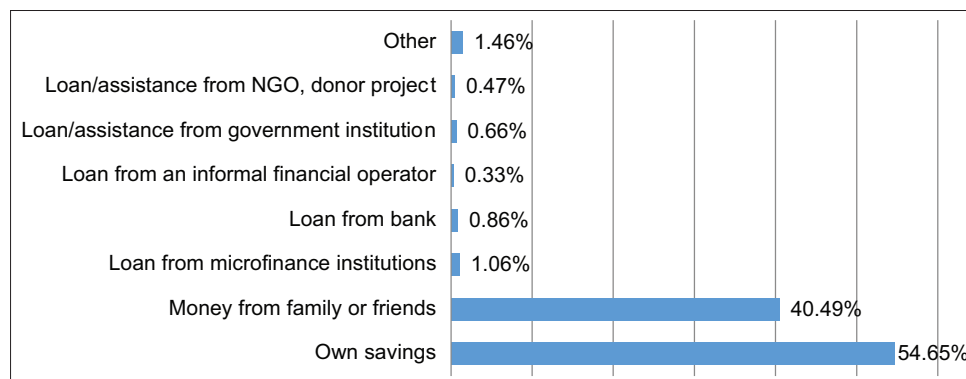
4.5. A Comparison of Monthly Earnings of Self-employed and Paid-employed Youth

The self-employed youths were asked to estimate the total profits they registered concerning their main job/activity during the previous month. Also, paid-employed youths were asked to state their salary or wage during the last month. Figure 3 presents the findings. According to the results, not every self-employed youth is earning profits – some youths make losses (about 2.4%), and others are just able to break even (17.9%). Because people start businesses to earn income, the findings suggest that about 20.3% of self-employed youth could also be referred to as “disguised

Table 4: Determinants of self-employment among the youth in Uganda-Multivariate probit model

Variables	(1) (self-employment)	(2) (paid-employment)	(3) (unpaid- employment)
Age	0.0304*** (0.0084)	-0.0039 (0.0088)	0.0053 (0.0087)
Gender	-0.053 (0.0509)	0.0418 (0.0536)	-0.0021 (0.0533)
No of children	-0.0706*** (0.0206)	-0.0062 (0.0219)	0.0075 (0.0217)
Marital status	-0.0018 (0.0678)	0.0097 (0.0700)	-0.1884*** (0.0707)
Well-off	0.1618* (0.0895)	0.3139*** (0.0892)	-0.0416 (0.0908)
Poor	-0.2737*** (0.0567)	-0.0569 (0.0602)	-0.2378*** (0.0592)
Primary Education	0.1551 (0.1173)	0.6241*** (0.1519)	0.6471*** (0.1543)
Secondary education	0.4299*** (0.1366)	0.3639** (0.1723)	0.4908*** (0.1706)
Independence	0.0132 (0.0754)	-0.7360*** (0.0842)	-0.1901** (0.0795)
Higher-income motive	0.5882*** (0.0989)	-0.3968*** (0.0987)	-0.0322 (0.0954)
Flexible work hours	0.5205*** (0.1445)	-0.7357*** (0.1493)	0.1941 (0.1390)
Lack of a salary job	0.0094 (0.0647)	-0.2988*** (0.0665)	-0.2043*** (0.0681)
Constant	-0.5071** (0.2309)	-0.7220*** (0.2526)	-0.9570*** (0.2550)
n		2533	
Log pseudolikelihood		-4455.2726	
Chi2 (12) (P-value)		343.02 (0.000)	

Note: Figures in parentheses stand for Robust standard errors. ***, **, * stand for statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively. Primary education is a dummy variable for completed primary education or less, and secondary education is a dummy variable for completed secondary education. The omitted category for education is those that have higher education qualifications. Well-off and poor are dummy variables for wealth/financial status. The omitted category of wealth is the average category. Lack of a salary job is a proxy for unemployment

Figure 1: Sources of finance for self-employment activities

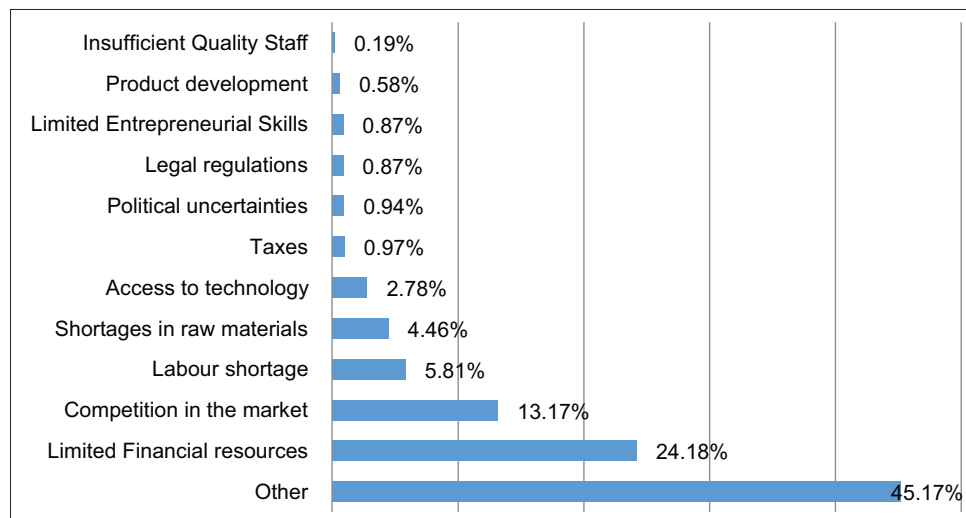
Source: Authors' calculations based on Uganda's 2015 School-to-work transition survey

self-employees" Nevertheless, 79.7% of the self-employed youth make some profits.

