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RISK, RECESSIONS AND RESILIENCE OF SUB SAHARAN AFRICAN ECONOMIES

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ABSTRACT

The ability to predict overall developments in the economy is extremely limited. The track record of forecasting is very poor, especially immediately before or during recessions when good forecasts are needed most by policy-makers. This paper examined facts on duration and size of recessions, which can be used by policy-makers in assessing macroeconomic risks. In addition, models of the business cycle in economic theory will be required to replicate or substantiate these facts. Evidence is taken from 17 Sub Saharan African economies between the periods of 1960 to 2010. Two definitions of recession are used, and the resulting analyses from the two are robust with respect to the definitions. The striking feature of the data is the resilience of the economies. The majority of recessions last for a year and small minority persisted for more than 2 years. However, in terms of size and duration, the bigger the recession and the longer it persisted, the less likely recovery becomes. This is not consistent with the assumption made in mainstream macroeconomic theory that business fluctuations are driven by recurring identically independently distributed random shocks.

Keywords: economic recessions, resilience, sub Saharan Africa, weibull distribution, economy, risk.

INTRODUCTION

Gross Domestic Product (GDP) of the Sub Saharan Africa (SSA) region grew fairly strongly at an average yearly rate of approximately 5.0 percent (per-capita rate of nearly 2.0 percent) for about a decade and a half from 1960, Ormerod, (2010). This record of growth could not be sustained in subsequent years, however, as the growth rate fell to as low as 1.2 percent per annum during 1981-85, a rate that was much smaller than population growth of roughly 2.9 percent. Hence, per capita GDP deteriorated by an average of nearly 2.0 percent annually during this period. It was not until the latter part of the 1990s that SSA began to grow sufficiently to overcome population growth (Fosu, 2009). As observed above, then, the problem of the overall African growth record is not necessarily a case of consistently dismal performance, but rather one of episodic growth.

Aggregate evidence masks the considerable disparities in growth among SSA countries. During 1981-85 (when growth was at its lowest point in SSA as a whole), a number of African countries actually registered growth rates of at least 4 percent (about 1 percentage point above population growth): including Benin, 4.7 percent; Botswana, 10.0 percent; Burkina Faso, 4.2

percent; Burundi, 5.4 percent; Cameroon, 9.4 percent; Chad, 9.2 percent; and Republic of Congo, 10.6 percent. It is also interesting to note that while the biggest economy, South Africa, led growth in the early periods. This trend actually began to pull down the SSA average beginning in the early 1970s (Fosu, 2009). That trend has persisted, though less so in the most recent half of the decade. Because the overall SSA average is weighted heavily toward South Africa, which has a large relative weight due to its substantially higher GDP than the rest of SSA, Table-1 (one) reports the simple mean together with the usual weighted average of the growth rates. Around the path of slow but steady growth, however, are persistent short-term fluctuations in growth rates. Some of these have been dramatic. In the Great Depression in America in the early 1930s, real output fell by 30 per cent and almost one in every four Americans lost their jobs (Ormerod, 2008). Policy-makers, whether in the public or private sectors, would like to have reasonably accurate forecasts of short-term developments in the economy as a whole, in order to assess the risks which might be posed to their objectives. However, the track record of economic forecasting of the overall economy, even just 1 year ahead, is poor.

