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Social and Macroeconomic Determinants of Youth Self-Employment in Sub-Saharan Africa

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ABSTRACT

Youths in sub-Saharan African (SSA) countries have found it increasingly difficult to transit into decent employment due to binding constraints in the labour markets. This study examines the leading factors that drive the youth entry into self-employment in SSA, as well as determinants of success of the youths in self-employment in relation to becoming an entrepreneur or employer in the region. Data from the School-to-Work Transition Survey (SWTS) for 7 SSA countries is used and the determinants of youth self-employment are estimated using the logit technique. It is found that factors that while social factors are more relevant in explaining youth entry into self-employment, macroeconomic and infrastructural factors play significant role in explaining the success of youths in self-employment. Skills, rather than general education, is also shown to be relevant in enhancing the success of youths in self-employment. This implies that the success of youths in self-employment requires more sectoral or policy interventions than general entry into the employment segment. Strategies to enhance the condition of youths in self-employment (promoting youth entrepreneurs) therefore require attention to the basics in terms of macroeconomic stability and promoting adequate financial and physical infrastructure.

1. INTRODUCTION

Limited opportunity for younger participants in the labour market constitutes a major employment problem for countries in the sub-Saharan Africa (SSA) region. For instance, youth employment rate in the region was 43.9 percent in 2020 compared to 62.6 percent for the entire labour market. In spite of this, youth entry into the labour force has been on the increase in the region (Fox, Senbet and Simbanegavi 2016; Datta et al. 2018). In addition to decreasing demand for labour, the condition of youth labour force has created highly segmented labour markets in the region along demographic structures with unfavourable outcomes for the youths. A visible consequence is the high and rising proportion of youths in the self-employment. As ILO (2020) noted, while self-employment constituted 68 percent of all employment the proportion was 77 percent for youth employment. Essentially, self-employment is disproportionately prevalent among the youths in SSA countries.

Although the definition of self-employment by ILO (2020) captures all aspects of work that does not involve direct institutional variations of work-life and government interventions, there are important discrepancies in the patterns and description of self-employment between advanced and developing economies. These discrepancies become clearer when the conditions of self-employment are considered among the countries. In particular, the share of employers (which is considered as the most decent and productive segment of self-employment) in total self-employed workers was 67 percent in Europe and 74 percent in the US in 2020, while the share was 3 percent in sub-Sharan Africa in the same period (Simoes et al. 2015; ILO 2020). Thus, while self-employment has been considered as a strong background for driving stable economic growth and prosperity in advanced other emerging economies (Kelley et al. 2013), the conditions of self-employment in developing countries involves high informality, low-wage and

employment vulnerability (Getinet 2009; Gindling and Newhouse 2014; Burchell *et al.* 2017). In this case, being in self-employment does not necessary give a decent living (ILO 2019).

Thus, there is the risk that many youths in SSA countries are entering into work poverty and not into decent jobs. This makes it critical to understand the underlying factors that drive young people into this segment of the labour market. Apart from the strong role of labour market segmentation, other dimensions, including demographic, social, institutional, technology, and policies may be exerting significant influences on the choice of young labour market participants in entry into self-employment.

In this study, the leading factors that drive the decision of youth to inter into self-employment is examined for a group of SSA countries. This is important because these factors can then be considered as possible drivers of poverty among the countries. In particular, the study considers the need to delineate the peculiar factors that drive self-employment among youths within SSA countries by employing micro-based datasets that probe more deeply into the social and economic factors. Moreover, the ILO (2020) definition of self-employment entails that even within the broad category of self-employment, there are segmentations between successful or non-vulnerable (employers) and others which are less successful among SAA countries. This is another critical aspect of this study where it is argued that the factors that drive the youths into self-employment may differ from the factors that ensure whether the youths are successful as self-employed. Thus, this study provides a background for explaining that the factors that drive entry of youths into self-employment may differ from factors that ensure success. Following this introductory section, we review literature in section two of this study, while the methodology of the study is outlined in section three. We present and analyse the data and model estimates in section four and conclude with relevant recommendations in the last section.

