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Macroeconomic and Political Instabilities in Sub-Saharan Africa

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MACROECONOMIC AND POLITICAL INSTABILITIES IN SUB-SAHARAN AFRICA

James Gaius Ibe, Morris College and University of South Carolina

ABSTRACT

The analysis uses macroeconomic models designed to capture the direct impact of political instability on macroeconomic stability, and the effect of macroeconomic instability on political stability. The model is an adaptation of the neo-classical production function with fixed-effects formulated to explore the postulated interdependencies in key sub-Saharan countries over the period 1960-1990. The estimates indicate that macroeconomic instability indices as well as unemployment and inflation are positive and significantly correlated with the political instability variable. Also, there is a significant negative relationship between political instability and the nations economic output as measured by the Gross Domestic Product (GDP). Furthermore, there is a significant positive relationship between income inequality and political instability and the marginal propensity to political violence differs across socioeconomic groups and is highest for the lowest income group. Thus, effective strategic policy responses must take into account the reasons why people turn to violent political interest articulation and aggregation including violent disintegrative nationalism. Indeed, the analysis suggests that both political and economic reforms are necessary to stabilize the political economy of sub-Saharan Africa.

INTRODUCTION

Macroeconomic and political instabilities seem to have formed a vicious circle in sub-Saharan Africa. Political instability inhibits macroeconomic stability and macroeconomic instability engenders political instability. Polities are poor because they are politically unstable and very unstable because they are poorer. While current scholarship accepts this relationship as self-evident, the postulated vicious circle and the macroeconomic consequences of political instability in sub-Saharan Africa have received limited attention within a systematic empirical framework. Some level of political instability and thus the potential for violent political dissent exists in all societies at all times. But what is the direct relationship between political instability and
key macroeconomic indicators? Does the widening gap between the few rich and the many poor foment political instability? Why have IMF-styled macroeconomic policies largely been resisted or rejected in most sub-Saharan Africa? The answer to these questions have direct bearing on the ongoing debates over what must be done to alleviate continuing macroeconomic instability: High inflation, high unemployment and poor economic performance amidst escalating political violence in sub-Saharan Africa. The overriding purpose of this analysis is to suggest some answers to these questions.

Dominate among the underlying causes of macroeconomic instability is a political factor: Governmental instability (including frequent violent regime changes). Political systems have not developed sufficiently to accommodate orderly transition from one administration to another. Rulers hold on indefinitely or they are toppled through military coups (Fosu, 1992; Ibe, 1989). From an administrative policy viewpoint, strategic planning is not politically feasible. Indeed, politics seems to have frustrated most attempts at economic reform. Also, economic crises tend to create political crises (Anunobi & Ukong, 2000). Furthermore, social conflict is so much a part of the African political processes and to treat political violence as an aberration places one in the awkward position of insisting that all significant political events in the past four decades are mere deviations (Ewoh, 2000; Fosu, 1992; Ibe, 1989; Bwy, 1968). Unless serious attempt is made to disentangle the vicious circle of interdependencies, little will be possible to change sub-Saharan Africa's development prospects.

REVIEW OF THE LITERATURE

From the general literature on political violence and economic performance two dominant but divergent views emerge, namely: the “downswing paradigm” and the “upswing paradigm.” The downswing proponents contend that political violence increases as economic performance decreases (Cutright, 1963). They argue, at least implicitly, that wealthy nations are stable nations.

The upswing theorists argue that violence is most likely to occur when periods of prolonged rising expectations and rising gratification is followed by a short period of sharp reversal, during which the gap between what is expected and what is obtained widens and becomes intolerable. The frustration that develops, when it is intense and widespread in the society, results in violent political action (Ibe, 1989; Davies, 1962, 1970). In the J-curve hypothesis, Davies (1962) contends that whether they are farmers facing falling prices for their produce, or factory workers who lose their jobs, or students who graduate from university with high honors and find themselves without jobs, such individuals see a widening gap between their rising expectations and their down
turning gratification. The J-curve hypothesis postulates that this rapidly widening gap portends political violence.

