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INVESTIGATING UNEMPLOYMENT HYSTERESIS IN SUB-SAHARAN AFRICA: EVIDENCE FROM SUR-FADF

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Abstract

This study examines unemployment hysteresis across 48 Sub-Saharan African (SSA) countries between 1991 and 2024, assessing whether unemployment shocks are temporary or persistent. Using the Seemingly Unrelated Regression Fourier Augmented Dickey-Fuller (SUR-FADF) test, offering a more robust approach than traditional unit root methods. Findings reveal significant regional variation: Central and East African nations generally display mean-reverting unemployment, suggesting shocks dissipate over time, while several West and Southern African countries, including Burkina Faso, Mali, and South Africa, exhibit entrenched hysteresis, where unemployment remains persistently high. The study highlights that unemployment dynamics are shaped by structural, institutional, and regional differences, necessitating tailored policy responses. In mean-reverting contexts, active labour market measures such as vocational training, public employment programs, and fiscal stimulus can effectively reduce joblessness. Conversely, in economies with hysteresis, deeper structural reforms are required, including flexible labour laws, improved education systems, and strategies to address skill mismatches. The research underscores the importance of regional cooperation to harmonise labour strategies, share best practices, and strengthen institutional frameworks. It recommends integrating advanced econometric tools like SUR-FADF into policy analysis and prioritising youth and female employment programs to prevent long-term scarring. The study contributes to understanding unemployment hysteresis in SSA.

Keywords: Unemployment, Hysteresis, SUR-FADF, Sub-Saharan Africa, Labour market dynamics, Investigating; Panel unit root tests, Structural breaks

INTRODUCTION

Blanchard and Summers (1986) argue that elevated unemployment rates may persist even after economic recovery, challenging the notion of a natural rate to which unemployment reverts. This phenomenon, known as hysteresis, implies that temporary shocks can have enduring effects on labour markets, preventing a return to pre-shock employment levels. Consequently, hysteresis undermines traditional equilibrium models and raises critical policy implications. As Furuoka (2016) argues, if hysteresis is present, policymakers need to implement appropriate measures to reduce unemployment. These measures may take the form of active labour market interventions to mitigate structural unemployment and prevent long-term scarring in the workforce. A growing body of empirical research supports the existence of unemployment hysteresis in several advanced economies, particularly across Europe, Canada, and Japan (Jaeger & Parkinson, 1994; Røed, 1996, 1997; O'Shaughnessy, 2011; Ataklı Yavuz, Kılıç, &

Akcan, 2025). However, the findings remain mixed. In the United States, for instance, unemployment typically reverts to pre-shock levels, suggesting limited evidence of hysteresis (Jaeger & Parkinson, 1994; Røed, 1996). Similarly, studies in middle-income countries reveal sparse instances of hysteresis, indicating that its manifestation may be contingent upon specific labour market structures, institutional settings, and macroeconomic conditions (Boukraine, 2021).

Unemployment remains a persistent and multifaceted challenge in Africa, particularly within Sub-Saharan regions, where demographic dynamics, structural economic limitations, and labour market inefficiencies converge to exacerbate joblessness. Notwithstanding the modest economic growth in some of these economies, the region still grapples with high unemployment rates. Over the past four decades, Africa's average unemployment rate has hovered between 6% and 8%, with notable variation across regions and periods. According to long-term data from sources like the World Bank and Macrotrends, Sub-Saharan Africa, which represents the majority of the continent, has seen unemployment rates ranging from 5.5% to 7% since the early 1990s (Macrotrends, 2025). However, these averages mask deep disparities. For instance, South Africa has consistently reported rates above 25%, while countries like Niger and Burundi often report rates below 2%. These differences reflect diverse labour market structures, informal employment levels, and data collection methods. According to the latest modelled estimates from the International Labour Organisation (ILOSTAT), nine out of the top ten countries globally with the highest unemployment rates are located in Sub-Saharan Africa (see Figure 1).



Figure 1: Top ten countries in the World with the highest unemployment rate in 2025

Source: International Labour Organisation, ILOSTAT, via World Bank (2025)

Countries such as Eswatini, South Africa, Djibouti, and Namibia etc feature prominently, reflecting deeply entrenched labour market vulnerabilities across the region. This enduring trend

appears to support the hypothesis of unemployment hysteresis. In other words, the spatial clustering of high unemployment rates in Sub-Saharan Africa appears less indicative of temporary downturns and more reflective of entrenched hysteretic forces within regional labour markets.

This paper investigates the presence of unemployment hysteresis across 48 Sub-Saharan African countries, a subject of critical importance for designing effective, evidence-based labour market policies. Despite its relevance, research on hysteresis in Africa remains limited, with only a handful of studies addressing the phenomenon at both national and regional levels (see Uzodigwe et al., 2024; Dadam & Vieg, 2024; Yaya, Ogbonna & Mudida, 2019). These contributions advanced the methodological frontier by employing diverse unit root testing approaches, including the Fourier ADF and FADF-SB tests, to reveal hysteresis dynamics in selected countries. Building on this foundation, our study extends the scope of analysis to a broader regional context, thereby filling an important gap in the literature and offering fresh insights into the persistence of unemployment in Sub-Saharan Africa. The rest of the paper is structured as follows. Following the introduction is the review of related literature in Section 2. Section 3 is concerned with materials and methods. Section 4 presents the empirical results and discussion, and Section 5 presents the conclusion and policy recommendations.

LITERATURE REVIEW

Theoretical Literature

The theoretical foundation of unemployment hysteresis originates from the macroeconomic debates of the 1980s, particularly in response to the persistent unemployment observed in Europe. Classical and neoclassical theories, as expressed by Friedman (1968) and Phelps (1967), posit that unemployment fluctuates around a natural rate determined by structural factors such as technology, demographics, and institutional settings. In this framework, deviations from the natural rate are temporary and self-correcting, with monetary and fiscal policies exerting only short-term influence. However, this equilibrium-based view struggled to explain prolonged unemployment following major economic shocks, prompting economists to explore alternative models.

Blanchard and Summers (1986) introduced the hysteresis hypothesis, arguing that temporary shocks could have permanent effects on unemployment. Their insider-outsider model suggests that employed workers (insiders) possess bargaining power that enables them to resist wage reductions, thereby excluding unemployed individuals (outsiders) from re-entering the labour market. This dynamic leads to a shift in the natural rate of unemployment itself, making it endogenous to past labour market conditions. The hysteresis hypothesis implies that unemployment may follow a unit root process, lacking a tendency to revert to a long-run mean.

Consequently, demand-side policies may have long-lasting effects, challenging the notion of policy neutrality in the long run.

