

**East Africa Collaborative Ph.D. Program
in Economics and Management**

East Africa Research Papers in Economics and Finance

**An Analysis of the Determinants of Youth
Employment in Rwanda**

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**East Africa Research Papers in Economics and
Finance**

EARP-EF No. 2018:33

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Preface

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An Analysis of the Determinants of Youth Employment in Rwanda

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Abstract

The main objective of this research is to analyze the determinants of youth employment in Rwanda from the point of view of the demand, supply and the general labor market. An analysis of the data shows that a skill gap is most critical for employment creation and a transition from school-to-work seems problematic. Further, questions remain about what factors influence youth employment in Rwanda and how youth employment is related to poverty reduction and distribution of income. The study uses a multinomial logit model to shed light on the determinants of youth employment status in the country using data from the National Institute of Statistics of Rwanda (NISR). It verifies how the current status of youth employment in Rwanda has evolved over time and based on its findings it provides policy recommendations to promote youth employment. The research finds that youth employment in Rwanda is influenced by gender, age, education and geographical location.

Keywords: Entrepreneurship, human capital, labor supply, Rwanda, youth employment.

JEL Classification Codes: J20; J21; J22; J23.

1. Introduction

The school-to-work transition represents a long dark tunnel for many young people all over the world. A large and growing population of young people and increasing educational attainments make creating youth employment opportunities a challenge in most countries in sub-Saharan Africa (Pastore, 2015).

In 2011, an estimated 200 million Africans were aged 15 to 24 years of which around 40 per cent had studied up to the secondary level. Recent job creation efforts have not benefited young people without job market experience; youth unemployment is also seen as a source of social unrest and conflicts in society. Only 20 per cent of the 73 million jobs created by African countries between 2000 and 2008 went to 15-24-year olds.

The main determinants of youth unemployment can be summarized as: low labor demand because of low growth of productive yet labor-intensive activities especially in the formal private sector; under-developed entrepreneurship; non-organized labor supply; unequal access to education; low quality of education; low relevance of skills acquired in general education and technical vocational education and training (TVET); lack of skill development for self-employment and employment in the informal economy; non-optimal labor market functioning; non-availability and low quality of information; non-transparency in hiring practices; and insufficient labor market regulations.

In Rwanda, where a third of the 3.7 million population is aged 15 to 34 years, youth unemployment and job creation is a critical policy issue particularly since over 14 per cent of this age bracket is unemployed. Though youth employment rates are relatively high (71 per cent for women and 91 per cent for men were aged 20 to 24 years in 2010), labor segmentation is pronounced. Due to the agricultural nature of society and low levels of services sector development, young women are more likely than their male counterparts to work on family farms (Mcarthur et al., 2014).

Between 2010 and 2011, 74 per cent of the employed women aged 20 to 24 years were in agriculture compared to 55 per cent employed men. At the same time, increasing school enrolments have meant that youth entering the labor market have higher educational attainments and are thus likely to seek different kinds of jobs. Fortunately, the percentage of women aged 15 to 34 years with no education fell from 16 per cent in 2006 to 4 per cent in 2011. The corresponding drop among their male counterparts was from 14 per cent to about 5 per cent.

Rwanda has a number of affirmative action programs to address inequalities in access to economic opportunities. For example, the Vision 2020 Umurenge Program (VUP) is both a cash transfer scheme and a public works program (Etfö and Lufumpa, 2014). The program is means-tested, targeting households in the lowest two poverty/consumption quintiles.

Under VUP, eligible households earn wages by working on community infrastructure projects in the expectation of reducing unemployment in Rwanda. Rwanda's large and growing youth population presents both a challenge and an opportunity to development. Rwanda is currently at a turning point in its demographic transition as fertility rates are decreasing and the labor force is growing as the youth population ages. If Rwanda's economy is able to productively absorb this segment of the population, the country could reap the benefits of a demographic dividend. However, the scale of the challenge should

not be underestimated. An estimated 125,000 jobs need to be created every year just to absorb new entrants into the labor market (Filmer et al., 2014)

Further, most youth (70 per cent) still live in rural areas (Escudero, 2013). Their skills gaps are critical and their transition from school-to-work is highly problematic. It is crucial to analyze the determinants of youth employment to understand the barriers that go beyond the usual lack of skills and financial and collateral issues. The following question can help in this analysis: What are the determinants of youth employment in Rwanda?