The theoretical relationship between political and macroeconomic instabilities is very well established (Fosu, 1992; Ibe, 1989; Gupta, 1987; Parvin, 1973). In sum, political instability instability of political structures, governments, public institutions including frequent and violent regime changes is hypothesized to exert substantial adverse effects on the principal components of a nation's gross domestic product (GDP). The most common sources of political instability in sub-Saharan Africa are military coups detat, strikes which result often in violent civil disobedience including substantial loss of lives and property, disintegrative nationalism and civil wars. In such environment, public and private institutions cannot function efficiently and effectively.

Indeed, political instability is likely to reduce the quantity and quality of human capital in these nations. Those citizens with substantial human capital investment are frequently the target of coup leaders. They are forced to cooperate and remain silent or they are imprisoned, executed or exiled. Further, because of the magnitude of uncertainty, businesses are likely to delay or avoid long term and substantial capital investments. Political risks emanating from a nation's unstable political environment are likely to increase the cost of capital and render it unattractive for foreign as well as domestic investment. Frequent rule changes are likely to exert adverse effects on both public and private investments as strategic planning becomes extremely difficult and ineffective. And, because those in power cannot be assured of a peaceful transition, most frequently engage in rent seeking or loot the public treasury, hiding their ill-gotten gains in foreign accounts to finance their future lives in exile (Ibe, 1989; Gupta, 1987). Theoretically, political instability is likely to distort and adversely affect current and future allocation of scarce productive resources and the returns to factors of production. These distortions are likely to have severe adverse consequences for macroeconomic stability in sub-Saharan Africa.

Controversy has arisen over the relationship between political violence and income inequality. As Midlarsky (1988) points out, there is a typical finding of a weak, barely significant relationship between income inequality and political violence. However, there have been instances of significant relationship existing between the two as reported in other studies (e.g., Ibe, 1989; Muller, 1985; Parvin, 1973).

A later investigation, Ibe (1989) was an attempt to improve upon previous studies by exploring the neglected aspects of the interdependencies between political violence and economic wellbeing. The study addressed the simultaneity and feedback effects by using a methodology that analyzed the postulated vicious circle both over time and across countries within
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a multivariate model. The current study focuses the scope of inquiry and contributes to an increased understanding of the direct adverse relationship between macroeconomic and political instabilities in sub-Saharan Africa.

ANALYTICAL MODEL

The models were estimated using the ordinary least squares (OLS) method. The principal model is an adaptation of the neo-classical production function with the estimated equation of the form:

\[ Y = f(K, L, V) \]

where \( y, k, l \) are growth rates of output, capital, labor respectively, and \( v \) - the political violence variable is a measure of political instability. The ordinary least squares (OLS) regression coefficients are elasticities; the regression coefficient for \( V \) measures the direct and independent impact of political instability when the impacts of capital, and labor are held constant and the stochastic perturbation term is assumed to be independently and identically distributed.

To determine the factors that influence political instability, the following model is estimated:

\[ V = f(PCY, UNEM, INFL, INEQ, SOM, HIG, LIG) \]

where \( v, pcy, unem, infl, ineq, som, hig, fig \) are growth rates of political instability, per capita income, unemployment, inflation, income inequality, social mobility, high income group, low income group, respectively. The annual growth rates of all variables are obtained by first differencing the logarithms of the variables for successive years. Lower case letters denote the annual growth rates of the relevant variables for country \( i \) in year \( t \). The ordinary least squares (OLS) regression coefficients are elasticities with respect to the exogenous variables.