**Table-1.** SSA GDP growth (annual %), 5 year averages.

Sampled countries	1960-1964	1965-1969	1970-1974	1975-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2002	2005-2009	Av.
Angola	2.04	1.90	1.80	2.40	2.10	3.28	-3.78	6.43	10.55	18.56	4.81
Botswana	6.32	11.02	18.15	12.23	10.01	11.87	4.06	8.35	5.43	2.15	9.55
Cameroon	2.71	1.61	6.70	6.86	9.40	-2.22	-1.86	4.75	3.66	3.76	3.52
CAR	0.71	3.23	1.95	0.70	2.29	0.04	1.09	2.38	-0.88	4.10	1.34
Cote d'Ivoire	8.03	9.73	6.44	4.52	0.32	1.18	1.51	3.22	-0.01	0.85	3.82
Gabon	8.24	5.581	8.09	0.40	2.56	1.73	3.13	0.41	1.74	1.18	4.58
Ghana	3.10	2.98	0.01	1.04	-0.25	4.81	4.28	4.32	5.04	6.20	2.89
Guinea	1.50	1.80	2.00	2.60	2.02	4.21	3.90	4.25	3.08	2.82	3.33
Guinea-Bissau	1.58	2.65	3.20	-0.61	6.45	3.78	3.18	1.06	-0.12	4.20	2.47
Kenya	3.49	5.88	10.02	6.35	2.53	5.64	1.61	2.16	3.61	6.11	4.62
Liberia	3.20	6.63	1.61	2.18	-1.88	-16.48	-21.66	39.34	-3.36	7.80	1.21
Nigeria	4.54	5.59	5.79	4.05	-2.75	5.42	2.49	3.08	5.71	5.20	3.80
RSA	6.81	5.15	3.66	3.12	1.40	1.68	0.89	2.80	3.89	4.99	3.30
Sudan	1.95	1.43	4.99	2.69	0.83	4.55	5.13	6.46	6.48	11.80	4.01
Tanzania	1.58	2.11	1.80	2.50	3.98	5.40	1.80	4.08	6.54	5.94	4.53
Zaire (D. R.C)	2.82	3.84	2.49	-1.45	1.86	0.01	-7.12	-3.89	4.05	5.08	0.39
Zimbabwe	3.56	9.37	4.91	1.72	4.36	4.60	1.39	0.89	-5.32	-4.39	2.77

Source: World Bank, 2008

During recessions, the overall level of economic activity falls, posing risks to the very survival of many companies, as the current events illustrate. In the most recent decades in the Western economies, aggregate economic data on GDP is available on a quarterly basis, and the conventional definition of a recession has come to mean two successive quarters in which the growth rate of GDP is negative (Ormerod, 2010). In many countries, however, quarterly data are a relatively recent innovation, and only in a minority of SSA economies are quarterly data available. No official quarterly data are available before 1960. The more general definition of a recession is therefore, using annual data, a year in which GDP growth is negative. In early 2008, very few economists predicted what was about to happen and almost all published forecasts envisaged positive economic growth during 2009. Fildes and Stekler (2002), and McNees (1992), provide more systematic assessments of forecasting accuracy. The track record of predicting recessions, when the risks to companies from the overall economic environment are at their highest, is exceptionally bad (Savvides, 1995). Ormerod and Mounfield (2000) give a potential explanation of this in terms of the signal/noise ratio in the data. An important reason for this failure to assess the risks of recession is that the causes of recessions are not properly explained in economic theory.

Mainstream macroeconomic theory posits that cycles are not inherent features of economies, but are caused by exogenous stochastic shocks. This is the case with real business cycle theory (Kydland and Prescott, 1982), and its more modern development, dynamic stochastic general equilibrium theory (Woodford, 2009). The stochastic element at the heart of such models means that by definition in these theories, successful short-term prediction is at best extremely difficult. There is a different tradition within economics (from the time of Karl Marx in the mid-nineteenth century), which sees business cycles, the fluctuations around trend growth which include recessions, as endogenous to the Western market economies. On this view of the world, we need not posit external shocks, whatever these might be, to account for the existence of recessions; they are an inherent feature of the market-oriented capitalist economies. Proponents of this theory like Hayek, Keynes and Schumpeter form a distinct minority within academic economic. However, these theoretical approaches often differ substantially. Further, they have not really been subjected to scientific validation, and so we are simply unable to say which, if any, gives the best account of recessions, or indeed whether any of them are able to replicate the key empirical features of recessions at all. The purpose of this paper, therefore, is not to ascertain why recessions happen, but to



establish some stylised facts on recessions in the African economies. The following research questions are pertinent to the study:

- a) How large is the typical fall in output during a recession?
- b) How long do recessions last?
- c) Are large and/or long recessions quantitatively or qualitatively different from small and/or short ones?
- d) Do recessions become more or less persistence as either their duration or size increases?

