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**GLOBALISATION, STRUCTURAL ADJUSTMENT AND  
AFRICAN AGRICULTURE: ANALYSIS AND EVIDENCE**

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## **Abstract**

A major purpose of this paper is to examine the effects of poor governance or 'state fragility' in African countries on their overall economic and agrarian performance. The results of our econometric analysis show that a higher level of public security is conducive to lower levels of conflict, whether of an ethnic, religious and regional nature. It also corresponds with greater agricultural value-added per capita. The analysis further indicates that trade openness and aid do not have a substantial impact on agricultural development.

Our institutional and historical examination of the structural adjustment programmes in African countries suggest that African agriculture's poor performance is not necessarily due to the negative influence of African governments, but could also, in large part, be attributed to the policies advocated by the international financial institutions and donor countries. The resolution of the problems associated with these policies lies in improving the ability of African farmers to benefit from new agrarian technologies that raise staple food productivity and thereby enhance food security and national stability.

The paper also provides, inter alia, a nuanced analytical description, based upon available aggregate statistics, of the short- and long-term performance of African economies and their agricultural sectors during the last 25 years.

**Keywords:** African agriculture, Poor governance, State fragility, Donor policies

**JEL Codes:** 013, 055, 015, QO1, Q18

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Further information about the Centre for Business Research can be found at [www.cbr.cam.ac.uk](http://www.cbr.cam.ac.uk)

## **1. Introduction**

This is a revised version of the paper, presented at the European Report on Development (ERD) conference on Food Crisis and the Development Potential of the Agricultural and Commodities Sector in Fragile Countries held at Jesus College Cambridge in March 2009. The revisions take into account the discussant's and other comments made at the conference and above all the critical but generally constructive comments of an anonymous referee appointed by ERD. The paper has been extensively recast to address the concerns of the referee and to make more of a contribution to ERD's research and policy programmes. Specifically, using aggregate data for sub-Saharan Africa as a whole, the paper begins by examining over time the overall performance of African economies as well as those of their food and agricultural sectors. The recent record of these economies is assessed in a long-term historical and comparative perspective. The paper has three limited objectives.

The first is to provide a nuanced analytical description of the short term and long-term performance of African economies and their agricultural sectors during the last 25 years. There is a general perception that African economies overall as well as their agricultural sectors have performed poorly over the years, and that prospects for African economic development are not very bright. However, as the relevant statistics on these topics which will be presented in the next section will indicate, the popular perception is at best only half correct. The data will show that the overall economic record of the African economies during the recent period up to 2007 has been highly creditable<sup>1</sup> by comparative international standards as well as by sub-Saharan Africa's own previous record. On the other hand, the agricultural sector, particularly food production has not performed so well. The main issues raised by these developments are a.) the sustainability of the fast economic growth of the last five years, and b.) how best to produce more food and to enhance efficient agricultural production.

A second purpose of the present paper is to examine the effects of state fragility in African countries on their overall economic and agrarian performance. State fragility in its mildest form is often depicted in terms of government failure to protect property rights or enforce contracts that make the achievement of fast economic growth difficult. Neither at an operational level nor at the conceptual level is there any consensus on the definition of fragility. The conceptual issues in relation to fragility will be taken up in the next section. In considering the operational formulations of fragility here, we note the differences between donor agencies.

Thus DFID (2005 p7) in the UK defines ‘fragile states’ as ‘those countries where the government cannot or will not deliver core functions to the majority of their people, including the poor.’ The report suggests ‘there are wider reasons why we need to work better in fragile states. They are more likely to become unstable, to destabilise their neighbours, to create refugee flows, to spread disease and to be bases for terrorists.’ (DFID 2005 p7) The World Bank’s classification of Low-Income Countries Under Stress (LICUS) considers 7 countries classified as ‘severe’ fragile states and the other 19 as ‘core’ fragile states. USAID chooses yet another criteria for calling a state fragile.

In the light of this heterogeneity of views on what is fragility we have in this essay put forward a new definition of fragility, which identifies it with the ability of the state to provide basic physical protection against violence, injury or death to its citizens and against arbitrary encroachment upon private property. Many people would regard the latter as a primary obligation of the state and its inability to provide such security would suggest the state has failed and is ‘fragile’. It will be interesting to see whether this definition of ‘fragility’ produces results similar to those based on the concept of fragility used elsewhere in the literature. These issues, together with the econometric analysis of the empirical evidence bearing on them will be considered in section IV.

