

Unemployment And Economic Development In Uganda; A Case Study Wakiso District

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Abstract

The study was carried out to investigate the effect of unemployment on economic development in Uganda. The major objective of the study was to examine the effect of unemployment on economic development in Uganda period from 1994-2021. The specific objectives were to examine the trend of unemployment in Uganda, to examine the level of economic development and to establish the relationship between economic development and unemployment in Uganda. The study used secondary data from international labour organization for the unemployment, Uganda bureau of statistics for the economic development data. The data used is yearly data covering the period from 1994-2021 the data was then analyzed and presented using OLS, Augmented Dickey Fuller to test for the presence of unit root, the Johansen co-integration test was employed to test the existence of the long run relationship between economic development and the independent variable. The study revealed that unemployment negatively affected economic development in Uganda for the period under study. The skewness of 0.09 suggested that the distribution of the unemployment rates was slightly skewed to the right, indicating that there were marginally more observations below the mean than above. Kurtosis was reported at 2.13, which was close to the normal distribution value of 3, suggesting that the distribution of the unemployment rate does not exhibit significant outliers or extreme values. The Jarque-Bera test statistic was 0.90 with an associated probability value of 0.64. Hence, the need by the government and relevant agencies to formulate policies to encourage self-employment and reduce cost of doing business in the country so as to achieve a high, rapid and sustainable economic development.

Keywords: Unemployment, Economic and Development

Background of the study

According to (Nelson & Christopher, 2022a), unemployment refers to a situation where a person aged 15 and over who meets the conditions is unemployed for a given week and is able to accept work within two weeks after actively looking for work in the last four weeks work. weeks, or if you found one in less than three months. In general, unemployment refers to a situation where a member of the labor force is actively looking for a job, but cannot find it at the prevailing wage rate in a given time period (Hussein et al., 2024). Economic development is the creation of wealth from which community benefits are realized. It is more than a jobs program, it is an investment in growing the economy and increasing the prosperity and quality of life of all residents. According to (Julius & Nancy, 2024), unemployment is between 64% and 70% and about 400,000 young people are released into the labor market annually to compete for about 9,000 job vacancies. About 30% of young people who are institutionally skilled in Uganda are unable to find work and the situation is even worse for semi-skilled youth. Young people who remain unemployed or underemployed and not reaching their full potential are often associated with high rates of drug abuse and gambling.

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The high population has been described by the local media as Uganda's ticking time bomb (Godfrey et al., 2023), as the high unemployment rate means that many young people have nothing to do. High levels of inactivity can have a destabilizing and disturbing impact on the economy and society as a whole, as youth are often at the forefront of revolutions and political unrest. Young women often have less capital in the form of skills, savings and credit than men, making them particularly vulnerable (Alex & Moses, 2024), women also face socially constructed gender norms and stereotypes that can discriminate against their access to employment (ibid). Women's economic empowerment is increasingly seen as a fundamental strategy for both poverty eradication and gender equality (Chant and Jones 2005, p. 185). According to (Nelson & Christopher, 2022b), the increased empowerment of women along with the declining economic situation in Uganda has resulted in more women entering the workforce. Young women often find themselves in a difficult situation where society expects them to be women, and they also have their own aspirations, which are to some extent reinforced by the changing development process and are at odds with society. So society seems to be changing. Where men have traditionally been the main service providers, women are now increasingly entering the workforce and competing with men for the few available jobs, challenging existing notions of gender and gender relations (Muhamad & Alex, 2024).

According to the latest Labor Force Survey conducted by the Uganda Bureau of Statistics in 2016-2017, the national unemployment rate is estimated to be around 4% (Uganda Bureau of Statistics, 2017). However, unemployment is significantly higher among Ugandan youth, who make up more than 78% of the country's total population (Allan et al., 2023). The unemployment rate for people aged 14-30 is estimated at over 20% (Julius & Nancy, 2024). This high rate of youth unemployment poses a risk to Uganda's economic and social stability.

In Wakiso district specifically, unemployment looks even more worrying. Due to rapid population growth and increasing rates of urbanization as Kampala expands, Wakiso struggles to create sufficient employment opportunities for its growing workforce (O. Lydia et al., 2024). A 2010 study by the Economic Policy Research Center estimated the unemployment rate in Wakiso to be around 14.5%, well above the national average (EPRC, 2010). The study found that nearly 60% of Wakiso's labor force newcomers were unable to find formal wage employment each year.