Microeconomic mechanisms further reinforce the hysteresis phenomenon. Human capital depreciation is a key factor; long-term unemployment erodes skills and reduces employability, making reintegration into the labour market increasingly difficult (Layard et al, 2005). Moreover, stigmatisation by employers and negative signalling effects contribute to persistent unemployment, as individuals with extended joblessness are perceived as less productive or motivated (Ljungqvist & Sargent, 1998). Institutional rigidities, such as stringent employment protection laws, union dominance, and minimum wage regulations, also hinder labour market flexibility and adjustment (Blanchard & Wolfers, 2000).

Dynamic macroeconomic models have incorporated hysteresis by allowing for endogenous shifts in the natural rate of unemployment. In particular, Dynamic Stochastic General Equilibrium (DSGE) models demonstrate how persistent shocks, such as financial crises, pandemics, or political instability, can alter labour market trajectories in ways that are not easily reversible. Galí (2011) emphasised that incorporating hysteresis into DSGE frameworks enhances the realism of policy simulations and macroeconomic forecasting, especially in economies subject to frequent disruptions.

In the context of Sub-Saharan Africa, the relevance of hysteresis theory is particularly noticeable. The region's labour markets are marked by high informality, underemployment, and limited access to vocational training, which amplify the risk of long-term unemployment. Structural vulnerabilities, demographic pressures, and exposure to external shocks, such as commodity price volatility and climate-related disruptions, further exacerbate labour market fragility. Political instability and weak governance in several countries contribute to labour market disruptions that may have enduring effects, making the assumption of a stable natural rate of unemployment less tenable.

Given these complexities, traditional unit root tests may be insufficient to capture the true nature of unemployment dynamics in Sub-Saharan Africa. The Seemingly Unrelated Regression Fourier ADF (SUR-FADF) framework offers a more robust methodological approach by accounting for both cross-sectional dependence and smooth structural breaks. This aligns well with the theoretical understanding of hysteresis, providing an improved perspective through which to examine unemployment persistence in developing economies. By integrating insights from both macroeconomic theory and micro-level labour market behaviour, the SUR-FADF approach enhances the empirical validity of hysteresis testing in the African context.

Empirical Literature

Early empirical studies on unemployment hysteresis predominantly focused on OECD countries, employing standard unit root tests such as the Augmented Dickey-Fuller (ADF) and Phillips-Perron tests. Ball (2009) revisited hysteresis in OECD economies and found mixed evidence, suggesting that institutional factors and labour market policies play a critical role in shaping unemployment dynamics. Chang (2011) extended this analysis using panel data and confirmed hysteresis in several advanced economies, emphasising the importance of structural reforms.

Recent advancements in econometric techniques have led to the adoption of more robust tests that account for cross-sectional dependence and structural breaks. Becker, Enders, and Lee (2006) introduced the Fourier ADF (FADF) test, which incorporates smooth structural breaks using trigonometric terms. This approach has proven particularly effective in capturing nonlinearities and regime shifts in macroeconomic time series. Enders and Lee (2012) further refined this methodology, demonstrating its superiority over traditional unit root tests in detecting stationarity under complex data-generating processes.

Recently, the use of panel data has become increasingly prevalent in hysteresis research, allowing for more efficient estimation and greater statistical power. Breitung and Pesaran (2008) emphasised the importance of accounting for cross-sectional dependence in panel unit root testing, leading to the development of Seemingly Unrelated Regression ADF (SUR-ADF) and SUR-FADF frameworks. These methods exploit the correlation structure across countries to improve inference, making them particularly suitable for regional studies such as those focused on Sub-Saharan Africa.

Despite these empirical efforts, across the globe, empirical investigations into unemployment hysteresis in Sub-Saharan Africa remain relatively sparse but are gaining momentum. The region's labour markets are characterised by informality, limited social protection, and vulnerability to external shocks, making hysteresis a plausible phenomenon. This current study, applies advanced unit root tests to African data, revealing heterogeneous results across subregions. For instance, in West Africa, the application of SUR-FADF tests reveals strong rejection of the unit root hypothesis in countries such as Nigeria, Ghana, and Guinea-Bissau, indicating mean-reverting unemployment and limited hysteresis effects. Conversely, countries like Burkina Faso and Mali exhibit persistent unemployment dynamics, suggesting structural rigidities. East African economies show similar heterogeneity. Malawi, Djibouti, and Somalia consistently reject the unit root hypothesis, while Ethiopia and Kenya present mixed results. These findings underscore the importance of accounting for country-specific factors such as labour market institutions, conflict history, and macroeconomic volatility. Central Africa presents a more unified picture, with Angola, Chad, and Congo demonstrating strong stationarity in unemployment rates

across all test specifications. This suggests that, despite political and economic challenges, labour markets in these countries may be more resilient to shocks than previously assumed.

The use of SUR-FADF in this study represents a methodological advancement in the analysis of unemployment hysteresis in Sub-Saharan Africa. By incorporating both cross-sectional dependence and smooth structural breaks, this approach provides a more nuanced understanding of unemployment dynamics. The findings have significant policy implications: in countries where hysteresis is absent, active labour market policies can effectively reduce unemployment. In contrast, countries exhibiting hysteresis may require deeper structural reforms to address entrenched labour market inefficiencies.

METHODOLOGY

Research Design and Data Sources

This study adopts a quantitative panel econometric approach to investigate unemployment hysteresis across 48 Sub-Saharan African countries between 1991 and 2024. The design integrates both time-series and cross-sectional dimensions, allowing for robust testing of persistence in unemployment shocks. By employing the SUR-FADF framework, the research accounts for cross-sectional dependence, nonlinearities, and smooth structural breaks that traditional unit root tests often overlook.

The start period of 1991 was chosen because no systematic data is available on the unemployment rate in most of these countries before 1991, while the end period of 2024 helps to capture major economic disruptions like the COVID-19 pandemic, global inflationary pressures, and regional conflicts, which previous studies failed to account for. This study utilised annual data on total unemployment. The sensitivity analysis involved varying model specifications, testing alternative assumptions, and examining the influence of structural dynamics. All data were obtained from World Bank Development Indicators (WDI).

Unit Root Models

This study employs four-unit root test methods to assess the presence of hysteresis. They include the ADF test (Dickey and Fuller 1979), the Seemingly Unrelated Regressions Fourier Augmented Dickey-Fuller (SUR-ADF) test (Breuer, McNown, & Wallace 2002), the Fourier ADF (FADF) test (Enders & Lee 2012a) and a novel unit root test, the SUR-FADF test (Furuoka, 2016), which is the main contribution of this study. These methodologies were selected to capture a broad spectrum of dynamic properties in the unemployment time series, including cross-sectional dependence, nonlinear deterministic trends, and potential structural breaks.

Augmented Dickey-Fuller (ADF) Test

The Augmented Dickey-Fuller (ADF) test extends the Dickey-Fuller (DF) test by including lagged differences to account for autocorrelation. The test is based on the null hypothesis that a unit root is present in an autoregressive model of a given time series, in our case, unemployment.