An appreciation of these problems will be useful to policy-makers in both the public and private sectors in assessing the risks they face.

Hypotheses

The following hypotheses therefore were formulated and tested in the study.

H₀₁: the distributions of the size data including and excluding the war-related years are the same

H₀₂: the duration of the recessions follows an exponential distribution

H₀₃: the distribution of the size of recessions is the same between every pair of countries in the data set.

Sources of data

Considering the experiences of a broad range of African economies since the late twentieth century, the period by which they could all reasonably be regarded as agricultural economies. The main data source is the annual real GDP data for 17 SSA economies available from 1960-2010 in World Bank Development indicators, International Financial Statistics of the IMF, HIS Global Insight, and Oxford Economic Forecasting all converted to 2005 base year.

Sampling technique

There are 48 countries that made up the SSA. Of late, Southern Sudan which gained independence from Sudan in July, 2011 is now included, making a total of 49. All the African countries excluding those of Arab origin (i.e., Egypt, Morocco, Algeria, Tunisia and Libya) are regarded as Sub Saharan Africa (Fosu, 2009). Data set obtained from World Bank, International Monetary Fund, HIS Global Insight and Oxford Economic Forecasting for the entire SSA economies were pooled together and the SSA countries randomly sampled. Since the list was already made, only a single stage randomized sampling process was involved. At the end, 17 SSA countries were randomly selected for the study. They include: Angola, Botswana, Cameroon, Central African Republic (CAR), Gabon, Ghana, Guinea, Guinea Bissau, Kenya, Liberia, Nigeria, Republic of South Africa (RSA), Sudan, Tanzania, Zaire (DRC) and Zambia.

Definitions of recession

The conventional definition of a recession, using annual data, is a year in which the rate of growth of real GDP is less than zero. A more sophisticated approach to defining a recession is that of the National Bureau of Economic Research (NBER), where a team of distinguished economists apply judgment to a wider series of economic indicators in order to define a period of recession, which can be summarized as a 'period of significant decline in economic activity (Ormerod, 2010). The main indicator they use is in fact GDP, but they take into account other variables such as employment. The conventional approach and that of the NBER usually give the same result. But NBER-type indicators are not generally available for some of the countries in the data set, and even when they are, relate only to the decades at the end of the twentieth century. So the analysis was carried out using the standard definition. The duration of a recession is the number of consecutive years in which real GDP growth is less than zero. The size of a recession is the cumulative percentage fall in GDP during these years. As a check on robustness, the data were also examined using an alternative definition, in which a recession is defined as being the entire period over which real GDP remains below its previous peak level. In other words, even when positive growth is resumed, the level of GDP can still be below the previous peak, and on this definition, such years are counted as recession years. The size of the recession on this definition is the cumulative percentage fall in GDP below its previous peak value.

Data analysis

The basic data have information on recessions in 17 SSA countries, and this is pooled to form the data set used in the analysis. As a first step, the potential heterogeneity of the pooled data was examined specifically whether the distribution of the size of recessions varies across countries. Kolmogorov - Smirnov tests are carried out of the null hypothesis that the distribution of the size of recessions is the same between every pair of countries in the data set. The range of values for this expression in the pair-wise tests is 5.5 - 10.24. The full sample, 1960 - 2010, is used in order to maximise the number of observations for each country. There are 136 such pair-wise tests, and the null hypothesis is rejected at a P -value of less than 0.05 in only five cases. In other words, the null hypothesis that the two distributions are the same was only rejected at the conventional level of statistical significance in five out of 136 cases. It is therefore reasonable to assume that the pooled data across countries are homogeneously distributed. This is a useful finding in itself, for two reasons. First, it suggests that there are features that are common to recessions across countries. Given that the hypothesis is not rejected that the statistical distribution of the cumulative sizes of recessions is the same across all countries. In principle, therefore, a general theoretical model can explain recessions, which is the presumption of economic theory. Second, certain aspects of the pooled data would become more problematic if it contained heterogeneity across countries



