

Unraveling the Challenges of Unemployment in Africa: *A Data-Driven Approach*

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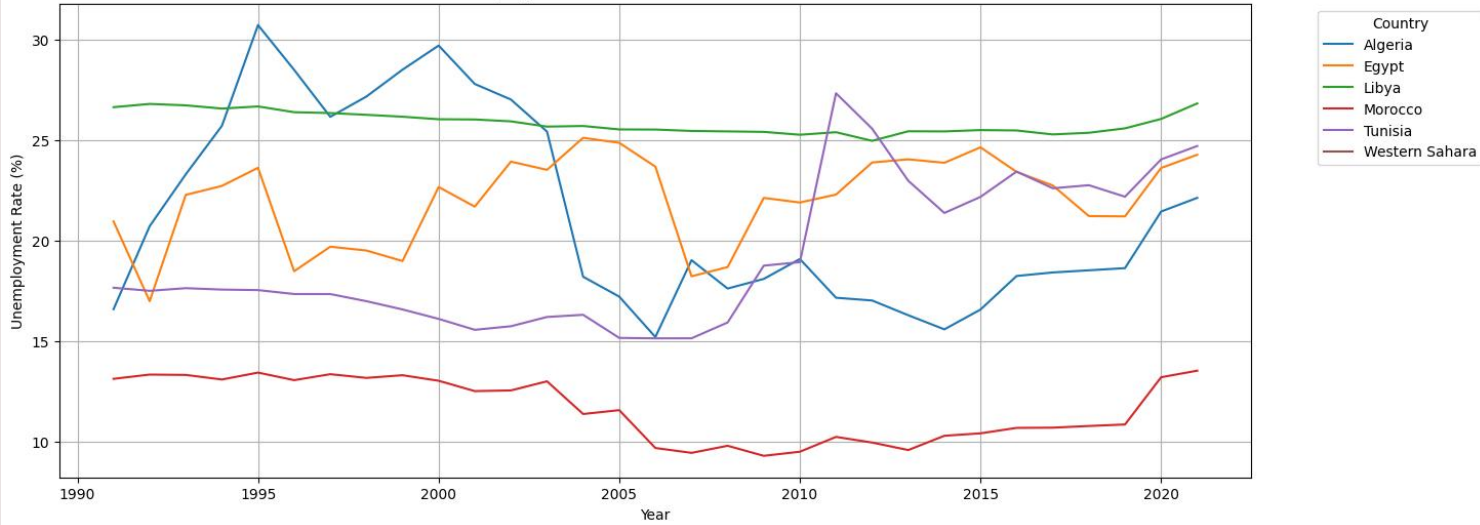
Project Overview and Objectives

- Unemployment remains one of the most daunting challenges facing African nations today. It is a multifaceted problem with deep roots in socio-economic, educational, and policy-related factors.
- The primary goal of this case study is to analyze data, identify patterns, and propose informed, data-driven recommendations that governments and stakeholders can implement to effectively address and reduce unemployment rates, particularly focusing on the African context

There are four (6) datasets for this project. The data dictionary containing the features of the data can be found in Slides 7 - 12

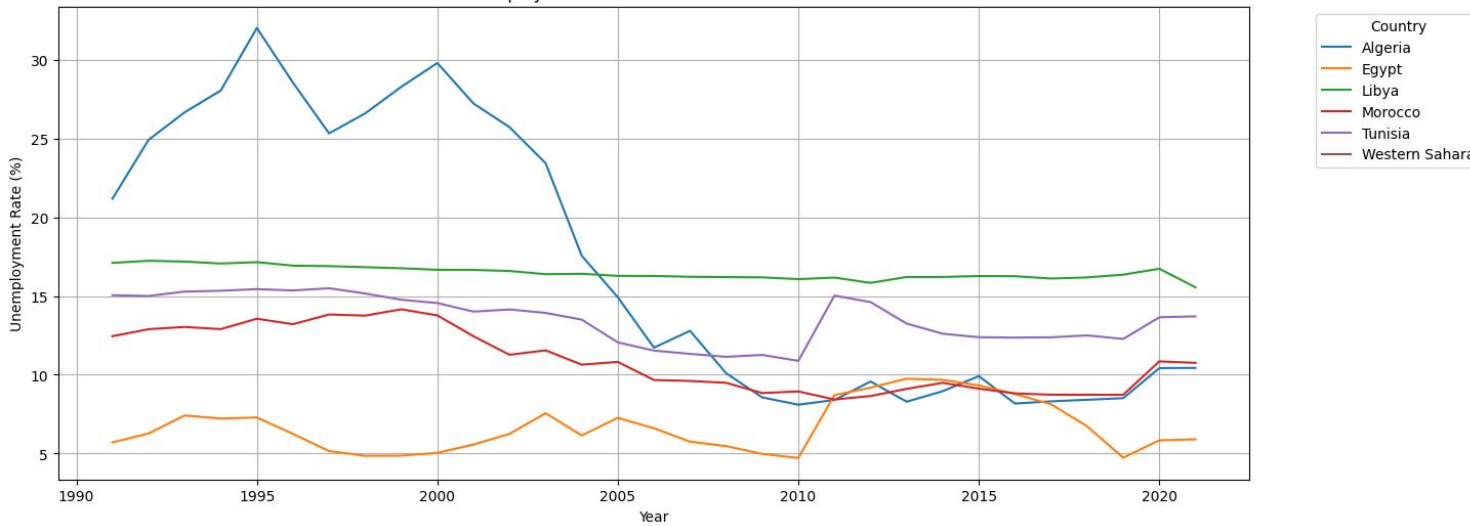
1**Unemployment Rate by
Gender****2****National Strategy for Youth
Employment****3****Share of Education in Government
Expenditure****4****Share of the Population with
Access to Electricity****5****Total Number of LLCs from 2006 -
2020****6****Country Code**

