

Determinants of Employability in the Informal Sector Among the Youth in Tanzania

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ABSTRACT

This study investigates the determinants of employability in the informal sector among youth in Tanzania using data from Integrated Labor Force Survey (ILFS) conducted in 2020/2021, utilizing probity regression analysis. Human Capital Theory guided this study. The model, statistically significant at a 1% level, indicates that variables including sex, capital access, income tax, social security, technical and computer skills, literacy and numeracy skills, physical skills, business registration, ownership, age, marital status, readiness for work, and education level collectively account for 4.4% of variations in youth employability. Positive impacts on employability are associated with capital access, numeracy and computer skills, paid employment, and level of education. The negative impacts are being male, income tax, social security coverage, literacy skills, physical skills, registered and owned businesses, married individuals, age, and readiness for work. The study suggests that attending school and possessing computer skills increases the likelihood of informal sector employment, while being male, subjected to income tax, covered by social security, having literacy skills, physical skills, registered or owned businesses, being married, aging, and being ready for work decrease the probability. The findings emphasize the importance of targeted interventions to enhance employability for youth in the informal sector, with considerations for gender, skills development, and business practices. Research recommended that enhancing access to education, programs in skill development and improving numeracy, computer skills to the youth will foster employability for the youth.

Keywords: Employability, Informal Employment, Informal Sector, Probit Regression, Youth

I. INTRODUCTION

Youth is the period when people want to formulate their ambitions and life goals, look for and discover their own roles and responsibilities in society and move towards financial and economic reliance. The transition from youth to adulthood is a transformative experience. Youths must make critical decisions that will significantly impact their lives on a social, psychological, and economic level (Shamchiyeva et al., 2014; Kitole et al., 2023). The high rate of unemployment among youth in Africa can be attributed to multiple factors. The high percentage of youth population (just over 20%), the underdeveloped economies that result in low job creation, the small private sectors that employ the growing youth population, the poor quality of education that contributes to the mismatch between the skills required by the labor market, the lack of general and job-related skills, and the limited amount of formal work experience are noteworthy h-factors (Report, 2017). Unemployment has been pushing many African youths to engage in violence and criminal activities, young women and girls seek sex business, sexual violence, substance and drug abuse, and all the bad become HIV/AIDS victims (Dimoso and Andrew, 2021; Merouani, 2023).

Families and societies are especially stressed by youth unemployment because, following significant educational investments, they expect that their children would find employment and thereby contribute to the development of their families and community (Lorato et al., 2023; Msigwa & Kipesha, 2013). According to data on informal employment in Africa, 66% of employments are in the informal economy (Kitole & Sesabo, 2023; Banks, 2016). Xiao et al. (2022) provides evidence to corroborate this reality, indicating that the growth of the informal sector and changes in the expanding formal production systems are the primary causes of the increase in informal employment in Sub-Saharan Africa. A study by Semboja and Hafidh (2021) shows that 7 in 10 nonfarm workers in Sub-Saharan Africa are in informal employment. Kamuzora (2024) shows that there is a dualism of good and bad employment in informal employment in the developing and emerging economies like Africa and Latin America. That dualism is found also in formal employment (Admasu et al., 2019; Mnyavanu et al., 2021).

The ongoing development of informal economy statistics contributes to the enhancement of youth employability statistics and national accounts. Many countries, especially developing and transitional, rely heavily on the informal sector to generate income, create employment opportunities to young people, and mitigate poverty. It gives youth people the chance to sustain themselves and their families by offering employment in a variety of industries, including street vending, small-scale manufacturing, agriculture, and domestic work (Bonnet et al., 2019). Although it creates employment and generates income, the young people in the informal sector have been facing challenges. These challenges include inadequate infrastructure for waste management and environmental sustainability, limited access to credit, a lack of social protection, and vulnerability to economic shocks and volatility (Semboja & Hafidh, 2021).

The informal sector concept in Tanzania became more prominent after the economy underwent gradual fundamental changes in the year of the 1980s, which called the roles of the reformation of public and private sectors. The mostly means of production and economic operations were carried out by the government and it also provided services to the public, including processing, marketing, and regulatory systems in addition to health, education, sanitary water supply, and public security (Di Porto et al., 2017; Delbiso et al., 2018; Pigozne et al., 2019).