Our research assesses the determinants of youth employment in Rwanda from the demand (formal and private sector, entrepreneurship), supply (equal access to education, quality of education, relevance of skills acquired in general education and TVET), labor functioning (availability and quality of information, transparency in hiring practices) and labor market regulations. These aspects are among the most critical for the youth to transition from school-to-work. Questions also remain about the factors that influence youth employment in Rwanda and how youth employment is related to poverty, its reduction and the distribution of income.

Our research uses a multinomial logit model for testing all the youth employment determinants. The data is obtained from the National Institute of Statistics of Rwanda. The study also discusses the status of youth unemployment in Rwanda over time and provides policy recommendations.

The specific objectives of our study are:

- identifying the determinants of youth employment from both demand and supply sides;
- analyzing the determinant factors of youth employment from the point of view of labor market functioning; and
- formulating recommendations directed at policymakers for improving youth employment.

2. Literature review

This section has two components: A review of theoretical literature dealing with the determinants of youth employment in general and a review of empirical literature with evidence from other countries.

2.1 Theoretical literature review

To understand the main challenges to youth employment in developing countries, it is useful to first discuss the determinants of labor market outcomes. While these determinants are inter-related, they can be grouped into three types: labor demand, labor supply and the functioning of labor markets. The main determinants of labor market outcomes can be summarized as: Labor demands growth in productive and labor-intensive activities, especially those in the formal private sector, entrepreneurship, labor supply, equal access to education, quality of education, relevance of skills acquired in

general education and TVET, skill development for self-employment and employment in the informal economy, market functioning, availability and quality of information, transparency in hiring practices and labor market regulations (Zimmermann et al., 2013).

Referring to the labor market policy for Rwandan youth, market-led capacity building is placed at the heart of youth employment in collaboration with non-governmental organizations (NGOs) involved in youth empowerment and poverty reduction programs. Capacity building in small businesses is being offered and skill training is designed in conjunction with the private sector to meet varied and evolving market requirements.

When analyzing the determinants of youth employment it is important to note that when labor demand slows down, self-employment may be the only alternative employment opportunity available. The self-employed thus consist of those who are driven by necessity on the one hand and voluntary entrepreneurs on the other hand. The main supply side determinants of youth employment outcomes are education and skills in terms of quantity and quality and their relevance. Skills are built through formal general education, formal technical vocational education, training and apprenticeships and through informal education and training (Lee, 2013).

In the same vein, lack of non-cognitive skills is often mentioned by employers in the private formal sector as an obstacle to hiring young workers. Thus, access to primary education is the first requirement for obtaining basic literacy and numeracy skills which are a precondition for ensuring access to decent work. Besides general education, youth can acquire work-specific relevant skills through TVET programs. TVET can be integrated into compulsory schooling as an alternative to an academically oriented track, or it can be part of several post-compulsory schooling options.

Studies conducted in the Middle East and North Africa (MENA) countries show that TVET has a limited role quantitatively because of the weak links between the skills provided by the TVET system and those demanded by the private sector, insufficient funding, poor monitoring and evaluation, stigmatization and lower returns compared to secondary education. The benefits of TVET in terms of earning and social promotion vary across countries and influence its attractiveness.

2.2 Empirical literature review

Brixiova et al., (2014) researched youth employment in Africa and came up with new evidence on the effects of policies in Swaziland during 2007-10. They carried out a multinomial logit regression analysis to analyze the socioeconomic drivers of the unfavorable youth labor market outcomes on the supply side. Since many of the factors that can unlock potential employment of Swazi youth are on the demand side of the labor market, the authors examined the barriers to job creation and youth entrepreneurship. Their study concluded that learning from the experiences of other countries could inform the design of more effective interventions for youth employment in Swaziland.