during statistical analysis. In total, there have been 138 examples of recessions over the 1960 - 2010 period as a whole. The duration in years is set out in Table-2. The striking feature of the duration data is that approximately two-thirds of all recessions last only a single year, using the conventional definition of a recession. The SSA economies therefore appear prima facie to be able to recover after an initial shock. The sample period, both in terms of time and country, embraces a very wide variety of different approaches to economic policy by individual governments and international bodies. So it is unlikely that rapid and successful policy responses are the reason why

the typical recession is of such short duration. It is more reasonable to postulate that this is an inherent feature of how the economies operate. The resilience of the SSA economies is further illustrated by the recovery patterns of the economies devastated by the Civil Wars. There are thirteen truly extreme shocks, each with cumulative output falls of more than 25 per cent, in each case; the falls took place in the countries that experienced protracted civil war like Liberia and Zaire (DRC) with Liberia recording 17 year consecutive duration of recession and Zaire 13 years, respectively.

Table-2. Duration of recession years (i.e., number of consecutive years in which real GDP growth is less than zero).

Years	1	2	3	4	5	6	7	8 ⁺
Number	88	16	11	9	6	3	2	3

Source: Author's computation

A summary of the size distribution of recessions over the sample as a whole is given in Table-3 and Figure-1. The information is given for the full 1960 - 2010 period, and for the same period but excluding the war-affected

years in countries sampled. In both cases, the right-skew nature of the distribution is clear, with the mean being distinctly higher than the median. Essentially, the war-

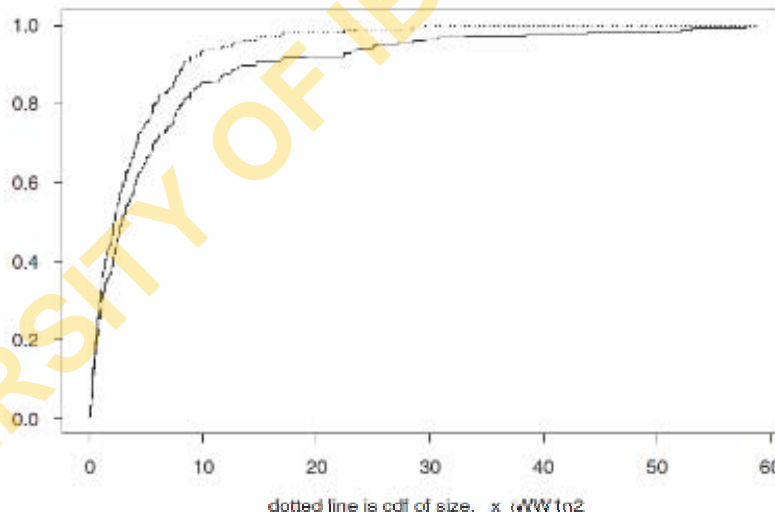


Figure-1. Cumulative distribution function (cdf) of size of recessions, full sample 1960-2010 and excluding war torn years. The dotted line is the cdf excluding these war related years.

related years just stretch out the tail of the data, because the null hypothesis that the distributions of the size data including and excluding the war-related years is the same

is only rejected at a P-value of 0.206 on a Kolmogorov - Smirnov test. The conventional level of rejection of the null hypothesis is of course 0.05 and below.

Table-3. Cumulative size of recessions (i.e., per cent fall in real GDP).

	Min	1 st quartile	Median	Mean	3 rd quartile	Max
Full sample	0.01	0.94	2.88	6.26	7.33	58.7
Excluding war related years	0.01	0.74	2.24	3.74	4.91	29.6

Source: Authors computation



Duration of recession

The small number of observations available on the duration of recessions, given that the longest ones that lasted for 8 years and above were only 3, limits the ability to carry out formal statistical analysis in particular and the ability to see if the data are consistent with that of a known statistical distribution. This distribution is consistent with the assumption in mainstream macroeconomic theory that business fluctuations are driven by recurring identically independently distributed random shocks, so that the

duration of the cycle should be independent of length. Obviously, however, even if the data were exponential, this does not mean that the theory is necessarily correct, since models with completely different theoretical bases can also generate a distribution of the duration of recessions similar to an exponential (Ormerod, 2004, 2008; Li and Gao, 2006.) A nonlinear least squares regression of the frequency against the exponential of the length in years gives the following fit (Table-4).