Much of Uganda's economic activity and foreign investment is centered around Kampala in central Uganda. However, remote areas like Wakiso benefited less from this economic development (N. Lydia et al., 2023). While Wakiso's real GDP growth has generally hovered close to the national average of over 6% in recent years, productivity in the district remains low due to underinvestment in infrastructure and lack of industrialization (Christopher et al., 2022a). Wakiso's economy is still primarily based on agriculture, with over 80% of the working population engaged in mostly subsistence farming (Wakiso District Local Government, 2017). This has contributed to high levels of underemployment and seasonal unemployment among the district's residents. There is a clear connection between the level of economic development of the region and its unemployment. Areas with strong, diversified economic growth tend to have lower unemployment by creating more job opportunities in more industries. However, in less developed districts like Wakiso, the economy has not grown fast enough or inclusively enough to absorb the large numbers of new workers entering the workforce each year. Without meaningful efforts to increase investment, improve skills training and support economic transformation, Wakiso will continue to struggle with high unemployment (Ntirandekura et al., 2022). To address these interconnected challenges, the Ugandan government, in partnership with organizations such as the World Bank, has launched initiatives to stimulate more equitable private sector-led growth in secondary cities and rural areas outside of Kampala (World Bank, 2016). If successful, such programs could help expand economic activity and employment across Uganda. Wakiso District has also taken steps such as formulating a new five-year strategic development plan focused on industrialization, skills training and strengthening its business environment to better exploit local economic opportunities (Julius & Nancy, 2024).

With nearly a quarter of Uganda's total population facing severe unemployment, the experiences of Wakiso District highlight the importance of balanced regional development for the country's sustained economic progress and social stability (Julius & Nancy, 2024). By promoting diversified, inclusive growth that creates productive jobs across Uganda, policymakers can help alleviate the unemployment problems facing areas like Wakiso in the years to come. Ongoing monitoring and evaluation of unemployment trends and targeted interventions will continue to be key to supporting the availability of decent work at the national level.

Statement of the problem

Effect of Unemployment on Economic Development in Wakiso District. Unemployment refers to a situation where the workforce is actively looking for work but cannot find it at a given wage rate in a given time period (Paul & Kazaara, 2023). Unemployment and inflation are two twin evils that have over the years dug deep into the fabric of the Ugandan economy, leading to low living standards, high crime and low revenue collection among others (Muhamad & Alex, 2024). Economic development in Uganda has been poor since the early 1980s when the Structural Adjustment Program (SAP) was introduced. This research helped to solve the above problem in Wakiso district (Moses, 2023). Therefore, there is a need to address unemployment which will help boost economic development in Wakiso District

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Purpose of the study

The purpose of the study was to examine the effect of unemployment on economic development from 1994 to 2021

Specific study objectives

1. To determine the level of unemployment in Uganda
2. To examine the trend of economic development in Uganda
3. To establish the relationship between unemployment and economic development in Uganda

Research questions

1. What is the level of unemployment in Uganda?
2. What is the trend of economic development in Uganda?
3. What is the relationship between unemployment and economic development in Uganda?

Methodology

This chapter showed the methods of collecting data that is quantitative research. Data was collected from ILO and UBOS and it covered years from 1994-2021 using different tests like diagnostic test, multicollinearity test (Olanrewaju et al., 2021a). The study used quantitative research which focused on quantifying the collection and analysis of data such as secondary data. Secondary data involved extraction of relevant information from trusted sources. These sources of data under this study was Uganda Bureau of Statistics (UBOS) and International Labor Organization (ILO) (Jallow et al., 2021). Unemployment data was extracted from the ILO whereas the data about economic development using the real Gross Domestic Product (GDP) as the indicator was be extracted from the UBOS. The data covered years from 1994-2021 (N. Lydia et al., 2023).

The research focused on mainly two variables that is, the dependent and independent variables. The dependent variable is economic development (GDP rate) and the independent variable is unemployment rate in Uganda from 1994-2021 associated with non-stationary.