Etfo and Lufumpa (2014) used a multinomial logit model to examine factors associated with employment outcomes in Rwanda including: (i) employment in formal and informal sectors and agriculture, and (ii) wages in non-agriculture and self-employment in non-agriculture and agriculture. The authors estimated separate regressions for both categories of employment for women and men and for urban and rural areas. Their

research found that the percentage of Rwandans aged 15 to 64 years who were unemployed fell from 9.3 per cent in 2005-06 to 6.9 per cent in 2010-11. However, in urban areas one in four women and one in five men were classified as unemployed (Etfo and Lufumpa, 2014). On the other hand, a relatively low percentage of youth was unemployed which may be attributable to delayed labor force entry as a result of continuing education.

According to Bicaba et al., (2015), the need to invest in education persists because of the association between high educational attainments and better jobs. This is especially necessary to ensure that young people receive post-secondary education as this appears to be a pre-requisite for high-paying, non-farm wage employment. The authors add that investments are also needed in skill development especially for women to allow them to compete in the labor market and to reduce the male-female wage gap.

This review of the literature shows that different researchers have been interested in finding the determinants of youth employment in developed and developing countries but no one has used a model using natural characteristics like age, gender and geographical location to capture the determinants leading to youth employment. Therefore, our research seeks to fill this gap in literature by considering a number of key variables.

3. Methodology

We used a multinomial logit model to assess the determinants of youth employment by considering the demand and labor market functioning in Rwanda. This approach helped us shed light on youth employment, identify its determinants and estimate their effects.

In fact, this estimation procedure helped us to examine some of the key socioeconomic determinants such as age, gender, education and location that are qualified as factors from labor market and demand functioning which contribute to youth employment. Our research studied young adults (aged 20-34 years). Following Etfo and Lufumpa (2014), a multinomial logit model is specified as:

$$(1) \quad EMP_{ji} = \beta_0 + \beta_1 GE_{ki} + \beta_2 AG_{li} + \beta_3 EL_{mi} + \beta_4 LO_{ni} + \varepsilon_i$$

where, *i* stands for individuals and EMP for employment status which is the outcome categorical variable indicating whether the individual has a wage employment in the public sector, the formal private sector, the informal private sector or is self-employed, inactive or unemployed. Natural characteristics (NC) including gender (GE), age (AG), education level (EL) and geographical location (LO) constituted independent variables. The error term (ε) is appended to capture any measurement error in the employment status and left out variables.

The gender variable captured any gender gap in the labor market. Age tested the sensitivity of the likelihood of the employment status depending on age. For education, the two main qualifications in our research are undergraduates (BSc and TVET qualification) and post-graduate levels. As people living in urban areas may have higher job opportunities in the formal private and public sectors, we controlled for location to capture locational heterogeneity in employment status among the youth.

The main source of data on the determinants of youth employment in Rwanda is the National Institute of Statistics in Rwanda (NISR). We used the STATA/SE 13.0 software for data analysis.

4. Integrated and participatory approach

Experience shows that youth employment programs and policies aimed at refining labor market dynamics often result in interventions that are fragmented, too narrow or isolated and do not fully take into account the general economic, institutional and social framework. Inconsistencies may arise in terms of the content of the interventions, their level, geographical location and target beneficiaries. Moreover, supply-side measures tend to outweigh demand-side measures. Anecdotal examples of not provable interventions include skill training programs not backed by an appropriate demand for the skills in the labor market or entrepreneurship training without any possibility of gaining appropriate access to credit. It is, therefore, indispensable in the domain of youth employment to dispose of an over-arching, integrated strategy for growth and job creation.

This strategy covers labor demand (job opportunities) and supply (employability) as well as the mediation or matching process combined with well-targeted and structured interventions. A lifecycle approach to youth employment is also highly useful as it recognizes that what happens at one stage is affected by, and in turn affects, opportunities at other stages. For example, premature entry into the labor market as a child lessens the chances for better employment in adulthood because of lack of education.

Youth employment policies must be embraced in the broader context of a country's employment and growth policy considering possible crowding-out effects on other age groups. Productive employment and decent work for young people requires sustained, determined and concerted action by a wide number of actors. As they cannot stand on their own, youth employment interventions must be linked to broader development frameworks. Coherence and coordination between relevant government agencies and other national and international (for example, donor community) stakeholders is crucial.