Unemployment Trends for Female in North Africa



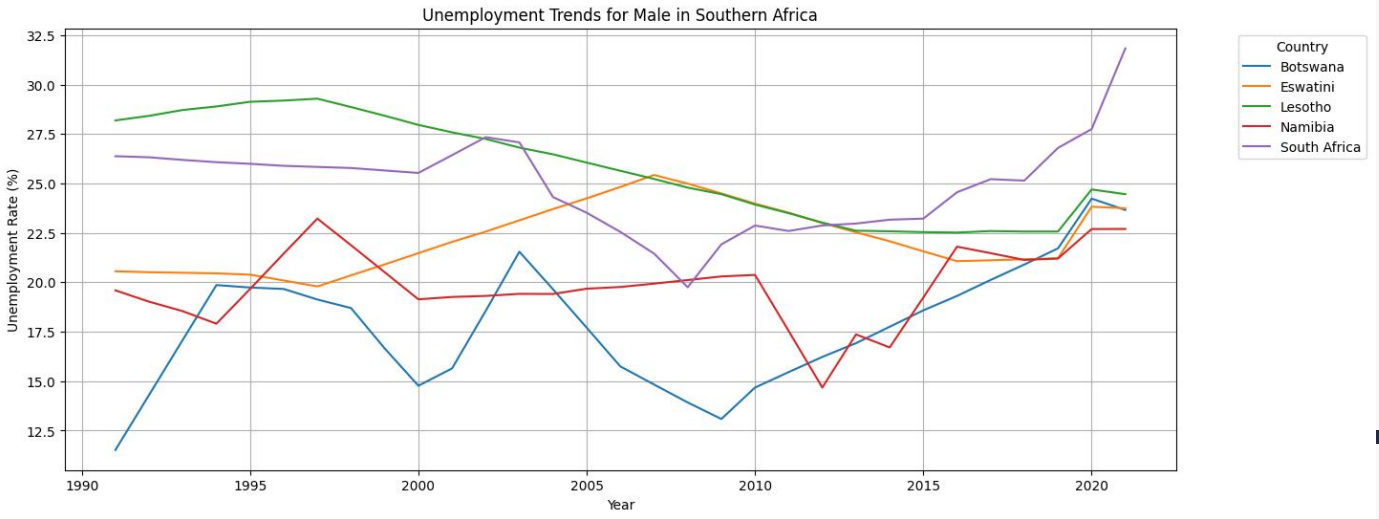
UNEMPLOYMENT TRENDS FOR DIFFERENT GEOPOLITICAL REGIONS IN AFRICA

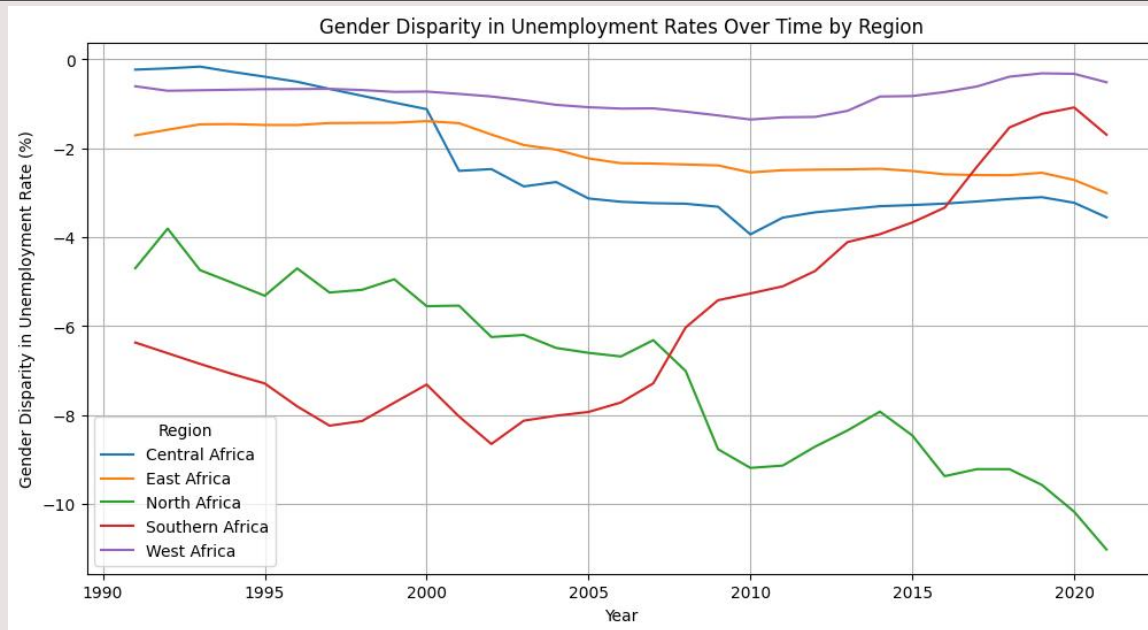
Unemployment Trends for Male in North Africa



The unemployment trends across different regions of Africa reveal several insights:

Region	Interpretation
Central Africa	Noticeable variance between countries. Stable unemployment rates for males in Angola and Gabon, significant fluctuations in the Democratic Republic of Congo, and a steady increase in Equatorial Guinea, suggesting economic challenges.
Southern Africa	Both males and females in South Africa and Lesotho have high and rising unemployment rates, reflecting economic struggles and job market saturation. Botswana and Namibia show more stability, indicating potentially better economic management or job creation.
North Africa	General decline in unemployment rates over time for both genders, with fluctuations. Libya shows a sharp increase in unemployment rates for both genders around 2011, coinciding with the onset of civil conflict, highlighting the impact of political stability on employment.
East Africa	Relatively low unemployment rates for males compared to other regions, with countries like Kenya showing an increase, potentially due to population growth outpacing job creation. Similar trends for females but with higher unemployment rates, indicating a gender disparity in job availability.
West Africa	Rising unemployment rates for males in recent years in countries like Nigeria and Senegal, suggesting economic downturns or job market issues. Generally higher rates with more variability for females, which could point to a combination of socio-economic factors affecting female employment more acutely.

