
DETERMINANTS OF YOUTH UNEMPLOYMENT IN UGANDA.

A CASE STUDY OF KAMPALA DISTRICT

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ABSTRACT

The study focused on the factors influencing joblessness in Uganda and has the following goals: to ascertain the effect of the rate of population growth, the connection between price increases and youth joblessness, and the effect of foreign direct investment on youth unemployment. The study used descriptive information along with a design that was cross-sectional in nature. This study's goal was to pinpoint the elements that influence young people's unemployment in the Kampala region of Uganda. Before being applied for forecasting, the VAR model underwent time-series property. The time series data undergone a descriptive analysis to make sure that the distribution was normal. These included assessments of the center of gravity (mean, median, and mode) as well as a measure of variability (standard deviation, skewness, and kurtosis). As a pre-test for time series data, stationarity checks were carried out using unit root tests. The rate of unemployment and foreign direct investment were significantly correlated, with a somewhat favorable relationship, according to the Pearson correlation value of 0.566. The null hypothesis was rejected and it was found that there was a significant correlation between foreign direct investment and the rate of unemployment since the P-value (0.00) 0.05 showed that this link was statistically different at the 5% level of importance. Similar to this, the correlation value of -0.203 revealed a weak negative insignificant relationship between the rate of joblessness and population growth. R-squared is 0.355, which indicates that 36% of the variations in unemployment can be attributed to population growth, inflation, and foreign direct investment. Other elements discovered in the error term provide 36% of the interpretation; as a result, they are not included in the model. The data is well-fitted, and since the R² is high, the fit is also good. The

F statistic of 6.057 with a p value of 0.002, which is less than 0.05, suggests that every factor together have a substantial short-term impact on unemployment. The data is well-fitted and consequently a good fit because the R² is high.

Key words: Youth unemployment, foreign direct investment, population growth rate and inflation rate.

BACKGROUND OF THE STUDY

The problem of unemployment has not gotten much attention during the classical era. Instead, poverty was given more importance. However, by the late 19th century, both the issue of poverty and the issue of teenage jobless had become pressing issues. By the middle of the 20th century, the young unemployment issue had grown fairly serious as a result of the conditions both before and after World War II. This demonstrates that the profits in the National Income expanded as the economy became fully involved (Corry, Bernard, 1996).

Most African countries have seen an upsurge in youth unemployment and being unemployed. Increases in joblessness are a result of a number of factors, including large populations of adolescents, slow national labor markets, and pervasive poverty in the countries. The rate of youth unemployment in Uganda is among the highest in the continent. Uganda also boasts the second-highest percentage of youth in every country on the globe, with a median age of 15.9 (Myers, 2016). Pursuant to the National Population and Household Census (Frank et al., 2023), a shocking 78% of the overall population is under 30. Since they usually have less capital than men do in the form of skills, money, and credit, young women are prone to vulnerability (Okojie, 2003). Women will also be prevented from entering employment by socially ingrained gender stereotypes and prejudices (ibid). In the words of Chant and Jones (2005), strengthening women professionally can help women achieve the same possibilities and end poverty.

39% of people identified as Roman Catholic, 45% as Protestant, and 13% as Muslim (CIA, 2017). Less than 1% of Ugandans identify themselves as practicing indigenous Ugandan religions, although widespread accepted customs and misunderstandings persist all over the nation (ibid). 78% of the 4.5 million persons counted in the 2014 census were under 30 years old, while 55% of the population as a whole was under the age of 18. Uganda had one of the greatest population increases in the world with an average fertility rate of 5.8 children per woman (Victor et al., 2022). These numbers suggested that Uganda's population would probably continue to grow in the years to come due to their size.

*The fast-growing population of Uganda is putting a lot of pressure on the country's economy. This has an effect on the dependency ratio and the size of the labor force, which is determined by a rapidly growing working-age demography. Youth unemployment is still a major problem on the African continent, according to a World Bank article (The World Bank, 2015), where the percentage of persons between the ages of 15 and 25 is growing swiftly but not at the same rate as the labor market. The study will pay particular attention to this issue in order to ascertain whether FDI, population growth rate, and hyperinflation have an effect on youth joblessness. **STATEMENT PROBLEM.***