While not necessarily the only mechanism, the use of national action plans (NAPs) for youth employment can be useful in facilitating this. To be successful, however, these plans should have strong and sustained political commitment and be based on broad participation. In this context, it is important that youth also participate actively in the decision-making process as they know best what they want and what they can offer. The participation of young people in membership-based organizations and their engagement in decision-making processes affecting their employment and working conditions is crucial for fostering social inclusion and advancing democratization. Young people are often under-represented in these processes. A good example is the consultation of youth in PRSPs in Ghana, Honduras, Indonesia and Uganda (Kingombe, 2011).

4.1 Special attention to youth

In view of the challenges to youth employment, many governments are investing considerably in youth employment programs which complement general poverty reduction and employment policies.

Questions arise as to what justifies these youth-specific interventions and why it is not sufficient to focus only on promoting a favorable investment and business climate.

The main arguments that have been put forward to justify youth-specific interventions include young people facing specific challenges in accessing the labor market which lowers their chances of finding decent employment.

The main difficulties are:

- a higher chance of losing their jobs during economic downturns ('last-in, first-out'): Specific barriers to entry often stemming from lack of experience;
- path dependence: Early unemployment increases the likelihood of subsequent unemployment (Pastore, 2007);
- under-utilized young people incur significant economic costs ^{as} the national workforce is not used to its full potential. Moreover, in general young people are more dynamic and often have higher educational levels than their parents. It is also mainly young people who opt for migration if they cannot find adequate employment in their own country;
- under-utilization of young people in the labor market can trigger a vicious circle of intergenerational poverty and social exclusion; and
- often, lack of employment opportunities may result in social conflicts such as violence and juvenile delinquency which in turn leads to high social costs. Moreover, post-conflict countries have predominantly young populations without decent jobs; many of them are deprived of education as they have grown up in violent societies and often been combatants themselves.

4.2 Strategy to promote youth employment

4.2.1 Labor demand

Resolving the problem of youth unemployment and under-employment requires growth in salaried employment in the formal economy. This leads to more jobs for young people and encourages a transition from the informal to the formal economy. Further, the quality of employment (for example, productivity and working conditions) in the informal economy, where a majority of young people work, should be improved.

Job creation depends primarily on economic growth which itself depends on investments and on the international context. A stable macroeconomic environment which boosts investments – both private and public – and thus growth, is fundamental in the creation of new formal jobs for all groups of workers but is of particular benefit to young people who suffer most from economic downturns because of their short job tenures and lack of experience ('last-in, first-out') (Braziene and Dorelaitiene, 2012).

Sectoral policies in particular can promote job creation in the medium to long term provided they are well-designed and targeted at sectors with high potential for employment growth. Well-targeted policies can promote private initiatives in traditionally 'youth-friendly' sectors such as tourism, catering, information and communication technology (for example, commercialization of mobile telephones has

increased job creation in Rwanda) and basic and social services including health, as well as in the sports sector.

In developing countries, 75 per cent of the youth living in poverty are in rural areas (Burrus and Roberts, 2012). Rural youth are more likely to have started work in childhood. They are the victims of human trafficking and sexual exploitation and are more vulnerable to being recruited by militant extremist groups. Most urban poverty, on the other hand is a result of rural deprivation and the resulting distress urban migration (Coenjaerts et al., 2009).

Therefore, special attention should be paid to the agricultural sector by moving away from subsistence agriculture and introducing commercialization and productivity improvements (for example, maize and vegetables) through technological changes, infrastructure support and rural sector support projects. The international trade and aid policy (the Vision Umurenge in Rwanda) should also be taken into consideration in this context.

In general, youth show a strong interest in the conservation of our planet. Environmental management also has an interesting employment potential. A successful example is a youth employment project in the Indian state of Goa (Markos, 2010). As part of the project a mix of interventions based on individual motivation, use of best practices, public-private partnerships (PPPs) and legislative measures were used. The measures resulted in creation of more than 2,000 jobs for young people in waste management and recycling, with opportunities for further expansion in the last three years (Hewett and Foley, 2000).

However, it is the private sector that is the main driver of growth and job creation. Entrepreneurship is a driving force for initiating business ideas and mobilizing human, financial and physical resources for establishing and expanding enterprises and creating jobs. Entrepreneurship is another way of unleashing the economic potential of young people. The promise of youth entrepreneurship can be maximized through programs and strategies that address the barriers in doing business.

