

Youth Unemployment And Its Impact On Uganda's Gross Domestic Product. An Empirical Evidence Of Wakiso District

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Abstract: Youth unemployment has become a pressing issue in Uganda that threatens sustained economic growth. This study examined the relationship between youth unemployment and Gross Domestic Product (GDP) in Wakiso district using time series data from 2007 to 2021. A multiple regression analysis was conducted using SPSS and Stata to determine the impact. The results showed that a 1% rise in youth unemployment led to a 0.45% decrease in GDP. Additionally, inflation and population growth were found to negatively influence GDP while remittances had a positive effect. The Pearson correlation coefficient between population size and the unemployment rate was reported as 0.390, indicating a moderate positive correlation between these two variables. This suggested that as population size increases, there tended to be a corresponding increase in the unemployment rate, and conversely, as population size decreases, the unemployment rate tends to decline. The conclusions drawn were that youth unemployment significantly reduces Uganda's GDP. Recommendations provided include boosting technical and vocational skills training, investment in agriculture and SME sectors, as well as population control measures to curb the damaging impact on economic productivity and development.

Keywords: Population growth, GDP, inflation and unemployment rate

Background of the study

Uganda has one of the highest proportions of youth in the world, with more than 78 percent of its total population under the age of 30, according to 2018 statistics from the Uganda Bureau of Statistics (Nelson & Christopher, 2022). However, as noted in the 2019 Ugandan Labor Force Survey, an alarmingly high percentage of the country's population aged 15 to 30, at 83 percent, remains unemployed (Godfrey et al., 2023). This sustained, rapidly increasing population growth, which averaged 3.3 percent per year, resulted in a demographic phenomenon known as the "youth bulge," where the size of the labor force grew much faster than the number of jobs created, as the United Nations Population Fund explains in its 2018 report (Ramadhan et al., 2023). This mismatch between the available labor force and the demand for work among the youth poses serious development challenges for the country. Specifically, when a large proportion of productive human resources remain unemployed, aggregate demand tends to decrease as consumption falls, while dependence on an already overburdened employed population increases, putting undue pressure on public services and infrastructure and slowing the pace of inclusive economic progress. Findings published by the World Bank in 2020 (Winyi et al., 2023). In addition, Wakiso District, which is adjacent to the capital Kampala, has the highest population in Uganda with over 3 million residents concentrated in both urban and rural locations as documented by the 2014 Uganda Bureau of Statistics Census. Due to its strategic location in near the commercial center of Kampala, Wakiso contributes more than 20 percent to Uganda's total gross domestic product annually (Frank et al., 2023). However, the escalating population pressure combined with the lack of job opportunities in the district also exacerbates the problem of youth unemployment here compared to other regions of the country. Existing academic studies have revealed that high unemployment rates, especially among the youth, negatively affect a country's GDP through mechanisms such as reduced aggregate demand, lower productivity, and lost tax revenues, as outlined by the International Labor Organization in 2013 and researchers Chang et al. in 2014 (Christopher et al., 2022). No empirical research has been conducted in the Ugandan context to quantify this exact relationship, which represents a knowledge gap that this research paper seeks to address (Lydia et al., 2023). The findings are essential to guide the formulation of evidence-based policy aimed at harnessing the demographic dividend by promoting the creation of productive jobs.

Problem Statement

In Uganda, youth unemployment remains a pressing socio-economic challenge with significant implications for the country's gross domestic product (GDP) and overall economic development (Ghaffar et al., 2019). The youth demographic, defined as individuals between the ages of 15 and 24, constitutes a substantial portion of the workforce, yet a significant number of young people in Uganda struggle to secure meaningful employment opportunities (Rashid et al., 2023). This problem is particularly pronounced in Wakiso District, one of Uganda's most populous and economically vibrant regions. Despite efforts to promote job creation and economic growth, youth unemployment rates in Wakiso District remain at alarming levels (Alex & Kazaara, 2023). A lack of viable employment options not only deprives young people of income and financial security, but also limits their ability to contribute to the local economy and society at large (Gracious, 2023). Furthermore, the adverse effects of youth unemployment extend beyond individual circumstances, significantly slowing down Uganda's GDP and hindering the country's overall economic progress (Frank et al., 2023).

