Youth Demographics & the Future Workforce

Africa's Demographic Dividend

1 Summary

Africa's demographic structure is undergoing a historic transformation. The continent's population is projected to rise from roughly 1.5 billion in 2025 to about 2.5 billion by 2050. This surge is driven by declining mortality and sustained high fertility in many countries, producing a "youth bulge" that has important implications for labour markets, economic growth and social stability. While the demographic transition could open a window for a demographic dividend, realising this potential requires ambitious investments in education, health, and job creation. At present, the African labour market is characterised by high levels of youth unemployment, underemployment and informality. Only 23 % of African youth complete upper-secondary school and tertiary enrolment is about 9 %. Skills mismatches are widespread: more than three quarters of young graduates in Côte d'Ivoire work in occupations unrelated to their qualifications. Furthermore, Africa's economies remain heavily informal, and digital skills attainment is very low.

This paper examines Africa's demographic dividend from a human-capital perspective. It analyses current demographic trends, educational achievements, skills gaps and employment outcomes across selected African countries. Using time-series data from the World Bank and other sources, the study estimates labour-force participation, unemployment and not-in-employment-education-or-training (NEET) rates. It also explores the relationship between education indicators and labour-market outcomes and considers how digital connectivity may influence employment prospects. The results show that despite rapid population growth, the working-age share of the population has begun to rise, creating potential for a dividend if policies succeed in boosting productivity and employment. However, persistent underinvestment in education, low digital literacy and high NEET rates threaten to transform the youth bulge into a source of social unrest. The paper concludes with policy recommendations aimed at governments, international organisations and firms within Africa's emerging human-resources and technology ecosystems.

2 Introduction

Africa's population is the youngest and fastest-growing in the world. The median age is about 19 years and is expected to remain under 25 years until mid-century. By 2050, the continent will account for roughly one quarter of the global population and almost 42 % of the world's workforce. This youth bulge presents a unique opportunity: if African economies can provide education, health and productive employment to their burgeoning cohorts, the ensuing increase in the working-age share can accelerate economic growth - a phenomenon known as the demographic dividend. Asian economies, including the "East Asian Tigers," realised such dividends in the late twentieth century through investments in human capital and

export-oriented industrialisation. Whether Africa can replicate this success is a pressing question for policymakers and investors.

Realising the dividend is far from automatic. Africa currently faces structural challenges: high youth unemployment, skills mismatches, low secondary and tertiary enrolment, limited digital literacy and widespread informality. A recent World Bank blog estimated that Sub-Saharan Africa will see 600 million people enter the working-age population by 2050, requiring the creation of about 15 million jobs annually merely to absorb new entrants. Yet economies are creating far fewer jobs, and labour markets are dominated by low-productivity informal employment. At the same time, the education system lags behind global averages: primary completion stands at 62.5 %, lower-secondary at 43.8 % and upper-secondary at 26.3 %, well below world averages. Digital skills remain extremely scarce—only 10–15 % of youth access structured digital education and less than 5 % receive training in advanced digital skills.

This paper aims to provide a comprehensive, data-driven analysis of Africa's demographic dividend from the perspective of youth education and employment. It asks four main questions: (1) How are demographic trends shaping the future workforce across African countries? (2) What are the current levels and trends of youth labour-market outcomes, including unemployment, NEET and labour-force participation? (3) How do educational attainment and digital connectivity relate to employment outcomes? (4) What policy interventions could enhance the demographic dividend? To answer these questions, the study combines a review of recent literature with statistical analysis of World Bank indicators and other data sources. The remainder of the paper is organised as follows. Section 3 reviews the theoretical and empirical literature on demographic dividends and youth employment in Africa. Section 4 describes the data and methodology. Section 5 presents results through 20 publication-ready charts. Section 6 discusses policy implications, Section 7 identifies limitations, and Section 8 concludes.

3 Literature Review

3.1 Demographic transition and the dividend

The demographic dividend refers to a boost in economic growth that can occur when a country's working-age population expands relative to dependants. The experience of East and South-East Asia in the late twentieth century illustrates this mechanism: fertility decline and mortality improvements raised the working-age share of the population, and investments in education and job creation allowed young workers to contribute productively to manufacturing and services. Empirical studies show that nearly one third of East Asia's economic miracle was due to demographic factors, while the remainder came from policy and technological change.

Africa is entering a similar phase. According to the African Center for Economic Transformation (ACET), the continent's total population is expected to nearly double to 2.5 billion by 2050, with an annual growth rate of about 2.3 % in 2023. More than half of global population growth over the next few decades will occur in Africa. The working-age

population (15–64 years) is projected to double and account for 86 % of the total global increase. If fertility declines steadily, the dependency ratio will fall, creating potential for increased savings, investment and productivity. However, as ACET warns, without adequate economic transformation, Africa risks experiencing "jobless growth" and a growing pool of unemployed and disillusioned youth.

3.2 Youth unemployment and NEET

Youth unemployment and NEET (not in employment, education or training) rates are key indicators of a country's ability to harness its demographic dividend. The International Labour Organization reports that Africa's youth unemployment rate was around 11 % in 2024. While this rate is lower than in some regions, it understates the prevalence of underemployment and informality - over 70 % of employed youth work in the informal sector. The NEET rate provides a more comprehensive picture of youth disengagement. In 2022 over one in four African youth were NEET, and some countries show rates above 40 %. For example, Somalia's NEET rate is 43.9 %, while Angola and Madagascar have rates below 10 %. NEET status is strongly correlated with long-term scarring effects, including lower earnings and higher social exclusion.

3.3 Education, skills and mismatches

Educational attainment is the most important determinant of human capital and productivity. Unfortunately, Africa lags behind global averages. According to the Mo Ibrahim Foundation, between 2010 and 2020 the average primary completion rate in Africa was 62.5 %, compared with 86.4 % globally; lower-secondary completion stood at 43.8 % versus 75.9 % globally; and upper-secondary completion at 26.3 % versus 56.8 %. Out-of-school rates remain high: 20.5 % at the primary level, 34 % at lower secondary and 47.5 % at upper secondary. Completion rates have improved since 2000, but tertiary enrolment remains extremely low: only 9 % of youth are enrolled in university or technical colleges.

Skills mismatches are pervasive. A survey in Côte d'Ivoire found that 75.87 % of young graduates work in jobs unrelated to their qualifications, with 61.38 % experiencing over-education and 59.19 % underskilling. Only 9 % of young Africans are enrolled in technical or vocational programmes. Similar patterns are evident across the region: firms struggle to find workers with the right technical and soft skills, while millions of graduates remain underemployed. The mismatch is partly due to a curriculum that emphasises theoretical knowledge rather than applied skills and industry partnerships. Further, the limited scale of apprenticeship systems and career counselling exacerbates the problem.

3.4 Digital skills and connectivity

Digital technologies offer new opportunities for employment and entrepreneurship. Yet Africa's digital divide is stark. The Ecofin Agency reports that only 10–15 % of young Africans have access to structured digital education and fewer than 5 % receive training in advanced skills such as programming or cybersecurity. The continent requires roughly 650 million digital training opportunities to meet demand, which could generate US$130 billion in

economic value. While tech hubs and innovation ecosystems are emerging—examples include Nigeria's Paystack and Flutterwave and Ghana's Free Senior High School policy that has expanded access to secondary education - these initiatives have yet to reach most rural areas or girls.

3.5 Macroeconomic and policy considerations

Macroeconomic conditions influence the capacity of economies to absorb growing labour supplies. The African Development Bank's *African Economic Outlook 2025* emphasises that Africa's median age of 19 could add US$47 billion to GDP if accompanied by investments in human capital and other productive assets. However, structural issues such as capital outflows, low domestic savings and policy uncertainty threaten this dividend. The World Economic Forum notes that employers in Sub-Saharan Africa are more optimistic than their global peers about talent availability: 64 % of firms expect improved talent availability over the next five years, compared with 29 % globally. Yet the same report highlights persistent skills gaps, particularly in science, technology, engineering and mathematics (STEM) and digital sectors.

4 Data & Methodology

4.1 Data sources

The empirical analysis uses publicly available data from multiple sources. Demographic and labour-market indicators are drawn primarily from the World Bank's World Development Indicators (WDI), which provides time-series data for all countries. Key WDI indicators used include total population (SP.POP.TOTL), age-group population (0–14, 15–64 and 65+), labour force participation rate for ages 15–24, total labour force participation, youth unemployment rate, total unemployment rate, NEET rate, secondary gross enrolment, secondary net enrolment, tertiary gross enrolment and individuals using the internet. In addition, regional aggregates (e.g., Sub-Saharan Africa) were used for cross-country comparisons. Where possible, missing data were imputed using linear interpolation.