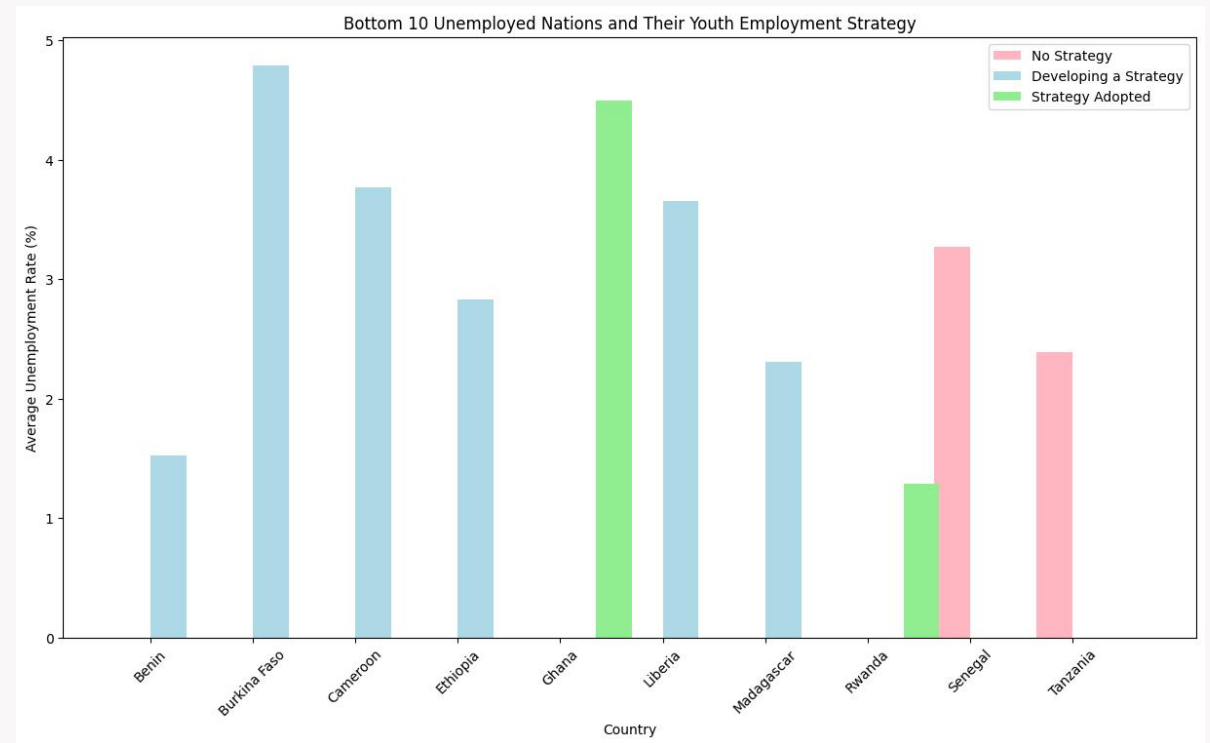




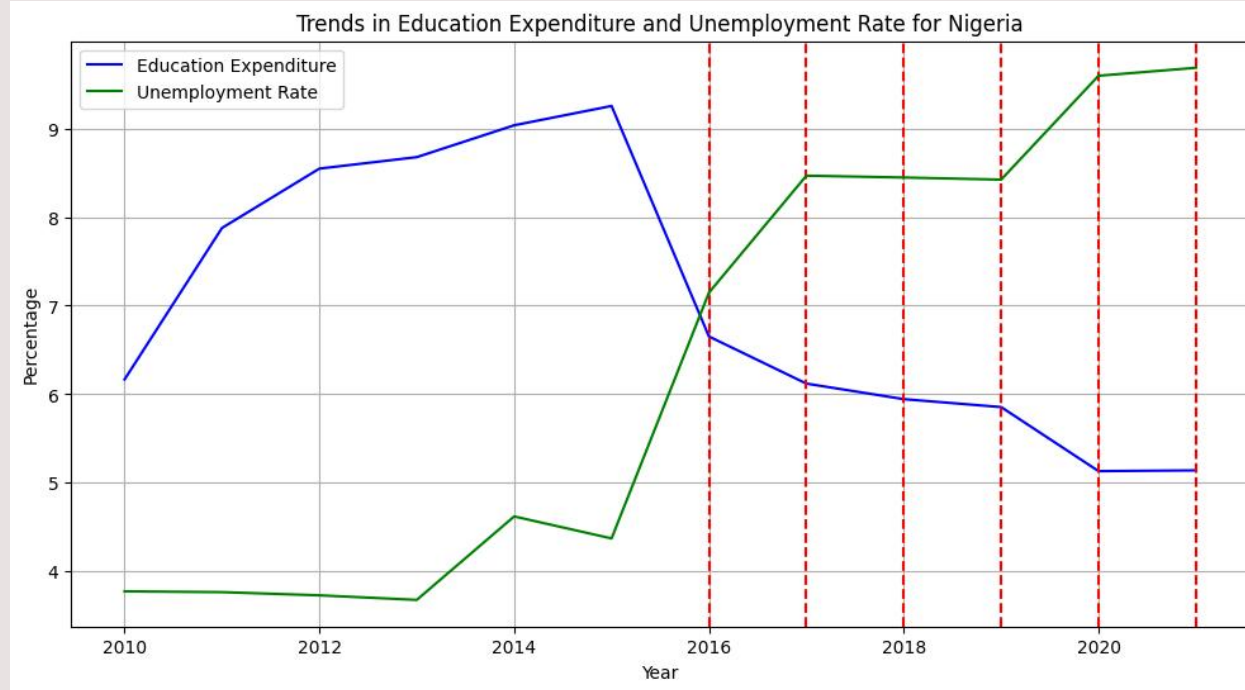
UNEMPLOYMENT RATES – GENDER DISPARITY

Region	Interpretation
Central Africa	Shows the most significant gender disparity, with women consistently facing higher unemployment rates than men.
East Africa	Exhibits a moderate but increasing disparity, suggesting that despite economic progress, women may not be benefiting equally in terms of job opportunities.
North Africa	Reflects a steady gender disparity, which could be attributed to cultural or systemic factors that limit women's participation in the workforce.
Southern Africa	Presents a unique trend where the disparity initially decreases, potentially due to policies enhancing female employment, before the gap widens again, indicating a potential reversal of these gains.
West Africa	Shows the most improvement, with a declining trend in gender disparity, suggesting effective interventions or economic conditions that have improved employment rates for women relative to men.