Table-4. Duration of recessions and exponential least squares fit.

Years	1	2	3	4	5	6	7	8 ⁺
Actual	88	16	11	9	6	3	2	3
Fitted	88	16	11	6	3	1	1	0

Source: Authors computation

The null hypothesis that the duration follows an exponential distribution with rate parameter of 0.07 is only rejected at a P -value of 0.602 on a Kolmogorov - Smirnov test. The small number of observations limits the accuracy of the test, though the P -value at which the hypothesis is rejected is very much higher than the conventional level of rejection. However, the data are perhaps slightly more stretched than a simple exponential (Laherr è re and Sornette, 1998). Indeed, a grid search across the scale and shape parameters of the Weibull distribution gives a maximum of the P -value at which the null hypothesis is rejected that the data follow that distribution of 0.976. This is distinctly higher than the maximum P -value at which the null hypothesis that the data are exponential is rejected. The value of the shape parameter is 0.61. With the Weibull distribution, a shape parameter less than 1 implies that the probability of a recession ending is reduced the longer it goes on. Although the evidence is not conclusive, given that the longest recession lasted for 17 years, there is a definite suggestion that exit from recession is not independent of the length of the recession. The Weibull distribution is widely used in reliability models for lifetimes of devices such as the time to complete some task (Borghers, and Wessa (2011).

Size of the recession

The hypothesis that the data both including and excluding the war-related years are the same is not rejected. The data on the size of recession are therefore analysed excluding the war-related years, where the massive recessions experienced arise from military activity and not from the workings of a peace-time economy. Figure-2 shows the histogram chart of the cumulative size of the 138 recessions observed during the 1960 - 2010 period, excluding the war-related years. Both Table-2 and Figure-2 show clearly the right-skew distribution of the size of recessions.

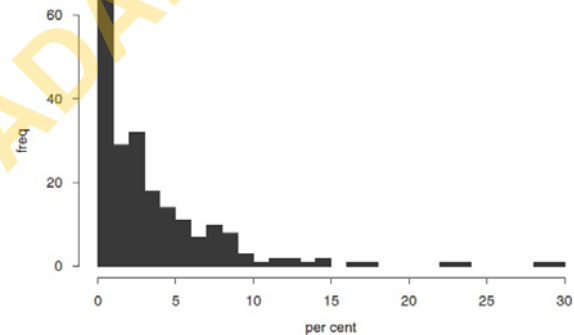


Figure-2. Cumulative percentage fall in output in recessions excluding war-related years.

Alternative definition of recession

On the conventional definition, when GDP growth becomes positive once again, the recession is over. However, it is quite possible that even after the first year of positive growth, the level of real GDP remains below its previous peak. The alternative definition considered here takes account of this. A recession is defined as a period of successive years during which the level of real GDP remains below its previous peak. The size on this definition is the cumulative sum of the percentage differences between the level of GDP in each of the recession years and the level of GDP at its previous peak. On the conventional definition, the longest recession lasted 17 years. Using the alternative definition, 12 out of the total of 124 recessions lasted longer than 8 years, with two lasting for 19 years and one for 23 years. However excluding the war years, only 5 (out of 67) lasted for more than 8 years while the longest being 10 years. In terms of the size of recessions, measuring this as the cumulative percentage fall in GDP below its previous peak value, some very large values indeed are recorded, principally in the war torn countries. In spite of the slight growth recovery for SSA generally in the latter part of the 1980s, the early 1990s were simply calamitous, with similar