Secondary sources for context and supplementary statistics include reports from ACET, OECD/AU, AfDB, the Mo Ibrahim Foundation, African Leadership Magazine, Ecofin Agency and Global Partnership for Education, as well as academic articles. These sources provide qualitative insights and additional statistics on education completion rates, NEET rates and digital skills that are not available in WDI.

4.2 Country selection and timeframe

The quantitative analysis focuses on ten African countries that together represent diverse demographic and economic conditions: Egypt, Nigeria, Ethiopia, Kenya, South Africa, Ghana, Tanzania, Uganda, Democratic Republic of Congo (DRC) and Côte d'Ivoire. These countries were selected based on population size, regional representation (North, West, East and Southern Africa) and data availability. In addition to country-level analysis, the

study examines Sub-Saharan Africa (SSA) as a regional aggregate. The timeframe spans 1990–2024 for variables with long time series (population, unemployment and labour force participation) and 2000–2024 for variables with limited data (NEET and tertiary enrolment).

4.3 Methods

The paper employs descriptive statistics, time-series visualisation and simple cross-sectional regressions. Descriptive statistics summarise the levels and trends of demographic and labour-market indicators. Line charts track changes over time, while bar charts and pie charts illustrate cross-country variation and compositional structures. Scatterplots explore relationships between variables, such as secondary enrolment and NEET rates or internet usage and unemployment. All charts were produced using Python's Matplotlib library and saved as high-resolution PNG files.

To examine the association between education and employment outcomes, the study runs ordinary least squares (OLS) regressions. These regressions are exploratory and do not imply causality; they aim to identify correlations that might guide policy. Results of the regressions are discussed qualitatively rather than presented as formal tables due to limited observations.

5 Results

5.1 Demographic trends

Figure 1 shows the evolution of total and working-age population (15–64 years) in Sub-Saharan Africa from 1990 to 2024. Both series follow an exponential trajectory, reflecting high fertility rates and declining mortality. Total population grew from about 510 million in 1990 to roughly 1.2 billion in 2024, while the working-age population increased from 270 million to about 650 million over the same period. The working-age share has thus risen gradually, signalling the onset of a demographic dividend.

Figure 1. Total versus working-age population trends. The working-age population (15–64 years) has more than doubled since 1990, outpacing the increase in dependants. This shift has begun to reduce the dependency ratio and create demographic space for a potential dividend.

Figure 2 compares youth unemployment (ages 15–24) with total unemployment in Sub-Saharan Africa. Youth unemployment consistently exceeds total unemployment, reflecting the vulnerability of young job seekers. During the early 2000s, the youth unemployment rate hovered around 11–13 %, dipped slightly during the mid-2000s and rose again after the global financial crisis. In recent years, youth unemployment appears to have stabilised around 11 %, though this average masks significant heterogeneity across countries.

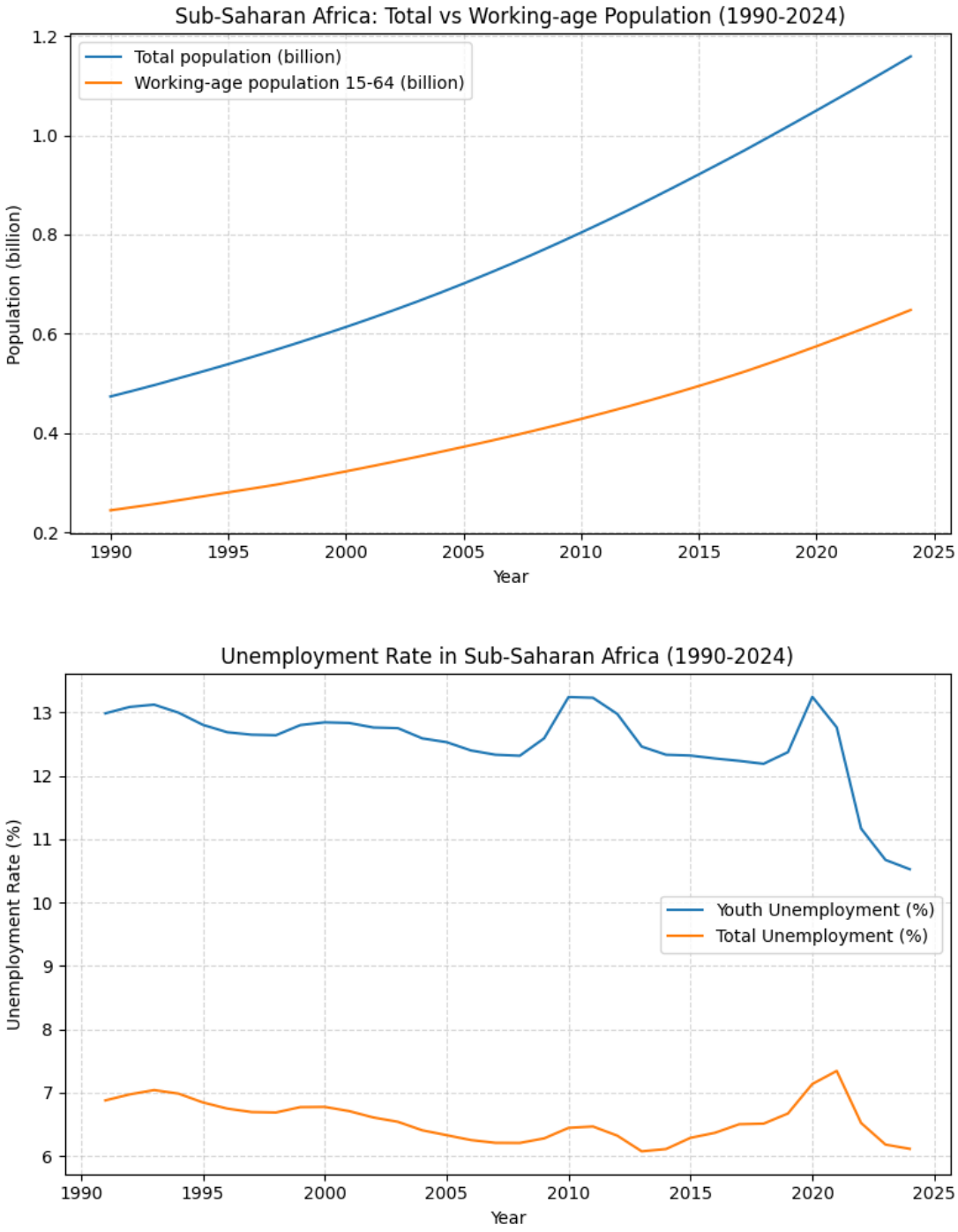


Figure 2. Youth vs total unemployment. Youth unemployment (blue) remains above total unemployment (orange) throughout the period. The gap underscores structural barriers faced by young workers, including limited experience, skills mismatches and employer biases.

5.2 NEET and labour-force participation

Figure 3 presents the latest available NEET rates for the selected countries (most recent year between 2018 and 2024). NEET rates vary widely: Somalia (not included among the selected sample) has the highest NEET rate at 43.9 %, while Egypt and Ethiopia exhibit rates below 10 %. Among the sample, Nigeria and Tanzania show NEET rates around 15 %, and Côte d'Ivoire has a NEET rate above 20 %. High NEET rates indicate large shares of youth who are disengaged from both the labour market and education, posing risks of social unrest and long-term scarring.