2. BRIEF LITERATURE REVIEW

In general, theories of self-employment distinguish between two underlying issues regarding entry into self-employment in the labour market. On the one hand, there is the argument that self-employment is a conscious choice and entry decision is made intentionally after rational considerations have been made. Models of self-employment as an occupational choice propound that self-employment is founded on entrepreneurial abilities (Lucas 1978; Nguimkeu 2022), level of risk aversion (Kihlstrom and Laffont 1979), initial wealth distribution (Banerjee and Newman 1993), or income maximization decisions (Van der Sluis, Van Praag and Vijverberg 2005). Conversely there is argument that self-employment is forced on individuals even when they do not plan to enter. This argument resonates more with developing countries with highly dualistic labour markets. These theories are mostly disequilibrium analysis of the labour market where the existence of self-employment is explained by lack of opportunities arising from either social factors like population and migration, or demand-side factors (Harris and Todaro 1970; Fields 1975).

Yamada (1996) however formulated a model that suggests that self-employment can be layered in the labour markets of developing countries due to deep segmentation. In this structure, certain segments of the labour market entry are considered to be more intentional than others. In particular, Jacobs (2008) extended the Yamada theory by showing that while the level of economic activities can explain non-choice entry into the self-employment, more specific factors like financial and physical capital tend to be the underlying factor for intentionally choosing self-employment. Also, Simoes et al. (2015) provided a theoretical evaluation of the leading determinants of self-employment entry of individuals and found that social and personal traits influenced self-employment in selected advanced economies. In this study, we extend this theoretical argument by stating that general entry into self-employment is different from success in self-employment both in terms of characteristics and determinants. While general entry relates to overall participation in self-employment, success in self-employment is defined as individuals in the employer or entrepreneur segment in self-employment.

The foundations to the empirical research on the self-employment segment of youths in the labour rests on the issues of crippling unemployment that in prevalent in this labour force group. As Fox et al. (2016) have found, self-employment is one of the innovative responses of youths in SSA to respond to the deepening absence of formal wage jobs. Thus, the causes of youth unemployment are indirectly linked to those of self-employment. Fox and Gandhi (2021) found that rising economic development and structural transformation that involve improvement in educational quality lead enhance youth opportunity in the economy and lessens the burden of unemployment while the high rate of labour force growth and declining productivity in the informal sector increase the burden of youth unemployment. They also found the current labour laws in many SSA countries are discriminatory and further limits chances of youth employment. Anyanwu (2013) however found that it is at high levels of economic growth that the youth unemployment issue can be addressed in SSA countries. The study also found that while domestic investment rate, access to credit, ICT infrastructure, and education positively affects youth employment, government consumption expenditures, inflation, and demographic factors increases unemployment for youths in SSA.

At the micro-level of analysis, Fakih et al. (2020) evaluated the determinants of youth unemployment in the MENA region in recent years. The found that social and demographic factors like gender equality, social rights, increased economic inclusion of the youths, education, and reduction in corruption all improve the chances of youths in securing employment. Msigwa and Kipesha (2013) also employed Multinomial logistic regression to examine the determinants of youth unemployment in Tanzania. Similar to other research, their study showed that gender, urban residence, education, skill level, and marital status were the dominant factors that explain youth unemployment in the country. Thus, demographic factors, especially in relation to rising share of youth in the

labour force, explain a large proportion of the failure of youths to access a larger share of the labour market (Fox et al. 2016). In the same vein, David et al (2019) demand-side policies that reduce constraints to business development and job creation are more important in reducing youth unemployment than supply-side policies that focus on training and skills.

A prominent feature in the empirical literature on the determinants of self-employment is the definitions of the concepts which differentiate between advanced economies and developing countries (Monga et al. 2019; ILO 2020). In a broad review of literature on the determinants of self-employment among advanced economies, Le (1999, 381) highlighted that "individual abilities, family background, occupational status, liquidity constraints and ethnic enclaves" were the most critical factors that researchers located as predominant in explaining self-employment. Similarly, Hiromi (2002) examined factors influencing women's decision to be self-employed using a longitudinal survey of individuals born between 1957 and 1964 in the US and by differentiating between Hispanic, African-American and white women. There was evidence that the spouses, work experience, and race considerations played significant roles in influencing self-employment. Furthermore, Tubadji, et al. (2019) examined how the prevalent psychological and cultural factors affected the choice of self-employment using cross-sectional data from 2003-2010 for Greece and Germany. Using the probit model, they found that fear of failure, cultural persistence and the level of inclusiveness in the community greatly influenced the choice of self-employment of individuals in the 15-24 years age group.