In addition to providing (i) an analytical narrative about the growth of the sub-Saharan African agrarian economy, as well as of the economy as a whole in both the short and long terms, (ii) examining the economic effects of a particular formulation of the concept of state fragility, the 3rd objective of the paper is to consider another important causal factor which is often invoked to explain the poor long-term African agricultural and economic performance. This hypothesis suggests that the African deficit was aggravated if not caused by the structural adjustment programmes of the International Financial Institutions (IFIs) as well as the major donor countries. Outside these international agencies and donor governments many independent observers [see for example Havnevik (2007), Round (2007)] as well as NGOs [see for example Christian Aid (2007), Bello (2008)] argue that these structural adjustment programmes with their neo-liberal agenda were misconceived and they undermined the role of the government in all spheres of agricultural development and were, for that reason, particularly harmful to small holder African farmers. This is clearly, for an ERD, a sensitive matter but one which cannot be avoided if the Report is to have any credibility. We provide a contribution to this subject for consideration by ERD based on historical and institutional analysis. A full discussion of this issue with reference to the relevant literature will be provided in section IV.

It will be appreciated that in a short paper the above subjects can only be examined to a limited degree. Nevertheless, we hope that these contributions will assist the ERD to arrive at balanced and practical conclusions from a policy perspective. The stakes are indeed high. Africa now has a chance to maintain the momentum and build on its short-term economic successes with the help of appropriate policies. Unfortunately, the world financial turmoil, for which Africa is not at all responsible, has made this task far more challenging.

(Readers may wish to bear in mind that the words ‘Sub-Saharan Africa’ and ‘Africa’ have been used interchangeably in the following account).

## **2. Agrarian Economy and Overall Economic Development in Sub-Saharan Africa**

Contrary to the widely accepted negative image of African economic development, there has recently been a huge improvement in the region’s economic outcomes. As Table 1 indicates, between 2003 and 2007 African economies registered an overall per capita GDP growth rate of a respectable 3% per annum. Although most other developing continents and regions did better, it was nevertheless an enormous improvement for African countries compared with their own past, especially in the 1980s and 1990s. In 2007 the Sub-Saharan African economies registered a growth rate of 6% per annum, one of the highest rates recorded by them during any year over the last quarter of a century. Apart from the recent recovery of the African economies, Table 1 also highlights their long-term poor performance. During the 1980s, the so-called ‘lost decade’ in Sub-Saharan Africa, per capita GDP contracted at a rate of 0.5% per annum. In the 1990s per capita GDP did rise, but at an extremely slow rate. Thus over the 26-year time span covered by Table 1, the African economies expanded by barely 16%, while East and South Asia grew by 317%. All developing countries taken together recorded a per capita increase of more than 100% over this period. However, to be fair, the 1980s and 1990s were not only bad for Africa, but also for Latin America and West Asia.

Most observers will agree that an approximate cause of the improved African economic performance during the last 5 years or so has clearly been the rise in commodity prices.<sup>1</sup> The commodity producers and exporters not only gain directly from the rising commodity prices but also indirectly through the relaxation of balance of payments constraints, which most developing countries are subject to. Although during the last five years or so the prices of minerals, ores, and metals rose far more than

for food and agricultural raw materials, the latter also recorded a healthy rise (see Table 2). Agriculture would also have benefited from this economy-wide upturn. As Table 3 indicates, the growth rate in value-added in agriculture over the 15-year period 1990-92—2005-07<sup>2</sup> was 3% per annum, which is greater than the average growth rate for developing countries as a whole. This, on the face of it, suggests no great crisis for African agriculture in the most recent period. It may be noted that the population growth rate in the African case was higher than that of other regions and therefore, measured in per capita terms African agriculture did not perform so well.