1.1 Statement of the Problem

According to Tanzania's Integrated Labour Force Survey report (ILFS) three quarters of all paid non-agricultural work, or 75.9% of all employment, are informal. Furthermore, according to a report published in Tanzania by the Danish Trade Union Development Agency (DTDA) in 2018, when agricultural operations are taken into consideration, informal employment makes up 85% of employment in Tanzania's mainland and 88% of employment in Zanzibar. Secondary school graduates are one of the rising groups in the informal labor market, according to the ILFS report (Buba et al., 2022).

According to studies, the percentage of secondary school graduates entering the labor market increases annually. Between 2008 and 2019, just 21.5% of students passed the secondary education examinations with good grades, and the remaining 78.5% received poor grades. In summary, thirty.5% of all secondary school graduates within the specified period were utter failures, according to the data. Individuals who had failing grades were unlikely to pursue regular postsecondary education and were more likely to pursue alternative careers in the labor market (Mnyavanu et al., 2021). The Tanzania's youths depend mostly in agriculture as a main source of livelihood which employing over 65 per cent of youth population. The informal sector is the second biggest employer accounts for 23 per cent. In urban unemployment rate estimated to 13.4 per cent which is significantly higher than in rural areas (8.4 per cent) and in urban unemployment is more acute for women (Banks, 2016).

1.2 Research Objective

(i) Investigating the determinants of employability in the informal sector among youth in Tanzania.

II. LITERATURE REVIEW

2.1 Theoretical framework

2.1.1 Human Capital Theory

This study draws upon the human capital theory which suggests that individuals' productivity and employability are influenced by their investment in education, skills, and training. According to (Blundell et al., 1999), youth who acquire relevant skills and knowledge through education and training are more likely to find employment and succeed in the informal sector. Similarly, Buba et al. (2022) emphasizes the importance of education, vocational training, and skill development programs in enhancing employability. In addition, it stipulates that experience and on-the-job training enhances productivity as well as prospects for getting a job.

The Segmented labour market theory supports this argument by proposing that labor market is categorized into different segments. In this regard, the informal sector is one of them according to Fumbwe et al., 2021 and Cain, 1989). This theory states that individuals' access to employment opportunities in each segment is dictated by factors such as education, skills, social capital, and discrimination. At the same time, higher education levels and relevant skills increases their probability of getting better-paying and more stable jobs in the informal sector. Similarly, youth possessing vibrant social networks and connections may have an advantage on accessing information concerning available jobs, referrals, and support. The theory, in addition offers crucial insights into the specific features of the informal sector and its influence on youth employability.

However, this framework is criticized for ignoring the structural impediments and inequalities that guide on youth employability. Critics demonstrate the importance of taking into account wider concerns such as poverty, inequality, discrimination, and societal norms that affect resource accessibility and opportunities in the informal sector (Tan, 2014; Kitole et al, 2024b). At the same time, critics also reason that this hypothesis may cause marginalization and

exploitation of employees in the informal sector. This is because of acknowledging the existence of inferior jobs without campaigning for better working conditions and social protection (Bolarinwa & Simatele, 2023).

The framework above illustrates a comprehensive analysis of the relationship between individual, market, and contextual variables influencing informal sector employability among youth in Tanzania. It shows the need for regarding human capital development, market access, supportive policies, and individual agency in boosting sustainable and decent employment openings for young people.

2.2 Empirical review

This section evaluates the various supportive literature which aligns and relates with this current study. Shamchiyeva et al., (2014) shows the relationship between employability skills in informal sector which linked education or knowledge, age, marital status, sex and employability. Education and training potentially increase the productivity and employability of young people, opening up new opportunities in different sectors and occupations. Likewise Olusadum, (2018) succeeded in establishing the positive results influenced by age in the study where the adult group are more likely higher to be employed by 61.2 percent compared to young people 21.4 percent. In addition to a dummy for informal employment, several other explanatory variables that capture age, the urban or rural setting, education, sex and the aggregate sector of employment were included.