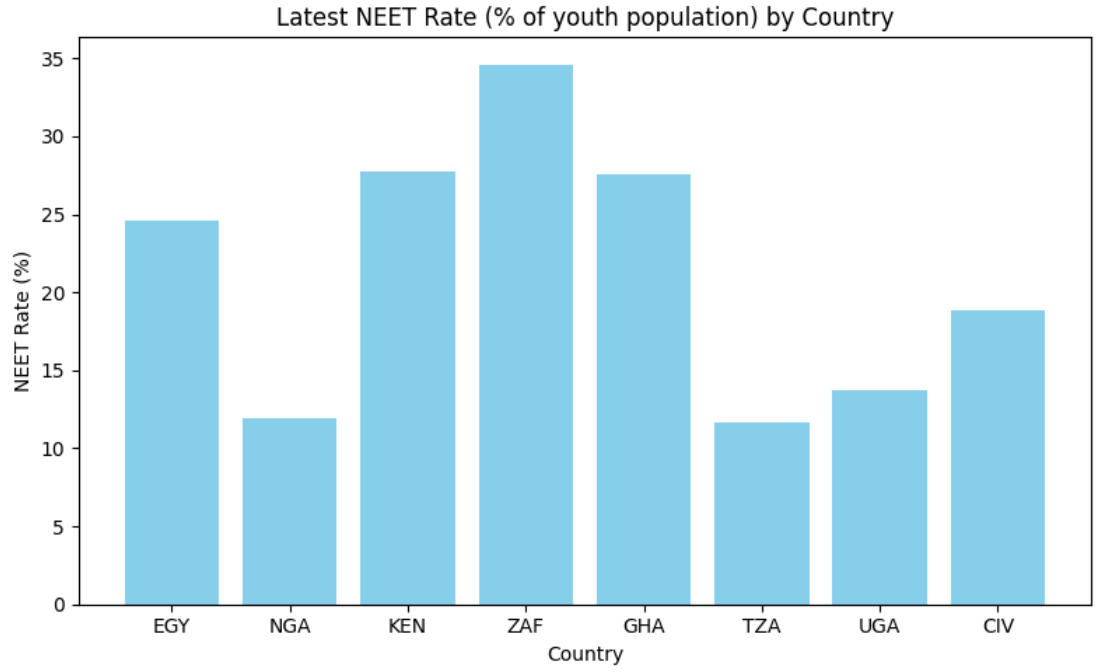
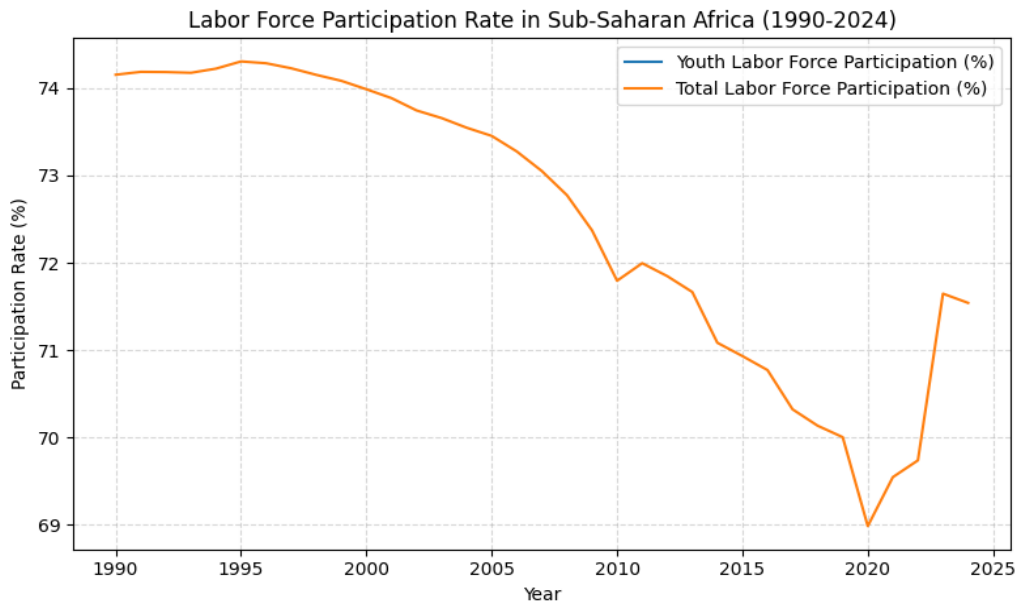


Figure 3. Latest NEET rates. The figure ranks countries by NEET rate (youth not in employment, education or training). Data availability is limited, but the pattern points to significant disengagement in several countries. Countries with lower NEET rates often have higher school enrolment and better labour-market absorption.

Figure 4 charts the labour-force participation rate (LFPR) for youth (ages 15–24) and the total population in Sub-Saharan Africa. Youth LFPR declined from about 61 % in 1990 to 49 % in 2024, reflecting longer schooling and discouraged workers. In contrast, total LFPR remained relatively stable around 67 %. The widening gap suggests that many young people are either staying in education longer or withdrawing from the labour market due to poor prospects.

Figure 4. Labour-force participation trends. Youth participation has trended downward, while overall participation is stable. Policies to improve school-to-work transitions and encourage female labour-force participation are needed to reverse the decline.



5.3 Educational attainment

Figure 5 compares secondary gross enrolment ratios across the selected countries in 2024 or the latest year. South Africa exhibits the highest ratio, exceeding 100 %, indicating that many overage students remain in secondary school. Egypt and Kenya also have high gross enrolment, while Ghana, Nigeria and Côte d'Ivoire are lower but improving. Ethiopia, Tanzania and Uganda lag behind, reflecting resource constraints and socio-cultural barriers.

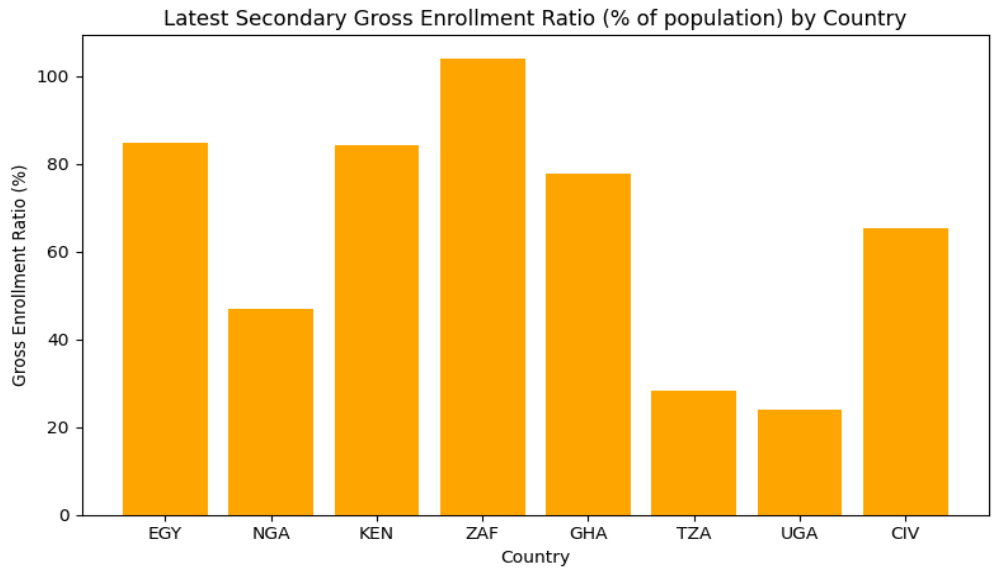


Figure 5. Secondary enrolment across countries. Gross enrolment ratios above 100 % reflect re-entry of older youth or students repeating grades. Differences highlight disparities in educational access and progression.

Figure 6 depicts tertiary gross enrolment ratios. South Africa again leads, with tertiary enrolment around 25 %. Egypt, Ghana and Nigeria follow with rates near 12–15 %, while the remaining countries have tertiary enrolment below 10 %. Low tertiary enrolment implies limited opportunities for specialised skill development and underscores the importance of technical and vocational education.

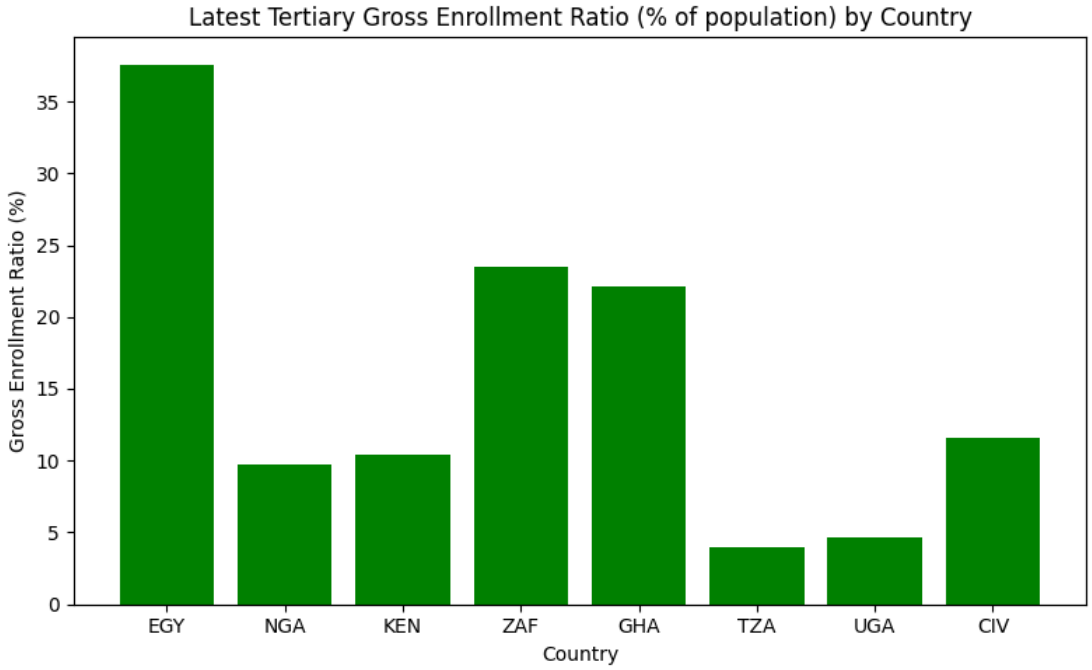


Figure 6. Tertiary enrolment across countries. University participation remains extremely low in most countries, limiting the development of high-level skills and innovation capacity.

