THE RELATIONSHIP BETWEEN POLITICAL STABILITY, DEMOCRACY AND LONG RUN GROWTH: THE CASE OF SUB SAHARAN AFRICA

Adem GÖK[1]

Abstract

The aim of the study is to analyze the relationship between political stability, democracy and long run growth in Sub Saharan Africa. Panel vector auto regression model is employed to overcome the endogenenity problem due to the reverse causality. The analysis covers 44 countries in Sub Saharan Africa over the period of 1996-2017. Compared to other regions, Sub Saharan Africa has the slowest long run growth rate as of 2017. Political stability in the region is still way below compared to developing and developed countries of other regions. Sub Saharan Africa is second worst region with respect to democracy as of 2008 and the region has experienced democratic backsliding after a peak in 2005. According to Granger causality test, bidirectional casual relationships are found between political stability, democracy and growth. It is also found that one standard deviation shocks given to political stability and democracy have positive significant impacts on growth.

Keywords: Democracy, Growth, Panel VAR, Political Stability, Sub Saharan Africa

Jel Classification: C33, E02, 043

POLİTİK İSTİKRAR, DEMOKRASİ VE UZUN DÖNEM BÜYÜME ARASINDAKİ İLİŞKİ: SAHRA ALTI AFRİKA ÜZERİNE

Öz

Çalışmanın amacı, Sahra Altı Afrika'sında politik istikrar, demokrasi ve uzun dönem büyüme arasındaki ilişkiyi analiz etmektir. Kişi başı GSYH'dan politik istikrar ve demokrasiye olan ters nedensellik ilişkisi nedeniyle, içsellik sorununu aşmak için panel vektör otoregresif model kullanılmıştır. Analiz 1996-2017 dönemi için 44 Sahra Altı Afrika ülkesini kapsamaktadır. Diğer bölgelerle karşılaştırıldığında, Sahra Altı Afrika'sı, 2017 itibariyle en düşük uzun dönem büyüme oranına sahiptir. Sahra Altı Afrika'sı politik istikrar bakımından diğer bölgelerdeki gelişmekte olan ve gelişmiş ülkelerle karşılaştırıldığında çok geride kalmaktadır. Sahra Altı Afrika'sı, 2008 itibariyle demokrasi seviyesi açısından en kötü ikinci bölgedir ve bölge 2005 yılında zirve yaptıktan sonra halen demokratik gerileme yaşamaktadır. Granger nedensellik testi sonucuna göre, politik istikrar, demokrasi ve uzun dönem büyüme arasında çift yönlü nedensellik ilişkisi bulunmuştur. Politik istikrar ve demokrasiye verilen bir standart sapmalık şokun uzun dönem büyümenin bir göstergesi olan kişi başı GSYH üzerinde pozitif anlamlı etkisi olduğu bulunmuştur.

Anahtar Kelimeler: Büyüme, Demokrasi, Panel VAR, Politik İstikrar, Sahra Altı Afrika

Jel Sınıflandırması: C33, E02, 043

[1] Kırklareli University, Kırklareli Üniversitesi, Kayalı Kampüsü, İİBF, İktisat Bölümü, Oda No:324, Kırklareli, 39000, adem.gok@klu.edu.tr, ORCID: 0000-0002-3786-2507.

1. Introduction

The aim of the study is to analyze Sub Saharan Africa (SSA) due its low long run growth rate due to the lowest performance in political stability and democracy when compared to other regions. SSA has the slowest long run growth rate denoted by lowest GDP per capita of 1,647 $ as of 2017. SSA has still experienced negative rates of per capita income growth as of 2015. Political stability in SSA is still way below compared the developing and developed countries in other regions. SSA is second worst region with respect to the democracy as of 2008 and it has experienced democratic backsliding after a peak in 2005.

Beside the low GDP per capita, which is a proxy for low long-run growth, the main problem in SSA is the low quality of institutions. Low institutional quality in the region leads to low long-run growth performance of the region throughout the centuries. The reason for SSA countries to be endowed with low levels of long-run economic growth, democracy and political stability is that most of the SSA countries can be characterized as praetorian states with strong-armed governments. These patrimonial states, which are ruled by client-patron relationships, are inclined to low long-run growth and high political instability, and generally they are ruled by autocratic regimes (Tusalem, 2015).

The factors such as education, innovation, capital accumulation, economies of scale, etc. are not causes of growth, but they are growth (North and Thomas, 1973). These factors may only become the proximate causes of growth and the real cause of growth is the quality of institutions (Acemoglu et al. 2005). Hence, we have to analyze the role of institutional factors to evaluate the real causes of growth of a country, region or a continent. Due to this fact, only institutional factors; political stability and democracy are taken as the determinants of long run growth.

An estimate of the impacts of political stability and democracy on growth without controlling for the impacts of growth on political stability and democracy is biased. Because the analysis should tackle the problem of reverse causality running from economic growth to institutional factors. In other words, growth and institutional factors must be taken as endogenous. Due to the endogeneity problem, an econometric approach with single equation has simultaneity problem. (Alesina et. al, 1996). Also, the estimation should consider the self-reinforcing nature of political stability, democracy and growth, which requires that the reduced form equations need to be dynamic rather than static. Hence we should estimate three simultaneous equations for political stability, democracy and growth by conducting panel vector auto regression (Panel VAR) in order to address the endogeneity problem.

Hence, the motivation of the study is to analyze the relationship between political stability, democracy and long run growth in SSA by conducting panel VAR over the period of 1996-2017.

A brief literature review for the effects of political stability and democracy on growth, and the effects of growth on political stability and democracy is as follows.