Report (2017) summarized and adds to the available literature on informality with evidence on the factors related to informal employment among youth that appear with direct reasons across developing economies. In particular, young women seem to be more vulnerable to informality and are less prone to transit into stable and satisfactory jobs. Vulnerability in general is a prerequisite for informality; vulnerable populations such as women, the youngest, the least educated and the least healthy are more often informally employed than their male, older, more educated and healthier counterparts. The vulnerability is also manifest in labour market trajectories: youth with long spells of unemployment are at higher risk for informality and dissatisfaction, suggesting that the unemployed end up being pushed into informal jobs that procure low satisfaction (Report, 2017; Pigozne et al., 2019; Mbaso et al., 2024).

In a comparison of the factors influencing youth and adult employment conducted in Burkina Faso, Ouedraogo (2018) used a probit model to prove that the probability that a young person or adult will have a job or not is not influenced by their level of primary and secondary education. Higher education, however, decreases young people's employment prospects by 5.67%. Author like Forse (1997) have noted that social characteristics such as age, marital status, sex, socioeconomic status of the previous job held, and social origin influence the process of obtaining employment, based on an analysis of the job search methods used by job seekers. Likewise, they argue that these patterns of job searches indicate the socioeconomic standing of the positions filled. In contrast to other job seekers, the unemployed, for instance, rely more on family connections to get employment; young graduates and trainees receive more recommendations from their educational institutions; and individuals who are employed receive recommendations from their employers (Forse, 1997). Furthermore, Wapoh's (2013) research on the ways in which graduates in Cote d'Ivoire obtain jobs reveals that women utilize interpersonal relationships to a greater extent than men.

III. METHODOLOGY

Data from Integrated Labour Force Survey (ILFS) is utilized to investigate factors that influence Tanzanian's youth employment in the informal sector. The period is from July 2020 to June 2021. The ILFS offers extensive information on employment, education, and skill sets, among other areas of Tanzania's economy. This study assures that the conclusions are reliable and suggestive of the larger population by using this nationally representative survey data, which improves the study's generalizability.

3.1 Analytical Modelling

The determinants of employability in informal sector are employing the probit regression model since has considerable advantages includes: The model is robust to heteroscedasticity, meaning it can handle situation where the variance of the error term is not constant and used when the dependent variable in a regression model is a dummy variable.

The probit regression equation estimated can be expressed as follows:

$$Prob(Y = 1 \text{ or } 0) = \beta + \beta_i X_i + \mu_i$$

Whereby Prob(Y) is probability of employability in informal sector (the predicted values fall within the 0 to 1 probability range), β is the intercept term, representing the log-odds of the event occurring when all explanatory variables X_i are zero. β_i is the coefficient (constant parameter) for the explanatory variable X_i . Indicates the change in the log-odds of the event occurring for a one-unit change in X_i , and μ_i is the error term or the residual, capturing the unobserved factors influencing the response variable that are not captured by the explanatory variables.

3.2 Measurement of Variables

Based on the available literature, the description of the variables in the study on the determinants of employability in the informal sector among youth in Tanzania includes the dependent variable as the employability in the informal sector among youth in Tanzania: This variable represents whether a youth is employed or unemployed in the informal sector. It is a binary variable, with "1" indicating employment and "0" indicating unemployment. The independent variables are: education level which represents form of education attained by the youth e.g. primary, secondary, vocational, or higher education. In this regard, vocational training or technical skills acquired captures the specific vocational training or technical skills that the youth have acquired, relevant to the informal sector. Socioeconomic factors (age, marital status and family background), resources access (financial capital access and information access), labour market condition (market demand for specific goods and services and availability of employment in the informal sector), and social capital (size and strength of social networks).

The variable representing the demand for specific goods or services in the informal sector influences employment opportunities, while the variable assessing the overall availability of job opportunities in the informal sector impacts youth employability. The variable examining the influence of family background and socioeconomic status on employability highlights the role of these factors in shaping opportunities for youth. Additionally, the variables measuring access to financial resources, access to information and for business development reflect the importance of financial support and knowledge in supporting youth's entrepreneurial activities in the informal sector.