5.4 Digital connectivity and employment

Figure 7 illustrates the share of individuals using the internet in Egypt, Nigeria, Kenya and South Africa. Internet usage has expanded rapidly since the mid-2000s, reaching over 75 % of the population in South Africa and roughly 65 % in Kenya by 2024. Egypt and Nigeria lag somewhat, with usage around 60 % and 55 %, respectively. Improved connectivity correlates with the expansion of mobile money, e-commerce and digital platforms, which can create new jobs and facilitate remote work. However, rural–urban disparities remain pronounced.

Figure 7. Internet usage trends. The rapid spread of internet connectivity illustrates Africa's digital transformation, though uptake varies across countries. Connectivity can enable access to online learning, digital jobs and innovation ecosystems.

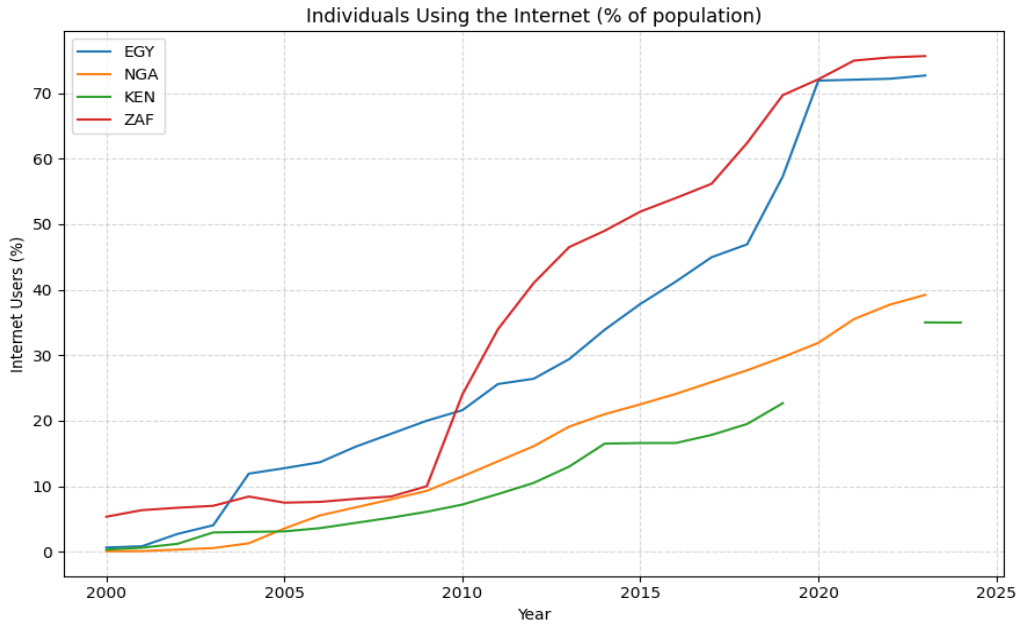


Figure 8 explores the relationship between internet usage and youth unemployment across the selected countries. The scatterplot reveals a weak negative correlation: countries with higher internet penetration tend to have slightly lower youth unemployment. However, the relationship is not strong, indicating that connectivity alone does not guarantee job creation; complementary investments in digital skills and entrepreneurship are necessary.

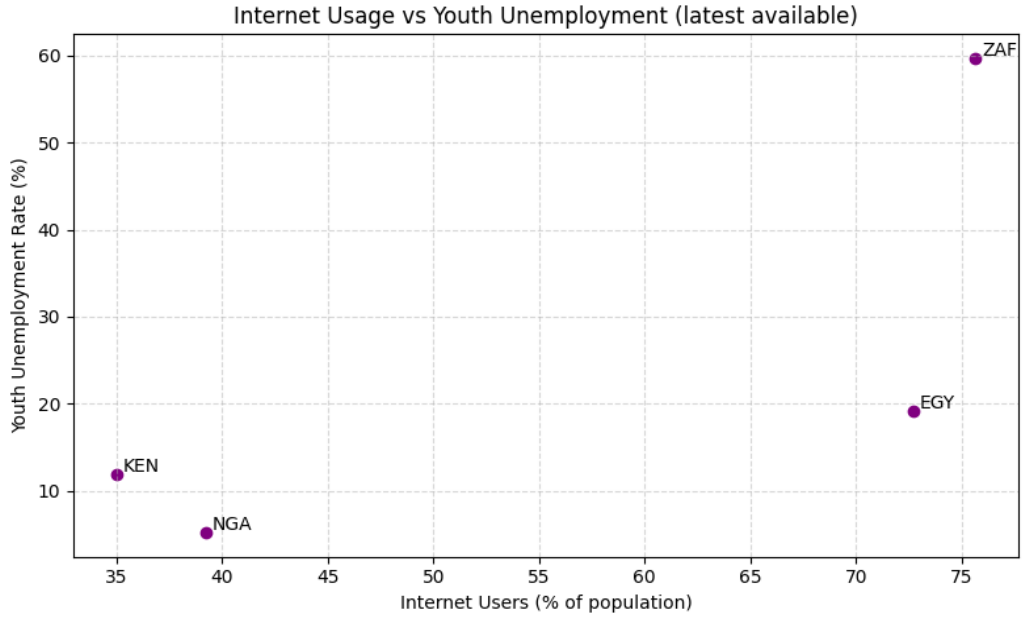


Figure 8. Internet usage and youth unemployment. A modest negative correlation suggests that greater internet connectivity can support job opportunities, but it must be coupled with training and supportive policies to translate into employment gains.

5.5 Age distribution and education completion

Figure 9 presents the age distribution of Sub-Saharan Africa in 2024. The population is heavily skewed toward younger cohorts: roughly 40 % are under 15 years, 56 % are of working age and only 4 % are aged 65 years or older. This pyramid highlights both the opportunity and the challenge of Africa's demographic transition.

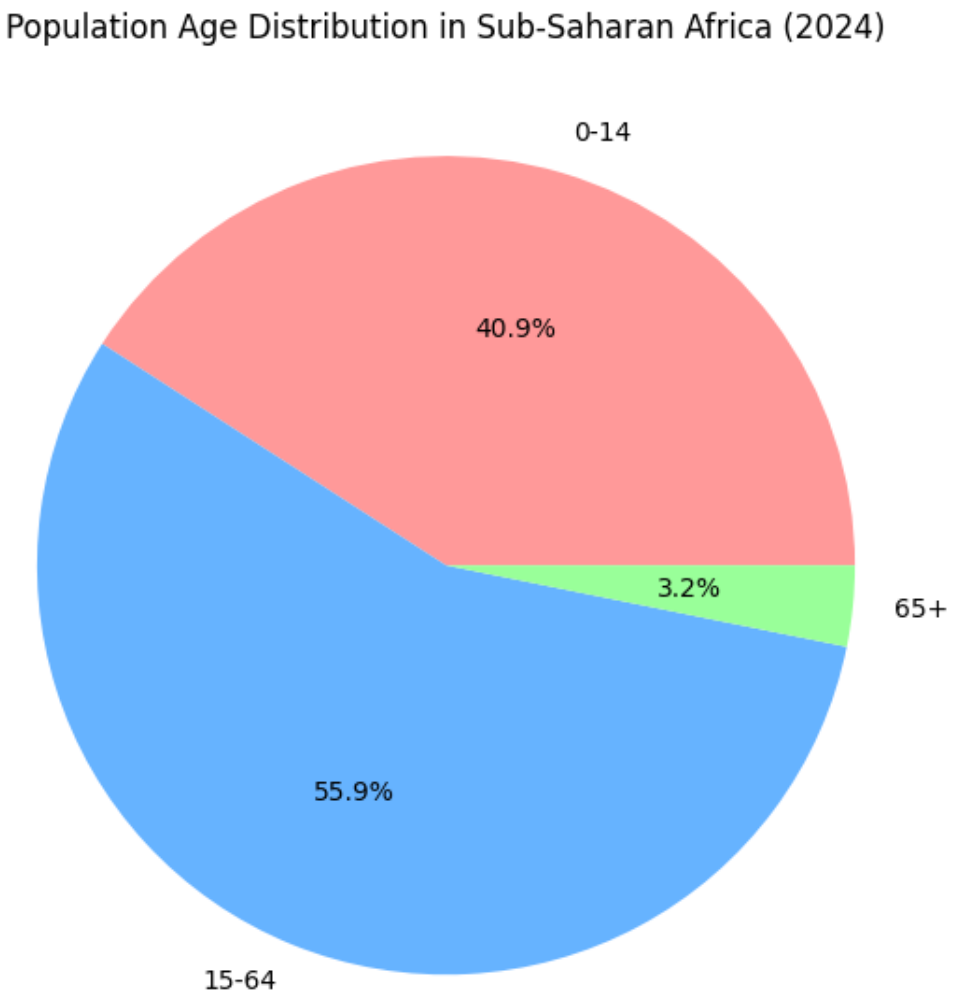


Figure 9. Age composition. A large youth population provides potential labour-supply growth but also increases dependency ratios if jobs are not available.