By treating political stability as an exogenous variable, Goldsmith (1987) concluded that political stability has no significant effect on growth. Londregan and Poole (1989) could not find evidence for a negative significant impact of political instability on economic growth; instead, they found that a decrease in growth decreases political stability. According to Alesina et al. (1996), the probability of a government change is high in countries with lower political stability and these countries suffer from lower growth. Alesina et al. (1996) also could not find a significant impact of economic growth on political stability. Zablotsky (1996) found a two-way association between political stability and growth. He concluded that they are both prerequisites for each other. While Asteriou and Price (2001) stated that political stability has a strong positive significant impact on growth for UK, Cebula (2011) stated the same result for OECD countries. Cebula (2011) concluded that decreasing economic freedoms and abandoning policies ensuring political stability lead to decrease in economic growth. While Gür and Akbulut (2012) found that political stability has a positive significant effect on growth for developing countries. Aisen and Veiga (2013) found the same result for 169 developed and developing countries. Aisen and Veiga (2013) concluded that political instability decreases growth through the channels of lower productivity, lower physical and human capital accumulation. According to Gurgul and Lach (2013), there is a positive significant role of political stability on growth for 10 CEE transition countries and there is a one-way causality running from political stability to growth. In a cointegration analysis for Bangladesh over the 1984-2009 period, Uddin Ahmed and Habibullah Pulok (2013) stated positive significant short run and negative significant long run effects of political stability on growth. Radu (2015) concluded that political stability is a prerequisite for both growth and sustainable economic development for Romania. By employing panel data analysis, Shabbir et al. (2016) obtained the result that higher political stability promotes growth in D-8 countries. Tabassam et al. (2016) found that terrorism, which is a proxy for political instability, has a negative significant impact on growth for Pakistan. They recommended that the factors leading to political instability must be taken into account to reach economic decisions. Uddin et al. (2017) detected that political stability is vital and political risk is detrimental for growth in developing countries. Even both variables have negative significant effect on growth, political instability has more severe negative significant effect than political risk for the OIC countries, compared

with non-OIC countries. They concluded that a decrease in political stability decreases growth in developing countries by decreasing capital investment and human capital accumulation, and by disrupting industrialization process.

Weede (1983) initially detected a negative significant effect of democracy on growth for 90 countries over the period of 1960-1979. When he replicated the analysis only for developing countries, he found an insignificant role of democracy on growth. He also found a strong negative role of democracy on growth for countries where revenue of government is larger than twenty percent of GDP. He concluded that democracy does not hurt the growth prospect of a nation but a consolidation of democracy and strong state interference with the economic system does. Barro (1996) stated that democracy has a weak negative significant effect on growth. He suggested a nonlinear relationship between democracy and growth. He concluded that democracy positively contributes to growth at low level of political freedom and democracy negatively contributes to growth above the moderate level of political freedom. For a group of 110 countries over the period of 1961-1992, De Haan et al. (1996) found that political rights and civil liberties may not enhance growth performance of a country, at least they do not hinder it. Feng (1997) concluded that democracy has a negative direct impact and a positive indirect impact on economic growth. The indirect impact is directed through the channel of political stability. Heo and Tan (2001) pointed out that democracy Granger causes growth for ten developing countries and economic growth Granger causes democracy for eleven developing countries. Hence they concluded that democracy and economic growth causes each other. Tavares and Wacziarg (2001) declared a moderate negative effect of democracy on growth. They concluded that democracy enhances growth by increasing human capital accumulation and by decreasing income inequality, and democracy impedes economic growth by decreasing physical capital accumulation and by increasing government consumption. Rivera-Batiz (2002) stated that democracy is a significant determinant of growth as long as democracy is associated with high quality of governance. In a meta-regression analysis, Doucouliagos and Ulubaşoğlu (2008) could not find a direct effect of democracy on growth, but they found a positive significant indirect effect of democracy on growth through the channels of higher human capital, lower inflation, lower political instability, and higher economic freedom. By comparing direct and indirect impacts of democracy on growth, they concluded that the net impact does not seem to be detrimental. Helliwell (2009) evaluated two-way relationship between democracy and growth. He found that democracy has a positive significant indirect role on growth through the channels of education and investment, which counterbalances the insignificant direct role of democracy. Aisen and Veiga (2013) found a small negative role of democracy on

growth for 169 countries. Baklouti and Boujelbene (2018) pointed out bidirectional relationship between democracy and growth for 17 MENA countries. They concluded that democracy and political stability have positive significant impacts on growth when democracy is regressed with political stability.

Given the motivation of the study, the paper contributes to the literature in two ways. First, the paper analyzes the relationship between long run growth, political stability and democracy in a Northian sense, which considers governance as the foremost determinant of long run growth. Second, the paper analyzes the interrelation between long run growth, political stability and democracy in a simultaneous system with Panel VAR, considering the fact that each variable affects the other at the same time.

Next section builds hypotheses to analyze the relationship between political stability, democracy and long run growth. Third section presents the comparison of SSA with other regions according to its performance on political stability, democracy and long run growth. Fourth section presents Panel VAR methodology and results. Last section concludes.

2. The Theoretical Perspective on the Relationship between Democracy, Political Stability and Growth

2.1. The Interrelation between Political Stability and Growth

Since political stability creates a business environment where confidence and trust flourish, a certain level of political stability must be established in a country to facilitate investment and production, which contributes to economic growth (Shabbir et al., 2016).

First we must define political instability in order to analyze the role of political stability on growth. It is the political upheaval, unrest, turmoil or violence in a society that increases the propensity of regime or government change. The change might be constitutional or unconstitutional (Alesina et al., 1996), but unconstitutional change in the executive power as in the form of coups d'etat leads to higher political instability.

The persistent nature of political instability threatens both socio-political structure and the process of economic development (Uddin et al., 2017). Political instability has negative effect on growth through various channels. The adverse effect is more severe for countries with lack of well-established economic and political institutions (Uddin et al., 2017).

First, political instability creates policy uncertainty, risk and volatility for investment and savings (Alesina et al., 1996; Tabassam et al., 2016). The fall in investment and savings decreases productivity and consumption due to decreasing earning capacity and purchasing power of society leading to decrease in growth (Tabassam et al., 2016). When political instability implies uncertain future policies, both risk averse domestic and foreign investors invest in safer places by exiting the economy instead of investing in a risky environment (Alesina et al., 1996; Tabassam et al., 2016). Hence decrease in domestic and foreign investment decreases economic growth.