Table 1

Variable Description and Measurement

Variable name	Operational definition	Expected sign
Dependent variable		
Youth employability in informal sector	Youth employability in informal sector (1= yes, 0= no)	
Independent variables		
Sex	Dummy, 1=Males, 0=otherwise	Positive/ Negative
Capital access	Dummy, 1=Loan accessed, 0= otherwise	Positive
Income tax	Dummy, 1=yes, 0= otherwise	Negative
Literacy skills	Dummy, 1=yes, 0=otherwise	Positive
Numeracy skills	Dummy, 1=yes, 0=otherwise	Positive
Computer skills	Dummy, 1=yes, 0=otherwise	Positive
Physical skills	Dummy, 1=yes, 0=otherwise	Positive
Registered business	Dummy, 1=yes, 0=otherwise	Negative
Business ownership	Dummy, 1=yes, 0=otherwise	Negative
Paid employees	Dummy, 1=yes, 0=otherwise	Positive
Age	Dummy, 1=yes, 0=otherwise	Positive/ Negative
Marital status	Dummy, 1=Single, 0=otherwise	Positive
Readiness for work	Dummy, 1=yes, 0=otherwise	Positive
Education level	Dummy, 1=yes, 0=otherwise	Positive
Technical skills	Dummy, 1=yes, 0=otherwise	Positive

IV. FINDINGS & DISCUSSION

4.1 Results

The descriptive analysis as shown in Table 2 provides a nuanced understanding of the determinants of employability in the informal sector among the youth in Tanzania. The study reveals that approximately 48.06% of the surveyed population is male, while 51.94% is female, emphasizing a relatively balanced representation. In terms of marital status, 73.35% are married, and 26.65% are single, underscoring the influence of marital commitments on employment status within the informal sector.

Analyzing the skill components, it is noteworthy that a significant proportion of youth possess intermediate-level technical skills (50.20%), literacy skills (51.45%), and numeracy skills (54.31%). This suggests a moderate proficiency level, reflecting the adaptability of the youth to the demands of the informal job market. The prevalence of basic computer skills among 72.71% of the respondents underscores the increasing importance of digital literacy in enhancing employability in the informal sector.

Furthermore, the advanced-level proficiency in physical skills by 43.08% of the surveyed youth highlights their capability to engage in a diverse array of roles within the informal sector. This collective skill set contributes to a wide range understanding of the determinants of employability, emphasizing the multifaceted nature of skills needed for

success in the informal job market. Overall, the percentage-based analysis illuminates the intricate interplay between demographic factors and various skill dimensions, providing valuable insights for policymakers, educators, and stakeholders aiming to enhance the employability of youth in Tanzania's informal sector.

Table 2*Summary of Descriptive Statistics*

Variable	Categories	Frequency	Percentage
Sex	Male	14872	48.06
	Female	15113	51.94
Total		29985	100%
Marital status	Single	2908	26.65
	Married	27077	73.35
Total		29985	100.00
Technical skills	Basic level	7454	25.02
	Intermediate level	13234	50.20
	Advanced level	4048	10.93
	Skill not needed	5249	13.84
Total		29985	100%
Education level	Never Attended	3379	15.13
	Primary Education	21796	62.81
	Secondary Education	3865	16.36
	Vocational Training	191	2.05
	Tertiary non-University	289	1.35
	University	465	2.30
Total		29985	100%
Literacy skills	Basic level	5873	23.77
	Intermediate level	18036	51.45
	Advanced level	2485	10.27
	Skill not needed	3591	14.51
Total		29985	100%
Numeracy skills	Basic level	6366	26.36
	Intermediate level	18138	54.31
	Advanced level	2514	10.38
	Skill not needed	2967	8.96
Total		29985	100%
Computer skills	Basic level	8890	15.75
	Intermediate level	1826	7.55
	Advanced level	985	3.99
	Skill not needed	18284	72.71
Total		29985	100%
Physical skills	Basic level	1855	7.67
	Intermediate level	11389	47.12
	Advanced level	15426	43.08
	Skill not needed	1315	2.13
Total		29985	100%

4.1.1 Determinants of Employability in Informal Sector among the Youths in Tanzania

The probit regression analysis revealed a model with significant fit at a 1% level of significance. Variables discussed were sex, capital access, income tax, social security scheme and technical skills. At the same time, skills in literacy, numeracy, computer and physical skills were examined. Further, variables such as registered business, business ownership, paid employees, age, marital status, readiness for work, and education level were collectively explained with 4.4% of variations in youth employability in the informal sector. Positive impacts on employability were observed for factors such as capital access, numeracy skills, computer skills, paid employees, and education level. While certain demographic factors and business-related variables were associated with a negative impact on youth employability.