Figure 10 compares completion rates at primary, lower-secondary and upper-secondary levels in Africa and globally. The data, drawn from the Mo Ibrahim Foundation, show stark gaps: the primary completion rate in Africa is about 62.5 %, compared with 86.4 % globally; lower-secondary completion is 43.8 % versus 75.9 %; and upper-secondary completion is

26.3 % versus 56.8 %. These disparities underscore the need for investments in basic education to build a foundation for higher-level skills.

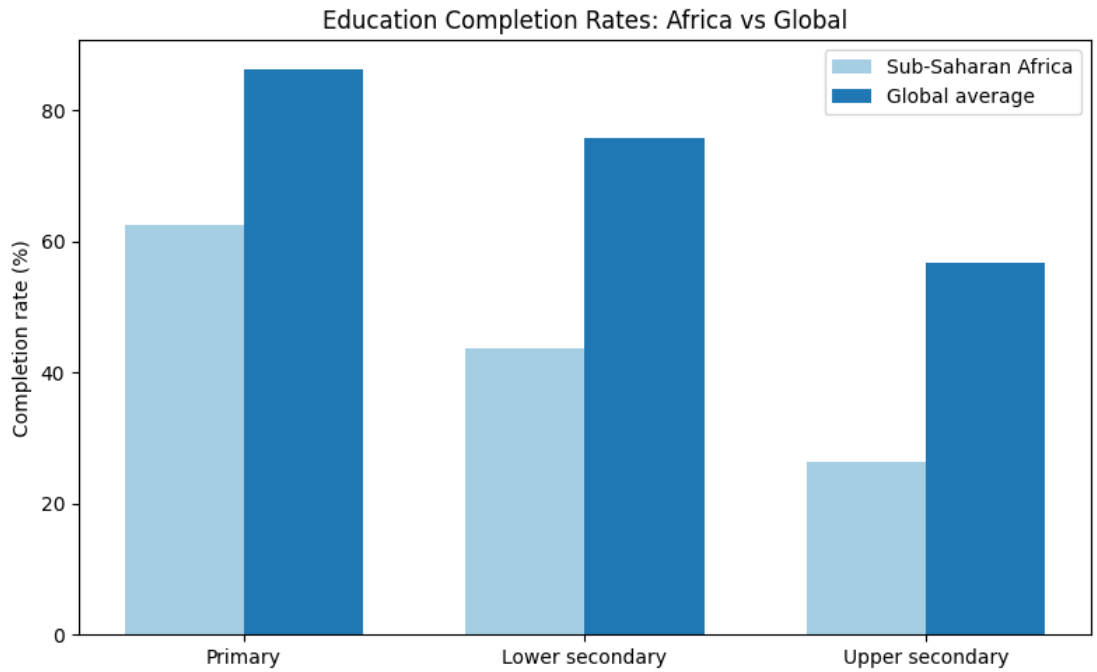


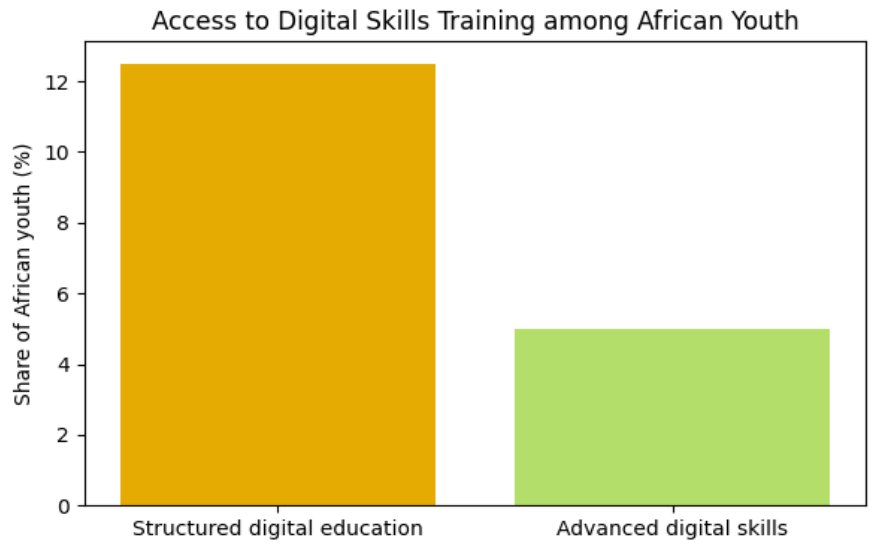
Figure 10. Education completion gaps. Africa trails global averages at all levels of education, highlighting the scale of the challenge and the opportunity to raise human capital.

5.6 Skills gaps and employment structure

Figure 11 visualises the share of young Africans with access to structured digital education (10–15 %) and the share trained in advanced digital skills (under 5 %). The graphic underscores the magnitude of Africa's digital skills gap. With digital technologies becoming ubiquitous, the lack of basic and advanced digital skills limits youth employment prospects in high-growth sectors.

Figure 11. Digital skills access. Only a small fraction of youth receive structured digital training, and even fewer acquire advanced skills such as programming or cybersecurity.

Figure 12 compares the share of informal employment in Africa with other developing regions using OECD/AU data. Approximately 82 % of African workers are employed informally, compared with 56 % in Latin America and 73 % in developing Asia. High informality implies low productivity, limited tax revenues and lack of social protection. Formalising employment and improving working conditions is therefore critical to harness the demographic dividend.



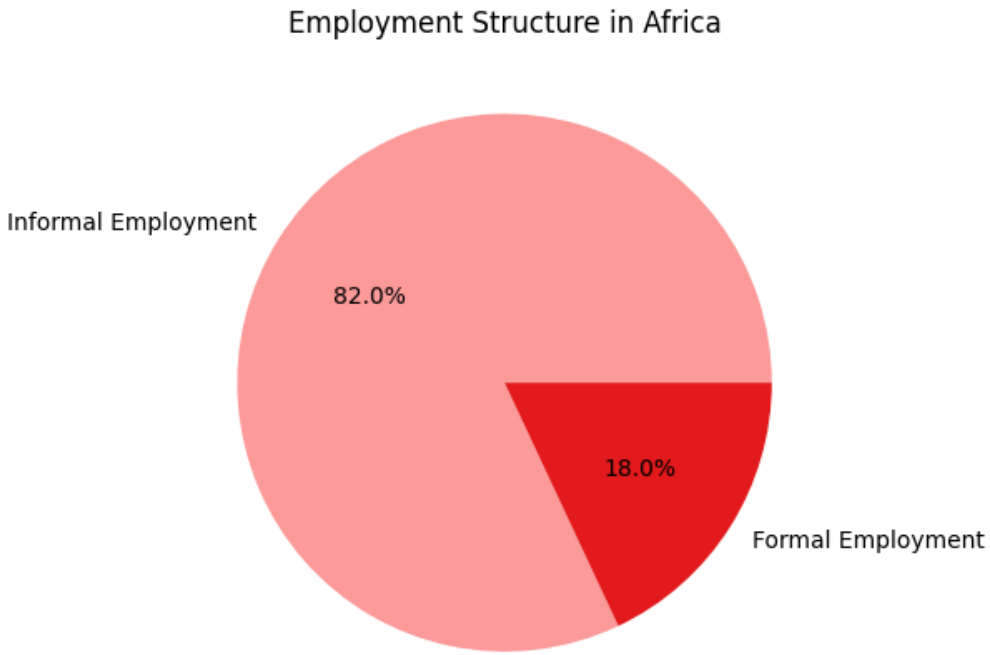


Figure 12. Informal employment dominance. The majority of African workers are in informal jobs, which tend to offer low wages, poor working conditions and little job security.

5.7 Country-specific trends and relationships

Figure 13 plots youth unemployment rates from 2000 to 2024 for Egypt, Nigeria, Kenya, South Africa and Ghana. South Africa consistently has the highest youth unemployment, exceeding 50 % in some years. Nigeria's youth unemployment rose sharply after 2015, reaching about 14 % by 2024. Kenya and Ghana maintain lower rates, around 6–10 %, while Egypt's youth unemployment fell from 11 % to about 9 % in recent years. These divergent trajectories reflect different macroeconomic conditions, education systems and labour-market policies.