Table 1: Description of variables

Variable	Description	Data type
Economic development	Real GDP in years	Count
Unemployment rate	Lagging indicator	count

Source: researcher 2023

This study applied quantitative methods to analyze the data. The study used appropriate statistical software packages like STATA and SPSS (Nelson et al., 2022). In specifying the model for research, the researcher first tested for stationary of the

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data because when all the variables are stationary at level we can use regression to see the relationship between them thus we first investigated for stationary in order to avoid spurious regression (Nafiu, 2012). That is associated with non- stationary data and distorts results. “A time series is said to be stationary when it’s mean and variance do not vary systematically over time” (Nafiu & Ph, 2012) thus regression analysis was to be used, that is simple regression where the revenue generated and the total capital expenditure by the government is related. Therefore, the regression model in the study model was taken the form of;
Economic development= $b_0 + b_1$ unemployment rate

Where; b_0 is the intercept

b_1 is the slope

Economic development is the dependent variable while unemployment rate is the independent variable

A diagnostic test which this study was employed are the data in question in time series, preliminary test was be carried out to establish normality, multicollinearity and stationary of the series. JarqueBera test employed to test for normality Augmented Dickey-Fuller (ADF) Johansen Co-integration procedure for testing co-integration on variables (Nafiu, 2012). The correlation matrix for the variables drawn and analyzed. When the correlation value is very close to zero it was concluded that the values have no close relationship. When the R^2 of the run regression is high and the partial coefficients of the regression are statistically different from zero then we bound to conclude that there is no multicollinearity. Using the ADF test for stationary values, unit root tests was carried out for each variable (Nafiu et al., 2012). The ADF Test was used on series in level and in the 1st difference. Conclusions about stationary was made by comparing the ADF-Statistic and the Critical Values (C.V) at 1, 5 and 10 percent. When the ADF-Statistics is greater in absolute terms than the critical values, the series is said to be stationary and the reverse implies non-stationarity (Olanrewaju et al., 2021b).

Series that are stationary are in levels are integrated of order zero $\{1(0)\}$. While those stationary after the first difference, then the series was be integrated of order two $\{1(2)\}$ and so on.

This is a restricted VAR which was to help estimate the speed of the dependent variable; in this case, GDP returns to equilibrium after there are changes in the explanatory variables. VECM was only be applied if the co-integration test proves existence of a rough long-run relationship between the variables, so as to estimate the short-run dynamics as well as transitory aspect or long-run dynamics of the variables (Olanrewaju & Abiodun, 2021).

RESULTS

Table 2: Data on Unemployment rate and Economic Development (Real GDP)

Year	Unemployment rate (%)	Economic Development (real GDP)
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1994	3	1.8
1995	2.8	5.9
1996	2.7	6.7
1997	3.2	7.7
1998	2.7	9.2
1999	2.2	6.6
2001	2.8	4.6
2002	2.8	6.1
2003	2.8	8
2004	2.8	3.9
2005	2.4	8.8
2006	3.5	7.1
2007	3.2	6.2
2008	2.5	5.8 10
2009	2	7
2010	3.7	8.8
2011	3	10.4
2012	3.7	8.1
2013	4.1	7.7
2014	4.2	6.8
2015	4.2	2.2
2016	4.2	4.7
2017	3.9	

Starting with the unemployment rates, the data fluctuates from year to year, showcasing periods of both stability and volatility. For instance, the unemployment rate was relatively low at 3% in 1994, decreased slightly to 2.8% in 1995 and 1996, but then increased to 3.2% in 1997. It saw a significant drop to 2.2% in 1999, demonstrating variability in labor market conditions during this period. Another notable increase is seen in 2010, where the unemployment rate jumped to 3.7%, and again in 2013 where it reached 4.1%, peaking at 4.2% in both 2014 and 2015. This data indicates periods of economic difficulty, possibly reflecting broader economic challenges during those years.

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On the other hand, the real GDP data exhibits significant variations, reflecting the economic growth or contraction over the same period. For example, in 1994, the real GDP growth was a mere 1.8%, but it saw a sharp increase to 5.9% in 1995 and continued to rise to 6.7% in 1996 and 7.7% in 1997. Notably, 1998 recorded a high GDP growth rate of 9.2%, suggesting a period of robust economic expansion. However, in 2001, there was a significant drop to 4.6%, indicating economic contraction. The data also shows another peak in 2010 with a GDP growth rate of 10%, and the highest recorded value of 10.4% in 2013, suggesting a strong economic performance. Nonetheless, the GDP growth rate declined sharply to 2.2% in 2016, one of the lowest in the observed period, hinting at economic challenges during that year (Olanrewaju et al., 2021b).