Out of a total staggering 34.5 million people in Uganda, 55% were under the age of 18 and 78% were under the age of 30, according to the 2014 census. Uganda has one of the most rapidly expanding populations in the world with a median conception rate of 5.8 children per woman (NPHC, 2014). The huge population (Nelson & Christopher, 2022), which projected that Uganda's total population would reach 47 million in 2025, indicated that the nation's populace would keep on increasing in the years to come. Out of the 34.5 million people in Uganda, 55% have not reached the age of 18 and 78% are beneath the age of 30, according to the 2014 census. Uganda will also have one of the greatest rates of population increase in the world with a total fertility rate of 5.8 children per woman (Ronald & Kazaara, 2023). These numbers suggest that Uganda's populace will continue to grow in the years ahead due to its enormous size (CIA, 2017), which estimated that the nation's population would reach 47 million by 2025. Since youth make up the largest and fastest-growing segment of Ugandan society, it was important to comprehend the difficulties they face. (Okojie, 2003) observed that a growing number of young people were becoming involved in criminal activities in some form as a result of joblessness.

Specific Objectives

- 1. To find out the impact of population growth rate on youth unemployment.*
- 2. To find out the relationship between inflation rates on youth unemployment.*
- 3. To find out the relationship between foreign direct investment on youth unemployment.*

Research questions

- 1. What is the relationship between population growth rate on youth unemployment?*
- 2. What is the relationship between inflation rates on youth unemployment?*
- 3. What is the relationship between foreign direct investment on youth unemployment?*

Hypothesis of the study

Ho: There is no relationship between population growth rate and youth unemployment

Ha: There is a relationship between population growth rate and youth unemployment

Ho: There is no relationship between inflation rates and youth unemployment

Ha: There is a relationship between inflation rates and youth unemployment

Ho: There is no relationship between foreign direct investment and youth unemployment

Ha: There is a relationship between foreign direct investment and youth unemployment

Research Methodology

A cross-sectional design was used in the investigation, coupled with descriptive data. This study's aim was to pinpoint the variables influencing young unemployment in Uganda. Statistical data was employed in the study to test the hypothesis that was made in the first chapter. The study will employ time series data from the years 1980 to 2020 for each component of the rate of unemployment, namely price rises, the rate of demographic development, and foreign investment. After analyzing time-series properties, the VAR model was used to make predictions.

Data source.

Secondary data for the period 1980 to 2020 was collected and used for analysis in this study. The data was obtained from world bank index (World Bank Open Data).

Diagnostic tests.

As a pre-test for time series data, stationarity checks were carried out using unit root tests. If the data are stationarity-conforming, a long run and short run causal relationship between the variables in issue was established in order to suggest policy in the Kampala district of Uganda.

In order to prove the validity of the algorithm and the data gathered, heteroscedastic tests and auto correlation tests were also utilized to ensure the equation's long-term sustainability.

Econometric model.

Model specification.

The econometric model for this precise study was;

$$(UN)_t = \beta_0 + \beta_1(INFLA)_t + \beta_2(POP)_t + \beta_3(FDI)_t + E_t$$

$$UN = f(\text{population growth rate, inflation rate, foreign direct investment})$$

This type of production function was essentially effective for developing countries like Uganda greatly endowed with natural resources which required expensive resources to reduce them.

This was expressed in linear form as;

Where;

UN-Unemployment rate

POP-population growth rate

INFL-Inflation rate

FDI-Foreign Direct Investment

t-time series observations for the period 1988-2018.

The vestige of other variables is contained predominantly in the error term expressed as u .

Estimation techniques.

Descriptive analysis.

The time series data was descriptively analyzed to ensure normality of distribution using SPSS (Nelson et al., 2022). These was included measures of central tendency (mean, median and mode) and a measure of variability (standard deviation, skewness and kurtosis)

Correlation analysis.

Correlation tests was carried to determine whether a statistical relationship existed between the variables and can one variable be predicted from another.

Checking Multicollinearity

Convergence, a statistical issue, is when there is a strong correlation between two or more variables employed as variables in a regression investigation. It can lead to inaccurate estimates of the regression coefficients and make it difficult to comprehend the findings. Here are some techniques that can be applied to test for various correlations while examining the factors impacting young unemployment in Uganda. Variance inflation factor (VIF) evaluation The VIF measures how much the multicollinearity of the predictor characteristics has increased the variance of a projected regression coefficient. Perform a VIF test for each predictor variable in the regression model. Convergence may be problematic when the VIF value is high (more than 5 or 10).