The test equation is:

$$\Delta Y_t = \alpha + \beta t + \lambda Y_{t-1} + \sum_{i=1}^P \delta_i \Delta Y_{t-1} + \varepsilon_t \quad (1)$$

Where: Y_t is the unemployment rate at time t ; ΔY_t is the first difference of Y_t ; alpha (α) is a constant; beta (β) is a deterministic trend, gamma (γ) tests for the presence of a unit root; delta i (δ_i) are coefficients of lagged differences; and ε_t is the error term.

The null hypothesis $H_0: \gamma = 0$ implies a unit root (non-stationarity), while the alternative $H_1: \gamma < 0$ suggests stationarity (Dickey & Fuller, 1979).

Seemingly Unrelated Regressions Augmented Dickey-Fuller (SUR-ADF) test

The SUR-ADF test improves the power of the ADF test in panel settings by accounting for cross-sectional dependence. It jointly estimates a system of ADF equations. The model takes the following compact form:

$$\Delta Y_{i,t} = \alpha_i + \beta_i t + \eta_i Y_{i,t-1} + \sum_{j=1}^P \delta_{i,j} \Delta Y_{i,t-j} + \varepsilon_{i,t} \quad (2)$$

Where: $i = 1, 2, \dots, N$, indexes countries; $t = 1, 2, \dots, T$, indexes time; $\varepsilon_{i,t}$ are contemporaneously correlated across equations. The system is estimated using the SUR framework to improve efficiency and account for cross-sectional correlation (Breuer, McNown & Wallace, 2002).

Fourier Augmented Dickey-Fuller (FADF)

The FADF test incorporates smooth structural breaks using a Fourier approximation. The test equation is:

$$\Delta Y_t = \alpha + \beta t + \lambda Y_{t-1} + \sum_{i=1}^P \delta_i \Delta Y_{t-1} + \theta_1 \sin\left(\frac{2\pi Kt}{T}\right) + \theta_2 \cos\left(\frac{2\pi Kt}{T}\right) + \varepsilon_t \quad (3)$$

Where: k is the frequency of the Fourier component; T is the sample size; θ_1 and θ_2 capture nonlinear deterministic trends. This test allows for flexible modelling of unknown smooth breaks without requiring dummy variables (Enders & Lee, 2012a).

Seemingly Unrelated Regressions Fourier Augmented Dickey-Fuller (SUR-FADF)

The SUR-FADF test is a Fourier function-based extension of the SUR-ADF test. This test allows synthesising methodological advantages of the SUR method and the Fourier function approximation method. First, the test is based on the SUR method that takes into account cross-sectional. The SUR-FADF test is based on the SUR method to estimate a system of the Fourier ADF (FADF) equations. This system can be expressed as follows:

$$\Delta Y_{i,t} = \alpha_i + \beta_i t + \eta_i Y_{i,t-1} + \sum_{j=1}^p \delta_{i,j} \Delta Y_{i,t-j} + \theta_{i,1} \sin\left(\frac{2\pi Kt}{T}\right) + \theta_{i,2} \cos\left(\frac{2\pi Kt}{T}\right) + \varepsilon_{i,t} \quad (4)$$

This model is estimated using SUR techniques, enhancing power and robustness in panel data settings with complex dynamics.

RESULTS AND DISCUSSION

This study employed four distinct unit root test approaches to assess the hysteresis of unemployment in Sub-Saharan Africa (SSA). Specifically, we utilised the conventional Augmented Dickey-Fuller (ADF) test, the Fourier Augmented Dickey-Fuller (FADF) test, the Seemingly Unrelated Regression Augmented Dickey-Fuller (SUR-ADF) test, and the recently developed Seemingly Unrelated Regression Fourier Augmented Dickey-Fuller (SUR-FADF) test. These methodologies were selected to capture a broad range of dynamic properties in the unemployment time series, including cross-sectional dependence, nonlinear deterministic trends, and potential structural breaks.

Unit Root for Hysteresis

West Africa

Table 1: Hysteresis in West Africa

Country	ADF	SUR-ADF	FADF		SUR-FADF	
			@ K = 1	@ K = 2	@ K = 1	@ K = 2
Benin	-0.255**	-0.179**	-0.511**	0.634	-0.497***	-0.210***
	(0.0365)	(0.0250)	(0.0082)	(0.0842)	(0.0000)	(0.0029)
Burkina-Faso	-0.552***	-0.011	-0.061	-0.015	-0.140**	-0.030
	(0.0007)	(0.7370)	(0.4800)	(0.7450)	(0.028)	(0.377)
Cote D'Ivoire	-0.127	-0.207***	-0.340***	-0.093	-0.421***	-0.190
	(0.1798)	(0.0000)	(0.0012)	(0.4077)	(0.000)	(0.060)
Gambia	-0.169**	-0.057**	-0.188***	-0.057	-0.164***	-0.0488**
	(0.0164)	(0.029)	(0.0067)	(0.2849)	(0.0000)	(0.06)
Ghana	-0.283***	-0.145***	-0.454***	-0.1464	-0.488***	-0.173***
	(0.0050)	(0.0000)	(0.0016)	(0.0936)	(0.0000)	(0.001)
Guinea	-0.896***	-0.229***	-0.471***	-0.256**	-0.510***	-0.294***
	(0.0000)	(0.0000)	(0.0054)	(0.0386)	(0.0000)	(0.0000)
Guinea-Bissau	-0.798***	-0.665***	-0.763***	-0.935***	-0.817***	-0.828***
	(0.0001)	(0.0000)	(0.0002)	(0.0000)	(0.0000)	(0.0000)
Liberia	0.0677	-0.248***	-0.4550***	-0.218**	-0.498***	-0.279***
	(0.7941)	(0.0000)	(0.0063)	(0.074)	(0.0000)	(0.0000)

Mali	-0.314** (0.0423)	0.0034 (0.968)	-0.162 (0.3711)	-0.041 (0.8001)	-0.358*** (0.0000)	-0.0410 (0.638)
Mauritania	-0.341** (0.0111)	-0.202*** (0.003)	-0.346** (0.0169)	-0.164 (0.1526)	-0.464*** (0.0000)	-0.238*** (0.001)
Niger	-0.317** (0.0247)	-0.242*** (0.001)	-0.625*** (0.0020)	-0.215 (0.1511)	-0.645*** (0.0000)	-0.289*** (0.001)
Nigeria	-0.563*** (0.0043)	-0.371*** (0.0000)	-0.505*** (0.0007)	-0.302*** (0.0070)	-0.588*** (0.0000)	-0.377*** (0.0000)
Senegal	-0.205* (0.0973)	-0.196*** (0.006)	-0.403** (0.0100)	-0.256** (0.00486)	-0.443*** (0.0000)	-0.207*** (0.008)
Sierra-Leone	-0.185* (0.0812)	-0.162** (0.012)	-0.174* (0.0917)	-0.393** (0.0306)	-0.199*** (0.003)	-0.4008*** (0.0000)
Togo	-0.392*** (0.0077)	-0.146*** (0.002)	-0.378*** (0.0041)	-0.101 (0.1936)	-0.451*** (0.0000)	-0.139*** (0.006)
West Africa	-0.340 (0.1524)	-0.250*** (0.0000)	-0.918*** (0.0002)	-0.267 (0.1322)	-0.899*** (0.0000)	-0.286*** (0.0000)

(Note that ***, ** and * imply the rejection of the null hypothesis of unit root at 1%, 5% and 10% significance level, respectively, which also means that there is no evidence of unemployment hysteresis. $K = 1$ and $K = 2$ are Fourier Frequencies.