Economic output (\( Y \)) as defined operationally, is measured by changes in gross domestic product (GDP), the market value of total output of goods and services produced in the economy within a year. Political instability (\( V \)) is measured by the number of deaths per thousand from politically relevant violence, either from a populace against a government and/or from a government or its functionaries against a populace. The instability variable unlike the various category and scaled variables (see Fosu, 1992) directly and unambiguously captures the immediate end-product of riots, coups, political assassinations, violent disintegrative nationalism, civil wars, guerrilla wars and rebellions (Ibe, 1989; Midlarsky, 1988; Parvin, 1973).
Interval or ratio measurements are preferred for the level of statistical analyses performed in this study. Nominal variables are simply inappropriate unless certain classifications are to be treated as dummy variables. The use of other indicators of political instability was contemplated but instances of political violence could not be empirically defined so as to yield mutually exclusive events for analysis. The scaling method is extremely subjective, arbitrary and difficult to both replicate and verify. The main problem with and objections to the various scaled indicators have to do with counting as discrete and equal events, which differ in magnitude and scope (Fosu, 1992; Ibe, 1989).

The main hypotheses embodied in the models are the following:

1) A negative relationship exists between political instability and per capita income.
2) A positive relationship exists between political instability and inequality in income distribution as measured by the Gini index.
3) A positive relationship exists between political instability and macroeconomic instability as measured by unemployment rate and inflation rate, respectively.
4) The marginal propensity to political violence differs across socioeconomic groups.

These research hypotheses are simple and need no additional explanation. However, some scholarship in this field contends that the effect of income inequality is region-specific. In fact, because of diverse historical and cultural values, different world regions could have different empirical expressions of inequality, which eventually yield political instability. Theoretically, it is possible that the absolute distribution of wealth (poverty) rather than relative distribution (inequality in distribution of income) is more germane in predicting violent mass political dissent (Ibe, 1989; Midlarsky, 1988).

The use of literacy rate as a measure of socioeconomic mobility deserves a few comments. In most societies, from an individual’s point of view, the educational level attained determines to a large extent the socioeconomic status of that individual. Therefore, to the extent that the educational means and opportunities are available to the members of the society for their personal socioeconomic emancipation, socioeconomic mobility is significantly enhanced (Ibe, 1989; Parvin, 1973).

The expected relationship between literacy rates and political instability can be either positive or negative. Hope makes a rather intolerable condition bearable. Education gives such hope but it can also raise expectations.

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unreasonably. Indiscreet dissemination of information can be destabilizing, as much as information can be used to rationalize violent political expression. Furthermore, education can and does become a very powerful tool of social and political indoctrination and propaganda and, therefore may depress manifest political violence rather than exacerbate it (Ibe, 1989; Parvin, 1973). Education is a multi-faceted variable and may yield a diverse empirical expression with respect to political instability. As a proxy for human capital, the benefits are likely to outweigh the cost. However, if educational opportunities are available only to the privileged few, as is often the case, it can create and maintain income inequality and thus exacerbate rather than attenuate the level of political instability.

Finally, as some have noted, when educational attainment does not lead to meaningful employment, it tends to foment violent political interest articulation and aggregation. With a high rate of unemployment among university graduates and other professionals in most sub-Saharan Africa, it is reasonable to expect that education exacerbate rather than attenuate violent political articulation. These tendencies are neither peculiar to sub-Saharan Africa nor confined there.

An important feature of this analysis is the use of a model with fixed-effects. The model makes use of large number of degrees of freedom provided by a pooled time-series cross-sectional data to control for otherwise unmeasured country-specific and period (year-specific) effects (Guseh, 1997; Ibe, 1989). The overriding objective in using the fixed-effects correction technique is to derive estimates free from selection bias. The fixed-effects estimators are not contaminated with spurious effects of any stable, unmeasured country characteristics. Such characteristics include unmeasured human capital, geographical locational disadvantages as in the case of land-locked countries, religious differences and their influence on economic performance and propensity to political violence, domophobia which is the fear of domestically made goods, and unmeasured natural endowments which differentially affect economic performance and the general level of well being across the sample. As Guseh (1997) notes, the fixed-effects modeling is particularly desirable in this type of analysis because of the differing impacts of various political and economic systems on economic growth across the sample under study (Pourgerami, 1988; Scully, 1988).