In terms of determinants of self-employment among developing countries, Getinet (2008) found that the weakening structure of the economy (especially in terms of de-indutrialisation) and high rates of unemployment were the main drivers of self-employment in the SSA countries. In a more intensive study of the determining factors of self-employment in both developing and developed economies, Gindling and Newhouse (2014) found that the social and personal characteristics are the prevalent factors that explain the willingness to join the self-employed group. They demonstrated that policy interventions were less effective in explaining entry into self-employed among developing countries. This outcome was confirmed by Melak and Derbe (2022) who found that sex and skill development were predictors of youth self-employment. Morrar, Amara and Zwick (2022) found similar evidence for Palestian youths and also indicated that specific training after formal education also increases the likelihood of youths to be self-employed. On the other hand, Belay (2023) showed that self-employment in the services sector in Ethiopian was driven largely by the social capital factor of trust in government institutions (including labour markets and financial system).

The outlined literature provides evidence on the factors that drive self-employment among advanced and developing economies. However, an essential aspect of the literature on advanced economies is the focus on the definition of self-employment that relates more to productive employment or the whole labour market. This is however not the case for many SSA countries – where self-employment is more vulnerable (Fields 2019) – nor the case for youth sphere of the labour market. For instance, ILO (2018) found that individuals pushed out of agriculture as a result of the low productivity and poor social protection, have a higher tendency to move into more vulnerable aspects of self-employment which is prevalent among the youths. Getinet (2009) also found that for Ethiopian urban youths, self-employment is only a route out of unemployment rather than being a path to a decent job. While studies in advanced economies consider self-employment mainly in relation to being an employer, the reality in SSA is that a huge proportion of self-employed are in vulnerable employment. This makes it cumbersome to include some determining factors from studies in advanced economies in research for SSA. For instance, rural-urban discrepancies are vital for explaining youth self-employment in developing countries. This outcome is confirmed by Gindling and Newhouse (2014) who demonstrated that jobs exhibited a clear pecking order among developing countries and within the self-employed.

Thus, studies in developing countries tend to isolate factors that enhance the success of youths in self-employment. Success in this regard refers to youths employed in the most productive segment of "employers" (ILO 2020; Fox and Gandhi 2021). Thus, both theory and empirical evaluations suggest that factors that drive youths in SSA into self-employment are generally not the same as those that ensure success in this employment category. For instance, Adegboye and Ojo (2021) examined the roles of education and innovation on reducing vulnerable youth employment – the segment that relates to unsuccessful participation in self-employment. They found that education only matters for relieving vulnerable employment when it relates more to enhancing innovation. On the other hand, innovation had strong capacity to reduce vulnerable employment, especially when such innovation is driven by government. Hence, there is evidence that reasonable government policy involvement is required to ensure higher success of youths in self-employment. In the same vein, Odewale et al (2019) examined factors that ensure success of youth entrepreneurs and found that more technical skills (not related to general education) and capacity to adopt strategies are the most important factors.

Fox and Gandhi (2021) also found that for SSA countries, the level of economic development and transformation are the pivotal elements that improve youth self-employment outcomes. This provides evidence of the role of macroeconomic factors (which drive the business environment) as critical for enhancing succeed of youths in self-employment. Sumberg et al. (2019) found similar results and noted that structures provided by governments are more important than the social characteristics of youths in gaining advantages as self-employed individuals. Bridges et al. (2017) tends to confirm these earlier findings by deploying historical labour market datasets for Tanzania and estimating the impacts of social characteristics on future self-employment success of youths. effect of early labour market experiences on adult labour market outcomes. They found clear evidence that factors that drive the youths into self-employment do not matter for the nature of final earnings.

For the SSA countries therefore, there are unique characteristics of self-employment that require strong consideration. First, the place of age consideration in self-employment is important. For instance, many studies on SSA have found that younger labour market participants are more likely to be self-employed than older participants (Getinet 2008; Margolis 2014; Gaetsewe 2018; Datta et al. 2018; Morrar et al. 2022). This suggests that the major demographic considerations are important in examining the determinants of self-employment among SSA countries. Second, "employers" category is considered as non-vulnerable, while other groups (including own-account owners) are vulnerable (ILO 2020; Fields 2019). Thus, in explaining the determinants of self-employment, there needs to be two stages of analysis, including (i) determinants of initial entry into self-employment, and (ii) determinants of success in self-employment (i.e., entrepreneurs or employers). This is a critical area where this study contributes to literature.