Analyzing these trends together, the data indicates some interesting patterns. For example, years of higher unemployment rates, such as 2010 and 2013-2015, coincide with both high and low GDP growth rates, suggesting a complex relationship between these variables. While some years with high GDP growth (e.g., 1998, 2010, 2013) do not correspond with particularly low unemployment rates, this indicates that GDP growth alone does not always result in immediate improvements in the labor market. Conversely, lower GDP growth rates in certain years (e.g., 2001, 2003, 2016) do not always correspond with higher unemployment rates, suggesting other factors at play affecting unemployment.

Table 3: Summary Statistics.

	Unemployment rate (%)
Mean	3.18
Median	3.20
Maximum	4.19
Minimum	2.00
Standard deviation	0.62
Skewness	0.09
Kurtosis	2.13
Jarque-Bera	0.90
Probability	0.64
Sum	85.89
Sum Sq. Dev	9.89
Observations	27

Source: Researcher, 2023

Table 3 presents a detailed summary of the statistical properties of the unemployment rate, expressed as a percentage. The mean unemployment rate is calculated to be 3.18%, indicating that, on average, the unemployment rate across the observed

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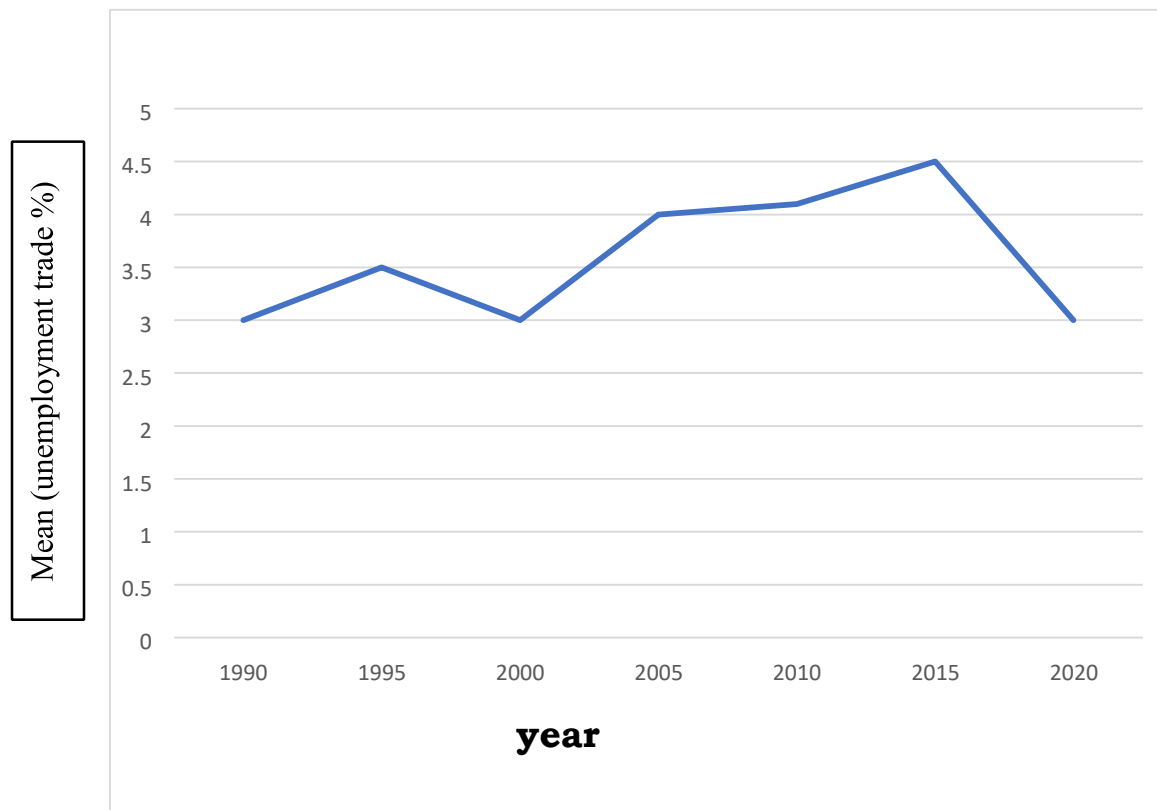
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period or regions is just over 3%. The median value is very close to the mean, at 3.20%, suggesting a relatively symmetrical distribution of the unemployment rates around the central tendency. The maximum observed unemployment rate is 4.19%, which marks the highest value within the dataset, while the minimum value recorded is 2.00%, indicating the lowest observed unemployment rate. The standard deviation is 0.62%, reflecting a moderate level of dispersion or variability around the mean, which means the unemployment rates tend to vary by about 0.62 percentage points from the average rate (Nafiu et al., 2013).