Table 1 provides an assessment of unemployment hysteresis across West African countries using various unit root tests, namely the Augmented Dickey-Fuller (ADF), Seemingly Unrelated Regression ADF (SUR-ADF), Fourier ADF (FADF), and Seemingly Unrelated Regression Fourier ADF (SUR-FADF). Rejecting the null of a unit root at conventional significance levels (1%, 5%, and 10%) indicates that the unemployment series is stationary, suggesting the absence of hysteresis. Conversely, failure to reject the null implies the presence of hysteresis, meaning unemployment shocks may have lasting effects.

Countries such as Guinea-Bissau, Nigeria, Guinea, and Ghana consistently reject the unit root hypothesis across all test specifications and Fourier frequencies. This suggests that unemployment in these countries is mean-reverting and that policy interventions can effectively reduce unemployment over time. These findings align with the structuralist view that labour market rigidities are not the sole drivers of persistent unemployment (Ball, 2009). However, Benin, Liberia, and Côte d'Ivoire show mixed results across different tests and frequencies. For instance, Benin's SUR-FADF at $K=1$ fails to reject the null, while other tests do. This inconsistency may reflect structural breaks or nonlinearities in the unemployment series, which Fourier-based tests are better equipped to capture (Enders & Lee, 2012). On the other hand, Burkina Faso and Mali

show weak or no rejection of the unit root hypothesis in most test specifications, indicating stronger hysteresis effects. This could be due to institutional weaknesses, limited labour mobility, or prolonged political instability that impedes labour market recovery (Blanchard & Wolfers, 2000).

The aggregate results for West Africa show significant rejection of the unit root hypothesis in SUR-ADF and SUR-FADF tests, particularly at K=2. This suggests that while individual countries may exhibit varying degrees of hysteresis, the region as a whole tends toward stationarity in unemployment. The use of SUR techniques enhances power by accounting for cross-sectional dependencies among countries (Breitung & Pesaran, 2008). The inclusion of Fourier frequencies (K=1 and K=2) allows for the modelling of smooth structural breaks, which are common in developing economies due to policy shifts, conflict, or external shocks. The SUR framework further improves efficiency by leveraging correlations across countries. These methodological enhancements are crucial for robust inference in panel settings (Becker et al., 2006). The absence of hysteresis in many West African countries implies that active labour market policies, such as vocational training, public employment programs, and fiscal stimulus, can be effective in reducing unemployment. However, for countries with persistent hysteresis, deeper structural reforms may be necessary to address entrenched labour market inefficiencies.

East Africa

Table 2: Hysteresis in East Africa

Country	ADF	SUR- ADF	FADF		SUR-FADF	
			K = 1	K = 2	K = 1	K = 2
Burundi	-0.237** (0.0131)	-0.075** (0.017)	-0.191* (0.0608)	-0.025 (0.5236)	-0.316*** (0.000)	-0.085*** (0.003)
Comoros	-0.186 (0.0789)	0.009 (0.859)	-0.174 (0.1772)	-0.012 (0.8930)	-0.227*** (0.000)	-0.048 (0.282)
Djibouti	-0.312 (0.1354)	-0.274*** (0.000)	-1.040*** (0.0001)	-0.288** (0.0481)	-0.989*** (0.000)	-0.304*** (0.000)
Eritrea	-0.413 (0.0848)	-0.2818*** (0.000)	-0.406*** (0.0060)	-0.483*** (0.0033)	-0.486*** (0.000)	-0.451*** (0.000)
Ethiopia	-0.0856 (0.3383)	-0.112*** (0.004)	-0.423*** (0.0087)	-0.160 (0.1007)	-0.503*** (0.000)	-0.127*** (0.001)
Kenya	-0.111** (0.0194)	-0.050 (0.142)	-0.104** (0.0325)	-0.063 (0.1831)	-0.114*** (0.001)	-0.040 (0.274)
Madagascar	-0.272** (0.0208)	-0.111** (0.010)	-0.547*** (0.0005)	-0.104 (0.1088)	-0.655*** (0.000)	-0.113** (0.011)

Malawi	-0.5482*** (0.0025)	-0.400*** (0.000)	-0.704*** (0.0027)	-0.756*** (0.0021)	-0.742*** (0.000)	-0.669*** (0.000)
Mauritius	-0.951*** (0.0001)	-0.107* (0.076)	-0.642** (0.0100)	-0.157 (0.2197)	-0.556*** (0.000)	-0.131** (0.033)
Mozambique	-0.447*** (0.0009)	-0.065* (0.063)	-0.166 (0.1362)	-0.037 (0.5166)	-0.263*** (0.000)	-0.066* (0.057)
Rwanda	-0.947 (0.1421)	-0.312*** (0.001)	-0.366* (0.0787)	-0.311 (0.1263)	-0.493*** (0.000)	-0.449*** (0.000)
Somalia	-0.7083*** (0.0019)	-0.298*** (0.000)	-0.466*** (0.0059)	-0.381** (0.0161)	-0.445*** (0.000)	-0.394*** (0.000)
Sudan	-0.316** (0.0280)	-0.122 (0.127)	-0.317 (0.1106)	-0.327 (0.1460)	-0.335*** (0.000)	-0.343*** (0.001)
Tanzania	-0.558*** (0.0004)	-0.258*** (0.000)	-0.370*** (0.0045)	-0.218* (0.0507)	-0.474*** (0.000)	-0.322*** (0.000)
Uganda	-0.445*** (0.0076)	0.643*** (0.000)	-0.863*** (0.0012)	-0.602*** (0.0019)	-0.591*** (0.000)	-0.677*** (0.000)
Zambia	-0.610*** (0.0003)	-0.136*** (0.000)	-0.247** (0.0166)	-0.103 (0.1678)	-0.308*** (0.000)	-0.152*** (0.000)
Zimbabwe	-0.2311 (0.055)	-0.133*** (0.006)	-0.250*** (0.0031)	-0.233*** (0.0046)	-0.280*** (0.000)	-0.174*** (0.001)
East Africa	2.989 (0.00058)	-0.175*** (0.000)	-0.608*** (0.0008)	-0.155* (0.0892)	-0.623*** (0.000)	-0.190*** (0.000)