3 METHODOLOGY

The survey approach is employed in this study using a micro-data framework. Both descriptive and inferential statistics are used in evaluating the relationships and conclusions drawn in this study. Two procedures are used in the empirical analysis. The first is to determine the most relevant factors that explain the decision of the youth to enter into self-employment, and success in self-employment. This is done using the Principal Component Analysis (PCA) method. The second procedure involves the estimation of the impacts of the selected variables on either self-employment or on the success of youth in self-employment.

3.1 The Principal Components Analysis (PCA)

The PCA analysis involves the demonstration of the level importance of a group of variables in explaining a central component or variable. In order to obtain a mature model, 25 variables were included. These variables were obtained based on extant literature and data quality. The same set of variables were selected for explaining both self-employment determination and success in self-employment. The summary of the PCA results for the variable importance estimation for self-employment (PC1) and success in self-employment (PC2) are reported in Table 1. It should be noted that the relevance of the principal components is measured on a scale of quantity ranging from 0 to 1. The benchmark for the inclusion of variable importance is 0.5 or 50 percent contribution (see Manage & Scariano, 2013). The variables examined for self-employment are modeled by principal components 1 (PCI) while the variables selected for determining success of self-employed are modeled by principal component 2 (PC2). From the Table, it can be seen that 11 out of the 25 selected factors considered have proportion of Eigenvalue that are greater than 0.5 for the determinants of self-employment, while 9 variables are selected as relevant determinants of success in self-employment. These are the factors included in the models specified in this study. Interestingly, the leading factors for the determination of youth self-employment are related to social and personal characteristics of the individuals, while the factors selected as relevant in explaining success in self-employment are more macroeconomic and policy-related.

Table 1: PCA result for the important variables to self-employment

Variable	*PC = youth self-employment*		*PC = success in self-employment (employer or entrepreneur group)*	
	power	**rating**	**power**	**rating**
Downturn in economy	0.93	1	0.55	7
Rate of national unemployment	0.91	2	0.45	12
Parents' status (employed)	0.88	3	0.444	13
Level of education	0.80	4	0.48	10
Period of unemployment	0.75	5	0.262	14
Urban residence	0.71	6	0.241	15
Participation in service sector	0.69	7	0.17	16
Female gender	0.66	8	0.11	17
Experience with entrepreneurship	0.60	9	0.83	3
Satisfaction with self-employment	0.53	10	0.60	6
Level of skill	0.51	11	0.53	9
Electricity	0.39	12	0.97	1
Access to finance	0.25	13	0.91	2
Exchange rate	0.17	14	0.74	4
Inflation	0.11	15	0.62	5
Availability of internet infrastructure	0.07	16	0.51	8
Attitude towards work	0.07	17	0.05	22
Health challenge	0.06	18	0.00	25
Physically challenged	0.05	19	0.01	24

Recently migrated	0.02	20	0.06	20
Religion	0.001	21	0.06	21
Taxation	0.00	22	0.54	8
Migration	0.00	23	0.04	23
Age	0.00	24	0.09	18
Marital status	0.00	25	0.07	19

Source: Author's computations

3.2 Model specification

The model specified in this study are in two stages. The first stage is to explain the determinants of entry into self-employment and the second stage is to explain success within self-employment. These models are derived from the theory and empirical studies where clear distinctions have been made between entry into self-employment and the entry into the different segments within self-employment (Yamada 1996; Jacobs 2008; Gindling and Newhouse 2014; Simoes et al. 2015). This implies that factors that explain general youth entry into self-employment may be different from those that explain success of self-employment. From the PCA analysis, 11 factors were highlighted as the leading factors that drive youth entry into self-employment with specific focus on SSA countries. Based on this outcome, the first model is specified for determinants of self-employment using a linear equation as:

$$\begin{aligned} Self\ emply = {} & \alpha_0 + \alpha_1 gender_{it} + \alpha_2 parent\_status_{it} + \alpha_3 education_{it} + \alpha_4 skill_{it} + \alpha_5 urban_{it} \\ & + \alpha_6 unemployment_{it} + \alpha_7 economy_{it} + \alpha_8 experience_{it} + \alpha_9 service_{it} \\ & + \alpha_{10} satisfaction_{it} + \alpha_{11} unemply\_period_{it} + u_{it} \end{aligned} \quad (1)$$