The study revealed that youths who attended school were 0.2% more likely to be employed in the informal sector than those who never attended school, holding other factors constant. Similarly, youths with computer skills were 0.1% more likely to be employed than those without computer skills, holding other factors constant.

Table 3*Probit Regression on Determinants of Employability in Informal Sector among the Youth in Tanzania*

Simple probit				Marginal effect		
Variables	Coefficient	Std. err.	P>z	dy/dx	Std err	P>z
Sex	-0.255	0.038	0.000	-0.003***	0.001	0.000
Capital access	0.114	0.119	0.335	0.001	0.001	0.266
Income tax	-0.271	0.081	0.001	-0.004**	0.002	0.017
Social security scheme	-0.638	0.102	0.000	-0.015***	0.004	0.001
Literacy skills	-0.166	0.065	0.010	-0.002**	0.001	0.011
Numeracy skills	0.124	0.080	0.120	0.001	0.001	0.157
Computer skills	0.104	0.045	0.021	0.001**	0.000	0.017
Physical skills	-0.486	0.137	0.000	-0.004***	0.001	0.000
Registered business	-0.682	0.087	0.000	-0.017***	0.004	0.000
Business ownership	-2.262	0.056	0.000	-0.198***	0.012	0.000
Paid employees	0.009	0.063	0.893	0.000	0.001	0.892
Age	-0.219	0.046	0.000	-0.002***	0.001	0.000
Marital status	-0.106	0.047	0.025	-0.001**	0.000	0.020
Readiness for work	-0.363	0.110	0.001	-0.006**	0.002	0.024
Education level	0.163	0.056	0.003	0.002**	0.001	0.017
Technical skills	0.052	0.057	0.356	0.001	0.001	0.372
Cons	3.732	0.155	0.000			
Number of obs = 29,985				Prob > chi2 = 0.0000		
LR chi2(13) = 5119.47				Pseudo R2 = 0.4492		

*** $p < .01$, ** $p < .05$, * $p < .1$

Conversely, the study found that males were 0.3% less likely to be employed than females, holding other factors constant. Similarly, the burden of income tax shows a negative coefficient of 0.4%, indicating that the imposition of income tax decreases the likelihood of youth employability in the informal sector. Social security exhibits a negative coefficient of 1.5%, suggesting that being covered by social security significantly reduces the probability of youth employability in the informal sector. Youths with literacy skills were 0.2% less likely to be employed in the informal sector than those without literacy skills, all else being the same. Under ceteris paribus, youth with physical skills were 0.4% less likely to be employed than those without physical skills. Holding other variables constant, youths with a registered business and those who owned a business were 1.7% and 19.8% less likely to be employed in the informal sector than youths who did not register their business or own one.

Findings also revealed that married individuals were 0.1% less likely to be employed in the informal sector than single youths, with other variables remaining constant. Considering other factors, each additional year in age is associated with a 0.2% decrease in the probability of youth employability in the informal sector. Ultimately, outcomes depicted that youths who were ready for work were 0.6% less likely to be employed in the informal sector. This may be linked to probable competition or a preference for openings in the formal sector.

4.2 Discussion

Research findings illustrates the various elements that influence youth employability in Tanzania's informal sector. Research employed the probity regression analysis model which produced significant fit at a 1% level of significance. Factors were analyzed jointly which justified 4.4% of the variations in youth employability. Present research pointed both positive and negative impacts on employability. Factors e.g. capital accessibility, numeracy and computer skills, paid employees, as well as level of education positively influence employability. On the other hand, certain demographic and business-related variables had a negative impact.