An increase in political instability leads to decline in investment and output level. Decline in output level decreases the level of employment resulting in low income and high prices, which stimulates inflation (Tabassam et al., 2016). Hence, political instability causes an increase in inflation and unemployment, which negatively contributes to economic growth. The reduction in domestic productivity increases imports, which leads to decline in growth by distorting trade account (Tabassam et al., 2016).

Political instability negatively affects factors that are contributing to growth such as physical and human capital accumulation because of the uncertainty and risk in their expected returns. (Aisen and Vega, 2013) Decline in these factors lead to decline in growth.

As Aisen and Vega (2013) argued, political instability adversely affects total factor productivity by reducing the rate of time preference of a society, which leads to less efficient resource allocation and decline in R&D made by firms and government. Together with less efficient allocation of resources, decline in R&D slows down technological progress, which leads to lower productivity and growth.

A weak government under continuous threat of losing power is over sensitive to satisfy the wishes of lobbyists and pressure groups in order to stay in the office (Alesina et al., 1996). The cost of remaining in the office is following policies that are not maximizing social welfare (Olson, 1982). Political instability strengthens the adverse effects of rent-seeking activities on growth (Alesina et al., 1996).

Finally, if the probability of coups d'état is high especially in countries with weak rulers that are easily overthrown, citizens might engage in revolutionary activities instead of productive market activities. This situation leads to decrease in investment through decreased labor supply, and to decrease in economic growth due to decrease in purchasing power (Alesina et al., 1996).

Hence political stability stimulates economic growth by creating a suitable environment for business to develop, which positively contributes to both domestic and foreign investment, by creating employment, which increases purchasing power leading to both increased consumption and aggregate demand, by improving trade account due to decrease in imports and increase in exports (Khaldūn et al., 1969).

Hypothesis 1: An increase in political stability leads to growth.

There are two conflicting hypotheses for the role of growth on political stability as good growth hypothesis and destabilizing growth hypothesis (Paldam, 1998). Good growth hypothesis asserts that growth increases the level of income, so citizens ratify the government and vice versa (Paldam, 1998). In democratic countries, poor economic performance as in the form of low growth may lead to political unrest and political instability, which may increase the chance of government collapse (Alesina et al., 1996; Uddin et al., 2017). Also, the chance of reelection of incumbent government depends especially on rate of growth immediately before the elections (Alesina et al., 1996). Hence low growth leads to increase in political instability in democratic countries. In nondemocratic countries with weak rulers that are easily overthrown, low growth contributes to popular dissatisfaction, increases the likelihood of citizens to engage in revolutionary rather than market activities, and leads to coups d'état more likely through the channel of high unemployment (Alesina et al., 1996). Since growth enhances the legitimacy of the government and rapid growth enhances the popularity of the government, rapid growth diminishes the likelihood of constitutional or unconstitutional change in executive power. While constitutional change in government instills lower political instability in democracies, unconstitutional change in government instills higher political instability in nondemocracies (Feng, 1997).

Hypothesis 2: Economic growth leads to increase in the level of political stability.

On the other hand, destabilizing growth hypothesis asserts that economic growth initiates complex societal changes, which leads to political instability, if the political system is not matured (Paldam, 1998).

Hypothesis 3: Economic growth leads to decline in the level of political stability.

2.2. The Interrelation between Democracy and Growth

Each of three alternative schools argues different mechanism for the role of democracy on growth.

Conflict school claims the hindering role of democracy on growth by offering three hy-

potheses. First, premature democracies generate dysfunctional results, which decreases economic growth; second, in contrast to autocratic regimes, democratic regimes cannot carry out appropriate policies for rapid economic growth; last, democratic regime is not capable of pervasive state involvement in the development process of a nation (Sirowy Inkeles, 1990). They concluded that rapid economic growth requires autocratic control with decreased freedom, hence, developing countries in particular cannot attain rapid economic growth without a strong centralized government (Feng, 1997). A parallel argument to conflict school is that an authoritarian government utilizes and allocates resources more efficiently than democratic government (Feng, 1997). Alesina et al. (1996) states that policy makers in democracies are prone to the pressures from lobbyists and interest groups, hence they may follow opportunistic policies to increase the possibility of reelection instead of following policies to increase economic growth.

Hypothesis 4: An increase in democracy impedes economic growth.

Compatibility school claims that democracy enhances growth since democracy generates social conditions that are conducive to economic growth by improved civil liberties and political rights, and democracy promotes growth by ensuring property rights and market competition due to improved economic freedom (Feng, 1997).

Hypothesis 5: An increase in democracy leads to growth.

Finally, skeptical school claims that democracy has no systematic significant role on growth. It is not the type of regime either democratic or autocratic, but the institutional structure either two-party or multi-party and government development strategies either import or export substitution matter. Since different regimes may embark on same policies, regime type has a negligible role on growth.

Hypothesis 6: An increase in democracy has no significant role on growth.

If rapid growth is experienced in authoritarian government, then it will increase the legitimacy of the regime, which leads to a decline in democracy (Feng, 1997).

Hypothesis 7: Growth leads to decrease in the level of democracy.

Rapid growth promotes political freedom by allowing citizens to gain status and income independently from the state. (Feng, 1997).

Hypothesis 8: Economic growth leads to increase in democracy.

In the short run, autocratic government uses economic growth as an excuse to sacrifice democracy and freedom, but in the long run, continuous economic freedom in the form of

high per capita income leads to higher development level, which enhances democracy (Feng, 1997).

2.3. The Interrelation between Political Stability and Democracy

Political stability enhances democracy since it inhibits regime interruption, enhances system adjustability, and reduces the probability of coups d'état (Feng, 1997). Political stability has positive impact on democracy since democratic transition cannot occur until the state has achieved its unity by overwhelming internal conflict due to the presence of various ethnic groups or polarizing cleavages (Tusalem, 2015). A country needs domestic security within its borders as a minimum state of political stability to experience the advent of democratic politics (Tusalem, 2015).