Youth Employment Strategy vs Unemployment Rates



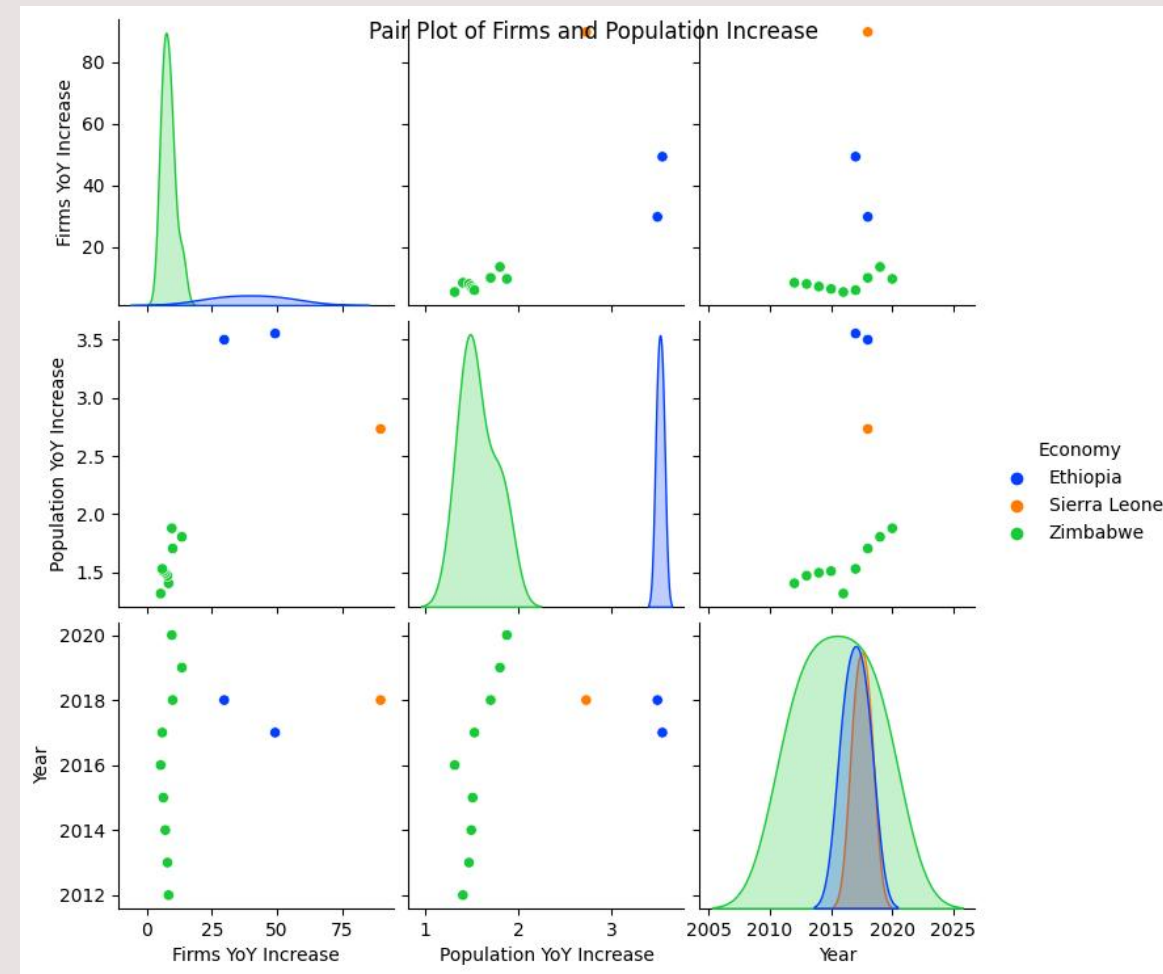
- While the adoption of youth employment strategies can be correlated with lower unemployment rates, the mere existence of such strategies is not a panacea. Effective implementation, along with addressing other underlying economic issues, is crucial for these strategies to mitigate unemployment effectively.