RESULTS

Descriptive statistics.

Table 1 Presents the summary statistics of the data used in this study and its characteristics that is, measures of central tendency and measures of variation.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Inflation, consumer prices (annual %)	40	-4.56740	15.12520	4.7160160	4.61811680
Population growth (annual %)	37	.00000	3.75569	2.8296681	1.15398132
unemployment rate	38	-6.4709	7.3459	1.700097	2.7138253
FDI	41	-.1373	6.6566	2.197785	1.8099755
Valid N (listwise)	37				

Source: World Bank index

The comparatively small mean and standard deviation demonstrate that there were no appreciable fluctuations in the data, which was how volatility was measured. The values are 4.71602 basis points, 2.82967 percentage, 1.7001 percentage, and 2.1978 percentage for each of the variables of joblessness, inflation rate, growing population rate, and foreign direct investment, correspondingly. The findings demonstrate that since the parameter's means fall between the minimum and maximum values of the various series, they serve as accurate gauges of central tendency.

Correlation Analysis.

Correlation tests are carried out to determine the relationship between the dependent and independent variables.

Table 2 presents the correlation matrix for the variables of this study with unemployment rate as the dependent variable.

	<i>Unemployment rate</i>	<i>Foreign direct investment</i>	<i>Population growth rate</i>	<i>Inflation</i>
<i>Unemployment rate</i>	1.0000			
<i>Foreign direct investment</i>	0.566 0.00	1.0000		
<i>Population growth rate</i>	-0.203 0.228	-0.2437 0.1461	1.000	
<i>Inflation</i>	-0.006 0.970	-0.0712 0.6623	-0.2921 0.0794	1.0000

Source: World Bank Index

Ho: There is no significant relationship between foreign direct investment and unemployment rate

Ha: There is a significant relationship between foreign direct investment and unemployment rate

Ho: There is no significant relationship between population growth rate and unemployment rate

Ha: There is a significant relationship between population growth rate and unemployment rate

Ho: There is no significant relationship between inflation rate and unemployment rate.

Ha: There is a significant relationship between inflation and unemployment rate.

It is evident that there is a reasonably substantial positive link between the rate of joblessness and foreign direct investment given that the Pearson correlation value is 0.566. The null hypothesis is rejected since the P-value (0.00) 0.05 shows that this relationship is significant enough to be taken into account at the 5% level of significance, and it is concluded that there is a substantial relationship between foreign direct investment and the rate of joblessness. The correlation coefficient, which is -0.203, points to a similar weak negative insignificant connection between joblessness and population growth. The increase in the gross domestic product and the inflation rate have a correlation coefficient of -0.006, which indicates a strongly negative relationship. The null assumption has been accepted, and it is concluded that there is not a significant correlation between the inflation rate and the rate of joblessness. The connection is statistically insignificant at the 5% level of significance because the P-value (0.970) >0.05.

This suggests that the study's independent variables—exports, imports, and inflows of foreign direct investment—have a strong positive connection with the dependent variable and are hence significantly linked with the expansion of the economy.

Unit Root Tests.

Table 3 Represents unit root tests

<i>Variables</i>	<i>Test statistic at Level</i>	<i>5% Critical values At Level</i>	<i>Test statistic at First Difference</i>	<i>5% Critical Value At First Difference</i>	<i>Probability at Level</i>	<i>Probability At First Difference</i>
<i>Inflation</i>	<i>-5.741</i>	<i>-3.548</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
<i>Population growth rate</i>	<i>-1.915</i>	<i>-3.568</i>	<i>-4.195</i>	<i>-3.556</i>	<i>0.078</i>	<i>0.0046</i>
<i>Unemployment rate</i>	<i>-2.842</i>	<i>-3.564</i>	<i>-4.591</i>	<i>-3.572</i>	<i>0.1819</i>	<i>0.0011</i>
<i>Foreign Direct Investment</i>	<i>-2.883</i>	<i>-3.556</i>	<i>-5.113</i>	<i>-3.572</i>	<i>0.1682</i>	<i>0.0011</i>

Source: World Bank Index

Augmented Dickey Fuller test for population growth rate at level and first difference.

Ho: population growth rate has a unit root.

We accept the null hypothesis that the population growth rate has a unit root and get to the finding that the population growth rate is uncertain at level and hence not $I(0)$ since the standard deviation of the tau test statistic (-1.915) is less than the 5% critical threshold (-3.568).