abysmal growth as in the early 1980s. Much of this underperformance could be attributed to severe political instabilities, as in Angola, Burundi, Democratic Republic of Congo, Liberia, Rwanda and Sierra Leone, all of which experienced negative GDP growth (Table-1). In addition, the net barter terms of trade for SSA as a whole deteriorated substantially in the late 1980s to early 1990s, falling by an average of about 2.5 percent per year during 1989-1993. However, the null hypothesis that the distributions of both duration and size, respectively, including and excluding the war years are the same cannot be rejected at the conventional P -value of 0.05 on a Kolmogorov - Smirnov test. The P -values at which the hypothesis is rejected are, respectively, 0.691 and 0.144. So the data and analysis used below for the alternative definition again excludes the war years. A comparison of the duration data on the two definitions is set out in Table-5. Technically, on a Kolmogorov - Smirnov test the null hypothesis that the two distributions are the same is only rejected at P = 0.931, but there are small sample issues

with the test in this context. Less rigorously, the two certainly exhibit similarities. In particular, the resilience of the economies is again very noticeable. On the standard definition, 71 per cent of recessions last just 1 year and 92 per cent for 1 or 2 years. On the alternative definition, the percentages are, respectively, 59 and 79. The null hypothesis that the distribution is exponential with rate parameters 0.12 is only rejected at P = 0.808, but the same test with a Weibull with shape parameter 0.81 is only rejected at an even higher P -value of 0.951. So, again, there is evidence that the duration data are more stretched than that of a simple exponential, and the longer a recession has lasted, the less likely it becomes that it will end. The size data on the two definitions are in Table-5. The null hypothesis that the two are the same is rejected at a P -value of 0.041. The data on the alternative definition obviously exhibit considerably more right-skew than the data on the standard definition. On the latter, for example, the mean is 1.67 times the median, and on the former it is 3.67.

Table-5. Duration of recessions (i.e., alternative definitions; excluding war-related years)

Years	Successive years in which real GDP growth less than zero	Successive years in which level of real GDP is below previous peak
1	79	54
2	14	23
3	6	9
4	3	4
5	2	3
6	1	2
7	1	1
8	0	1

Table-5. Cumulative size of recessions (per cent): Alternative definitions; excluding war-related years.

	Min.	1 st quartile	Median	Mean	3 rd quartile	Max.
Successive years in which real GDP growth less than zero	0.01	0.75	2.24	3.73	4.91	2
Successive years in which level of real GDP is below previous peak	0.01	0.91	2.34	8.58	6.89	132.3

However, both are consistent with a Weibull distribution with a shape parameter of less than one. The hypothesis that the data on the alternative definition follow a Weibull rather than an exponential distribution is much clearer than when using the standard definition. Using the alternative definition of recession, (i.e. the entire period over which real GDP remains below its previous peak level), a grid search of the parameters of a Weibull distribution indicated that with a scale parameter of 4.494 and a shape parameter of 0.761, the null hypothesis is only

rejected at a P-value of 0.604. The null hypothesis that the data follow an exponential is rejected at P -values considerably below 0.05. A grid search over the value of the rate parameter shows that the best result is at 0.222, but even here the null hypothesis is rejected at a P -value of 0.028.

CONCLUSIONS

The aim of this paper is to establish stylized facts on the duration and size of recessions in the SSA



economies. The track record of forecasting recessions is extremely poor, so an appreciation of the distribution of the size and length of recessions is important in assessing risks for policy-makers in both the public and private sectors. Evidence is taken from 17 SSA economies over a long period of time, from 1960 to 2010. Two definitions of a recession were considered. First, the conventional one of a recession being years in which the growth rate of real GDP is less than zero. Second, years in which the level of real GDP remains below its previous peak value. The qualitative nature of the results is robust with respect to the choice of definition. A striking feature of the data is the resilience of the economies. The clear majority recessions lasted for just a single year, and only a small minority persists for more than 2 years. A plausible reason for this is that most recessions are essentially inventory cycles. During the upswing, businesses tend to become too optimistic about future prospects. As a result, production begins to run ahead of sales and inventory levels rise. Firms then cut back on production in order to restore inventories to more reasonable levels. As part of this process, fixed investment projects may be postponed. Temporary reductions in capital expenditure plus actions to reduce inventory levels are of themselves inherently of short duration. The adjustment takes place quickly. Of course, this is by no means the only reason for both recessions in general and for any particular recession. Indeed, a key feature of recessions is that detailed examination of them ex-post reveals that each one has its own individual characteristics.