The skewness of 0.09 suggests that the distribution of the unemployment rates is slightly skewed to the right, indicating that there are marginally more observations below the mean than above. Kurtosis is reported at 2.13, which is close to the normal distribution value of 3, suggesting that the distribution of the unemployment rate does not exhibit significant outliers or extreme values. The Jarque-Bera test statistic is 0.90 with an associated probability value of 0.64. This high p-value indicates that there is no significant evidence to reject the null hypothesis of normality, implying that the unemployment rates are likely to be normally distributed.

The sum of the unemployment rates is 85.89%, summing up all the unemployment rate observations in the dataset. The sum of squares of deviations from the mean is reported as 9.89, providing a measure of the total variance in the dataset.

Figure 1: Trend of Unemployment rate



Source: Researcher, 2023

Over the years, there has been an increase in the rate of unemployment in Uganda in 1992 and later a sharp reduction in the rates in 1994. However, there was a continuous increase in the unemployment rate till 2000 thus showing a cyclic trend.

Level of Economic Development

The level of Economic Development in Uganda under this study was assessed using summary table of statistics and histogram to transpose the normality of the data. The assessment of the level of Economic Development was the second objective in this study

Table 4: Summary Statistics

	Economic development (GDP %)
Mean	6.31
Median	6.60
Maximum	10.40
Minimum	1.80
Standard deviation	2.24

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Skewness	-0.28
Kurtosis	2.26
Jarque-Bera	0.56
Probability	0.75
Sum	170.50
Sum.sq.dev	131.29
Observations	27

Source: Researcher, 2023

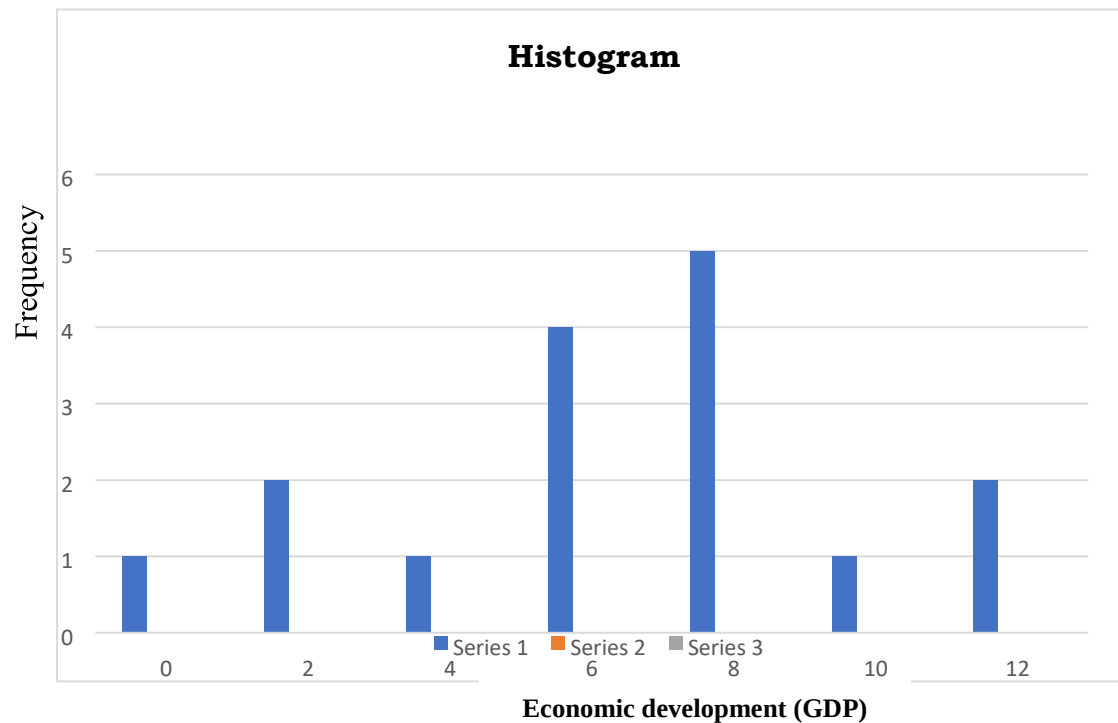
Table 4 provides a comprehensive summary of the statistical properties of economic development, measured in terms of GDP growth percentage. The average GDP growth rate, or mean, is calculated at 6.31%, indicating that, on average, the economy grew by 6.31% over the observed periods or regions. The median GDP growth rate is slightly higher at 6.60%, suggesting that half of the observations have GDP growth rates below this value, while the other half are above it. The maximum GDP growth rate recorded is 10.40%, representing the highest observed economic growth within the dataset. In contrast, the minimum GDP growth rate is 1.80%, which is the lowest value observed, showing significant variation in economic performance across different periods or regions. The standard deviation of 2.24% reflects a considerable level of dispersion around the mean, indicating that the GDP growth rates typically vary by approximately 2.24 percentage points from the average rate.