After differencing, we reject the null assumption and determine that the population growth rate is stable and hence inclusive of order one because the tau test statistic (-4.195) is larger in absolute terms than the critical value at 5% (-3.556).

Augmented Dickey Fuller test for growth domestic product at level and first difference.

Ho: Unemployment rate has a unit root.

We accept the null hypothesis that the expansion in the GDP has a unitary root and come to the decision that the rate of unemployment is unpredictable at level because the median value of the tau test statistic (-2.842) is less than the critical value of five percent (-3.564). As a result, $I(1)$ is not true because the rate of unemployment is unpredictability at level.

We reject the null hypothesis because the population growth rate is stationary after differentiating, and because the tau test statistic (-4.591) is higher in terms of absolute magnitude than the critical value at 5% (-3.572), which means that the unemployment rate is stationary and therefore established of order one.

Augmented Dickey Fuller test for inflation at level and first difference.

Ho: Inflation rate has a unit root.

The tau test statistic (-5.741) in absolute terms is greater than the 5% critical value (-3.548) in absolute terms. We reject the null hypothesis and conclude that inflation rate is stationary at level (1).

Augmented Dickey Fuller test for Foreign Direct Investment at level and first difference.

Ho: Foreign Direct Investment has a unit root.

Since the unit root is accepted and FDI is unpredictable at level, not $I(0)$, the tau test statistic (-2.883) in terms of absolute magnitude is smaller than the 5% critical value (-3.556) in absolute terms.

We reject the null assumption and determine that FDI has been incorporated of order one after differencing since the tau test statistic (-5113) in absolute terms is bigger than the crucial value at 5% (-3.572).

Co-integrated parameters are those that move in the same direction over time only when the error term is stationary, or $I(0)$. If it is discovered to be non-stationary, the model is invalid or pointless.

Presentation of empirical findings.

Regression estimation results with unemployment rate as a dependent variable

Table 4 represents regression estimation results with unemployment rate as a dependent variable

<i>Source</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>			
<i>Model</i>	96.523	3	32.174			
<i>Residual</i>	175.297	33	5.312			
<i>Total</i>	271.82	36	37.486			
<i>UN</i>	<i>Coef.</i>	<i>Std. Err.</i>	<i>T</i>	<i>P> t </i>	<i>[95%</i>	<i>Interval</i>

					<i>conf.</i>	
<i>FDI</i>	0.908	0.229	0.025	0.865	0.2223068	1.308782
<i>Inflation rate</i>	0.015	0.090	-0.054	0.725	- 0.2836365	0.1435367
<i>Population growth rate</i>	-0.129	0.363	0.581	0.00	- 0.9600089	0.7656292
<i>_cons</i>	1.079047	1.801958	0.60	0.553	-2,587064	4.745159

Source: World Bank Index

$$(UN)_t = 1.08 - 0.015(INFLA)_t - 0.129(POP)_t + 0.908 * (FDI)_t + Et$$

A 1% increase in population growth results in a 0.129 decrease in the rate of unemployment when all other variables are held constant. Because the p-value (0.865) is higher than 0.05, it is assumed that exports have a significant positive impact on the rate of unemployment.

A 1% increase in inflation causes a 0.015 percentage point spike in the unemployment rate, all other things being equal. Because the p-value (0.725) is higher than 0.05, it can be said that inflation only slightly raises the unemployment rate.

Assuming all other factors remain equal, an increase in foreign direct investment of 1 percent results in an increase in the rate of joblessness of 0.908 percent. Given that the p-value (0.00) is smaller than 0.05, it seems likely that foreign direct investment positively affects the rate of joblessness.

<i>Number of obs</i>	36
<i>F {3, 33}</i>	6.057
<i>Prob>F</i>	0.002
<i>R-squared</i>	0.355
<i>Adj R-squared</i>	0.296
<i>Root MSE</i>	2.6931

Source: world bank index

R-squared is 0.355, which means that population growth, inflation, and foreign direct investment together account for 36% of the fluctuations in joblessness.

Other factors found in the error term account for 36% of the explanation, thus they are left out of the model. The data is well-fitted and consequently a good fit because the R^2 is high.

The F statistic of 6.057 with a p value of 0.002, which is less than 0.05, suggests that all variables together have a substantial short-term impact on jobless.

Test for spurious

Durbin Watson test.