However, during the period 1990-92—2002-4 food production in Sub-Saharan Africa expanded at a rate of only 2.8% per annum, which was the lowest of all regions shown in Table 4. Similarly, the results of the regression analysis in Table 5 show that the trend rate of growth of Sub-Saharan food production since 1970 has been 2.3%, and that of value-added in agriculture has been 2.5%. The corresponding trend growth rate of population has been 2.7%, leading to a per capita decline in food production and agricultural production.<sup>3</sup> Data for individual countries confirm falling per capita food production, which was aggravated by a) the economic policy regime that operated in Sub-Saharan Africa in the 1980s and 1990s and b) by globalization. These points will be considered in full detail in the following sections. As Walden Bello (2008) notes:

At the time of decolonization in the 1960s, Africa was not just self-sufficient in food but was actually a net food exporter, its exports averaging 1.3 million tons a year between 1966-70. Today, the continent imports 25% of its food, with almost every country being a net food importer. Hunger and famine have become recurrent phenomena, with the last three years alone seeing food emergencies break out in the Horn of Africa, the Sahel, Southern Africa, and Central Africa.

So far, we observe a picture of long-term failure in African agriculture, but also glimpse a short-term improvement as a consequence of the rise in commodity prices and the consequent relaxation of the balance of payments constraint. The important question is whether these recent improvements will be sustainable. As Bailey, Lenihan and Singh (forthcoming) observe:

The good record of African economic growth between 1950 and 1973 when these economies expanded at a rate of nearly 5% per annum could not subsequently be sustained. Similarly, during the 1990s a number of countries were successively selected as the ‘African success

story' by the Bretton Woods Institutions, none of which could actually maintain fast growth for more than 2-3 years (Mkandawire, 2005). Such economic history invites scepticism about the ability of African countries to convert their recent favourable changes in the terms of trade into lasting progress.

There are however important counter-arguments that are an equally essential part of the story. First, the human capital situation in Sub-Saharan Africa is much better today than it was in the 1950s and 60s. New universities and teaching institutions of various kinds have been established throughout Africa and should help sustain the new gains. Similarly and equally importantly, the World Bank structural adjustment policies based on the Washington consensus framework have been discredited by their widespread failure in practice.<sup>4</sup> This suggests a new policy regime more favourable to agriculture and food production may be instituted.

Table 6 provides information on the economic structures of the various regions (columns 4-6) as well as changes in agricultural productivity per capita over time (columns 1-3). The latter variable, which is a long-term indicator of agricultural development, has a very low value in African countries. However, the information in columns 4-6 on comparative economic structures of different developing regions is not very helpful in indicating the desirability or otherwise of the economic structures in the various regions. In some respects the information on the various structures is grossly misleading. For example, the table shows that industry in Sub-Saharan Africa accounted for a greater proportion of GDP in this region than did industry in South Asia (32% versus 28%), implying in terms of received theory that industry is more developed in the former region than in South Asia. This interpretation flies in the face of all available evidence. Similarly, the lower proportion of GDP accounted for by agriculture in Sub-Saharan Africa than in South Asia is not an indicator of more desirable structural change experienced by the former. Indeed without a satisfactory theory of optimal structure and structural change, it is not possible to draw any meaningful conclusion from these statistics.<sup>5</sup> A lower share of agriculture in GDP could imply a premature de-agrarianization of the region than a step towards positive structural change.

To sum up, on balance the evidence suggests that notwithstanding some recent improvements in African agriculture, its long-term performance has been poor. Two kinds of causal hypotheses concerning this failure



have been outlined. These will be dwelt further and empirically examined in the following sections.

### **3. African Economic and Agrarian Failure and State Fragility**

One of the important hypotheses concerning the long-term poor agricultural performance in African countries is that of so-called 'poor governance'. It is argued that a lack of democratic governance mechanisms, corruption and more fundamentally the rule of law, lack of protection of private property, the state inability or failure to enforce contracts are responsible for economic failure in general and for agricultural failure in particular. Understanding the nature of the African state through the performance of African agriculture has led to an examination of the policies in operation in the agricultural sector and an evaluation of the institutional capacity and support provided by the state for measures of governance. At one end, is located the case of the developmental state with its powerful, competent and insulated bureaucracy (Leftwich, 1995) and at the other there is the fragile or failing state that is mired in political and policy disasters (Mkandawire, 1998; Mbabazi and Taylor, 2005). The inability of the state to deliver development objectives has given rise to criteria for identifying fragile states being set out by international financial institutions and donor agencies to assess the challenges that they face in working with such countries (OECD 2007).