The skewness value is -0.28, suggesting a slight negative skew in the distribution of GDP growth rates. This means that there are marginally more observations with GDP growth rates above the mean than below. The kurtosis is 2.26, which is close to the normal distribution value of 3, indicating that the distribution of GDP growth rates does not have significant outliers or extreme values.

The Jarque-Bera test statistic is 0.56, with an associated probability value of 0.75. This high p-value implies that there is no significant evidence to reject the null hypothesis of normality, suggesting that the GDP growth rates are likely normally distributed. The sum of all GDP growth rate observations is 170.50%, which is the total growth accumulated over the observed periods or regions. The sum of squared deviations from the mean is reported as 131.29, providing a measure of the

total variance in the dataset.

Figure 2: Normality Test



ILO: 2016

Source: Researcher, 2023

Figure 2 depicts the distribution of normality of Economic Development. The figure shows that the data about Economic Development is normally distributed. This is because of the super transpose of the normal curve on the histogram.

Figure 3: Trend of Economic Development

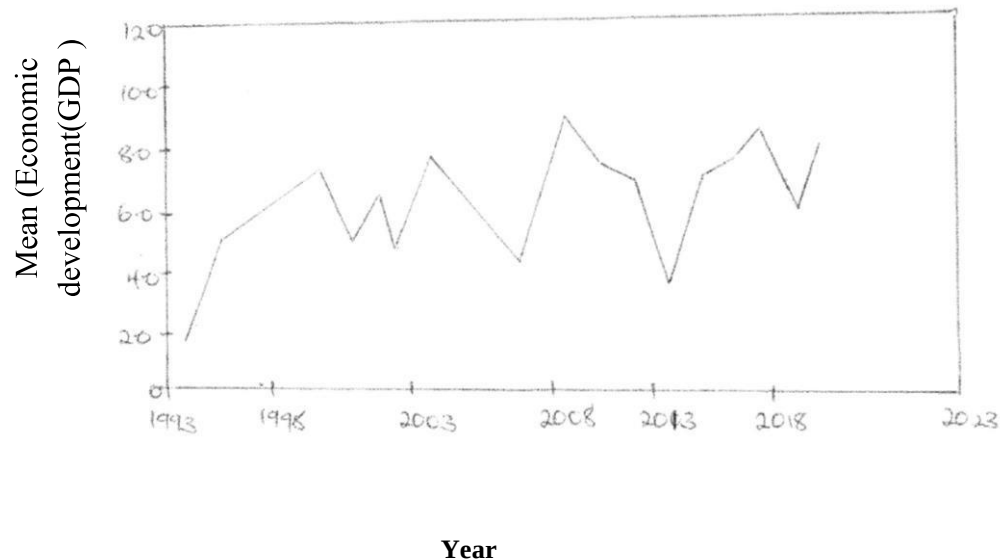


Figure 3 implies the trend of Economic Development over years from 1991 to 2017. From 1991 to 1995 there was a steady increase in economic development of the country. The country's economic development continues fluctuating over years. Thus, showing a cyclical trend in Economic Development of Uganda

Relationship between Unemployment and Economic Development

To establish the relationship between the Unemployment and Economic development was the third objective of this study.