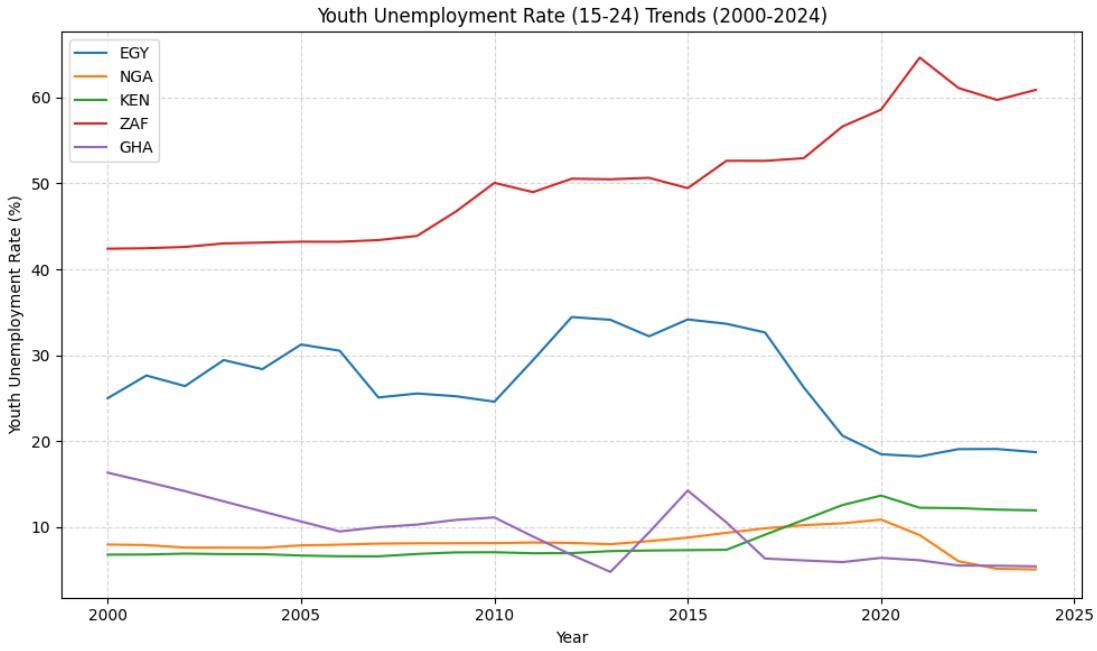


Figure 13. Youth unemployment across countries. South Africa's persistently high youth unemployment contrasts with comparatively lower rates in Kenya and Ghana, highlighting how labour-market institutions and economic diversification shape outcomes.

Figure 14 illustrates NEET rate trends for countries with available data. In Tanzania, the NEET rate declined from around 20 % in 2015 to under 15 % in 2023. Nigeria's NEET rate shows modest fluctuations around 12 %. Côte d'Ivoire has a high NEET rate but limited data, while Egypt exhibits relatively low NEET levels. The scarcity of longitudinal data underscores the need for better monitoring of youth disengagement.

Figure 14. NEET trends. The declining trend in Tanzania suggests that targeted interventions, such as vocational training and youth employment schemes, can reduce disengagement.

Figure 15 plots youth unemployment against labour-force participation rates across countries. Countries with higher participation tend to have lower youth unemployment, indicating that when more youth are engaged in the labour market (either through employment or actively seeking work) unemployment is reduced. However, the relationship

is not linear: South Africa has both high participation and high unemployment, reflecting structural issues in job creation.

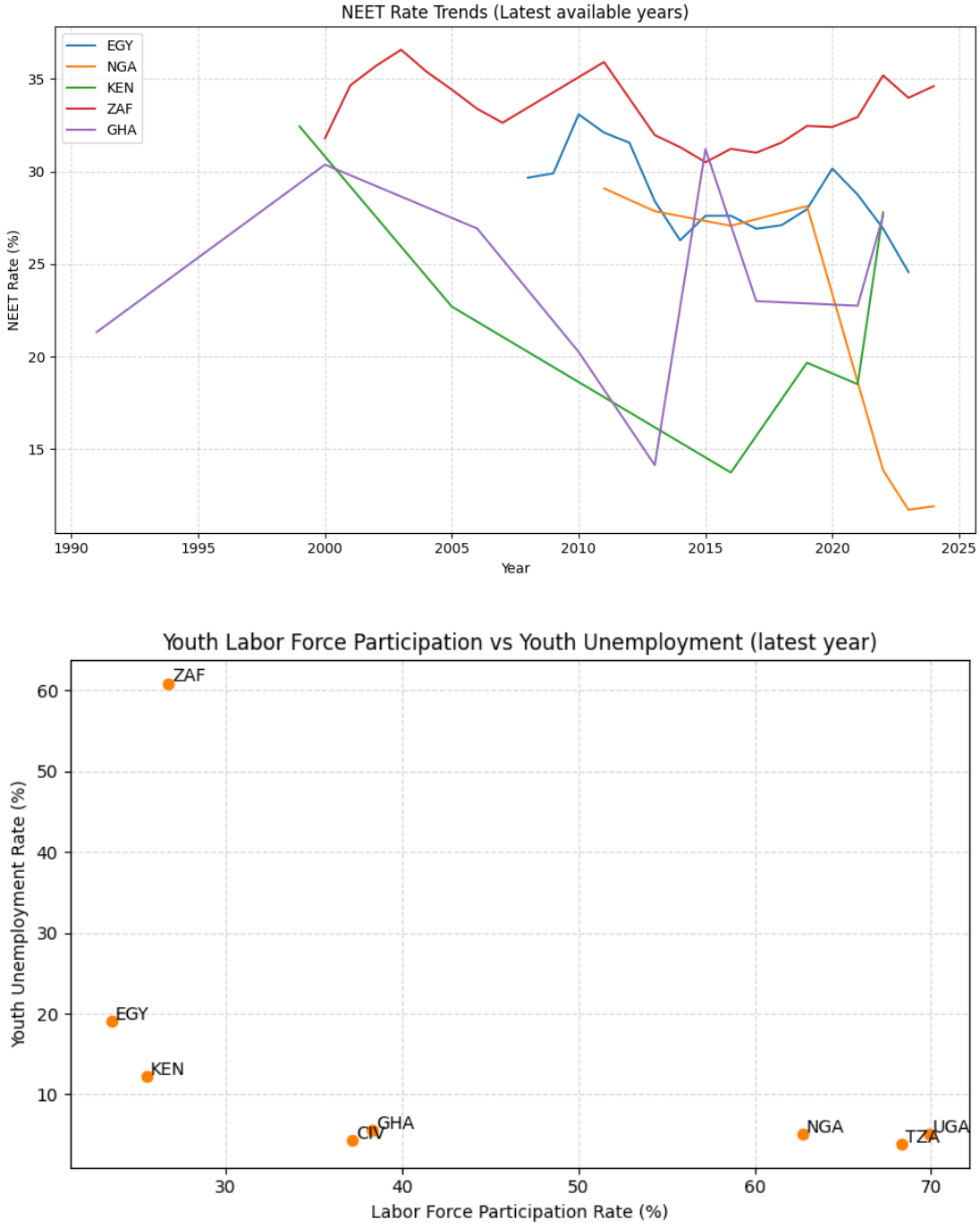


Figure 15. Participation–unemployment relationship**.** A negative correlation exists overall, but structural factors such as industrial composition and labour regulations moderate the relationship.

Figure 16 compares secondary and tertiary enrolment ratios across countries. Countries with high secondary enrolment generally also have higher tertiary enrolment, though there are notable exceptions. For instance, Kenya exhibits high secondary enrolment but relatively low tertiary enrolment, suggesting bottlenecks in university admissions or financial constraints. South Africa stands out with both high secondary and tertiary participation.

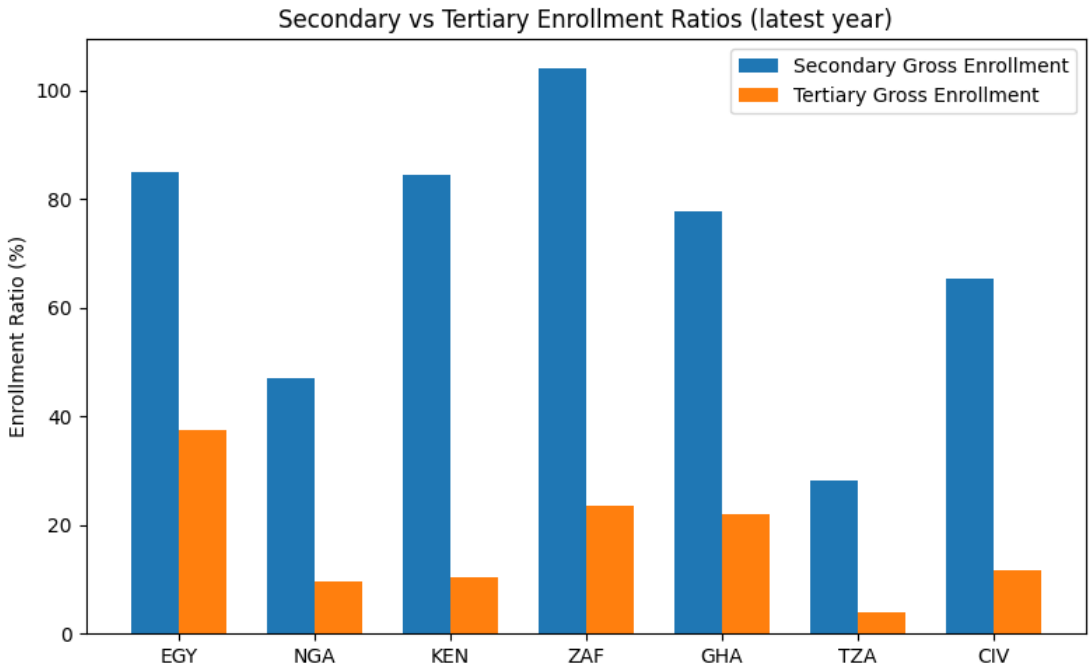


Figure 16. Secondary–tertiary progression. The slope of the relationship illustrates how improvements in secondary education translate into tertiary enrolment, but capacity constraints remain in many countries.