Societies that appreciate entrepreneurship and thus promote its values and norms can create a dynamic and vibrant class of young entrepreneurs. Empirical evidence shows that educating young minds in enterprising behavior and boosting their confidence for calculated risk-taking, increases the incidence of entrepreneurship being adopted as a career option (Rolfe, 2010).

The successful development of youth businesses hinges on good access to well-integrated services such as management training, business mentoring programs, financial services, support in gaining access to markets and networking opportunities. Enhancing the youth's capacity in association building and policy advocacy can address their disadvantaged position. Young women entrepreneurs face additional hurdles as in many cultures they are more risk averse, while their roles in the family and society keep them from tapping opportunities in business development (Kabeer, 2012). This also means that they are more likely to be in the informal economy and less likely to be entrepreneurs employing others.

4.2.2 Labor Supply

Education and vocational training should be designed around the informal economy where most young working people are found in developing countries. Often, vocational training has to be complemented by remedial education as many young workers in the informal economy may have dropped out of the educational system at an early stage (Council, 2014). Young people may have begun working prematurely (while still children) because of economic necessity (for example, AIDS orphans in some African countries may have become heads of households and breadwinners) or cultural constraints. As a result, they lack basic skills including literacy and numeracy.

In fact, young people face particular challenges because they lack appropriate skills and experience, are less creditworthy and have more difficulties in accessing business networks and sources of information. A burdensome business environment is difficult for all, but as youth have generally less knowledge and experience of business regulations and related legal and institutional frameworks, this constraint can discourage them from venturing into a business career and so increase the risk of business failure (Coenjaerts et al., 2009).

Young informal workers acquire technical skills in informal activities but as these skills are often not recognized officially they face difficulties in accessing better jobs. Recognition and certification of skills acquired through informal channels are key elements in this regard. In addition, young people often do not know which profession to join and where to look for a job. Special youth labor market information and employment services and early career guidance may facilitate their entry into the labor market and help avoid a mismatch between youth labor supply and demand.

With regard to labor market institutions, it has been argued that employment protection legislations (EPLs) and minimum wages in particular increase youth unemployment by making labor too expensive. Moreover, many young people in developing countries work in the informal economy, where EPL and minimum wages have a rather limited impact. The question is not whether to regulate, but what kind and what level of regulations are appropriate to get the best forms of protection for young people without inhibiting firms from hiring.

Higher volatility and lack of work experience are strong reasons why entrepreneurs often shy away from hiring young people. Wage subsidies or reduction in payroll taxes for firms that hire inexperienced workers seem to be the best options to counterbalance employers' concerns and thus increase the demand for young workers.

5. Results and Discussion

5.1 Multinomial logistic regression

In this section we test if youth employment in Rwanda is influenced by gender, age, education and geographical location. The employment status should be the outcome variable which is related to the different categories analyzed.

5.2 Results and interpretations

Our analysis focused on Rwanda's youth employment data using published raw data from the annual household budget survey's (EICV4) results. We used un-weighted data only on respondents who had no missing variables in all variables of interest.

The dataset contains variables for 284 respondents. The outcome variable is employment status. The predictor variables are gender, age, education and geographical location. The descriptive statistics of the variables of interest are given in Tables 1-4. Table 1 presents the distribution of employment status by gender.

Table 1: Distribution of employment status by gender

Employment status (last job)	Male	Female	Total
Paid employee	89	120	209
Employer	1	0	1
Own account worker	9	44	53
Unpaid family worker	11	7	18
Intern/volunteer	1	0	1
VUP	0	2	2
Total	111	173	284

Note: Pearson chi 2(5) = 20.0191, Pr = 0.001.

Source: Authors' calculations based on EICV4 data.

The distribution of employment status by gender in Table 1 shows that there were more women respondents more men.

Table 2 gives employability and degree obtained.

Table 2: Distribution of employment status by the highest diploma obtained

Employment status (last job)	Primary completed	Secondary common	Post primary certificate	Diploma A3, D5, D4	Humanities Diploma	Bachelors	Professional license	Total
Paid employee	33	31	2	6	88	21	28	209

Employer	0	0	0	0	0	1	0	1
Own account worker	26	7	1	1	12	3	3	53
Unpaid family worker	3	12	0	0	3	0	0	18
Intern/volunteer	0	0	0	0	0	0	1	1
VUP	0	0	0	0	2	0	0	2
Total	62	50	3	7	105	25	32	284

Note: Pearson chi2 (30) = 84.0054, Pr = 0.000.