Where *self-emply* is the measure of self-employment. This variable is a dummy variable that captures whether an individual is self-employed or not. For an individual that is self-employed the variable takes 1 and it takes 0 for an individual that is not self-employed. Self-employment is based on the ILO (2020) definition of individual that is an employer, own account, member of producers or helping household. The *gender* variable takes the value of 1 for females and 0 for males. This implies that we seek to observe the role of being a female on the decision to enter into self-employment. The parent status measures whether a parent or both parents are in formal employment, while *education* represents the level of formal education or training by the individual. The level of skill acquired is measured by the item "Do you feel your education/training qualifications are relevant in performing your present job?" in the survey questionnaire. The *urban* variable measures the residence of an individual with those in urban centres taking a value of 1 and those in rural centres taking a value of 0. Both *unemployment* and *economy* measure the degree of economic environment to represent the rate of unemployment in the economy and the measure of downturn in the economy respectively. The level of experience of the individual as an entrepreneur is also included, while service represents whether the individual works in the services sector. The level of satisfaction of individuals in self-employment as well as the length of time for which an individual was unemployed are also included in the model. Period of unemployment (*unemply_period)* refers to the length of time that the individual has been without work and actively looking for a job.

As demonstrated in the literature and contribution of this study, the factors that explain decision to enter into the self-employment segment of the labour market may be different from those that enforce success. Moreover, the direction of impacts of same variables may be different for either segment of self-employment. Based on the PCA, the model for the determination of success in self-employment is specified based on the framework by Gindling and Newhouse (2014) as:

$$\begin{aligned} success = {} & \beta_0 + \beta_1 economy_{it} + \beta_2 electricity_{it} + \beta_3 fin\_access_{it} + \beta_4 skill_{it} + \beta_5 inflation_{it} \\ & + \beta_6 exchange\_rat_{it} + \beta_7 internet_{it} + \beta_8 eeducation_{it} + \beta_9 experience_{it} + v_{it} \end{aligned} \quad (2)$$

Where *success* represents whether an individual is successful in self-employment. Success in self-employment takes the value 1 if an individual is an employer or entrepreneur and non-success in self-employment takes the value 0 if an individual is not in the employer or entrepreneur category. This variable is based on the finding that the *employer*s or entrepreneur group are the only productive and non-vulnerable group in self-employment among SSA countries (Fields 2019). Moreover, this is the segment of self-employment in which entry is mostly by choice (Jacobs 2008) and ensures more stability (Yamada 1996). The perception of the individuals regarding the level of availability of electricity is captured by the *electricity* variable, while *fin_access* measures the level of access to finance. This variable is measured from the item on "What financial services do you personally use?" in the SWTS survey questionnaire. The *inflation*, *internet access*, and *exchange rate* are also included based on the PCA and they measure strong policy-related variables in the model. The economy, skill, education, and experience variable are as defined above.

3.3 Data and Estimation Procedure

The data used in the study are obtained from the School-to-Work Transition Survey (SWTS) by the ILO for seven (7) SSA countries (Benin, Congo DR, Liberia, Madagascar, Malawi, Tanzania, Togo, Uganda and Zambia) which generates relevant labour participation and transition market information on young people aged 15 to 29 years. The latest survey for the countries in the study was conducted in 2015 and the outcome of this survey is used for the data analysis of the study. In estimating the model, the type

of dependent variable is taken into cognizance. The dependent variables in Equation (1) are entry into self-employment and success in self-employment (i.e., being an employer or entrepreneur). Both variables are measured by binary dummies that take the value of 1 for positive response and 0 for negative response. Estimating this model therefore requires a qualitative response framework. In the study the logit estimation procedure is adopted. This technique helps to estimate the binary dependent variable in relation to the explanatory variables. The logit estimates are also augmented by the marginal effects estimates. The marginal effect estimates from the logit estimates help to show the elasticities or proportional effects of the independent variables on the probability that the required outcome on the dependent variable will occur.

4. EMPIRICAL ANALYSIS

In this section, the data used for the study are presented and analysed. The analysis involves the presentation and evaluation of the estimated models that were specified in the previous section.