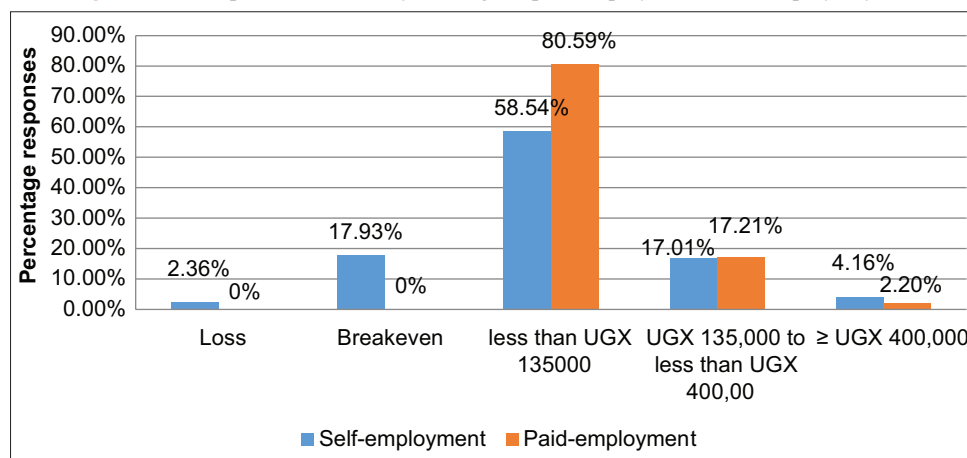
However, considering Uganda's poverty line of USD 1.25 and the current exchange rate of UGX 4,500, the minimum income level deemed adequate for survival is UGX 135,000 per month. But from the survey, we note that 78.8% of self-employed youth earn profits of less than UGX 135,000 per month, indicating that they live below the poverty line.

Similarly, focusing on the paid-employed youths, the findings from the survey show that 80.54% of paid-employed youth earn less than UGX 135,000 per month, indicating that they

are living below the poverty line. Since the national headcount of poverty stands at 24.5%, the youth contribute a large share to those Ugandans living below the poverty line. The percentage of self-employed youths and paid-employed youth below the poverty line is almost the same (78.8% and 80.6%, respectively). Even the portion of the youth earning between UGX 135,000-UGX 400,000 and above UGX 400,000 is roughly the same for both paid-employed and self-employed youth. This indicates that a comparison of paid employed and self-employed earnings reveals not much discrepancy. The high percentage of paid-employed youth living below the poverty line may be because it includes domestic workers who are mostly paid low salaries. At the same time, the high rate of self-

Figure 2: Most important problem you face in your business

Source: Authors' calculations based on Uganda's 2015 School-to-work transition survey

Figure 3: A comparison of monthly earnings of paid employed and self-employed youth

Source: Authors' calculations based on Uganda's 2015 School-to-Work Transition survey

employed youth below the poverty line may indicate a fragile and challenging business environment in Uganda.

5. CONCLUSION AND POLICY RECOMMENDATIONS

Information regarding the determinants, challenges, performance and general characteristics of self-employment among the youth is essential if supportive policy interventions are to benefit the neediest youth. This paper finds that most employed youths are self-employed. The majority of the youths were poor and had primary education or less. Most youths were self-employed because they could not get a wage or salary job, desired greater independence, desired flexible work hours, expected higher earnings from being self-employed, and requirements of their families. Most youths started businesses with individual savings or family money but not bank loans. Many youths face unique problems besides financial constraints and market competition, which were also major challenges faced by the self-employed youth. We also note that self-employment is currently not lucrative; sadly, 20.3% of self-employed youth do not make profits from their entrepreneurial

efforts. At the same time, 78.8% of the self-employed youth live below the poverty line. Econometric estimations revealed that the choice of self-employment is positively influenced by age, being financially well-off, education, high-income motive, and desire for more flexible work hours. Poverty and having many children while still a youth hinder the chances of self-employment.

In light of the above key findings and to deepen entrepreneurship while ensuring that it is lucrative, the governments should support self-employment to create livelihood opportunities for the poor and expand opportunities for better-paying self-employment. Hence, the following recommendations emerge; (a) Government of Uganda needs to make affordable credit available to youth. There is also a need to skill the youth to put the acquired credit to profitable use and become competitive in the market, for example, through setting up business incubators. Business incubators will offer the youths business and financial advisory services, mentorship programmes, entrepreneurial research output and network with funding organisations, thereby creating successful and sustainable enterprises. (b) The government programmes aimed at generating more jobs for the youth should mainly target young youth, youth

with many children, poor youth, and the less educated since they have limited capacity to start and maintain their businesses. Such affirmative action will promote equity and shared prosperity. (c) Since having many children while still a youth is negatively associated with chances of self-employment, family planning is a good option for delaying child-bearing until one can secure or personally create a good job. Thus, the government should ensure access to family planning services. Notably, the government should improve the quantity and quality of education beyond primary and up to higher education among the youth to enhance the youths' knowledge base necessary for successful enterprise creation and sustainability.

With consideration and proper implementation of the above recommendations, self-employment can boost the earnings of the youth above the poverty level.

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