Hypothesis 9: An increase in political stability increases democracy.

Democracy increases political competition by reducing the chances of abrupt and profound unconstitutional government change through coups d'état, which suddenly increases political instability (Feng, 1997). Democracy positively contributes to political stability since it inhibits regime interruption, enhances system adjustability, provides a stable political environment and reduces the probability of coups d'état (Feng, 1997). The combination of macropolitical certainty through inhibiting regime change and micropolitical adjustability through enhancement of system adjustability leads us to reach a conclusion that democracy leads to sustained growth (Feng, 1997).

Hypothesis 10: An increase in democracy increases political stability.

On the other hand, democratic states are vulnerable to political instability because democracy gives birth to political pluralism (Tusalem, 2015).
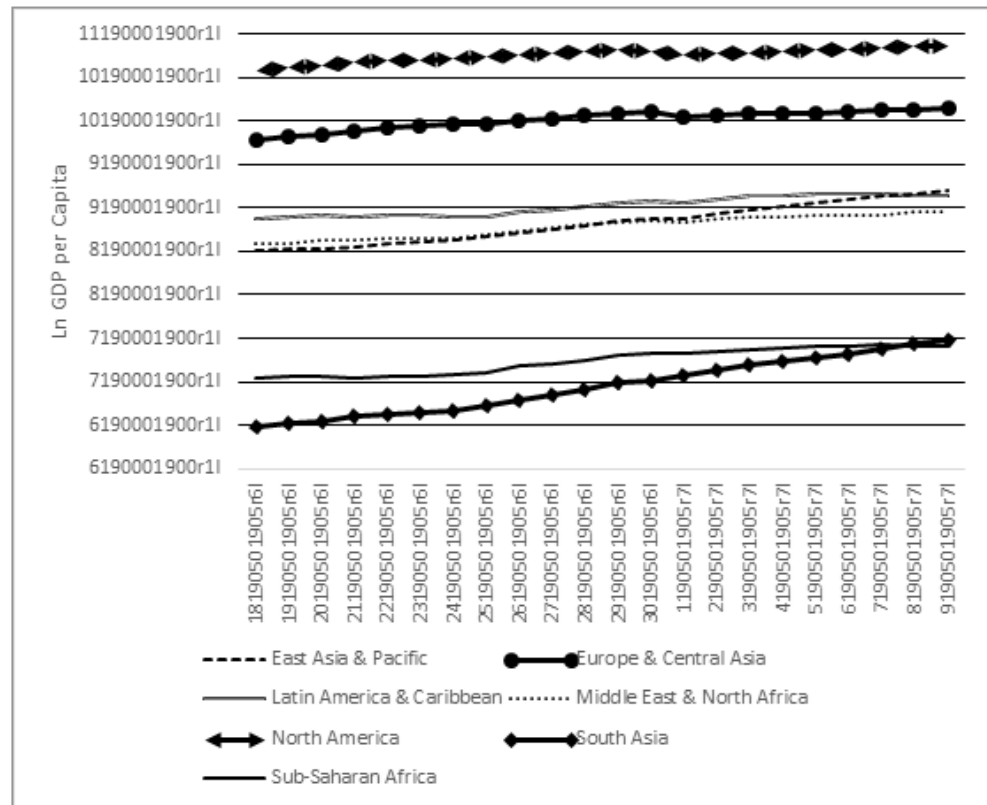
Hypothesis 11: An increase in democracy decreases political stability.

3. Regional Comparison Of Political Stability, Democracy And Long Run Growth

The reason why we take the case of SSA is its low long run growth rate compared to other regions. Figure 1 depicts that SSA has the slowest long run growth rate denoted by lowest GDP per capita of 1,647 $ as of 2017. As of 2015, the region has still experienced negative per capita income growth. South Asia is the second worst growing region with 1779 $ of GDP per capita. The highest long run growth rates belong to North America as 52,950 $ of GDP per capita and to Europe & Central Asia as 25,682 $ of GDP per capita. East Asia &

Pacific has 9914 $ of GDP per capita, followed by Latin America & Caribbean, who has 9356 $ of GDP per capita. Middle East & North Africa, an oil rich region, has 7740 $ of GDP per capita. According to the Figure 1, there are two club convergences; the first is the group of SSA and South Asia and the second is the group of East Asia & Pacific and Latin America & Caribbean. All other regions converge to their own steady state.

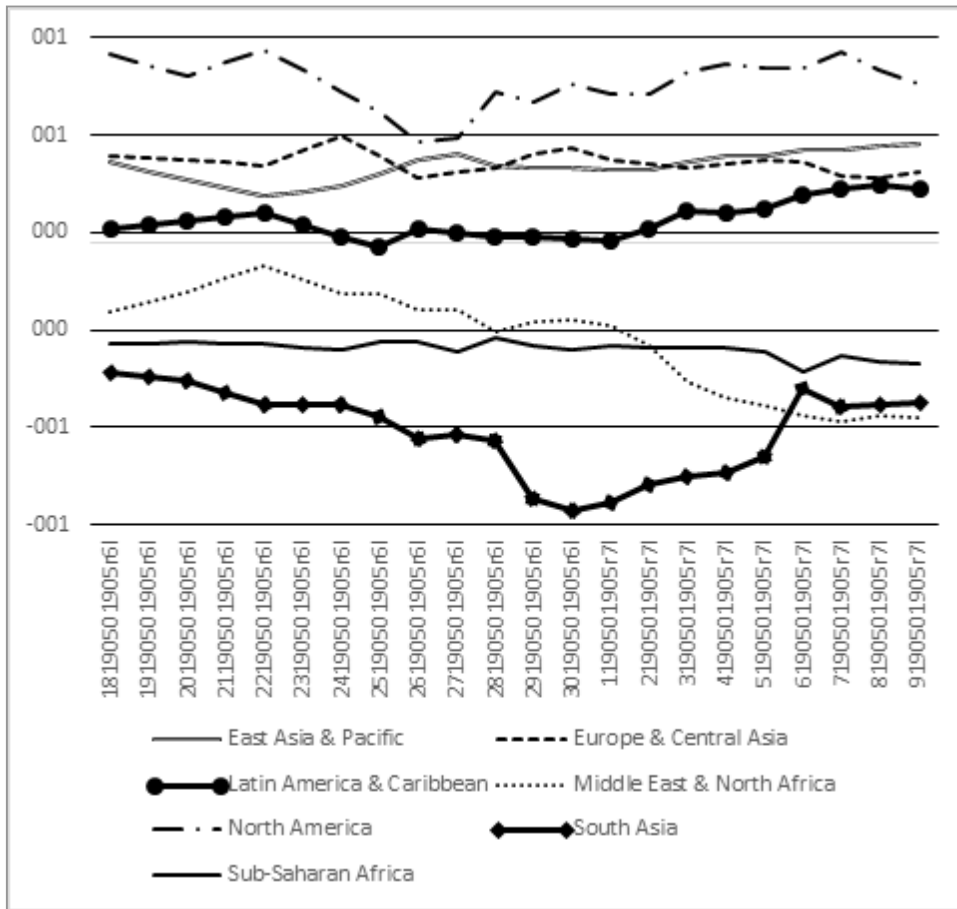**Figure 1:** Regional comparison of long-run growth