Stewart and Brown (2009) review the relative merits of the definitions of state fragility circulating within international donor agencies and come up with a threefold-typology of state fragility that encompasses the dimensions of *authority failure*, *service failure* and *legitimacy failure* and could be used to understand such fragility/failure. In this analysis, *authority failure* occurs when the state lacks the authority to protect its citizens from civil and/or ethnic violence and the ensuing conflict arising from civil war. In the instance where there is *service failure* the state becomes unable to ensure service entitlements, particularly in the areas of health services, basic education, water and sanitation, basic transport and infrastructure, and poverty reduction. In the situation of *legitimacy failure*, the state has only limited support among citizens, and often associated with a dominant military presence in government and a limited or no presence of democratic features: such as elections, media freedom, and civil and political liberties.

While there is little reference made with regard to either the state of agriculture, or policies undertaken therein, within the state fragility literature, it is possible to extrapolate how this new definition might be

used to locate the agricultural context. For instance, poor institutional capacity can result in service failure, as in the case of marketing and subsidy programmes in Africa. Ethnic conflict can increase on account of large differences in land ownership across ethnic groups (cf. case of Guatemala in Stewart and Brown 2009).

In the context of African agriculture, the failures of governance have not been the only cause of a faltering rate of growth. There has also been a reduction in the aid spent on agriculture and rural development over the last two decades (Fan and Rao, 2003; DFID, 2004). This trend reflects the low priority accorded to agriculture and rural development in donor policies as well as being a consequence of the lack of consistency between development agencies agendas and policies (Eicher, 2003; Maxwell, 2003).<sup>6</sup>

In this context the ability of the state to create new agricultural policies and programmes could be regarded as a sign of growing institutional capacity. The importance of the domestic actors, particularly key figures in the Ministry of Agriculture in directing policies and owning processes, is critical in ensuring service delivery. The ability of the state to create domestic policies, even when there is opposition by international agencies is another form of evidence of the growing legitimacy of governance in the country (Cabral and Scoones 2006). In the case of Malawi's new subsidy programme of 2005-06, the consequence was bringing together ruling and opposition parties to ensure food security. However, the initial success of this agricultural programme should not be interpreted as long-term interest in supporting the agricultural sector but short-term interest in ensuring the political survival of key state actors (Chinsinga, 2007).

The poor outcomes of agricultural policies on the performance of African agriculture have been attributed to low institutional capacity. In particular, the role played by domestic and international institutions in sub-Saharan Africa can be analysed to understand the extent to which state fragility could be an explanation for poor agricultural performance. The nature of the failure(s) using the Stewart and Brown classification would provide insights as to the particular trigger that operates in these fragile contexts. If there is evidence of authority fragility then conflict would be the expected outcome, and it would be useful to unpick the particular driver was ethnic rivalry or civil breakdown. In the case where there was a fall in service entitlements then this would emerge as a form of service failure. What is less clear is whether the service failure was on account of poor governance in the domestic sector or due to a steep reduction in international aid to African agriculture.

As indicated earlier in the econometric work in this essay we use a different but entirely defensible definition of fragility requiring the state to provide essential protection against the loss of life and property. There is recently available French data on this issue of personal security, which allows us to examine the impact of fragility as defined here on agriculture and food production in African countries. This task is carried out in section (iv) below.

#### **4. State Fragility Factors and Sub-Saharan Agriculture: A Panel Data Analysis**

The main hypothesis that will be tested in this section is that state fragility as defined below has a negative influence on agriculture and food production. We give the variables used in analysis and the data sources below.

##### **4.1 Influence of state fragility factors**

From the World Bank source (World Development Indicators) we get data on the value added in agriculture (measured in internationally comparable constant dollar) for 17 Sub-Saharan countries: Benin, Burkina-Faso, Botswana, Cameroon, Ethiopia, Gabon, Ghana, Kenya, Mali, Mauritania, Mozambique, Niger, Sénégal, Chad, Uganda, South Africa and Zimbabwe. To control for size we have deflated the value added figures by the countries' population figures (obtained from the same source). This per capita value added in agriculture is used as the proxy for agricultural development (our dependent variable). Our objective is to examine at the cross-country panel level the influence of state fragility and other institutions on Sub-Saharan agriculture after taking into account other factors (which may influence agricultural development through infrastructural development, opening up of the market, general health or quality of life etc) such as FDI as a % of GDP (FDIY), aid per capita (AIDPC) and openness indicator, trade (export plus import)-GDP ratio, TRDY (these data are also available from the same World Bank source mentioned above).