In Nigeria, Congo, and Botswana, there is a visible trend where a decrease in education expenditure is followed by an increase in unemployment rates within the 5-year periods marked by the red dashed lines. However, in Guinea, the unemployment rate does not show a similar pattern, remaining low regardless of changes in education spending. This suggests that while there can be a relationship between education spending and employment, it is not uniform across different countries and could be influenced by various local economic and social factors.

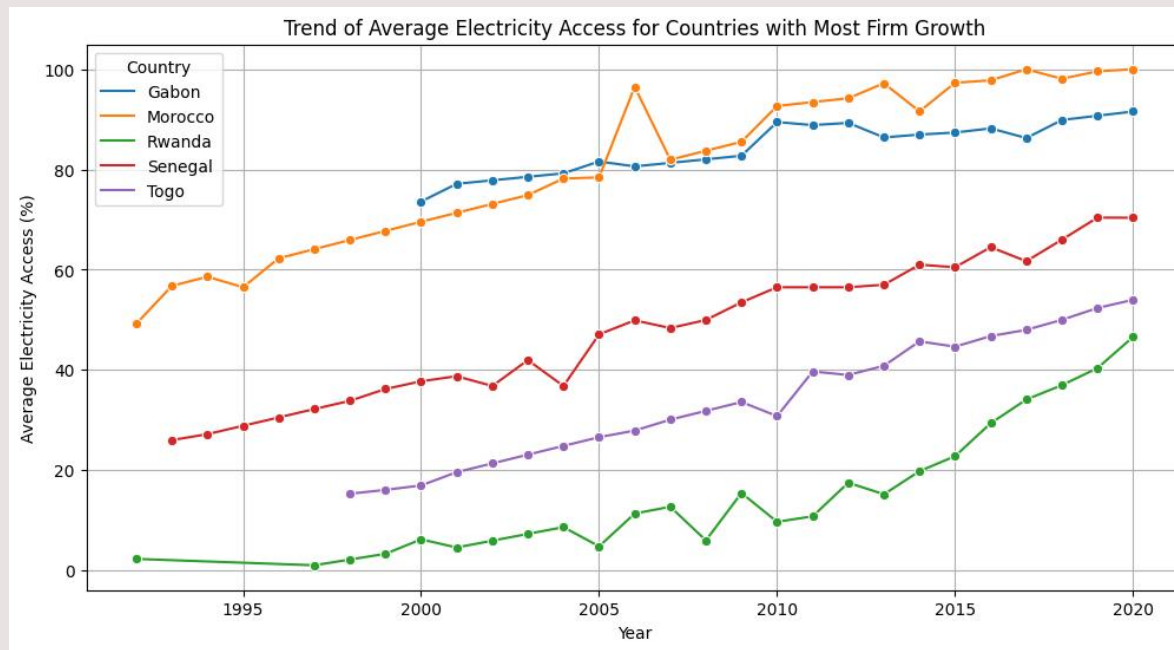
Countries with a decline in Government expenditure over a 5-year period

Firm Growth Relative to Population Growth



Firm growth does not always align with population growth. Ethiopia's pronounced spikes in firm growth contrast with Sierra Leone's and Zimbabwe's more modest increases. This suggests that while entrepreneurial activity is booming in some areas, it may not be sufficient to absorb the growing population into the workforce in others.

The visualizations for Tunisia and Togo reinforced the notion that a decline in the number of firms correlates with rising unemployment rates, underlining the importance of a robust private sector in job creation.



These plots suggest that electricity access is a critical factor for firm growth, with countries showing increased access to electricity generally experiencing more firm growth. Increased access to electricity is a fundamental component of economic development, which can encourage the establishment and expansion of firms. More firms in a country can lead to more job opportunities, which could potentially lower unemployment rates.

Population with
Access to
Electricity for
Countries with
the most and
least Firm Growth



SUMMARY

Key Findings	Implications
High unemployment rates in Central and Southern Africa	Regional approaches needed
Greater unemployment among women	Address socio-economic and cultural barriers
National youth strategies lack direct correlation with lower unemployment	Strategies need effective implementation
Long-term benefits of education investment	Immediate effects on unemployment may not be visible
Firm growth not always aligned with population growth	Encourage private sector development to match workforce needs
Access to electricity correlates with firm growth	Invest in infrastructure to support economic activities
Varied regional and gender impacts on unemployment	Dynamic, real-time policy-making and monitoring essential



THANK YOU