Table 5: VECM estimates for Economic Development and Unemployment rate.

	D (unemployment rate)	D (LnEconomic Development)
Constant	030236	-270363
ECT(-1)	.013665	-.142153
R-square	0.3227	0.3227

Source: Researcher, 2023

The constant term for the unemployment rate is 0.030236, indicating the baseline level of the unemployment rate when other factors are held constant. For economic development, the constant term is -270.363, suggesting a base level significantly influenced by other variables in the model.

The Error Correction Term (ECT) coefficient for the unemployment rate is 0.013665, which is positive. This positive coefficient indicates a slow adjustment process towards equilibrium in the long run, implying that deviations from the equilibrium unemployment rate will gradually correct over time. Conversely, the ECT coefficient for economic development is -0.142153, which is negative. This negative coefficient suggests that deviations from the equilibrium level of economic development will correct themselves over time, returning to equilibrium more rapidly than the unemployment rate (Ronald et al., 2023).

The R-square value for both the unemployment rate and economic development is 0.3227. This value implies that approximately 32.27% of the variance in each dependent variable is explained by the independent variables included in the model. While this R-square value indicates a moderate level of explanatory power, it also suggests that there are other factors influencing unemployment and economic development not captured in this model (Christopher et al., 2022b). The findings from this VECM analysis provide insights into the dynamic relationship between unemployment and economic development. The differing signs and magnitudes of the ECT coefficients reveal how quickly each variable adjusts back to equilibrium following a disturbance, with economic development showing a faster correction compared to the unemployment rate.

Granger Causality Test

This is performed to ascertain the relationship between Economic Development and Unemployment rate.

Table 6: Relationship between Economic Development (GDP) and Unemployment.

Null hypotheses	F-statistics	Chi square	P-value	conclusion
Total unemployment has no effect on GDP	0.35 1	3.212406	0.1823	Fail to reject

Source: Researcher, 2023

Table 6 presents the statistical analysis of the relationship between economic development, measured by GDP, and the total unemployment rate. The table tests the null hypothesis that total unemployment has no effect on GDP, using F-statistics, Chi-square values, and P-values to draw conclusions. The F-statistics value for the relationship between total unemployment and GDP is 0.351, which indicates the test statistic obtained from the regression analysis. The corresponding Chi-square value is 3.212406, which provides another measure to evaluate the relationship between the variables under the chi-square distribution.

The P-value associated with this test is 0.1823. This P-value is higher than the conventional significance levels (such as 0.05 or 0.01), which implies that there is insufficient evidence to reject the null hypothesis. In other words, the statistical analysis does not provide strong enough evidence to conclude that total unemployment has a significant effect on GDP.

Conclusions

The results of OLS revealed that an increase in unemployment rates reduced economic development rates in Uganda. The coefficient of unemployment was statistically significant and consistent with the theoretical expectation. The F-statistics values in all models of this study indicated that unemployment rates jointly and significantly affected economic development rates in the country at 5% level.

However, both structural rigidity and unstable monetary policy have been identified as the major causes of unemployment in Uganda Adamson (2000). This study concluded that the major cause of unemployment in Uganda was the method of production adopted by the government in the country. The method of production adopted in this country was capital intensive (labour savings) which was capable of increasing unemployment rates there by reducing economic growth rates.

Recommendations

Based on the findings made in the course of this study the following recommendations are made: This study found that the type of unemployment characterized in the Ugandan economy was structural, hence the need by the government and relevant agencies to formulate policies to encourage self-employment and reduce cost of doing business in the country so as to achieve a high, rapid and sustained economic development. The government should also embark on creation of more job opportunities to the people through construction and setting up more industries in order to mobilize and create more jobs for the people. The government should also sensitize the people through holding seminars and different classes for the people about entrepreneurship and how to become risk takers in order to reduce the rate of unemployment in the country.

References

- Alex, I., & Moses, N. (2024). *Interest Rates and its Impact on Stock Prices among Small Scale Enterprises : An Empirical Evidence of Kampala District*. 8(4), 43–46.
- Allan, K., Charles, N., Moses, N., Kazaara, A. G., & Nelson, K. (2023). *The Effect of Operation Wealth Creation on Youth Farmers Development : A Case Study of Labongo Layamo Sub County , Kitgum District*. 7(2), 50–63.