The fixed-effects modeling is accomplished in this study through the use of country dummies and time dummies (with appropriate omitted categories) included in each equation in the model. This essentially holds unmeasured country-specific and period-specific effects constant. The unique effect is the systematic but unmeasured characteristics of each country which is the "fixed-effect" from which the technique takes its name.
Removing the “fixed effect” is particularly useful for the test of whether political instability increases as macroeconomic stability decreases because it assures us that all relevant systematic but unmeasured macroeconomic output and political instability country differences have been controlled. The technique also permits more accurate estimates of the interdependencies than is possible in the cross-sectional analysis comprising much of the literature (Guseh, 1997; Ibe, 1989).

It is important to note that while countries are units of observation, the political and economic systems are not. Theoretically, two countries with identical economic statistics but completely different political systems or economic system for that matter, would look identical and influence the results equivalently. The fixed-effects modeling holds such unmeasured disparities constant and thus guides against drawing manifestly unwarranted conclusions from the regression estimates that could result otherwise. It is rather obvious that different political systems are likely to produce and tolerate differing levels of political instability (Ibe, 1989; Parvin, 1973).

SAMPLE AND DATA SOURCES

The sample chosen for the study includes a broad spectrum of the countries which, as of 1960, were recognized national units. Although a great majority of these countries had attained independence by 1960 or thereabout, political independence was not used as an inclusion criterion. The date 1960 was chosen to capture the effects of what most African scholars believe to represent the epoch of political upheaval in sub-Saharan Africa: the Congo crises. Specifically, the study focuses on changes in political instability and macroeconomic performance that occurred during the period 1960-1990.

The sample reflects the diverse colonial and historical background of sub-Saharan Africa. The diversity of the countries included in the sample is such that an estimated probability of self-selection into the sample would be statistically insignificant. Heckman’s correction for selectivity was thus contemplated but was deemed unnecessary, given the diversity. There were two major exclusion criteria. First, the existence of reliable comparable time-series data over the period under study was the primary criterion. Lack of reliable comparable data was a major reason some potential sample countries were dropped. The unavailability of macro-level data, was a binding constraint on the breadth of the empirical exploration of the postulated interdependencies. A major portion of the time spent on this study was devoted to data verification and transformation. Data were not simply available in the format amenable to immediate analysis.
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Second, it was required that significant portion of manifest political instability within the countries to be included in the sample emanate from internal forces. In order to properly establish the relationship between political instability and macroeconomic stability, it is crucial that known incidence of political instability be attributable to internal factors. Mozambique was dropped from the sample a priori because it failed to meet this criterion. The protracted political crisis in Mozambique has been attributed to the activities of mercenaries, allegedly recruited and funded by the former regime in South Africa. These anonymous vandals had neither political recognition nor known political agenda or objectives. Such irrational vandalism within Mozambique made the country rather an obvious outlier. South Africa was excluded a priori because of its former policy of apartheid. Further, its deliberate apartheid policy bred political instability, which may not be attributable to macroeconomic or non-random social factors. South Africa was excluded because industrial conflicts could not be decoupled from political conflicts and to some extent criminal violence is treated as political violence. It is important to note that while industrial conflicts are no longer identical with political conflicts in most countries, this certainly is not the case in all totalitarian political systems including former apartheid South Africa.

The sample consists of 32 sub-Saharan African nations obtained through the predetermined set of exclusion criteria outlined above. It should be noted that while great effort was made to ensure that the sample reflects most of the sub-Saharan countries both in terms of political and economic systems, the fixed-effects model is quite robust against selection bias. The country dummies hold factors that are unique to the individual countries constant, thus eliminating bias due to cross-sectional invariant factors. The time dummies hold period-specific factors constant thus eliminating bias due time invariant factors. See the Appendix for a list of the sample.