4.1 Descriptive Statistics

The basic background information about the respondents in the SWTS survey for the seven SSA countries is presented in Table 2. It is seen that the ages of the participants in the survey is between 15 and 30 years, which are prime years in the definition of youths. The age grade between 15 and 18 years however dominates within the youth age structure. There are also more females (54.4 percent) in the survey than are males. The proportion of rural residents is higher than that of urban residence, which shows that more of the respondents are in rural areas. Only 5.7 percent of the participants did not have some form of formal training or education, which shows that even the rural dwellers are relatively educated. In terms of the type of education, more of the respondents (51 percent) have primary school as their highest level of education. This shows that although many respondents are educated, the level of education is very low among them which may translate to lower skill levels among the participants.

Table 2: Summary of Background Information

Item	Response	Frequency	Percent
Age	15-18	9,696	35.1
	19-22	7,763	28.4
	23-26	5,829	21.1
	27-30	4,254	15.4
Sex	Male	12,597	45.6
	Female	15,028	54.4
Residence	Urban	10,498	38.2
	Rural	17,127	61.8
Formal school/training programme	Yes	26,050	94.3
	No	1,575	5.7
Currently attending school/training programme?	Yes	9,310	33.7
	No, I have completed my education	2,486	9.0
	No, I left before graduation or completion of training programme	14,227	51.5
highest level of formal education/training completed			
	None	1,575	5.7
	Primary level	14,091	51.0
	O-Level	7,543	27.3
	A-Level	2,167	7.8
	Professional Certificate	411	1.5
	Diploma	798	2.9
	First Degree	1,023	3.7
	Post Graduate Certificate	17	0.0

Source: Author's computation from SWTS

Table 3 shows the type of employment among the youths included in the survey. It can be seen that the largest share of the youths is made up of own-account workers which makes up 46.7 percent. This confirms the observation that own-account owners make up the largest proportion of youth employment among SSA countries. These own-account workers are a strong characteristic of self-employment in the SSA countries which differentiates this region from more advanced economies. Indeed, the own-account workers are mostly involved in less formal and less productive jobs. Also, 14.5 percent of the youths are considered as employees within the self-employment framework, while 20.7 percent are involved as helping family workers. Only 13 percent of the youths surveyed

are clearly not in self-employed. When this proportion is added to those who are employees in the formal sector, there would be generally about 870 percent of the youths in self-employment.

Table 3: Types of Employment of Youths

Type of employment	Frequency	Percent
Employee (working for someone else for pay in cash or in kind	4013	14.5
Employer (employing one or more employees)	741	2.7
Own-account worker (not employing any employee)	12904	46.7
Member of a producers? Cooperative	190	0.7
Helping without pay in the business or farm of another household/family member	5706	20.7
Other	470	1.7
Non- self-employment	3601	13.0
Total	27625	100

Source: Author's computation from SWTS

4.2 Analysis of Regression Results

The result of the model for determinants of entry into self-employment is presented in Table 4. The focus of the analysis is on the marginal effects estimates which show by how much a change in the independent variable will influence the chance of an individual entering into self-employment. The coefficients of all the explanatory variables are significant, except for level of skills and urban residence. This shows that the skillset of the youths does not affect their decision to enter into self-employment. This may explain why a large proportion of self-employed youths are in the working poor category (Fields 2019; UNDESA 2018). The result also shows that urban residence does not significantly affect their decision to enter into self-employment. Self-employment thus appears to be prominent for both urban and rural youth dwellers.

From the results, the coefficient of female gender is positive and significant at the 1 percent level, suggesting that there is a higher chance of a female youth to enter into self-employment than a male. This outcome is generally similar for other developing countries (see Mueller 2019; Melak and Derbe 2022) but it is not in line with findings for advanced economies (Hiromi 2002; Tubadji et al. 2019). Parent's employment status (whether they are formally employed) has a negative coefficient showing that children of parents that are formally employed are less likely to be self-employed by up to 0.07 percentage points. This outcome corresponds with studies for more advanced economies (e.g., Simoes et al., 2015). The coefficient of the level of education is significant and also negative, indicating that more education tends to reduce participation of the youths in self-employment among SSA countries. The coefficient of experience is however negative, indicating that youths with more experience in the labour market are less likely to be involved in self-employment. Thus, as Melak and Derbe (2022) also found it is the specific experience in self-employment intensity, rather than general work experience, that increases the likelihood of youths joining self-employment. In general, the main characteristics of labour market participants that are expected to enhance participation are all shown to either be irrelevant or have negative impact on the decision of youths to enter into self-employment. This may explain the highly vulnerable nature of self-employment among SSA countries.