From the database called 'Profils Institutionnels' (available on line: <http://www.cepii.fr/ProfilsInstitutionnelsDatabase.htm>) built by the researchers at the French Ministry of the Economy, Finance and Industry (MINEFE) and the French Development Agency (AFD) we can obtain detailed data (based on 2006 survey) relating to different aspects of institutions for a large number of countries including 17 Sub-Saharan countries covered in this study. For details of the methodology of the

construction of this dataset see Meisel and Aoudia (2007). Recently Kaufmann et al (2008) started using this dataset for their study of institutions.

Without getting bogged down into the detailed discussion of the definition of state fragility (see Sarkar, 2008 for such discussion) we use the functional or operational definition. We think that the first causality in a fragile state is the internal public security (security of life and property of the general public at large). In the French dataset we find the information on internal public security of different countries– variable A200. It also provided quantitative data (in a scale of 1 to 4 – very low to very high) on the following interrelated factors:

1. Security of persons and goods, A2000;
2. Conflicts of ethnic, religious, regional nature, A2001;
3. Violent actions by underground political organizations, A2002;
4. Organized criminal activity (drug-trafficking, arms-trafficking), A2003, and
5. Violent social conflicts, A2004.

These are aggregated into a single variable, A200 by the weighted average (with the weight of a factor being its standard deviation measuring variations of that factor across all the countries covered by the dataset). There is high correlation among the five factors and we find that A2001 and A2004 are the two variables (having no significant correlation between them) explaining all the five variables. As an indicator of state fragility we shall consider these two variables or alternatively we shall use the aggregate variable (A200). Principal component analysis (based on the data for 17 sub-Saharan countries) identifies the A2004 (Violent social conflicts) as the most important factor explaining the cross-country variations with the standardised weight of 0.25 followed by A2001 (Conflicts of ethnic, religious, regional nature) and A2002 (Violent actions by underground political organizations) with the identical weight 0.2 (Table 7).

We have also considered another variable, evolution of the security in the past 3 years (A250); it is based on the answers given by the investigators to the following question: in the past 3 years, has public security in your view substantially improved (4), moderately improved (3), remained stable (2), deteriorated (1) or severely deteriorated (0)?

As the period of analysis we have considered 2001-2006 – roughly this is the period of relevance for the data on state fragility (the first survey for the construction of French dataset began in 2001). We did not look for a long period data on state fragility index as the kind of data generated in various works are not often inter-temporally comparable in the same precise manner as one can think of purchasing power parity adjusted GDP or agricultural value added. Again we do not like to set aside the benefits of using panel data methodology vis-à-vis the OLS analysis of cross-country averages. So we have used the short-period (2001-2006) panel data and applied a special type of methodology, “fixed effects vector decomposition” (FEVD) methodology (details below) that is devised by some political scientists (see Plümper and Troegerhis, 2007).

## **4.2 Using FEVD panel data methodology**

In a cross-country analysis one crucial problem crops up due to country specific omitted variables – different countries have different histories, cultures and many institutional and/or socio-psychological factors that are not included in the analysis either due to ignorance or due to non-availability of data or a mixture of both. These omitted variables often influence the variables on the right hand side and create a bias in the estimates. So often a fixed effect (FE) model is used to eliminate the effect of these omitted variables through differencing or demeaning the data. But this procedure would eliminate all the (time-invariant) institutional variables included in our study. A random effect model can retain these variables but cannot take into account the omitted variable bias – correlation among the variables included on the right hand side and the variables that are not included (unobserved country specific factors). As a way-out of this impasse the “fixed effects vector decomposition” (FEVD) methodology has been devised by Plümper and Troegerhis (2007); it is specially designed to tackle this type of scenario. It is a three-stage procedure for the estimation of time-invariant and rarely changing variables in panel data models with fixed effects. The first stage of the estimator runs a fixed-effects model to obtain the fixed effects, the second stage breaks down the fixed effects into a part explained by the time-invariant and/or rarely changing variables and an error term, and the third stage re-estimates the first stage by pooled OLS including the time-invariant variables plus the error term of stage 2, which then accounts for the unexplained part of the fixed effects. We have conducted Hausman tests, which suggest that our FEVD estimates are efficient in comparison to random effect estimates. Although we have panel data for six years but Durbin-Watson statistic indicates some possibility of first order autocorrelation in each case. So we have used

AR (1) Prais-Winsten transformation for curing the problem of autocorrelation in the residuals (Table 8).