Research results are in alignment with existing literature on youth unemployment in Tanzania. For instance, a study undertaken by Msigwa and Kipesha (2013) showed that level of education, work experience, and skills significantly determined youth unemployment in Tanzania. Likewise, Rimisho (2018) noted that age, education, and work experience were valuable factors in influencing youth employability in SMEs in Tanzania. These outcomes are in

agreement with the study findings, particularly in the context explaining the need for education, skills, and work experience in youth employability.

In addition, Aikaeli and Mkenda (2013) undertook a survey on the determinants of informal employment in Tanzania's construction industry. The researchers demonstrated that inadequate education is an element that magnifies the possibility employment in the construction industry. This contradicts with the present study outcomes, which indicated the positive impact of education on youth employability in the informal sector. As such, these contradicting results may be attributed to the different sectors under study as well as the specific dynamics of the informal sector in Tanzania.

Nevertheless, research's findings also depict some variations when compared to other studies. As an example, the negative influence of social security on youth employability in the informal sector, as demonstrated in the study, disagrees with the conventional notion of social security as an enabler of employment (Xiao et al., 2022; Kamuzora, 2024). This variance may justify additional investigation into the distinct dynamics of social security systems and their impact on youth employability in the Tanzanian setting.

As such, this current research digs into the complex web of factors defining youth employability in Tanzania's informal sector. While acknowledging the vital value of education and skills, it brings in outcomes not anticipated, for instance the contradicting negative impact of social security on youth employability. These shaded results emphasize the composite nature of the informal sector, prodding further research into specific contextual dynamics. Appreciating the different influences on youth employability, policymakers and stakeholders should take into account these perceptions to come up with targeted tactics that address sector-specific challenges. They should also strive to promote a more inclusive and resilient informal economy in Tanzania.

Consequently, research findings offer worthy perceptions into the determinants of youth employability in the informal sector in Tanzania. In this regard, they are in agreement with existing literature on the value of education and skills. Moreover, they also demonstrate unique factors that influence youth employability in this setting. Additional research in this field can contribute to establishing targeted policies and interventions to foster youth employability in the informal sector.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

Research's purpose was to investigate employability determinants in the informal sector among Tanzanian youth. Employing probity regression analysis, research pointed several core factors that significantly determine youth employability in the informal sector. This model, having significant fit at a 1% level of significance, jointly explicated 4.4% of the variations in youth employability. Positive influences were discovered for variables e.g. capital accessibility, numeracy and computer skills, paid employees, and level of education. On the other hand, specific demographic and business-related variables indicated a negative impact on youth employability.

The findings underscore the importance of education and skills development in enhancing youth employability in the informal sector. Specifically, youths who attended school were 0.2% more likely to be employed in the informal sector, emphasizing the role of formal education. Additionally, computer skills were found to increase the likelihood of youth employability by 0.1%, highlighting the importance of technological literacy in the evolving job market.

5.2 Recommendations

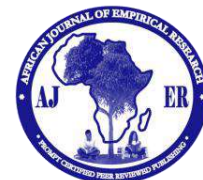
Outcome of the research propose a number of recommendations for policymakers and stakeholders. To start with, efforts should be channelized towards offering superior access to education and skill development programs. They should specifically focus on improving numeracy and computer skills among the youth. At the same time, policymakers may also opt to induce businesses to avail training opportunities with a goal of improving the overall workforce skills in the informal sector.

Nevertheless, negative impacts of income tax and social security on youth employability demands thorough evaluation of the regulatory environment. Policymakers may search for options to decrease burden of tax on informal sector businesses. At the same time, still ensuring a balance that aids in covering employees with social security scheme. In addition, measures should be enforced to promote entrepreneurship and simplify the process of registering businesses. This is because research illustrated that both registered and owned businesses were unlikely to hire youth.

Apart from worthy insights derived from this current research, it is indispensable to admit its limitations. Outcomes are rooted on a certain setting in Tanzania and may not relate directly to other zones or countries. Research's cross-sectional approach also confines the ability to establish causing. Future or additional research could utilize longitudinal design techniques to explore shifts in youth employability over time. In the same vein, additional research should investigate the effectiveness of interventions intended to bettering skills and minimizing regulatory obstacles in the informal sector.

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