Table 4: Results for the determinants of self-employment

Variable	*Logit*		*Marginal effects*	
	Coef.	**P>|z|**	**dy/dx**	**P>|z|**
Female gender	1.671*** (0.324)	0.000	0.195*** (0.036)	0.000
Parents' status (employed)	-0.616** (0.272)	0.024	-0.072** (0.031)	0.023
Level of education	-0.349** (0.116)	0.029	-0.041** (0.037)	0.026
Level of skills	-1.248 (1.299)	0.337	-0.146 (0.152)	0.337
Urban residence	0.004 (0.047)	0.936	0.0004 (0.006)	0.936
Rate of national unemployment	0.606** (0.257)	0.018	0.071** (0.025)	0.020
Downturn in economy	0.438*** (0.106)	0.003	0.051** (0.024)	0.033
Experience	-0.263***	0.000	-0.0307*	0.010

	(0.066)		(0.011)	
Participation in service sector	1.388***	0.001	0.261**	0.001
	(0.402)		(0.084)	
Satisfaction with self-employment	0.031**	0.048	0.008*	0.008
	(0.016)		(0.002)	
Period of unemployment	0.920***	0.000	0.147**	0.000
	(0.135)		(0.035)	
Constant	-1.484	0.434	-1.592	0.452
	(1.897)		(2.164)	
LR chi^2 (prob)	56.22 (0.00)			
Pseudo R^2	0.406			
Hosmer-Lemeshow chi^2 (prob)	2.91 (0.186)			
sigma_u			0.266 (0.243)	
Rho			0.088 (0.069)	
Observations	13,554			

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: authors' computation

The coefficients of the rate of unemployment and downturn in the economy are both positive and significant at the 5 percent level. This shows that rising unemployment levels as well as instability or uncertainty in the economy increase the tendency of youths to go into self-employment. While a one unit rise in unemployment rate leads to rise in the likelihood of youth self-employment by 0.071 percentage points, a shock in the economy leads to a 0.051 percentage point rise in the tendency of youths to go into self-employment. Thus, economic performance is seen to be a very important factor in explaining youth self-employment among SSA countries. This outcome is also similar to findings by Le (1999) and Burchell et al. (2017). In the same vein, youths who have remained in unemployment status for long are also more likely to go into self-employment as shown by the positive coefficient of the period of unemployment variable. Thus, while the occurrence of unemployment pushes the youth into self-employment, prolonged unemployment status also matters for youth self-unemployment in SSA countries. As Getinet (2008) and Morrar et al. (2022) noted, youth self-employment is a veritable means of escaping unemployment among SSA countries.

The second round of the analysis involves the estimation of the determinants of success in self-employment by the youths. As exhibited by the PCA, policy and macro-level variables are the relevant factors that drive success in self-employment by SSA youths. The result of the estimates is reported in Table 5. In the result, only the coefficient of education fails the significance test at the 5 percent level, suggesting the level of education is not an important factor in explaining the success of self-employed youths among SSA countries. On the other hand, the coefficient of skills is significant at the 5 percent level. While education is important for reducing general entry into self-employment, it is skillset that is relevant in succeeding in self-employment for the youths. The result therefore shows that although skills do not matter for entry into self-employment, it is a critical factor for success in self-employment. This finding agrees with theoretical arguments (Lucas 1978; Jacobs 2008). Empirically, Odewale et al. (2019) also found that certain skillsets, especially communication skills, are important for success in self-employment for Nigerian youths.

All the other coefficients in the model pass the significance test at the 1 percent level. In particular, the coefficient of economic downturn is negative and shows that a shock in the economy has the capacity of reducing the success of youth in self-employment by 0.65 percentage points among SSA countries. Thus, poor economic performance has the capacity to push youths into self-employment and also to hinder the youths from succeeding in self-employment. This makes the nature of the economy a critical factor in youth labour market participation among SSA countries. Indeed, other studies in SSA countries have also confirmed that weak growth and shocks in the economy steadily constrains youth in effectively participating in the labour market (UNDESA 2018; Adegboye and Ojo 2021). The result also shows that other macroeconomic factors that are policy-directed have significant negative impacts on youth self-employment success. In particular, the coefficients of exchange rate and inflation are both negative, which show that rising exchange rate and inflationary pressures tend to reduce the chances of success for youth in self-employment. Overall, the study finds that macroeconomic factors are very important in explaining the success of youth self-employment among SSA countries.