*(Note that ***, ** and * imply the rejection of the null hypothesis of a unit root at 1%, 5% and 10% significance level, respectively, which also means that there is no evidence of unemployment hysteresis. $K = 1$ and $K = 2$ are Fourier Frequencies.)*

The results from Table 2 present an analysis of unemployment hysteresis across East African countries using four-unit root testing frameworks: Augmented Dickey-Fuller (ADF), Seemingly Unrelated Regression ADF (SUR-ADF), Fourier ADF (FADF), and Seemingly Unrelated Regression Fourier ADF (SUR-FADF). Countries such as Malawi, Djibouti, Eritrea, Somalia, Tanzania, Uganda, and Zambia consistently reject the unit root hypothesis across most test specifications. This suggests that unemployment in these countries is mean-reverting, and policy interventions can effectively reduce unemployment over time. These findings align with the view that labour market shocks in these economies are transitory (Chang, 2011). Kenya, Ethiopia, and Sudan show mixed results across different tests and Fourier frequencies. For instance, Kenya's ADF and FADF tests reject the unit root hypothesis at 5% significance, but SUR-based tests do not. This inconsistency may reflect the presence of structural breaks or nonlinearities that

are better captured by Fourier-based models (Furuoka, 2017). Comoros and Rwanda exhibit weak or no rejection of the unit root hypothesis in most specifications, indicating stronger hysteresis effects. This could be due to institutional weaknesses, prolonged political instability, or limited labour market flexibility (Blanchard & Summers, 1986).

The aggregate results for East Africa show significant rejection of the unit root hypothesis in SUR-ADF and SUR-FADF tests, particularly at $K = 2$. This suggests that while individual countries may exhibit varying degrees of hysteresis, the region as a whole tends toward stationarity in unemployment. This supports the notion that regional labour markets are resilient to shocks, and unemployment tends to revert to its natural rate over time (Caporale & Gil-Alana, 2018).

The absence of hysteresis in many East African countries implies that active labour market policies, such as public employment programs, vocational training, and fiscal stimulus, can be effective in reducing unemployment. However, for countries with persistent hysteresis, deeper structural reforms may be necessary to address entrenched labour market inefficiencies. The findings also highlight the importance of using advanced econometric techniques to inform policy, as traditional tests may overstate the persistence of unemployment.

Central Africa

Table 3: Hysteresis in Central Africa

Country	ADF	SUR-ADF	FADF		SUR-FADF	
			K = 1	K = 2	K = 1	K = 2
Angola	-0.564*** (0.0016)	-0.581*** (0.000)	-0.513*** (0.0079)	-0.629*** (0.0007)	-0.483*** (0.000)	-0.686*** (0.000)
Cameroon	-0.087* (0.0761)	-0.028* (0.071)	-0.065 (0.2305)	-0.051** (0.0328)	-0.046 (0.229)	-0.038** (0.021)
Central African Republic	-0.049 (0.6524)	-0.062** (0.012)	-0.333** (0.0116)	-0.122 (0.2244)	-0.289*** (0.000)	-0.074*** (0.003)
Chad	-0.649*** (0.0023)	-0.133*** (0.008)	-0.484*** (0.0049)	-0.221* (0.0940)	-0.410*** (0.000)	-0.148*** (0.005)
Congo	-0.388** (0.0154)	-0.253*** (0.000)	-0.671*** (0.0014)	-0.414** (0.0187)	-0.600*** (0.000)	-0.315*** (0.000)
Equatorial Guinea	-0.239 (0.1834)	-0.114*** (0.000)	-0.228** (0.0230)	-0.251** (0.0247)	-0.205*** (0.000)	-0.181*** (0.000)
Gabon	-0.279** (0.0106)	-0.083** (0.032)	-0.266** (0.0238)	-0.046 (0.3789)	-0.337*** (0.000)	-0.086** (0.027)

Sao Tome & Principe	-0.183*	-0.154**	-0.391**	-0.215	-0.388***	-0.158*
	(0.0895)	(0.027)	(0.0130)	(0.1485)	(0.000)	(0.088)
Central Africa	-0.501***	-0.292***	-0.888***	-0.529***	-0.653***	-0.330***
	(0.0028)	(0.000)	(0.0001)	(0.0029)	(0.000)	(0.000)

*(Note that ***, ** and * imply the rejection of the null hypothesis of a unit root at 1%, 5% and 10% significance level, respectively, which also means that there is no evidence of unemployment hysteresis. $K = 1$ and $K = 2$ are Fourier Frequencies.*

The results from Table 3 provide an evaluation of unemployment hysteresis across Central African countries using four complementary unit root tests: Augmented Dickey-Fuller (ADF), Seemingly Unrelated Regression ADF (SUR-ADF), Fourier ADF (FADF), and Seemingly Unrelated Regression Fourier ADF (SUR-FADF). These tests are designed to assess whether unemployment rates in these economies are stationary or exhibit hysteresis. The rejection of the null hypothesis of a unit root implies stationarity and thus no hysteresis, while failure to reject suggests persistent unemployment effects.

Angola, Chad, Congo, and Equatorial Guinea consistently reject the unit root hypothesis across all test specifications. These findings align with the structuralist view that labour market rigidities are not the sole drivers of persistent unemployment (Ball, 2009). For Cameroon and São Tomé & Príncipe, there are mixed results across different tests and Fourier frequencies. For instance, Cameroon's ADF and SUR-ADF tests reject the unit root hypothesis at 10% significance, but Fourier-based tests provide less consistent evidence. This inconsistency may reflect the presence of structural breaks or nonlinearities that are better captured by Fourier-based models (Enders & Lee, 2012). On the other hand, the Central African Republic shows weak or no rejection of the unit root hypothesis in some specifications, indicating stronger hysteresis effects. This could be due to institutional weaknesses, prolonged political instability, or limited labour market flexibility (Blanchard & Summers, 1986).

The aggregate results for Central Africa show consistent rejection of the unit root hypothesis across all test specifications, particularly in the SUR-FADF framework. This suggests that, at the regional level, unemployment tends to revert to its natural rate over time, indicating the absence of hysteresis. The use of Fourier frequencies ($K = 1$ and $K = 2$) enhances the robustness of the analysis by capturing smooth structural breaks, which are common in African economies due to policy shifts, conflict, and external shocks (Becker, Enders, & Lee, 2006). The SUR framework further improves the power of the tests by accounting for cross-sectional dependencies among countries (Breitung & Pesaran, 2008).

The absence of hysteresis in many Central African countries implies that active labour market policies, such as public employment programs, vocational training, and fiscal stimulus, can be effective in reducing unemployment. However, for countries with persistent hysteresis, deeper structural reforms may be necessary to address entrenched labour market inefficiencies. The findings also highlight the importance of using advanced econometric techniques to inform policy, as traditional tests may overstate the persistence of unemployment.