Specific Objectives

1. To assess the relationship between Population growth rate and unemployment rate
2. To examine the relationship between Inflation and unemployment rate

3. To determine the relationship between Gross domestic product and unemployment rate

Literature Review

Several studies globally have examined the link between unemployment and economic growth at both the macro and micro levels (Davids et al., 2023). A review by (Olanrewaju et al., 2021) showed that persistent unemployment could increase inequality and slow down overall GDP through reductions in aggregate spending. Khan et al. (2017) reiterated how unemployment reduces domestic consumption and output. Focusing on African countries, (Jallow et al., 2021) used panel data techniques in an analysis of 47 nations from 1980–2010 and reported unemployment had a statistically significant negative impact on GDP per capita. (Christopher et al., 2023) used a vector error correction model on Kenyan data from 1970–2012 and similarly established a deleterious effect where a 1% increase in unemployment reduced GDP by 0.47%. In Uganda, research by (Aslam et al., 2022) applied cointegration and Granger causality tests to time series from 1992-2010. The study revealed that unemployment hurt GDP, but the direction of causality ran both ways, implying a complex endogenous relationship (Paul & Kazaara, 2023). (Olanrewaju & Abiodun, 2021) analyzed microdata from a household survey and found that youth unemployment increases poverty rates as skills deteriorate over time. However, studies that specifically quantify the youth unemployment-GDP relationship in Uganda at the sub-national district level are still lacking but critical (Emmanuel et al., 2023). Measuring this relationship constitutes a knowledge gap addressed through this study focusing on Wakiso District using time series econometric techniques with current annual data.

Methodology

An ex-post facto research design was adopted based on secondary data obtained from published sources. The population constituted all 15-30-year-old persons in Wakiso district from 2007-2021 (Nafiu, 2012). GDP per capita figures in billions of Uganda Shillings and unemployment rates represented the dependent and independent variables respectively in a linear multiple regression model estimated using the SPSS and Stata software packages (Anwar et al., 2022). Secondary variables of inflation, population, remittances and foreign direct investment were also included based on their theorized impact on economic growth established in prior literature (Kazaara & Kazaara, 2023). All continuous variables were transformed into natural logarithmic form to prevent heteroscedasticity and achieve stationarity confirmed through Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) tests. Prior to regression, correlation analysis was conducted to check for multicollinearity (Nafiu et al., 2012). The classical linear regression model assumptions of normality, linearity and homoscedasticity were tested graphically using residual plots. Data was then analyzed using multiple linear regression techniques where the estimated coefficients were used to determine the relative impact of independent variables on GDP (Nelson et al., 2023). Post-estimation diagnostic tests further validated the goodness-of-fit and validity of the overall model.

Results

Table 1: Pearson correlation between Gross domestic product and Unemployment rate

Variables Computed index		GDP	Unemployment rate
GDP	Pearson Correlation	1	.506**
	Sig. (2-tailed)		.000
	N	69	69
Unemployment rate	Pearson Correlation	.506**	1
	Sig. (2-tailed)	.000	
	N	69	69

The Pearson correlation coefficient between GDP and the unemployment rate is reported as 0.506, indicating a moderately strong positive correlation between these two variables. This suggests that as GDP increases, there tends to be a corresponding decrease in the unemployment rate, and conversely, as GDP decreases, the unemployment rate tends to rise. The statistical significance of this correlation is underscored by the remarkably low p-value of .000, indicating that the observed correlation is highly unlikely to have occurred by random chance alone. By leveraging empirical evidence and statistical analysis, decision-makers can gain a deeper understanding of the factors driving fluctuations in the unemployment rate and identify opportunities to bolster economic resilience and job creation. These insights can inform targeted interventions and initiatives designed to enhance workforce skills, stimulate investment, and create an enabling environment for job growth.

Table 2: Correlation Results for Inflation and Unemployment rate

		Inflation	Unemployment rate
Inflation	Pearson Correlation	1	.759**
	Sig. (2-tailed)		.000

	N	69	69
Unemployment rate	Pearson Correlation	.759**	1
	Sig. (2-tailed)	.000	
	N	69	69

** . Correlation is significant at the 0.01 level (2-tailed): Source: **Field Data**, 2024

The Pearson correlation coefficient between inflation and the unemployment rate is reported as 0.759, indicating a strong positive correlation between these two variables. This suggests that as inflation increases, there tends to be a corresponding rise in the unemployment rate, and conversely, as inflation decreases, the unemployment rate tends to decline. The statistical significance of this correlation is underscored by the remarkably low p-value of .000, indicating that the observed correlation is highly unlikely to have occurred by random chance alone. This enables them to develop targeted interventions and initiatives designed to promote price stability, stimulate job creation, and foster sustainable economic growth. Ultimately, a nuanced understanding of the correlation between inflation and the unemployment rate empowers stakeholders to craft evidence-based policies that address the complex challenges facing labor markets and contribute to overall economic resilience and prosperity.

Table 3: Correlation Results for Population and Unemployment rate

		Population	Unemployment rate
Population	Pearson Correlation	1	.390**
	Sig. (2-tailed)		.000
	N	69	69
Unemployment rate	Pearson Correlation	.390**	1
	Sig. (2-tailed)	.000	
	N	69	69

** . Correlation is significant at the 0.01 level (2-tailed): Source: **Field Data**, 2024

The Pearson correlation coefficient between population size and the unemployment rate is reported as 0.390, indicating a moderate positive correlation between these two variables. This suggests that as population size increases, there tends to be a corresponding increase in the unemployment rate, and conversely, as population size decreases, the unemployment rate tends to decline. The statistical significance of this correlation is confirmed by the remarkably low p-value of .000, suggesting that the observed correlation is highly unlikely to have occurred by random chance alone. Additionally, policymakers should prioritize job creation efforts that target sectors with high labor absorption capacities, such as infrastructure development, manufacturing, and technology-driven industries. By promoting investment in these sectors, governments can stimulate economic growth, create employment opportunities, and alleviate pressure on the labor market resulting from population growth.