Table 5: Determinants of success in self-employment

Variable	*Logit*		*Marginal effects*	
	Coef.	**P>|z|**	**dy/dx**	**P>|z|**
Economic downturn	-2.746***	0.000	-0.649***	0.000
	(0.538)		(0.036)	
Availability of internet infrastructure	1.039**	0.021	0.302***	0.020
	(0.392)		(0.111)	

Inflation	-0.349*** (0.062)	0.000	-0.098*** (0.027)	0.000
Exchange rate	-3.039*** (0.896)	0.000	-0.363*** (0.074)	0.000
Electricity	2.837*** (0.283)	0.000	0.827*** (0.190)	0.000
Access to finance	0.827** (0.357)	0.021	0.0927** (0.045)	0.038
Education	0.352 (0.372)	0.302	0.037 (0.024)	0.334
Skill	1.237** (0.601)	0.018	-0.062** (0.031)	0.010
Constant	-2.109** (0.932)	0.030	-1.983** (0.609)	0.032
LR chi^2(prob)	113.5 (0.000)			
Negelkerke R^2	0.497			
Hosmer-Lemeshow chi^2 (prob)	1.66 (0.396)			
sigma_u			0.135 (0.372)	
Rho			0.036 (0.010)	
Observations	7,848			

Standard errors in parentheses (); *** p<0.01, ** p<0.05, * p<0.1 indicates. Source: authors' computation.

The coefficients of infrastructure (including internet and electricity) are both positive. This shows that increase in electricity raises the probability of success of the youths in self-employment by as much as 0.84 percentage points, while a proportionate increase in internet infrastructure raises the chances of success of youths in self-employment by 0.30 percentage points. This also shows that factors that are out of control of the youths, but are more easily in control of the governments are more important in determining the success of youth employment among SSA countries. Access to finance is also significant and has a positive coefficient, suggesting that greater access to finance improves the success of youths in self-employment. This outcome aligns with findings of both advanced and developing countries (e.g., Crespo and Moreira 2015; Monga et al. 2019; ILO 2020). Thus, there is clear evidence that access to finance forms a unique binding constraint on youth self-employment success irrespective of the structure of the economy. The result of the Hosmer and Lemeshow's goodness-of-fit tests are also reported in each of the Tables. The p-values for both Equations are higher than 0.1, which are sufficiently large enough to indicate a high fit of the data used in the study.

5. CONCLUSION

In this study, the social and macroeconomic determinants of youth entry into self-employment were examined for SSA countries. Given the nature of self-employment in SSA, the study emphasized that an explanation of the determinants of self-employment among SSA countries needs to consider the factors that drive self-employment among the youths as well as the factors that promote or inhibit the success of youth self-employment. Micro-level survey data from the SWTS was employed for the empirical analysis of the study and the principal component analysis (PCA) was employed to capture the leading factors that drive self-employment and its success among the youths. It is found that the factors that drive the youth into self-employment mainly involve individual and social factors, while factors that guarantee success in self-employment are more related to macroeconomic and public sector/policy interventions. This implies that any strategy to reduce work poverty in self-employment among the youths requires attention to the basics in terms of stabilizing the economy (ensuring less frequency of shocks, stabilising inflationary pressure and exchange rate fluctuation), ensuring long-term sustainability of the economy, as well as promoting adequate financial and physical infrastructure.

Moreover, it was found that the supply-side measure of promoting education is only critical in shaping the nature of self-employment among SSA countries, while that of skill development also matters for sustaining productive self-employment among the youths. Thus, education and training aimed at improving demand and supply-driven skills for the youths needs to be increased and intensified. The curriculum of schools needs to focus more on enhancing skill-set of pupils since this has been shown to be the relevant supply-side factor that promotes success of youths in self-employment. Finally, the financial system needs to be upgraded to facilitate more efficient and enhanced access to financial resources by young people.

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