Southern Africa

Table 4: Hysteresis in Southern Africa

Country	ADF	SUR-ADF	FADF		SUR-FADF	
			K = 1	K = 2	K = 1	K = 2
Botswana	-0.362*** (0.0011)	-0.284*** (0.000)	-0.432*** (0.0002)	-0.427*** (0.0004)	-0.366*** (0.000)	-0.350*** (0.000)
Eswatini	-0.458*** (0.0001)	-0.066 (0.176)	-0.065 (0.3301)	-0.080 (0.2246)	-0.061 (0.283)	-0.130** (0.017)
Lesotho	-0.546*** (0.0021)	-0.380*** (0.000)	-0.389*** (0.00059)	-0.391** (0.0108)	-0.464*** (0.000)	-0.559*** (0.000)
Namibia	-0.528*** (0.0006)	-0.307*** (0.003)	-0.633*** (0.0003)	-0.516*** (0.0016)	-0.538*** (0.000)	-0.313*** (0.004)
South Africa	-0.212* (0.0801)	-0.058 (0.402)	-0.068 (0.6386)	0.081 (0.3847)	-0.054 (0.651)	0.036 (0.620)
Southern Africa	-0.722** (0.0248)	-0.111*** (0.009)	-0.132* (0.0772)	-0.166* (0.0617)	-0.181*** (0.000)	-0.193*** (0.000)

(Note that ***, ** and * imply the rejection of the null hypothesis of a unit root at 1%, 5% and 10% significance level, respectively, which also mean that there is no evidence of unemployment hysteresis. K = 1 and K = 2 are Fourier Frequencies.

The results presented in Table 4 offer an assessment of unemployment hysteresis across Southern African countries using four complementary unit root testing frameworks: Augmented Dickey-Fuller (ADF), Seemingly Unrelated Regression ADF (SUR-ADF), Fourier ADF (FADF), and Seemingly Unrelated Regression Fourier ADF (SUR-FADF).

At the country level, Botswana, Lesotho, and Namibia exhibit strong rejection of the unit root hypothesis across all test specifications and Fourier frequencies. This implies that unemployment in these countries is mean-reverting and that policy interventions can effectively reduce unemployment over time. These findings align with the structuralist view that labour

market rigidities are not the sole drivers of persistent unemployment (Ball, 2009). The robustness of the results across both ADF and SUR-FADF tests reinforces the reliability of the inference.

Eswatini presents mixed evidence. While the ADF test strongly rejects the unit root hypothesis, the SUR-based and Fourier tests show weaker or no rejection. This inconsistency may reflect the presence of structural breaks or nonlinearities that are better captured by Fourier-based models (Enders & Lee, 2012). It also suggests that unemployment dynamics in Eswatini may be influenced by episodic shocks or policy reversals that complicate the stationarity process.

South Africa stands out as the only country in the region where the unit root hypothesis is not rejected in most specifications. This indicates the presence of hysteresis, suggesting that unemployment shocks in South Africa may have long-lasting effects. This finding is consistent with previous studies that highlight the structural challenges in South Africa's labour market, including high youth unemployment, rigid labour laws, and skill mismatches (Blanchard & Wolfers, 2000; Furuoka, 2017). The persistence of unemployment in South Africa underscores the need for comprehensive structural reforms beyond short-term policy interventions.

The aggregate results for Southern Africa show consistent rejection of the unit root hypothesis across most specifications, particularly in the SUR-FADF framework. This suggests that, at the regional level, unemployment tends to revert to its natural rate over time, indicating the absence of hysteresis. The SUR-FADF test, which accounts for both cross-sectional dependence and smooth structural breaks, is particularly well-suited for analysing labour market dynamics in developing regions where structural shifts and interdependencies are common (Becker, Enders, & Lee, 2006; Breitung & Pesaran, 2008). The regional aggregation results for Southern Africa confirm the absence of hysteresis, with significant rejection of the unit root hypothesis in SUR-ADF and SUR-FADF tests. This suggests that, despite country-level heterogeneity, the region as a whole exhibits a mean-reverting unemployment dynamic.

The findings from Southern Africa reinforce the importance of using advanced econometric techniques to uncover the true nature of unemployment dynamics. The SUR-FADF framework, by incorporating both cross-sectional dependence and smooth structural breaks, provides a nuanced understanding of labour market behaviour in Sub-Saharan Africa. The results have significant policy implications: in countries where hysteresis is absent, active labour market policies can effectively reduce unemployment. In contrast, countries exhibiting hysteresis, such as South Africa, may require deeper structural reforms to address entrenched labour market inefficiencies.

Sub-Region Results Matrix Design

Table 5: *Sub-Regional Evidence of Unemployment Hysteresis in Sub-Saharan Africa*

Sub-Region	ADF Test	SUR-ADF Test	FADF Test		SUR-FADF Test	
			K = 1	K = 2	K = 1	K = 2
West Africa	Hysteresis	No Hysteresis	No Hysteresis	Hysteresis	No Hysteresis	No Hysteresis
East Africa	Hysteresis	No Hysteresis	No Hysteresis	Hysteresis	No Hysteresis	No Hysteresis
Central Africa	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis
Southern Africa	No Hysteresis	No Hysteresis	Hysteresis	Hysteresis	No Hysteresis	No Hysteresis
The Rest of Sub-Saharan	-0.057 (0.7186)	-0.121** (0.012)	-0.270** (0.0181)	-0.337** (0.0103)	-0.199*** (0.001)	-0.181*** (0.001)

(Note that ***, ** and * imply the rejection of the null hypothesis of a unit root at 1%, 5% and 10% significance level, respectively, which also mean that there is no evidence of unemployment hysteresis. K = 1 and K = 2 are Fourier Frequencies.

The sub-regional matrix provides a consolidated view of unemployment hysteresis across different parts of Sub-Saharan Africa using four econometric frameworks: Augmented Dickey-Fuller (ADF), Seemingly Unrelated Regression ADF (SUR-ADF), Fourier ADF (FADF), and Seemingly Unrelated Regression Fourier ADF (SUR-FADF). These tests are designed to determine whether unemployment rates are stationary or exhibit hysteresis, with rejection of the unit root hypothesis implying stationarity and thus no hysteresis. The results for West Africa reveal mixed evidence. The ADF test suggests hysteresis, indicating persistent unemployment effects. However, the SUR-ADF and FADF tests largely reject the unit root hypothesis, pointing to mean-reverting unemployment. Similar to West Africa, East Africa exhibits mixed results. The ADF test indicates hysteresis, while SUR-ADF and FADF tests reject it, suggesting stationarity. The SUR-FADF test at K=1 shows hysteresis, but at K=2 it rejects the unit root hypothesis. Central Africa presents the most consistent results across all tests, with strong rejection of the unit root hypothesis. Southern Africa shows a more complex pattern. The ADF and SUR-ADF tests reject hysteresis, but the FADF and SUR-FADF tests at K=1 and K=2 indicate hysteresis.