Table 5 represents test for spurious

<i>Test for spurious</i>	
<i>Number of gaps in sample</i>	<i>1</i>
<i>Durbin-Watson d-statistic (4,37)</i>	<i>1.178</i>

Source: world bank index

Since the Durbin Watson d-statistic (1.178) is greater than R squared value (0.355), it is non-spurious at 5% level of significance.

Findings have shown that all variables are integrated of order one which necessitates a co-integration test.

Diagnostic post estimation tests.

Diagnostic tests are carried out to ensure the residuals are normally distributed, homoscedastic and no presence of auto correlation.

Test for heteroscedasticity

Ho: The model is correctly specified.

Table 6 represents test for heteroscedasticity

<i>Ramsey Reset Test</i>	<i>F-Statistic</i>	<i>F-Statistic</i>
	<i>F (3,30)</i>	<i>Prob>F</i>
	2.84	0.0546

Source: world bank index

We accept the null hypothesis and conclude that the model is correctly specified since the probability value (0.0546) is greater than 0.05

Test for auto correlation

Breusch-Godfrey Serial Correlation LM Test:

Ho: There is no serial correlation.

Table 7 Represents test for auto correlation

<i>Breusch- Godfrey LM Test</i>			
<i>Lags p</i>	<i>Chi2</i>	<i>Df</i>	<i>Probability>chi2</i>
1	3.773	1	0.0521

Source: world bank index

The null hypothesis of presence of no serial correlation is accepted since the probability (0.0521) is greater than 0.05.

Test for multicollinearity.

Ho: There is a constant variance.

Table 8 Represents test for multicollinearity

<i>Vif variable</i>	<i>VIF</i>	<i>1/VIF</i>
<i>Population growth rate~1</i>	<i>1.127</i>	<i>0.8873</i>
<i>Population growth rate ~v</i>	<i>1.189</i>	<i>0.8410</i>
<i>Foreign direct investment</i>	<i>1.096</i>	<i>0.9124</i>
<i>Mean VIF</i>	<i>1.14</i>	

Source: world bank index

Since the VIF values are less than 10, it indicates that there is a moderate correlation between FDI and population growth rate which implies that there is no perfect multicollinearity.

Tests for co-integration

If the error term is stationary and the variables move in the same direction over time, this is called to as co-integration (0). If it is determined to be non-stationary,

the model is invalid or useless. The unemployment rate, inflation rate, population growth rate and foreign direct investment long run models were estimated. The Augmented D-Fuller test was used to analyze the residuals, and it revealed that they were stationary at a significance level of 5%.

Table 9: Augmented Dickey Fuller test for residuals at level.

<i>Variable</i>	<i>ADF test statistic</i>	<i>5% critical value</i>	<i>ADF test statistic</i>	<i>5 % critical value</i>	<i>ADF test statistic</i>	<i>5%critical value</i>
<i>Residual</i>	<i>-1.915</i>	<i>-3.548</i>	<i>-2.842</i>	<i>-3.568</i>	<i>-2.883</i>	<i>-3.564</i>

Since the tau statistics in terms of absolute values are higher than the 5% critical value in comparative terms at level, it is determined that the remaining values from the long run equation are stagnant. This demonstrates that there is co-integration between the rates of joblessness, inflation, population growth, and foreign direct investment, necessitating the need of an error correcting model for results estimate.

Conclusion

The economy needs to be diversified and jobs must be created in order to address the absence of officially recognized employment. By focusing on industries with an excellent chance for job creation and attracting investments, Uganda can give its young people more employment options. Access to finance is another important factor since it can assist young people in starting new businesses and expanding existing ones by providing assistance and amenities that are inexpensive for what they need financially.

Gender disparities must be eliminated in order to ensure equal chances and get rid of discriminatory beliefs that deny young women access to jobs, education, and training. By putting in place social protection programs that are tailored to the needs of vulnerable youth, safety nets can be created during times of unemployment and unemployment.

Recommendation.

By providing them with access to finance, services for expanding their companies, and programs for guidance, you can support and motivate young entrepreneurs. Young people can increase their economic activity and create opportunities for themselves to get employment by doing this.

Strengthen Computational job recruitment systems: Create and maintain up-to-date databases on the labor market that include trustworthy information on hiring patterns, available jobs, and required qualifications. Using this information to make informed decisions on career choices and developing abilities can aid colleges and universities, policymakers, and young people

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