A classical illustration of this is the very comprehensive description of all recessions in the United States carried out by Burns and Mitchell, (1946). Nevertheless, there are sufficient similarities to enable generalisations to be made. For example, the hypothesis that the distributions of the sizes of recessions across the individual countries are the same cannot be rejected at conventional levels of significance. This implies that there are common features underlying the causes of recessions, so that in principle it is possible to develop a theory of the business cycle, which is relevant to all SSA economies. This does not mean that country-specific or indeed recession-specific factors do not exist, but that there is a substantial degree of commonality in the recession experiences of the various SSA economies. The assumption is made in mainstream macroeconomic theory that business fluctuations are driven by recurring identically independently distributed random shocks, so that the duration of the cycle should be independent of length. The evidence suggests that this is not the case. Although in general the economies recover from a recession very rapidly, the longer the recession persists, the more likely it is to continue. The distribution of the data is more consistent with a Weibull distribution with shape parameter less than one than it is with an exponential. The same result is obtained with the distribution of the size of recessions. The bigger the recession, the more likely it is to continue. These results are not dramatic, but there is good evidence that they exist.

They are consistent with Keynes' view that during recessions, 'animal spirits' of entrepreneurs can become depressed to the point where it is not easy for the economy to exhibit spontaneous recovery. Most of the time, the economies do have this property, but the longer and deeper the recession, the less likely recovery becomes. Finally, recessions as experienced in SSA economies during the period under review, were mainly driven by 2 extreme factors of positive supply shocks and civil wars in most of the countries. The supply shocks involved commodity booms in natural-resource economies during the 1970s. These shocks tended to give rise to the *sub-optimal inter-temporal resource allocation* syndrome involving exuberant spending during the boom and subsequent under-spending due to fiscal difficulties: phosphate in Togo, 1974-89 (Gogue and Evlo, 2004); oil in Cameroon, 1982-93 (Kobou and Njinkeu, 2004); phosphates and groundnuts in Senegal, 1974-79 (Ndiaye, 2004); bauxite in Guinea, 1973-84 (Doumbouya and Camara, 2003); coffee in Burundi, 1975-85 (Nkurunziza and Ngaruko, 2003); uranium in Niger, 1974-85 (Mamadou and Yakoubou, 2006); and oil in Nigeria, 1974-86 (Iyoha and Oriakhi, 2004). In certain cases, the revenue booms engendered outright looting: e.g., oil in Nigeria over 1974-86 by several governments and during 1993-98 by Sani Abacha (ibid.), and coffee in Uganda during the 1971-78 reign of Idi Amin (Kasekende and Atingi-Ego, 2004). Governments saw the opportunity to use revenue windfalls during booms to reward their cronies and ethnic constituencies, usually regionally based, who would in turn support the leaders' political entrenchment. Conversely, during subsequent bust periods, the tendency was to maintain such redistribution at the expense of the rest of the population. Or, political leaders could just loot (Collier and O'Connell, 2008). This is the case of adverse redistribution. Furthermore, by generating polarization, the above redistributive syndrome could also lead to state breakdown, as in the case of Angola (1973-2002), Burundi (1988-2000), Chad (1979-84), DRC (1996-2005), Sierra Leone (1991-2000), Togo (1991-93), and Uganda (1979-86), (Collier and O'Connell, 2008; Fosu, 2008).

RECOMMENDATIONS

The following recommendations are made based on the findings of the study.

- a) Improvements in the terms of trade of SSA economies to increase growth
- b) Diversification of the economy to serve as buffer during recessions.
- c) Sets of anti-growth policy 'syndromes': state controls, adverse redistribution, sub-optimal inter-temporal allocation, and state breakdown should be discouraged through charters and agreement with the regional or African Union.
- d) Sanctions to be imposed on anti-democracy regimes and banish them from participating in regional, continental or global organizations.



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