Our estimates in Table 8 show that a country with a higher public security (a higher A200) consequent upon a better scenario regarding conflicts of ethnic, religious, regional nature (A2001) experiences a favourable effect on agricultural value added (per capita). An improvement in the security scenario (a higher A250) favours agricultural development. We did not find any significant effect of FDI, trade openness and aid on agricultural development. These are the main conclusions of the econometric analysis of this section. However we have also considered some other institutional data available from the same French source: one is concerning the proportion of administered prices and market prices (including direct subsidies on prices of primary products) and the variable (B403) capturing all these varies from 1 = large proportion to 4 = very small proportion or nil. The other one is concerning concentration of agricultural land (B703); it varies from 1 = highly concentrated to 4 = highly dispersed. The former has negative coefficient (implying the larger the proportion of administered prices so that the lower is B403, the higher is the agricultural value added per capita) and the latter has positive coefficient (implying the more dispersed land ownership the higher is the agricultural value added per capita).

It is also interesting to note that our conclusion of a negative effect of fragility on agriculture value added is not found in other studies. As Bourguignon et al, 2008, has noted, ‘if there is a clear difference between the two groups of countries (fragile and non fragile states) in terms of *levels* of the various indicators, the distinction between fragile and non-fragile states explains very little of the variability in terms of *rates of change* of MDG indicators. In other words, the variability of performance remains extremely high within both fragile and non-fragile state groups. Fragile states like Ethiopia or Cambodia witnessed rapid poverty reduction performance, while in other fragile states like Niger, Nigeria and Zimbabwe poverty increased dramatically over the period.’ (pg. 8)

## **5. Globalisation, Structural Adjustment and Smallholder Agriculture in Africa**

In discussing agricultural failure, fragile states and public insecurity, it is important to understand how these outcomes evolved. Much of the failed state literature in our view relies heavily on a historical characterization of African governments and cultural predispositions (Bayart *et al.* 1999, Chabal and Daloz 1999, 2005). It is necessary to trace the origins of agricultural decline to understand the historical processes and cause-effect relationships that have generated the present circumstances. In understanding such evolutionary changes in these social institutions, econometric analysis is not very helpful. One is obliged to follow in the footsteps of other social scientists and use historical and institutional analysis, which is what is implemented in the following discourse.

### **5.1 Role of Smallholder Agriculture in African Economies and Politics**

The importance of peasant agriculture to African non-mining economies and states cannot be over-emphasized. Peasant cash crop producers provided the political force behind the African national independence movements that swept the continent in the 1950s and formed the foundation for the economies of the newly independent countries that came into being in the 1960s. During that decade African countries' economic performance was promising. African and Asian countries were part of the 'third world' destined for eventual achievement of the first world's higher standards of living.

Western donor agencies actively supported health, education and infrastructure programs deliberately targeted at rural rather than urban areas. A severe famine in the Sahel in the early 1970s underscored the importance of food security as a prerequisite for development. Hence UN agencies and bilateral donors prioritized the modernization of peasant agricultural. The success of Green Revolution investments in raising rice and wheat yields in South Asia during the 1960s led African governments and donors to put concerted effort behind developing staple food improvement packages especially for maize. Beginning in the 1970s, peasant farmers in many African countries participated in subsidized fertilizer and seed programs and began to experience increasing yields (Bryceson 1990, Oluoch-Kosura and Karugia 2005).

## **5.2 Oil crises, SAP and the Short-circuiting of African Green Revolution Efforts**

The improving staple food yields, however, were short-lived. In the mid-1970s, the economic shock of the oil crises undermined African peasants' prospects and their national economies. Most African governments had established agricultural parastatals to handle the marketing of the widely fluctuating stocks of commercial staple food crops produced by peasants. Peasant farmers in many countries had been availed fixed pan-territorial prices regardless of the distance that they were located from urban centres of staple food demand. This, in addition to peasant farmers' subsidized crop input packages, had successfully incentivized peasant grain production. But at the time of the oil crisis, as the cost of surface transport escalated, parastatal finances became severely stretched. This marked a turning point in the tripartite relationship between peasant producers, state infrastructure providers and the global market.