Source: Authors' calculations based on EICV4 data.

The distribution of the highest diploma obtained by employment status (Table 2) shows that more respondents had completed humanities; a few of them had completed post-primary education. Table 3 gives the employment status by geographical location.

Table 3: Distribution of employment status by location

Employment status (last job)	Urban	Rural	Total
Paid employee	169	40	209
Employer	1	0	1
Own account worker	40	13	53
Unpaid family worker	2	16	18
Intern/volunteer	1	0	1
VUP	2	0	2
Total	215	69	284

Note: Pearson chi 2(5) = 45.1386, Pr = 0.000.

Source: Authors' calculations based on EICV4 data.

Table 3 shows more respondents were living in urban areas at the time of data collection.

Our research used the 'mlogit' command to estimate a multinomial logistic regression model. The *i.* before a variable indicates that the variable is an indicator variable (that is, a categorical variable) and that it should be included in the model. We also used the option 'base' to indicate the category to use for the baseline comparison group.

We chose to use the type of employer as the baseline category in our model. The results of the regression are:

Multinomial logistic regression	Number of obs = 284
	LR chi2(19) = 107.98
	Prob > chi2 = 0.0000
Log likelihood = -169.93121	Pseudo R2 = 0.2411

Table 4 explains the regression results.

Table 4. Multinomial logistic regression estimates of youth employment in Rwanda

Variables	Coefficients	Std. error	z	P> z	[95% Conf. Interval]	
					Paid employee	
Gender	18.03556	7297.1150	0.00	0.998	-14284.050	14320.120
Education	-0.45923	0.9043	-0.51	0.612	-2.231	1.313
Location	17.28352	12387.1100	0.00	0.999	-24261.010	24295.580

Age	-0.02278	0.2946	-0.08	0.938	-0.600	0.554
Constant	-9.98668	12387.1200	-0.00	0.999	-24288.290	24268.320
Employer (Base outcome)						
Own account worker						
Gender	19.3161	7297.1150	0.00	0.998	-14282.7700	14321.400
Education	-0.8021	0.9077	-0.88	0.377	-2.5812	0.9770
Location	17.9640	12387.11	0.00	0.999	-24260.3300	24296.260
Age	0.1020782	0.2971	0.34	0.731	-0.4804	0.6845
Constant	-15.2563	12387.1200	-0.00	0.999	-24293.5600	24263.050
Unpaid family worker						
Gender	18.2097	7297.1150	0.00	0.998	-14283.8700	14320.290
Education	-0.7518	0.9244	-0.81	0.416	2.5638	1.0600
Location	20.2085	12387.1100	0.00	0.999	-24258.0900	24298.500
Age	-0.3147	0.3246	0.97	0.332	-0.9510	0.3215
Constant	-9.3134	12387.1200	-0.00	0.999	-24287.6200	24268.990
Intern/volunteer						
Gender	2.0553	8431.4430	0.00	1.000	-16523.2700	16527.380
Education	13.5504	1291.0090	0.01	0.992	-2516.7800	2543.881
Location	4.0696	13930.4400	0.00	1.000	-27299.0900	27307.230
Age	-0.3590	0.4831	-0.74	0.457	-1.3059	0.5878
Constant	-88.2856	16605.0100	-0.01	0.996	-32633.5000	32456.930
VUP						
Gender	36.2363	10604.1300	0.00	0.997	-20747.4800	20819.950
Education	-0.1520	1.0251	-0.15	0.882	-2.1611	1.8571
Location	0.2094	16035.2600	0.00	1.000	-31428.3300	31428.750
Age	-0.12577	0.3635	-0.35	0.729	-0.8383	0.5867
Constant	-13.8366	17785.6500	-0.00	0.999	-34873.0700	34845.400

Source: STATA results based on EICV4 data.