For the rest of Sub-Saharan countries, the results show strong rejection of the unit root hypothesis in SUR-ADF, FADF, and SUR-FADF tests, particularly at higher significance levels. This implies no hysteresis and a mean-reverting unemployment rate. The ADF test, however, fails to reject the null hypothesis, suggesting the presence of hysteresis. This discrepancy reinforces the superiority of SUR-FADF methods, which account for cross-sectional dependence and smooth

structural breaks, making them more reliable in developing country contexts (Becker, Enders, & Lee, 2006).

Sensitivity Analysis

To ensure the robustness of our findings on unemployment hysteresis across Sub-Saharan Africa, we conducted a sensitivity analysis. This involved varying model specifications, testing alternative assumptions, and examining the influence of structural dynamics.

Lag Structure and Deterministic Components

The robustness of the Augmented Dickey-Fuller (ADF) test results was evaluated by systematically varying lag lengths and deterministic components. The initial specification employed a lag length of 8, selected using the Schwarz and Akaike Information Criteria, with both intercept and trend included. Subsequent variations tested shorter and longer lag structures, as well as alternative deterministic specifications (intercept only, no intercept, and no trend).

Table 6: ADF Test at Different Lag Structures

Sub-Region	ADF Test @ Lag 8 Max	ADF Test @ Lag < 8		ADF Test @ Lag > 8		Remarks
	Intercept & Trend	No Intercept & Trend	Intercept Only	No Intercept & Trend	Intercept Only	
West Africa	I(1)	I(1)	I(1)	I(1)	I(1)	Consistent
East Africa	I(1)	I(1)	I(1)	I(1)	I(1)	Consistent
Central Africa	I(0)	I(1)	I(0)	I(1)	I(1)	Mixed
Southern Africa	I(0)	I(1)	I(1)	I(1)	I(0)	Mixed
The Rest of SSA	I(1)	I(1)	I(1)	I(1)	I(1)	Consistent

(Note that I(0) and I(1) imply the absence and presence of unemployment hypothesis respectively) **Source: The Author's Estimation (2025)**

The results demonstrate consistency for West Africa, East Africa, and the rest of Sub-Saharan Africa, where unemployment series remained integrated of order one [I(1)] across all specifications. This indicates that hysteresis conclusions in these regions are not sensitive to arbitrary lag choices, reinforcing the robustness of the findings. In contrast, Central and Southern Africa exhibit mixed outcomes, with some specifications suggesting stationarity [I(0)]

and others indicating persistence [$I(1)$]. This variability highlights the importance of model specification in regions with complex labour market dynamics, where structural breaks and institutional heterogeneity may influence test outcomes (Becker, Enders, & Lee, 2006; Enders & Lee, 2012). Overall, the lag structure analysis confirms that the main conclusions are stable for most regions, but caution is warranted in interpreting results for Central and Southern Africa.

Regional Aggregation Sensitivity

To test the influence of sub-region economies, we re-estimated models by adjusting the overall regional aggregate. For example, SSA adjusted (minus West Africa) and SSA adjusted (minus East Africa) continued to reject the unit root hypothesis at conventional significance levels, indicating no hysteresis. Similarly, excluding Central Africa and Southern Africa yielded consistent results, with only minor variations in significance levels.

Table 7: Regional Aggregative Sensitivity Test

Sub-Region	Fourier SUR Test		
	K = 1	K = 2	K = 4
SSA _{-Adj} (Minus West Africa)	-0.255*** (0.000)	-0.154*** (0.002)	-0.078* (0.080)
SSA _{-Adj} (Minus East Africa)	-0.230*** (0.000)	-0.157*** (0.000)	-0.091** (0.016)
SSA _{-Adj} (Minus Central Africa)	-0.216*** (0.001)	-0.135*** (0.007)	-0.058 (0.202)
SSA _{-Adj} (Minus Southern Africa)	-0.652*** (0.000)	-0.149** (0.040)	-0.121* (0.081)
The Rest of SSA	-0.257*** (0.000)	-0.154*** (0.002)	-0.0785* (0.077)

*(Note that ***, ** and * imply the rejection of the null hypothesis of a unit root at 1%, 5% and 10% significance level, respectively, which also mean that there is no evidence of unemployment hysteresis. K = 1, K = 2 and K = 4 are Fourier Frequencies.*

These findings suggest that regional hysteresis conclusions are not dominated by any sub-region. This reinforces the robustness of the regional aggregation and validates the use of SUR-based methods, which account for cross-sectional dependence and improve inference in panel settings (Breitung & Pesaran, 2008). The results also underscore the resilience of Sub-

Saharan Africa's aggregate labour market dynamics, where hysteresis effects are not concentrated in single economies but reflect broader structural patterns.

Fourier Frequency Variation

In Fourier-based tests, we experimented with different frequency values ($k = 1$ to 5). The results were largely stable across frequencies, confirming the reliability of the nonlinear specification. For most regions, East Africa, Southern Africa, and the rest of Sub-Saharan Africa, no hysteresis was detected across all frequencies, indicating strong stationarity in unemployment rates.

Table 5: Fourier Frequency Variation

Sub-Region	SUR-FADF Test				
	K = 1	K = 2	K = 3	K = 4	K = 5
West Africa	No Hysteresis	No Hysteresis	Hysteresis	Hysteresis	Hysteresis
East Africa	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis
Central Africa	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	Hysteresis
Southern Africa	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis
The Rest of Sub-Sahara	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis	No Hysteresis

(Note that $K = 1$, $K = 2$, $K = 3$, $K = 4$ and $K = 5$ are Fourier Frequencies.)

However, West Africa and Central Africa exhibited sensitivity at higher frequencies ($K = 3$ to 5), where hysteresis effects emerged. This suggests that in these regions, unemployment dynamics may be influenced by cyclical or structural shocks that are better captured by higher-order Fourier approximations. Such sensitivity is consistent with the literature emphasising the role of smooth structural breaks and nonlinear adjustments in labour market behaviour (Enders & Lee, 2012).