Source: WDI (2018).
Notes: y-axis denotes natural logarithm of GDP per capita.

According to Figure 2, SSA outperforms MENA and South Asia with respect to political stability. But, the political stability in SSA is still way below compared to developing and developed countries of other regions.

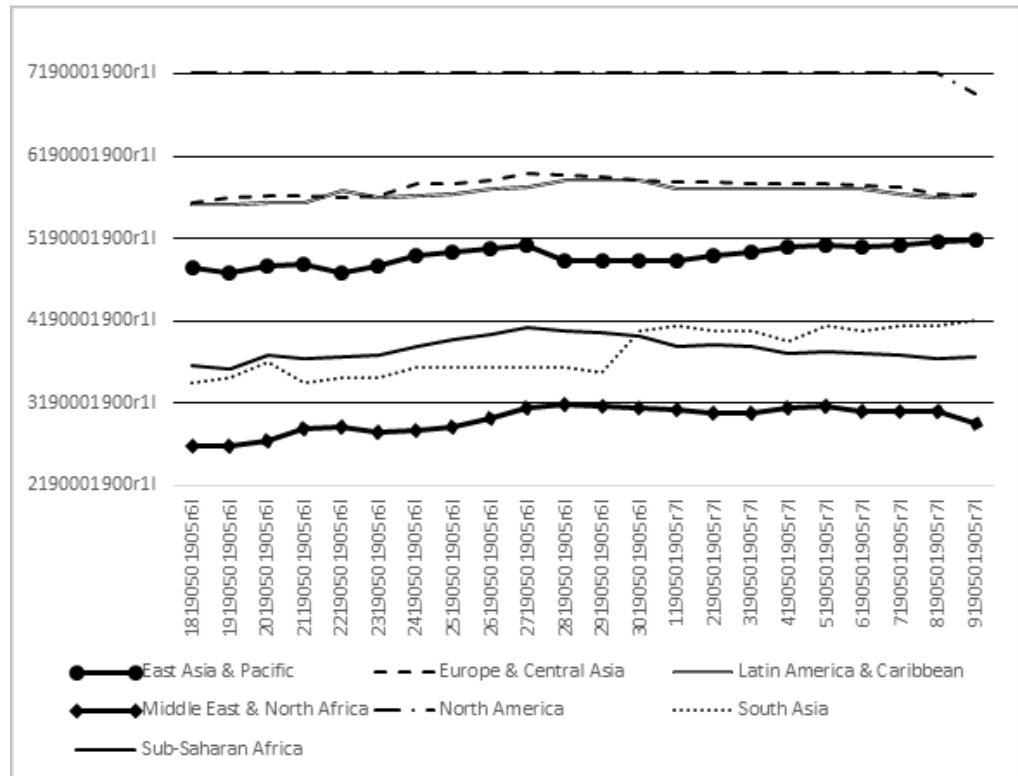**Figure 2:** Regional comparison of political stability

Source: WGI (2018).
Notes: y-axis denotes the scores of political stability no violence. Higher scores indicate higher level of political stability.

According to Figure 3, SSA is the second worst region with respect to democracy as of 2008. After a peak in 2005, the region has experienced democratic backsliding.

Figure 3: Regional comparison of democracy

Source: FRH (2018).
Notes: y-axis denotes the scores of democracy on a scale 1-7. Higher scores indicate higher level of democracy.

Inspecting Figures 1,2 and 3, we see that regions with high long-run growth have higher political stability and democracy, and regions with low long-run growth have lower political stability and democracy.

4. Data And Variables

The analysis covers 44 countries in SSA over the period of 1996-2017. The reason why we take SSA as the case of the study is its low long run growth together with its low performance in democracy and political stability compared to other regions. The selection of time period is done according to data availability. Table 1 presents the variables that are used in the analysis.

Table 1: Data Source

Variable	Explanation	Source
lngdppc	Natural logarithm of GDP per capita	WDI (2018)
democ	Democracy Index	
	average of political rights	FRH (2018)
	and civil liberties	
pols	Political Stability Index	
	political stability no violence	WGI (2018)

Notes: Values for political rights and civil liberties are subtracted from 8, hence the averaged democracy index indicates that higher values correspond to higher level of democracy. WDI (2018) and WGI (2018) are indices that are taken from the website of World Bank. FRH (2018) is taken from the website of Freedom House.

5. Methodology

Since all three variables in our model are endogenous, we use panel VAR for the estimation. The optimal lag-length is found one. Hence, the first order panel VAR model, which is specified for the analysis is as follows;

$$y_{it} = \Gamma_0 + \Gamma_1 y_{it-1} + f_i + d_{c,t} + e_t \tag{1}$$

where y_{it} is a three-variable vector including democ, pols and gdppcg in the model, f_i is the fixed effect, $d_{c,t}$ is the country specific time dummy to capture country specific shocks to growth, and e_t is the idiosyncratic error term (Love and Zicchino, 2006).