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Published on: 30.07.2024

- Christopher, T., Nelson, K., & Prudence, K. (2022a). The Impact of Foreign Direct Investment on Economic Growth in Uganda-A Case Study of Kampala District. *International Journal of Academic Multidisciplinary Research*, 6(12), 78–86. www.ijeais.org/ijamr
- Christopher, T., Nelson, K., & Prudence, K. (2022b). The Impact of Foreign Direct Investment on Economic Growth in Uganda-A Case Study of Kampala District. In *International Journal of Academic Multidisciplinary Research* (Vol. 6). www.ijeais.org/ijamr
- Godfrey, S., Matovu, K., & Ismail, L. (2023). *Effect Of Youth Unemployment And Crime Rates In Uganda , A Case Study Of Mityana District* . 7(3), 325–334.
- Hussein, O. A., Muhammed, M., Edris, P., & Serugo, K. (2024). *Taxation And The Development Of Small Businesses In Uganda , A Case Study Of Wakiso District*. 8(6), 353–361.
- 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.
- Julius, A., & Nancy, M. (2024). *Youth Unemployment And Its Impact On Uganda ' s Gross Domestic Product . An Empirical Evidence Of Wakiso District*. 8(4), 123–126.
- Lydia, N., Kazaara, A. G., Kazaara, A. I., Brenda, T., & Bafaki, G. (2023). *Promotion of Small-Scale Industries and Development of Business . A Case Study ; Masafu Subcounty (Busia)* . 7(3), 240–245.
- Lydia, O., Enock, Z., & Margaret, O. J. (2024). *Assessment Of The Effect Of Workplace Conflict On Employees Performance And Organizational Productivity . A Case Study Of Kazo General Hospital*. 8(6), 336–342.
- Moses, T. (2023). *On Job Training and Its Implication on Staff Performance in Uganda : A Case Study of Kasanda District Local Government*. 7(4), 155–163.
- Muhamad, S., & Alex, I. (2024). *Organizational Culture , Job Satisfaction and Organizational Commitment In Renewable Energy Industry . A Case Study of Kampala Capital City Authority*. 8(6), 146–151.
- 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>
- Nafiu, L. A., Oshungade, I. O., & Adewara, A. A. (2013). *GENERALIZATION OF MULTISTAGE CLUSTER SAMPLING USING FINITE POPULATION*. 3(1), 17–20.
- Nafiu, L. A., & Ph, D. (2012). *Comparison of One-Stage , Two-Stage , and Three-Stage Estimators Using Finite Population* . 13(2), 166–171.
- Nelson, K., & Christopher, F. (2022a). *Determinants of Youth Unemployment in Uganda a Case Study of Kampala District*. June.

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- Nelson, K., & Christopher, F. (2022b). *Determinants of Youth Unemployment in Uganda a Case Study of Kampala District*. 6(6), 34–44.
- Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. 6(7), 84–122.
- Ntirandekura, M., Ainebyoona, A., Registrar, D., District, B., & Commission, E. (2022). *HUMAN RESOURCE MANAGEMENT STRATEGIES AND ENHANCEMENT OF STAFF RETENTION IN PUBLIC SECTOR ORGANISATIONS : AN EMPIRICAL INVESTIGATION IN KABALE*. 6(7), 89–103.
- 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. (2021a). *Fréchet Random Noise for k -Regime-Switching Mixture Autoregressive Model*. 11(1), 1–10. <https://doi.org/10.5923/j.ajms.20211101.01>
- Olanrewaju, R. O., Waititu, A. G., & Abiodun, N. L. (2021b). *On the Estimation of k-Regimes Switching of Mixture Autoregressive Model via Weibull Distributional Random Noise*. 10(1), 1–8. <https://doi.org/10.5923/j.ijps.20211001.01>
- Paul, W., & Kazaara, A. G. (2023). *Assessing How Employee Job Rotation Affects Workers Productivity In Organizations . A Case Study of Action against Hunger , Kiryandongo District .* 7(3), 168–173.
- Ronald, K., Kazaara, A. G., Ismail, L., & Micheal, T. (2023). *The Impact Of Privately Owned Enterprises On The Economic Development Of Communities In Uganda . A Case Study Of Masaka City*. 7(3), 191–197.