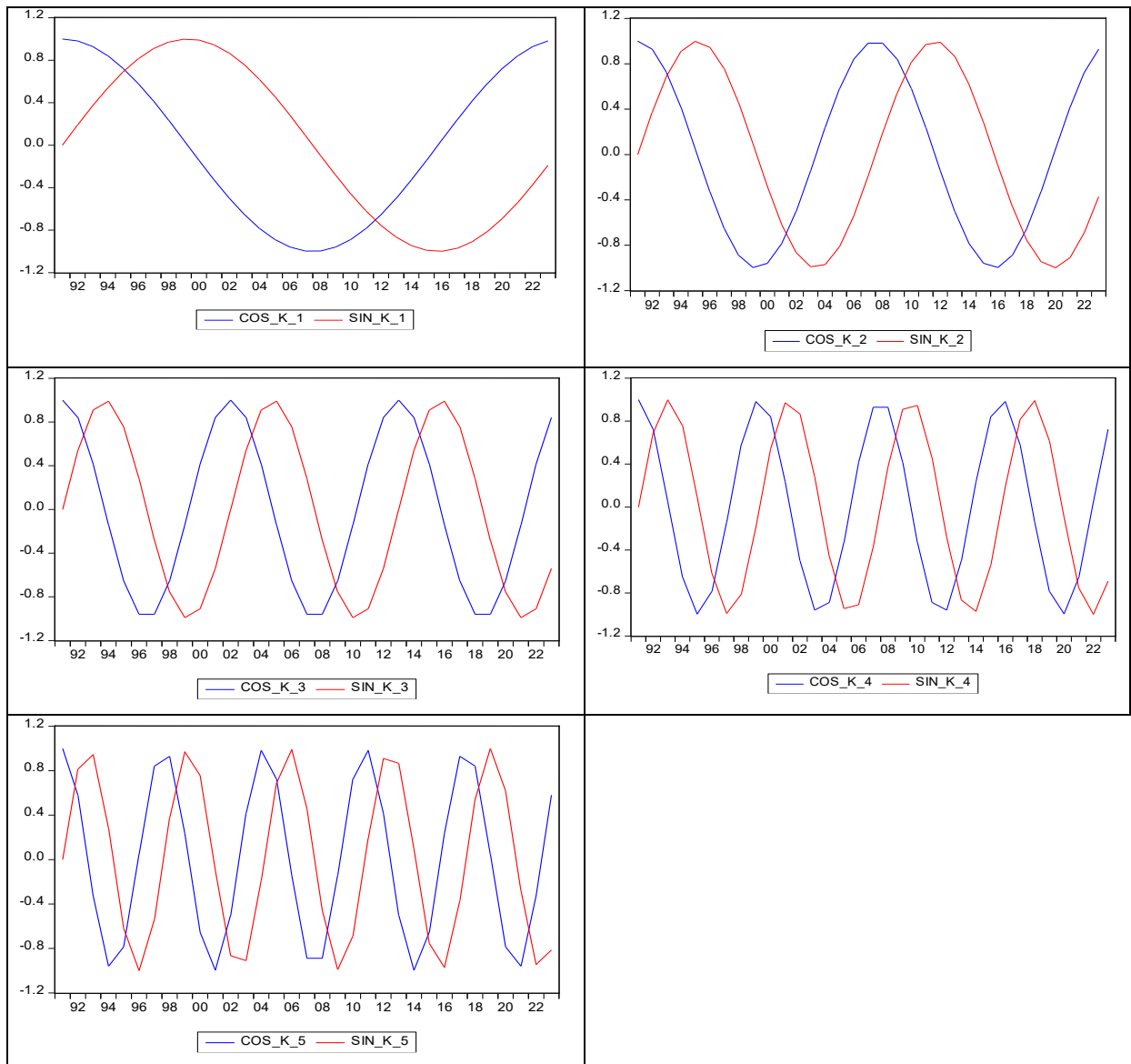


Figure 2: Fourier Function at Various Frequencies

The Fourier function, as shown across different frequencies in the figure above, illustrates how sinusoidal components, specifically sine and cosine terms, capture smooth, cyclical patterns within time series data. In the context of unemployment hysteresis analysis, adding Fourier terms into unit root tests (as done in the SUR-FADF framework) enables researchers to model structural breaks and nonlinear trends without forcing sudden shifts. As frequency increases, the function becomes more sensitive to subtle fluctuations, allowing the detection of complex, smooth transitions in unemployment dynamics that traditional tests might miss. This is especially relevant for Sub-Saharan Africa, where labour markets are affected by gradual policy changes, demographic shifts, and economic cycles. By applying Fourier-based methods at multiple frequencies, the study improves its ability to differentiate between real hysteresis effects and

temporary deviations, thereby enhancing the accuracy of policy advice tailored to each country's labour market behaviour.

SUMMARY AND CONCLUSION

The paper explores the phenomenon of unemployment hysteresis, which suggests that temporary shocks can have long-lasting effects on labour markets, preventing unemployment from reverting to pre-shock levels. Using annual and quarterly unemployment data from 1991-2024, the study applies four different versions of unit root tests, namely ADF, SUR-ADF, FADF, and SUR-FADF, to capture the dynamic properties of unemployment series across Sub-Saharan Africa. Results show significant regional variation. In West Africa, countries like Nigeria, Ghana, and Guinea-Bissau exhibit mean-reverting unemployment, while Burkina Faso and Mali show entrenched hysteresis. East Africa demonstrates resilience, with Malawi, Djibouti, and Tanzania rejecting the unit root hypothesis, though Comoros and Rwanda display persistent hysteresis. Central Africa largely shows stationarity, with Angola, Chad, and Congo presenting strong evidence of mean reversion, while the Central African Republic remains vulnerable. Southern Africa is mixed: Botswana, Lesotho, and Namibia show no hysteresis, but South Africa stands out with entrenched hysteresis, reflecting structural labour market rigidities. The aggregate regional results suggest that, overall, Sub-Saharan Africa tends toward mean-reverting unemployment, though country-specific differences highlight the importance of institutional, structural, and political factors. Sensitivity analyses confirm the robustness of findings across lag structures, Fourier frequencies, and regional aggregation.

The study concludes that unemployment hysteresis is not uniformly present across Sub-Saharan Africa. While many countries demonstrate resilience and mean-reverting unemployment, others, particularly South Africa, Burkina Faso, and Mali, exhibit persistent hysteresis effects. This heterogeneity underscores the complexity of labour market dynamics in the region, shaped by structural rigidities, institutional weaknesses, and exposure to external shocks. The SUR-FADF methodology proves effective in capturing these nuances, offering a more reliable framework than traditional unit root tests.

However, the findings also highlight important avenues for future research. First, extending the analysis to incorporate sectoral unemployment dynamics (e.g., agriculture, manufacturing, services) could provide deeper insights into structural sources of hysteresis. Second, future studies may explore the role of policy interventions, such as labour market reforms, social protection schemes, and active employment policies, in mitigating hysteresis effects. Finally, comparative studies between SSA and other developing regions could help

identify whether observed patterns are region-specific or part of broader global labour market trends.

RECOMMENDATIONS

Governments in Sub-Saharan African countries where unemployment is mean-reverting should intensify active labour market policies that directly create opportunities and build skills. This includes scaling up vocational training programs to align workforce skills with market demand, expanding public employment schemes to absorb job seekers during downturns, and deploying fiscal stimulus to support job creation in key sectors. Importantly, these interventions must be tailored to address the disproportionately high unemployment among youth and women. By designing inclusive programs that provide apprenticeships, entrepreneurship support, and targeted subsidies for female workforce participation, policymakers can prevent long-term scarring, enhance productivity, and accelerate recovery from cyclical shocks.

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