Figure 17 examines the association between internet usage and secondary enrolment. The scatterplot shows a positive correlation: countries with higher internet penetration tend to have higher secondary enrolment. Connectivity may facilitate access to online learning and information, supporting educational attainment. Nonetheless, other factorssuch as income, urbanisation and cultural norms) also influence enrolment.

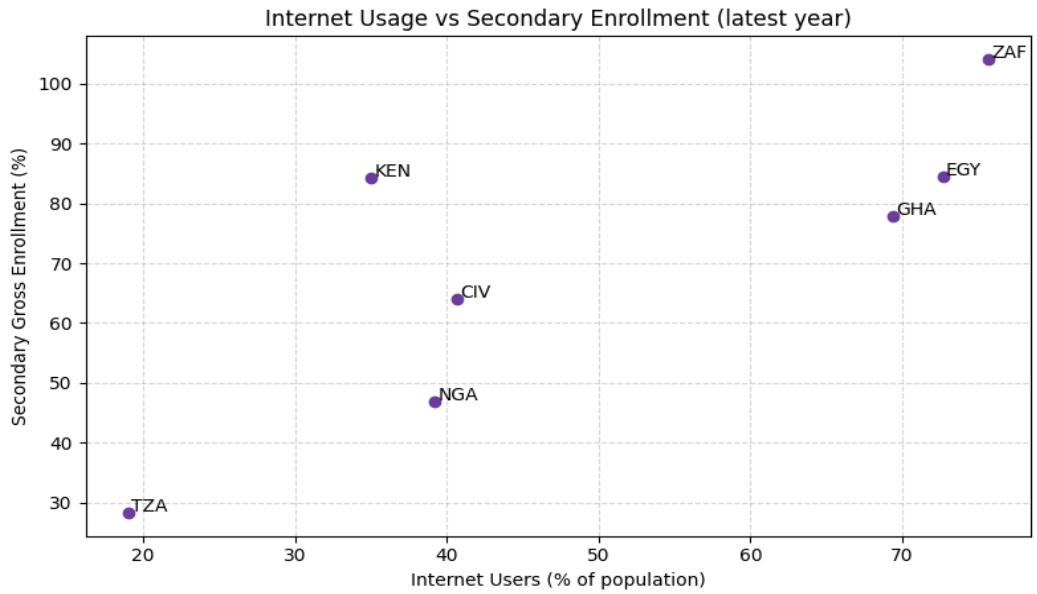


Figure 17. Digital connectivity and secondary education. Improved internet access appears to support secondary school enrolment, though the relationship is influenced by broader socio-economic factors.

Figure 18 presents the latest youth unemployment rates across the selected countries. South Africa registers the highest rate, exceeding 50 %. Nigeria, Ghana and DRC report rates around 13–15 %, while Kenya and Uganda have lower rates near 7–8 %. Egypt and Ethiopia show the lowest rates, below 10 %. These disparities underline the importance of national policies, industrial structures and labour-market institutions.

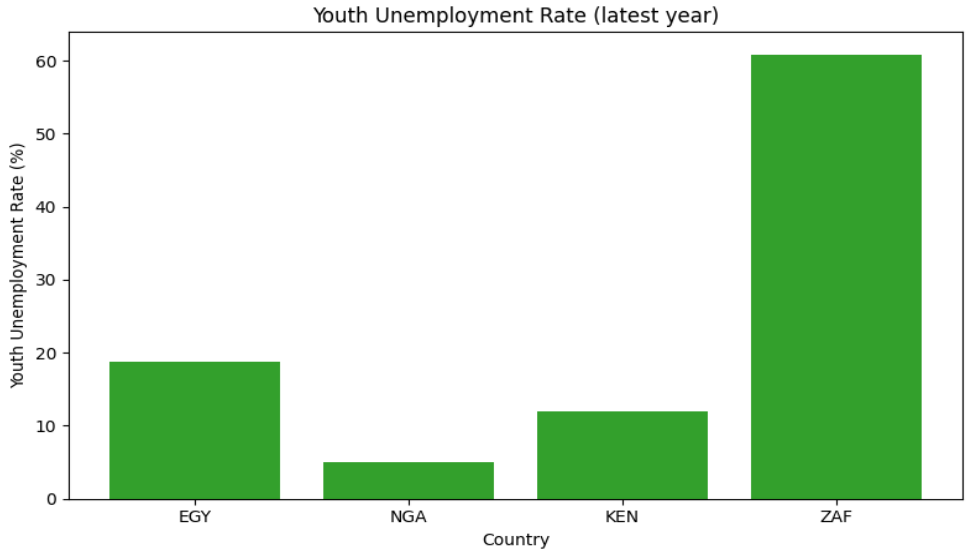


Figure 18. Latest youth unemployment**.** The distribution highlights significant heterogeneity across countries, with South Africa as an outlier.

Figure 19 explores the relationship between secondary enrolment and NEET rates across countries. A negative correlation is evident: countries with higher secondary enrolment typically have lower NEET rates. This association underscores the protective role of education: when youth remain in school longer, they are less likely to be idle. Policies that expand secondary education and support school retention can therefore reduce NEET.

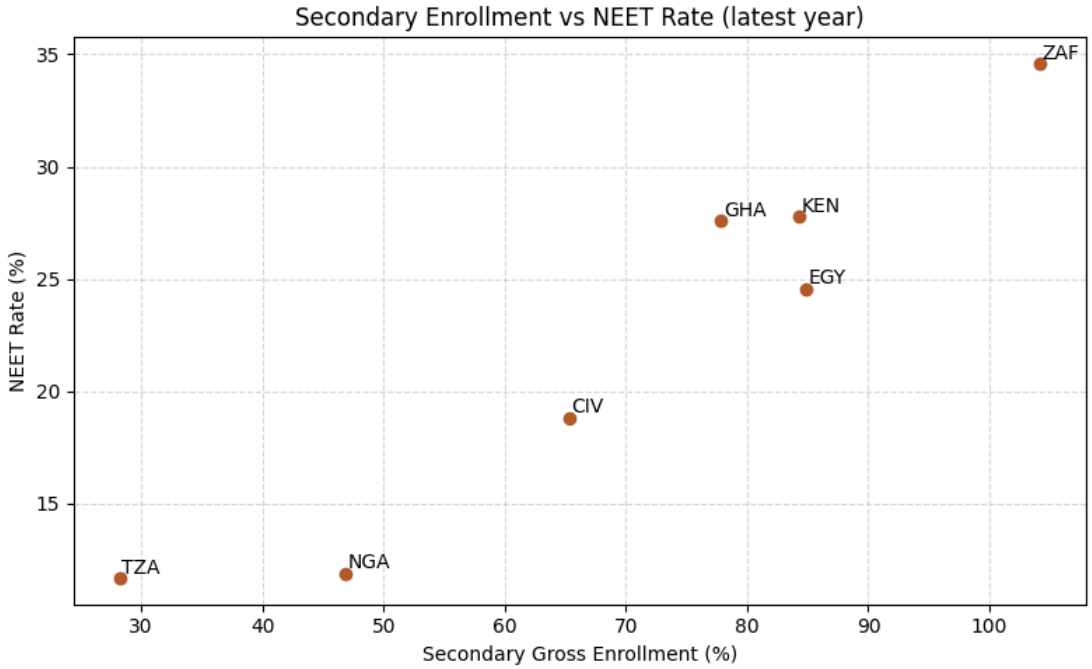


Figure 19. Education and NEET. Countries with high secondary enrolment (e.g., South Africa, Egypt) have much lower NEET rates, highlighting the importance of retaining youth in school.