The first order reduced form equations that are estimated with Panel VAR are as follows;

$$lngdppc_{it} = \beta_0 + \beta_1 lngdppc_{it-1} + \beta_2 democ_{it-1} + \beta_3 pols_{it-1} + d_{c,t} + e_t \quad (2)$$

$$democ_{it} = \beta_0 + \beta_1 democ_{it-1} + \beta_2 lngdppc_{it} + \beta_3 pols_{it} + d_{c,t} + e_t \quad (3)$$

$$pols_{it} = \beta_0 + \beta_1 pols_{it-1} + \beta_2 lngdppc_{it} + \beta_3 democ_{it} + d_{c,t} + e_t \quad (4)$$

We eliminated the time dummies by subtracting the mean of each variable.

We introduced fixed effects to account for individual heterogeneity in order not to impose the restriction that the underlying structure for each country is the same. We have used forward mean differencing (Helmert procedure) to eliminate the fixed effects, because mean differencing creates biased coefficients due to the correlation with the regressors due to the lags of the dependent variables. The transformation keeps the orthogonality between transformed variables and lags of regressors, so lagged regressors can be used as instruments to estimate the coefficients with System GMM (Love and Zicchino, 2006).

To analyze the relationship between endogenous variables, Panel VAR utilizes three tools of Granger causality test, impulse response function and variance decomposition. The identifying assumption of the panel VAR is that the variable appearing earlier in the model is more exogenous (Love and Zicchino, 2006). The ordering of endogenous variables is done according to the results of Granger causality tests.

The impulse-response functions depict the reaction (response) of one variable to the shock (impulse) given to another variable, while fixing all other shocks to zero. In order to analyze impulse-response functions, we estimated their confidence intervals with Monte Carlo simulations (Love and Zicchino, 2006).

Variance decomposition represents the percentage of variation in one variable that is explained by the shock to another variable, accumulated over time. Variance decomposition is reported for the total effect accumulated over 10 years (Love and Zicchino, 2006).

6. Summary and Stationary Analysis

Table 2 presents the summary statistics of the variables.

Table 2: Summary Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
lngdppc	968	6.979	1.078	4.811	9.920
pols	968	-0.506	0.915	-2.840	1.280
democ	968	3.721	1.588	1.00	8.090

The stationarity of the variables is tested with Levin-Lin-Chu unit-root test. According to the unit-root test results in Table 3, all variables are found stationary at the level.

Table 3: Levin-Lin-Chu Unit-Root Test

	Level		
Variables	**Constant**	**Constant and Trend**	**Result**
lngdppc	-0.6599	-3.9669***	I(0)
pols	-3.8902***	-3.7545***	I(0)
democ	-5.3299***	-4.4302***	I(0)

Notes: The numbers are adjusted t*. ***, ** and * denote significance levels at % 1, % 5 and % 10 respectively.

7. Results

Since there is two-way relationship between any two of the three variables according to the results in Table 4, the variables are endogenous and it is correct to use Panel VAR estimation technique.

Table 4: Granger Causality Test

	lngdppc	pols	democ
lngdppc		0.000	0.004
pols	0.035		0.000
democ	0.000	0.000	

Notes: The numbers are the Prob > chi2 values. Null hypothesis: Column variable does not Granger-cause row variable.

According to the results in Table 5, panel VAR satisfies the stability condition since the stability test indicates that all the eigenvalues lie inside the unit circle.

Table 5: Panel VAR Stability

Eigenvalue		Modulus
Real	**Imaginary**	
0.924	0	0.924
0.545	0	0.545
0.431	0	0.431

According to Figure 4, one standard deviation shock given to political stability (pols) has a positive significant direct impact on GDP per capita (lngdppc). We accept hypothesis 1 that an increase in political stability leads to growth in SSA by creating a business environment where confidence and trust flourish to increase domestic and foreign investment, by creating employment opportunities to increase purchasing power leading to both increased consumption and aggregate demand, by increasing R&D made by firms and government leading to increase in total factor productivity and by improving trade account due to the decrease in imports and increase in exports (Khaldūn et al., 1969; Aisen and Vega 2013; Shabbir et al., 2016). Also, political instability enhances the negative impact of rent-seeking activities on growth as SSA governments follow policies that are not maximizing social welfare in order to remain in the office (Olson, 1982; Alesina et al., 1996). Political instability increases the risks and uncertainty, which adversely affect physical and human capital accumulation leading to decline in growth of SSA countries (Aisen and Vega, 2013). The result support the findings of Zablotsky (1996), Asteriou and Price (2001), Cebula (2011), Gür and Akbulut (2012), Aisen and Veiga (2013), Gurgul and Lach (2013), Shabbir et al. (2016) and Uddin et al. (2017) and contradicts the findings of Goldsmith (1987), Londregan and Poole (1989).

Initially, one standard deviation shock given to GDP per capita (lngdppc) has a negative significant impact on political stability (pols) and later the negative significant effect turns into positive significant effect. Hence hypothesis 3 (destabilizing growth hypothesis), which asserts that growth leads to decline in the level of political stability is valid for earlier periods and hypothesis 2 (good growth hypothesis), which asserts that growth leads to increase in the level of political stability is valid for later periods. Hence, economic growth initially generates complex societal changes leading to political instability since the political system is not matured in SSA countries (Paldam, 1998). For later periods in democratic

SSA countries, poor economic performance as in the form of low growth may lead to political unrest, which may increase the chance of government collapse due to high political instability (Alesina et al., 1996; Uddin et al., 2017). For later periods, in nondemocratic SSA countries, where rulers are weak and easily overthrown, low growth through the channel of high unemployment increases popular dissatisfaction, creates incentives for revolutionary rather than market activities, and leads to the occurrence of coups d'etat more likely (Alesina et al., 1996). The result supports the findings of Londregan and Poole (1989), Zablotsky (1996) and contradicts the findings of Alesina et al. (1996), Gurgul and Lach (2013).