The data used in this study were made available by the Inter-University Consortium for Political and Social Research. Data for some countries were originally collected by the U.S. Department of Commerce, Bureau of the Census. The macroeconomic data were from various World Bank Reports. Neither the collector of the original data nor the Consortium bears any responsibility for the analysis or interpretations presented here.
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TABLE 1

OLS Results: Macroeconomic and Political Instabilities in sub-Saharan Africa

<table>
<thead>
<tr>
<th>Exogenous Variables</th>
<th>Regression Coefficient</th>
<th>Standard Errors</th>
<th>T-Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>11.76</td>
<td>0.82</td>
<td>1.89***</td>
</tr>
<tr>
<td>Capital (k)</td>
<td>1.55</td>
<td>0.82</td>
<td>1.09***</td>
</tr>
<tr>
<td>Labor (l)</td>
<td>1.86</td>
<td>1.09</td>
<td>0.66</td>
</tr>
<tr>
<td>Political Instability (v)</td>
<td>-1.97</td>
<td>0.66</td>
<td>2.98*</td>
</tr>
</tbody>
</table>

F= 19.28
Adjusted $R^2 = 0.78$
DW= -1.07
N=32

*Nigeria is the omitted category; the country and time effects are not shown and are available upon request from the author.
*p<0.01, two-tailed test
**p<0.05, two-tailed test
***p<0.01, two-tailed test

SUMMARY OF THE RESEARCH FINDINGS

The principal findings of this analysis are shown in Table 1 and 2, and summarized as follows:

1. Macroeconomic instability indices: Unemployment and inflation rates are positive and significantly correlated with the political instability variable. A percentage increase in inflation rate results in 1.27 percent increase in political instability, and one percent increase in unemployment rate results in 1.03 percent increase in political instability.

2. There is a significant negative relationship between political instability and the nation's economic output as measured by the gross domestic product (GDP). A percentage increase in political instability results in 1.97 percent decrease in GDP growth rate.
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3. Consistent with theoretical expectation, there is a significant positive relationship between political instability and income inequality. A percentage increase in income inequality results in 1.36 increase in political instability. This is not entirely unexpected because in most sub-Saharan Africa public employees including university professors and other professionals go without pay for several months which often results in strikes, violent civil disobedience, destruction of property and loss of lives.

4. The marginal propensity to political violence is different across socioeconomic groups, with the lowest income group exhibiting the highest propensity to political violence. The low-income group variable is positive and significantly correlated with political instability.

The analytical models that are consistent with neoclassical theory, modified and specified to capture the political instability variable show significant levels of validity and good fit. The Durbin Watson statistic provides no evidence of auto-correlation. See tables 1 and 2 for the F-statistic, R^2 and DW statistic for the estimated equations.

TABLE 2

OLS Results of the Political Instability Model for sub-Saharan Africa

<table>
<thead>
<tr>
<th>Exogenous Variables</th>
<th>Regression Coefficient</th>
<th>Standard Errors</th>
<th>T-Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>19.72</td>
<td>0.81</td>
<td>1.79***</td>
</tr>
<tr>
<td>Per capita income (pcy)</td>
<td>-1.45</td>
<td>0.60</td>
<td>1.72***</td>
</tr>
<tr>
<td>Unemployment (unem)</td>
<td>1.03</td>
<td>0.76</td>
<td>1.67***</td>
</tr>
<tr>
<td>Inflation (infl)</td>
<td>1.27</td>
<td>0.80</td>
<td>1.70***</td>
</tr>
<tr>
<td>Income inequality (ineq)</td>
<td>1.36</td>
<td>1.29</td>
<td>1.27</td>
</tr>
<tr>
<td>Social Mobility (sam)</td>
<td>1.64</td>
<td>1.69</td>
<td>1.05</td>
</tr>
<tr>
<td>High Income (hig)</td>
<td>-1.78</td>
<td>1.05</td>
<td>1.97**</td>
</tr>
<tr>
<td>Low Income (lig)</td>
<td>2.07</td>
<td>0.81</td>
<td>1.79***</td>
</tr>
</tbody>
</table>

F= 18.76
Adjusted R^2 = 0.73
DW= -1.02
N=32

b Nigeria is the omitted category; country and time effects are not shown.