Figure 20 projects the growth of the working-age population in Sub-Saharan Africa between 2024 and 2050 under the assumption of a near-doubling as suggested by ACET and OECD/AU data. The projection emphasises the sheer scale of labour-supply growth: the working-age population could rise from about 650 million today to over 1.1 billion by 2050. If employment growth fails to keep pace, the number of unemployed youth could soar.

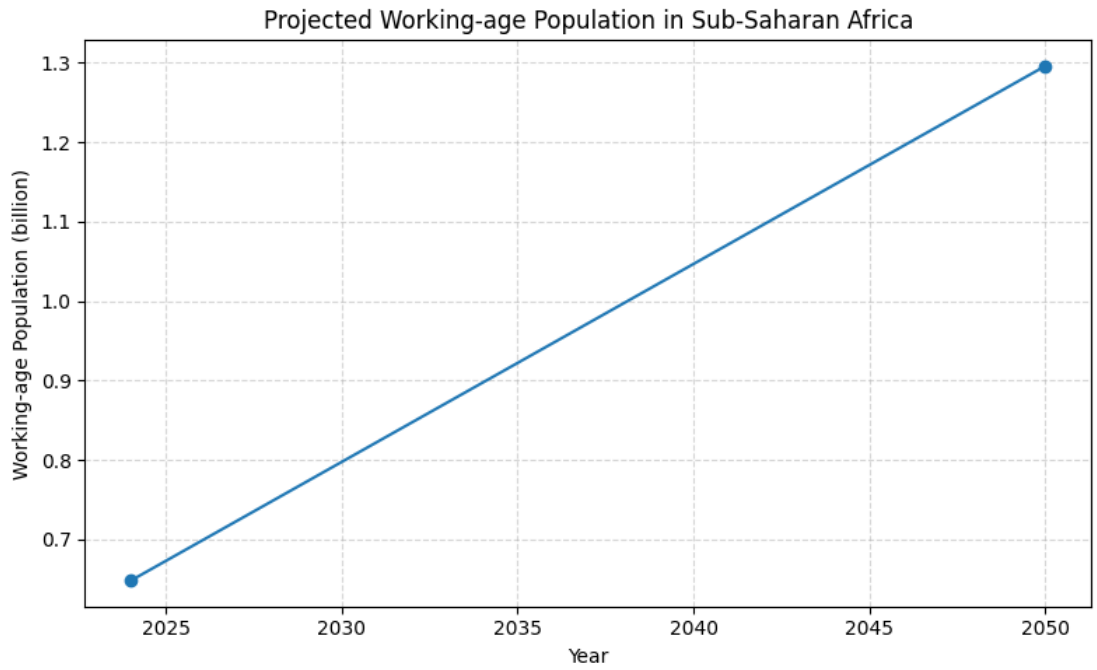


Figure 20. Working-age population projection. A doubling of the working-age population within a generation implies enormous challenges for job creation and skills development. Without rapid economic transformation, Africa risks squandering its demographic dividend.

6 Discussion and Policy Implications

6.1 Harnessing the demographic dividend

Africa's demographic dividend is a double-edged sword. On one hand, a growing working-age population can increase labour supply, boost savings and stimulate economic growth. On the other hand, if jobs are scarce and skills inadequate, the youth bulge can lead to high unemployment, informality and social unrest. The results presented in Section 5 reveal both opportunities and challenges.

Demographic trends (Figure 1 and Figure 20) indicate that the working-age population is rising rapidly relative to dependants, creating favourable conditions for a dividend. However, labour-market indicators (Figures 2, 3, 4, 13 and 18) show that youth unemployment and NEET rates remain high and that labour-force participation among youth is declining. Education and skills indicators (Figures 5, 6, 10, 11 and 12) show that secondary and tertiary enrolment rates remain low for many countries, completion rates lag behind global averages and digital skills are scarce. The correlation analyses (Figures 8, 15, 16, 17 and 19) suggest that education and digital connectivity are associated with better labour outcomes, but these relationships are not strong enough to guarantee employment.

6.2 Education policy priorities

1. **Expand access and improve quality of basic education.** Primary and secondary completion rates must rise substantially to build a foundation for skilled labour.

Governments should abolish school fees, invest in infrastructure, recruit and train teachers and provide targeted support to girls and marginalised groups. Countries such as Ghana, which implemented a Free Senior High School policy benefiting 1.6 million students, offer examples of how tuition waivers can improve enrolment. Quality must also improve: curricula should emphasise critical thinking, problem solving and digital literacy.

2. **Enhance technical and vocational education and training (TVET).** Only 9 % of youth are enrolled in technical and vocational programmes. Expanding TVET can help bridge the skills gap by providing practical training aligned with labour-market needs. Partnerships with employers and industry associations can ensure that curricula reflect current technologies and practices. Apprentice programmes, dual education systems and certification frameworks can make technical training attractive and credible.

3. **Promote tertiary education and research.** Tertiary enrolment is below 15 % in most countries (Figure 6). To build a knowledge economy, countries need more universities and research institutions, scholarships for low-income students and support for science, technology, engineering and mathematics (STEM) disciplines. However, the expansion of tertiary education must be balanced with labour-market demand to avoid graduate unemployment and mismatches.

6.3 Labour-market and economic policies

1. **Job creation and economic diversification.** African economies must create millions of jobs annually to absorb new entrants. This requires fostering sectors with high employment multipliers, such as agriculture, manufacturing, renewable energy, construction and services (including tourism and ICT). Regional integration through the African Continental Free Trade Area (AfCFTA) can expand markets and attract investment. Public-works programmes and infrastructure investments can also generate employment while improving productivity.

2. **Promote formalisation and social protection.** With 82 % of workers in informal employment, formalisation is essential. Governments can simplify business registration, reduce regulatory burdens and provide incentives for firms to register. Social protection systems (such as unemployment insurance, health insurance and pensions) should cover informal workers to enhance resilience and labour mobility.

3. **Support entrepreneurship and innovation.** Many youth are turning to self-employment and startups in response to limited wage employment. Supporting entrepreneurship requires access to finance, mentorship and incubation programmes. Governments and donors can establish youth enterprise funds, guarantee schemes and digital platforms connecting entrepreneurs with investors. Successful tech firms like Paystack, Flutterwave and Andela demonstrate the potential of Africa's tech ecosystem.

6.4 Digital transformation and skills

1. **Bridge the digital divide.** Only 10–15 % of youth have access to structured digital education and fewer than 5 % possess advanced skills. Expanding broadband infrastructure, especially in rural areas, and making devices affordable are preconditions for digital inclusion. Programmes such as Google's digital skills training, which have reached millions of Africans, should be scaled up and complemented by government curricula and certification.

2. **Integrate digital skills into formal education.** Digital literacy should be part of the basic curriculum from primary school onwards. Secondary and tertiary institutions should offer courses in coding, data analysis, cybersecurity and artificial intelligence. Partnerships with tech companies can ensure relevance and provide internships.

3. **Leverage digital platforms for employment.** Online labour platforms, remote work and e-commerce can create new opportunities. Governments should develop regulatory frameworks that protect workers while enabling innovation. Digital ID systems can facilitate access to online services, finance and social protection.

7 Limitations

This study has several limitations. First, it relies heavily on WDI data, which may suffer from measurement error and missing observations. NEET data are particularly sparse; many countries report only one or two years, limiting the ability to draw robust trends. Second, the analysis is descriptive and exploratory; causal relationships between education, internet usage and employment cannot be inferred from simple correlations. Third, the selection of ten countries, while diverse, does not capture the full heterogeneity of Africa's 54 nations. Country-specific factors (such as conflict, governance quality, mineral dependence and migration) may shape outcomes in ways not captured here. Fourth, the projections assume continuation of current demographic trends and do not account for policy changes or shocks such as pandemics or climate disasters.

8 Conclusion

Africa's demographic transition presents both a promise and a peril. The continent is home to the largest youth cohort in history, and the working-age population will continue to grow rapidly over the next quarter-century. If African governments and international partners can invest in education, digital skills, job creation and inclusive institutions, the demographic dividend could add billions of dollars to GDP, reduce poverty and position Africa as a global powerhouse. However, the window of opportunity is finite. Without decisive action, high unemployment, underemployment, informality and skills mismatches will intensify, undermining social cohesion and economic prospects.

The evidence presented in this paper shows that progress is mixed: some countries have improved secondary and tertiary enrolment, expanded digital connectivity and reduced NEET rates; others continue to struggle with high unemployment and low school

completion. Policy recommendations emphasise expanding access to quality education, reforming labour markets, promoting entrepreneurship, formalising employment and embracing digital transformation. Implementation will require coordinated efforts between governments, private sector actors, civil society and development partners. By seizing this moment, Africa can turn its youth bulge into an engine of inclusive growth and realise the demographic dividend.

9 References

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