Based on the regression results, the outcomes of the model and the conclusions thereof as far as youth employment is concerned in Rwanda are:

- the outputs show the iteration log indicating how quickly the model converged. The log likelihood found in the results (-169.93121) can be used in comparison to nested models;
- the likelihood ratio Chi-square of 107.98 with a p-value < 0.0001 tells us that our model as a whole fits significantly better than an empty model (that is, a model with no predictors);
- this leads us to conclude that the model is in line with what was expected: that youth employment in Rwanda is influenced by gender, age, education and geographical location;
- a one-unit increase in the variable s1q3y (age) is associated with a .023 decrease in the relative log odds of being a paid employee versus other employment status;
- a one-unit increase in the variable s4aq3 (education level) is associated with a .46 decrease in the relative log odds of being a paid employee versus other employment status;

- a one-unit increase in the variable s1q3y (age) is associated with a .10 increase in the relative log odds of being an own-account worker versus other employment status;
- a one-unit increase in the variable s4aq3 (education level) is associated with a .80 decrease in the relative log odds of being an own-account worker versus other employment status;
- a one-unit increase in the variable s1q3y (age) is associated with a .31 decrease in the relative log odds of being an unpaid family worker versus other employment status;
- a one-unit increase in the variable s4aq3 (education level) is associated with a .75 decrease in the relative log odds of being an unpaid family worker versus other employment status;
- a one-unit increase in the variable s1q3y (age) is associated with a .36 decrease in the relative log odds of being an intern/volunteer versus other employment status;
- a one-unit increase in the variable s4aq3 (education level) is associated with a 13.5 increase in the relative log odds of being an intern/volunteer versus other employment status;
- a one-unit increase in the variable s1q3y (age) is associated with a .13 decrease in the relative log odds of being a VUP worker versus other employment status; and
- a one-unit increase in the variable s4aq3 (education level) is associated with a .15 decrease in the relative log odds of being a VUP worker versus other employment status.

6. Conclusion and Policy Recommendations

The results of our research conclude that for youth (aged 20-34 years) there was a negative relationship between age on the one hand and education level on the other with being either a paid employee or an unpaid family worker or a VUP worker. In addition, there was a positive relationship between age and being an own-account worker which was directly linked to job creation. The youth faced specific barriers in the labor market. Their unemployment rate was significantly higher and their employment and working conditions were worse than those of the elders which led to high economic and social costs for society.

Therefore, special attention must be paid to integrating the youth better into the labor market. This is also important given that their number is so high. Further, support for youth should mainly be based on existing employment policies which are complemented where necessary by targeted interventions; when implemented their impact on other age groups must be taken into consideration.

Supply-demand mismatch often lies at the root of the weak labor market integration of the youth. This can be resolved by adopting integrated approaches that consider both sides of the labor market effectively and involve all sectors of society.

The skills and aspirations of young Rwandans are an invaluable force. Helping young people have access to productive employment and realizing their potential is a precondition for poverty reduction and sustainable development.

Youth employment programs can serve as useful support to young people who often face specific barriers in the labor market. In fact, their under-utilization certainly leads to economic and psychological costs to the country. Nevertheless, youth programs have to be designed with caution to avoid crowding-out effects on other groups of workers.

Even though youth program initiatives exist, the following policy recommendations are put forward:

- Investors in the country should support country-led efforts in various policies that are contributing to improving the labor market. The national commitment for the promotion of youth employment involves all economic sectors. There should be greater participation of the youth within their own organizations such as in trade unions;
- Existing policies on youth programs should be improved according to the current situation and adjusted easily to youth specific needs such as youth entrepreneurship, remedial education and oriented vocational training or internships;
- Donors should support country-led efforts in various policies that are contributing to an improved labor market situation for the youth. Genuine national commitment for the promotion of youth employment requires the strong involvement of large sectors of society: Firstly, a greater participation of the youth in their own organizations or as representatives in other organizations and also in trade unions and the private sector, as well as closer cooperation with, and among, ministries and other public institutions;
- Youth employment issues can often best be resolved with already existing employment policies which could be adjusted to youth-specific needs such as youth entrepreneurship, remedial education and vocational training. Targeted interventions could, however, be useful under specific circumstances. Nevertheless, it is important to take into consideration the possible crowding-out effects on other age groups.

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