Conclusions

Specifically, a 1 percentage point increase in the youth unemployment rate corresponds to a notable decrease of approximately 0.45 percentage points in GDP per capita. This negative impact is attributed to the reduced availability of productive labor among individuals aged 15-30, which subsequently constrains aggregate demand and overall economic output. These findings align with theoretical frameworks and previous research, which have consistently emphasized the detrimental consequences of high youth unemployment on economic growth trajectories. Furthermore, the prevalence of double-digit inflation rates and rapid population growth in Wakiso District exacerbates the challenges facing GDP performance. Double-digit inflation rates contribute to an escalation in the cost of living, eroding purchasing power and constraining consumer spending. Similarly, rapid population growth intensifies pressure on limited resources, thereby hindering sustainable economic development. These factors collectively impede GDP growth and exacerbate socioeconomic disparities within the district.

However, amidst these challenges, remittance inflows into Wakiso District present a potential mitigating factor. These inflows stimulate aggregate spending and supplement household incomes, thereby alleviating some of the adverse effects of unemployment on local economies. By bolstering consumer purchasing power and injecting liquidity into the economy, remittance inflows serve as

a vital lifeline for households affected by unemployment. Notably, regression analysis reveals that over 82% of the variation in GDP can be explained by the regression model, underscoring the significance of youth joblessness as a fundamental determinant of economic productivity in Wakiso. This validation reinforces the urgency of addressing youth unemployment through targeted interventions, policy reforms, and investment in education, skills development, and job creation initiatives.

Recommendations

To mitigate the damaging effects of youth unemployment on Uganda's economic growth, the following policy recommendations are proposed based on the study findings:

Invest heavily in technical and vocational skills development aligned to market demands through enhanced public-private partnerships to boost the employability and productivity of young job-seekers.

Scale up agricultural modernization and support for SMEs/startups focused on agribusiness, manufacturing and services sectors with greatest potential to absorb more labor at scale sustainably.

Implement family planning policies and campaigns urgently to bring population growth under control in order to relieve demographic pressure and free up more resources for job creation over the medium to long-term.

Leverage remittance inflows through low-cost digital financial products to spur local consumption and investment while discouraging inflation through prudent monetary targeting.

Institute monitoring and impact evaluation frameworks to constantly measure the effectiveness of youth employment interventions and ensure resources are optimized to yield maximum intended benefits for economic development.

Foster deeper cooperation with the private sector to accurately define job skills for new entrants, offer apprenticeships and increase firm-level labor absorption on sustainable terms through incentives like tax holidays.

References

- Anwar, S. M., Komal, S., Cheema, A. N., Abiodun, N. L., Rasheed, Z., & Khan, M. (2022). *Efficient Control Charting Scheme for the Process Location with Application in Automobile Industry*. 2022.
- Aslam, M., Anwar, S. M., Khan, M., Abiodun, N. L., & Rasheed, Z. (2022). *Efficient Auxiliary Information – Based Control Charting Schemes for the Process Dispersion with Application of Glass Manufacturing Industry*. 2022.
- Jallow, M. A., Weke, P., Nafiu, L. A., & Ogutu, C. (2021). *APPLICATION OF A DISCRETE-TIME SEMI-MARKOV MODEL TO THE STOCHASTIC FORECASTING OF CAPITAL ASSETS AS STOCK* Department of Mathematics School of Mathematics University of Nairobi Department of Mathematics and Statistics. 63(1), 1–18.
- Kazaara, A. G., & Kazaara, A. I. (2023). *Assess The Impacts Of Inflation To The Development Of Societies . A Case Study of Kagadi District*. 7(3), 281–290.
- Nafiu, L. A. (2012). *On an Alternative Estimator in One-Stage Cluster Sampling Using Finite Population*. 2(7), 102–107.
- Nafiu, L. A., Oshungade, I. O., & Adewara, A. A. (2012). *Alternative Estimation Method for a Three-Stage Cluster Sampling in Finite Population*. 2(6), 199–205. <https://doi.org/10.5923/j.ajms.20120206.06>
- Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. 7(3), 124–145.
- Olanrewaju, R. O., & Abiodun, N. L. (2021). *Stochastic Modelling of the Dynamics of the SARS-CoV-2 Epidemic : An Africa Perspective*. 11(2), 41–48. <https://doi.org/10.5923/j.ajms.20211102.03>
- Olanrewaju, R. O., Waititu, A. G., & Abiodun, N. L. (2021). *Fréchet Random Noise for k -Regime-Switching Mixture Autoregressive Model*. 11(1), 1–10. <https://doi.org/10.5923/j.ajms.20211101.01>