One standard deviation shock given to democracy (democ) has a positive significant direct impact on GDP per capita (lngdppc). Hence we reject hypothesis 4 and 6 by accepting hypothesis 5 in accord with compatibility school for the case of SSA. Democracy enhances economic growth in SSA based on two reasons. First, civil liberties and political rights create the social conditions that are conducive to growth. Second, economic freedom sustains property rights and market competition to promote growth (Feng, 1997). The result supports the findings of Heo and Tan (2001), Rivera-Batiz (2002), Doucouliagos and Ulubaşoğlu (2008), Helliwell (2009) and contradicts the findings of Weede (1983), Barro (1996), Feng (1997), Tavares and Wacziarg (2001), Aisen and Veiga (2013), Baklouti and Boujelbene (2018).

One standard deviation shock given to GDP per capita (lngdppc) has a positive significant impact on democracy (democ). We reject hypothesis 7 and accept hypothesis 8 that economic growth increases the level of democracy in SSA since rapid growth promotes political freedom by allowing citizens to gain status and income independently from the state. (Feng, 1997). The result supports the findings of Heo and Tan (2001), Helliwell (2009), Baklouti and Boujelbene (2018).
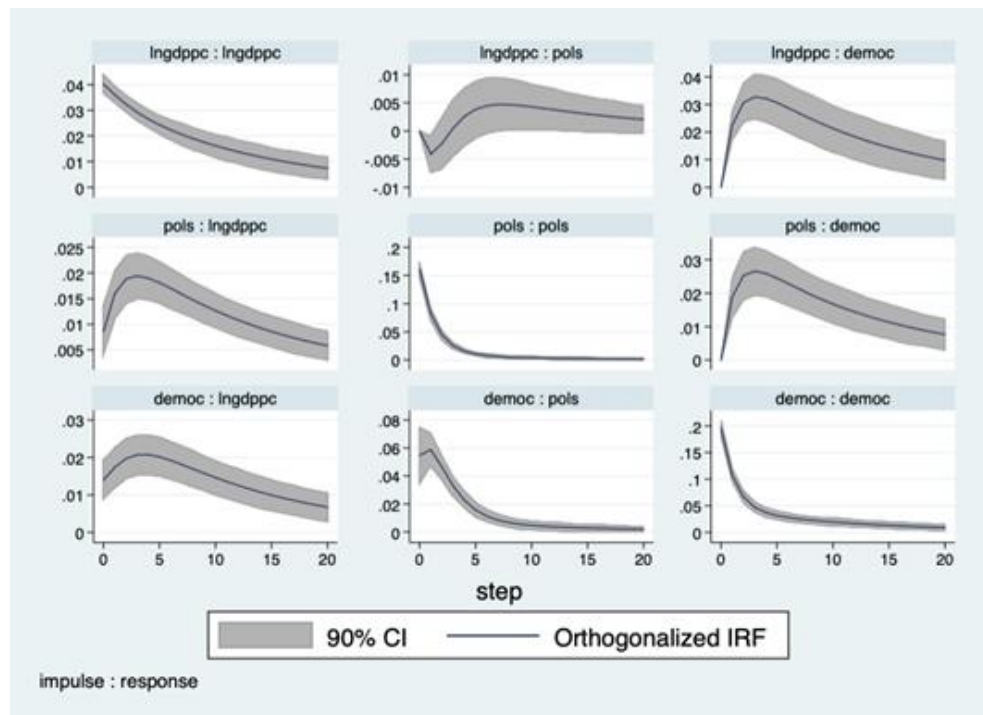
One standard deviation shock given to political stability (pols) has positive significant impact on democracy (democ). We accept hypothesis 9 that an increase in political stability increases democracy in SSA. Political stability enhances democracy by decreasing the probability of regime interruption, enhancing system adjustability, providing a more stable political environment and reducing the probability of coups d'état (Feng, 1997).

Hence, political stability has a positive significant indirect role on growth through the channel of democracy since political stability has a positive significant role on democracy, which has positive significant role on growth.

93

One standard deviation shock given to democracy (democ) has a positive significant impact on political stability (pols). We reject hypothesis 11 and we accept hypothesis 10 that an increase in democracy increases political stability.

Hence, democracy has a positive significant indirect effect on growth through the channel of political stability since democracy has a positive significant effect on political stability, which has positive significant effect on economic growth. The combination of macropolitical certainty through inhibiting regime change and micropolitical adjustability through enhancement of system adjustability leads us to reach a conclusion that democracy enhances sustained growth through the channel of political stability (Feng, 1997).

Figure 4: Impulse response function

According to the variance decomposition at a horizon of ten years in Table 6, GDP per capita (lngdppc) forecast error variance is explained mostly by its own shock as %55.9, secondly by democracy (democ) as %24.5 and thirdly by political stability (pols) as %19.4.

Political stability (pols) forecast error variance is explained mostly by its own shock as %76.7, secondly by democracy (democ) as %22.9 and thirdly by GDP per capita (lngdppc) as %0.2.

Democracy (democ) forecast error variance is explained mostly by its own shock as %83.7, secondly by GDP per capita (lngdppc) as %9.8 and thirdly by political stability (pols) as %6.3.

Table 6: Variance Decomposition

	lngdppc	pols	democ
lngdppc	0.559	0.194	0.245
pols	0.002	0.767	0.229
democ	0.098	0.063	0.837

Notes: Percent of variation in the row variable (10 periods ahead) explained by column variable.

8. Conclusion

Because of lowest long run growth rate of the region, SSA is taken as the subject of the study. In order to evaluate the real causes of growth of a country, region or a continent, the role of institutional factors on growth must be analyzed. Due to this fact, only institutional factors; political stability and democracy are taken as long run determinants of long run growth.