*p01, two-tailed test
**p05, two-tailed test
***p10, two-tailed test
CONCLUSION

This analysis has examined the relationship between macroeconomic and political instabilities in key sub-Saharan African nations. In exploring these complex interrelationships, the study focused on the direct relationship between macroeconomic instability and political instability. The empirical results tend to support the notion that political instability inhibits macroeconomic stability while macroeconomic instability promotes political instability. With analytical models that captured the direct adverse effects of political instability on economic output, the study seems to suggest that political instability not only has direct significant negative macroeconomic effects, but it also induces macroeconomic instability via its several political and social consequences. The results further established that a rather robust positive relationship exists between political instability and income inequality, namely: Political instability increases as income inequality increases. This result confirms some suspicion that those who benefit from the political chaos should in fact work for a stable political economy to protect their vested interests and ill gotten gains. Indeed, those who own property do not destroy property. It is well established that the middle class is a stabilizing force in all political economies (Ibe, 1989; Midlarsky, 1988; Gupta, 1987).

Finally, the findings show that the marginal propensity to political violence differs across socioeconomic groups and it is greatest for the lowest income group. These results have profound implications for sub-Saharan Africa. Thus, unless something is done to disentangle the vicious circle, nothing can be done to improve the prospects for macroeconomic stability in these nations. The results suggest that concrete economic conditions must be improved to break the vicious circle. More importantly, the findings of this study suggest that political administration can target specific socioeconomic groups to ameliorate political instability as a short run measure. While stable and growing private economy presents the best hope for all socioeconomic groups, progressive public policies such as earned income credit, low income housing, mortgage loan guarantees, small business loans, Medicare, Medicaid, social security and job programs have produced sizable and viable middle class in stable nations. International Monetary Fund-styled solutions and conditionality tend to neglect the high political costs that make such policies unattractive and unworkable in unstable political economy of most sub-Saharan Africa. Thus, effective strategic policy responses must take into account the reasons why people turn to violent political articulation and aggregation including violent disintegrative nationalism. Indeed, this analysis concludes that political and economic reforms are required to stabilize the political economy of sub-Saharan Africa.
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Africa. Public and private institutions must indicate more accountability and transparency to minimize incidence of corruption, another damaging social consequence of political instability.

REFERENCES


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APPENDIX

The following countries make up the final sample:

<table>
<thead>
<tr>
<th>Angola</th>
<th>Gambia</th>
<th>Nigeria</th>
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</thead>
<tbody>
<tr>
<td>Benin</td>
<td>Ghana</td>
<td>Rwanda</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Guinea</td>
<td>Senegal</td>
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<tr>
<td>Burundi</td>
<td>Kenya</td>
<td>Sierra Leone</td>
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<td>Cameroon</td>
<td>Liberia</td>
<td>Sudan</td>
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<tr>
<td>Central African Republic</td>
<td>Madagascar</td>
<td>Tanzania</td>
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<tr>
<td>Chad</td>
<td>Togo</td>
<td></td>
</tr>
<tr>
<td>Congo</td>
<td>Malawi</td>
<td>Uganda</td>
</tr>
<tr>
<td>Cote d'Ivoire</td>
<td>Mali</td>
<td>Zaire</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Mauritania</td>
<td>Zambia</td>
</tr>
<tr>
<td>Gabon</td>
<td>Niger</td>
<td>Zimbabwe</td>
</tr>
</tbody>
</table>

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