SSA has the lowest long run growth rate, which is proxied by lowest GDP per capita as of 2017. Political stability in SSA is still way below compared to developing and developed countries of other regions. SSA is the second worst region with respect to democracy as of 2008 and after a peak in 2005; the region has experienced democratic backsliding. According to regional comparison, it can be seen that regions with high long-run growth have higher political stability and democracy, and regions with low long-run growth have lower political stability and democracy.

An increase in political stability leads to growth in SSA by creating a business friendly environment to increase investment, by creating employment opportunities leading to higher consumption and aggregate demand, by increasing R&D leading to increase in total factor productivity and by improving trade account. Economic growth initially leads to political instability due to immature political system in SSA countries. Later, poor economic performance may lead to political unrest increasing the likelihood of government collapse in democratic SSA countries.

Democracy enhances economic growth in SSA since civil liberties and political rights create the social conditions that are conducive to growth, and economic freedom sustains property rights and market competition to promote growth. Growth increases democracy in

SSA since rapid growth promotes political freedom for citizens to gain status and income independently from the state.

Political stability enhances democracy by inhibiting regime interruption through coups d'état, by enhancing system adjustability, and by providing a more stable political environment. And democracy leads to higher level of political stability in SSA.

References

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, *1*, 385-472.

Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth?. *European Journal of Political Economy*, *29*, 151-167.

Alesina, A., Özler, S., Roubini, N., & Swagel, P. (1996). Political instability and economic growth. *Journal of Economic growth*, *1*(2), 189-211.

Asteriou, D., & Price, S. (2001). Political instability and economic growth: UK time series evidence. *Scottish Journal of Political Economy*, *48*(4), 383-399.

Baklouti, N., & Boujelbene, Y. (2018). Democracy, Political Stability and Economic Growth: Evidence from Mena Countries. *Business and Management*, *10*(4).

Barro, R. J. (1996). Democracy and growth. *Journal of economic growth*, *1*(1), 1-27.

Cebula, R. J. (2011). Economic growth, ten forms of economic freedom, and political stability: An empirical study using panel data, 2003-2007. *Journal of Private Enterprise*, *26*(2), 61.

De Haan, J., & Siermann, C. L. (1996). New evidence on the relationship between democracy and economic growth. *Public Choice*, *86*(1-2), 175-198.

Doucouliagos, H., & Ulubaşoğlu, M. A. (2008). Democracy and economic growth: a meta-analysis. *American Journal of Political Science*, *52*(1), 61-83.

Feng, Y. (1997). Democracy, political stability and economic growth. *British Journal of Political Science*, *27*(3), 391-418.

FRH (2018). Freedom in the World. *Freedom House,* New York.

Goldsmith, A. A. (1987). Does political stability hinder economic development? Mancur Olson's theory and the Third World. *Comparative Politics*, *19*(4), 471-480.

Gurgul, H., & Lach, Ł. (2013). Political instability and economic growth: Evidence from two decades of transition in CEE. *Communist and Post-Communist Studies*, *46*(2), 189-202.

Gür, T. H., & Akbulut, H. (2012). Gelişmekte Olan Ülkelerde Politik İstikrarın Ekonomik Büyüme Üzerine Etkisi. *Sosyoekonomi*, *17*(1).

Helliwell, J. F. (1994). Empirical linkages between democracy and economic growth. *British journal of political science*, *24*(2), 225-248.

Heo, U., & Tan, A. C. (2001). Democracy and economic growth: A causal analysis. *Comparative Politics*, 463-473.

Khaldūn, I., Rosenthal, F., Dawood, N.J., 1969. The Muqaddimah: An Introduction to

History; in Three Volumes 1. Princeton University Press.

Londregan, J. B., & Poole, K. T. (1989). *Coups d'Etat and the Military Business Cycle* (No. 88-89-36-a). Carnegie Mellon University, Tepper School of Business.

Love, I., & Zicchino, L. (2006). Financial development and dynamic investment behavior: Evidence from panel VAR. *The Quarterly Review of Economics and Finance*, *46*(2), 190-210.

North, D. C., & Thomas, R. P. (1973). *The rise of the western world: A new economic history*. Cambridge University Press.

Paldam, M. (1998). Does economic growth lead to political stability?. In *The Political Dimension of Economic Growth* (pp. 171-190). Palgrave Macmillan, London.

Radu, M. (2015). Political stability-a condition for sustainable growth in Romania?. *Procedia Economics and Finance*, *30*, 751-757.

Rivera-Batiz, F. L. (2002). Democracy, governance, and economic growth: theory and evidence. *Review of Development Economics*, *6*(2), 225-247.

Shabbir, G., Anwar, M., & Adil, S. (2016). Corruption, political stability and economic growth. *The Pakistan Development Review*, 689-702.

Sirowy, L., & Inkeles, A. (1990). The effects of democracy on economic growth and inequality: A review. *Studies in Comparative International Development*, *25*(1), 126-157.

Tabassam, A. H., Hashmi, S. H., & Rehman, F. U. (2016). Nexus between political instability and economic growth in Pakistan. *Procedia-Social and Behavioral Sciences*, *230*, 325-334.

Tavares, J., & Wacziarg, R. (2001). How democracy affects growth. *European economic review*, *45*(8), 1341-1378.

Tusalem, R. F. (2015). Democracies, Autocracies, and Political Stability. *International Social Science Review*, *90*(1), 1.

Uddin Ahmed, M., & Habibullah Pulok, M. (2013). The Role of Political Stability on Economic Performance: The Case of Bangladesh. *Journal of Economic Cooperation & Development*, *34*(3).

Uddin, M. A., Ali, M. H., & Masih, M. (2017). Political stability and growth: An application of dynamic GMM and quantile regression. *Economic Modelling*, *64*, 610-625.

WDI (2018). World Development Indicators. *World Bank,* New York.

Weede, E. (1983). The impact of democracy on economic growth: some evidence from cross-national analysis. *Kyklos*, *36*(1), 21-39.

WGI (2018). Worldwide Governance Indicators. *World Bank,* New York.

Zablotsky, E. E. (1996). *Political stability and economic growth: a two way relation* (No. 109). CEMA.