Peasant households were scattered throughout the length and breadth of an immense continent. Rising oil prices quickly undermined the competitiveness of their agricultural exports, which had to be transported exceptionally long distances to ports. Many African governments found it cheaper to rely on foreign imports of maize, rice and wheat to feed the cities (Andrae and Beckman 1985).

Meanwhile, they became heavily indebted. By the end of the 1970s most were forced to seek debt financing from the IMF. In doing so, the World Bank and IMF gained leverage and eventually the lead in African policy formulation, a lead that African governments, in the main, have failed to regain. In the context of rising neo-liberal thinking connected with the influence of Reagan and Thatcher on the world stage, the World Bank diagnosed that the continent's decline was due to over-involvement of African states. Structural adjustment programs (SAP) had the two-pronged agenda of reducing the role of the state in the economy and cutting back on state provisioned infrastructure and services.

SAP spelled the end of attempts to raise peasant staple food yields. Fertilizer and seed subsidy packages were retracted. FAO statistics show an upward trend in grain output on a par with Asia, which then levelled off and diverged from Asia<sup>7</sup> in the 1980s as subsidized crop input programs collapsed and yields on unfertilized soils declined. Peasant farmers, having seen the difference that fertilizer application could make, deeply resented this setback blaming the state for the subsidy removal. Subsidies and support for export cash crops were similarly affected. International financial institution-enforced economic liberalization



policies led to the dismantling of the market and productive service infrastructure that had ensured timely marketing and crop quality control for Africa's major cash crop exports since the colonial period (Ponte 2002). African peasant farmers' beverage and other traditional cash crop output eroded.

Cutbacks in rural health, education and above all agricultural support programs produced a widespread malaise. Western bilateral donors increasingly aligned with multi-lateral donors under the leadership of the IMF and World Bank to enforce debt conditionality. SAP was justified in the name of 'getting the prices right' for smallholders. In fact, smallholders' quickly realized that the state's retraction from produce markets and input provisioning left them with thin markets and declining productivity. In effect, SAP short-circuited the African Green Revolution efforts that donors had previously initiated in collaboration with African governments. Aid disbursement to agriculture declined precipitously in the 1990s

### **5.3 African farmers in a tilted world market**

A long-term secular decline in the terms of trade for agricultural exports accompanied the decline in agricultural investment. In OECD countries, the falling prices have been offset by extremely high levels of agricultural subsidy<sup>8</sup> to farmers advantaging them relative to developing country farmers. Most recently, the growth and concentration of private agro-industrial enterprises has been impacting on commodity, rural labour and increasingly land markets. The uses of biotechnology, global value chains, supermarket trade channels and just-in-time production have spread (Gibbon and Ponte 2005). In the face of these tendencies, African peasants' more remote locations and smaller scale of production made it more difficult for them to meet delivery market specifications of regularity and product standardization (McMichael 1994).<sup>9</sup>

These trends have widened the productivity gap between smallholder and large-scale production.<sup>10</sup> Large-scale farmers not only have more land, but far more capital investment, which serves to raise land and labour productivity. There are extreme differences between Sub-Saharan Africa where farmers' value added averages \$335 as opposed to \$39,000 for farmers in the United States (World Development Indicators 2007).

The highly capitalized, fossil fuel reliant nature of North American and European farmers enables them as a small percentage of the world's rural

population to out compete Asian and African farmers in the global market for most commercial export crops.<sup>11</sup> Displacement of African and Asian farmers in commodity markets is inevitable in the absence of increased capital investment in their agriculture. As the history of North America, Europe and Japan demonstrates, there is nothing inherently problematic about such displacement if the producers are both willing and able to find alternative viable livelihoods. But given the massive numbers of potential ‘economically displaced people’ and the unknowns of this historically unprecedented global tidal wave, general belief in world commodity markets’ ability to optimize production and welfare for the world’s poor has to be treated cautiously.

The gap in value added between African and Asian farmers as opposed to the United States and Europe is not simply a difference in economic capability and output. Rural ways of life, which have evolved over the millennia in Africa, have been finely tuned to the local environment, social consensus and political balance. The undermining of the local economies of rural communities suddenly with market shocks or gradually with worsening terms of trade, market disincentives and obstacles has already and will continue to cause adverse welfare repercussions, social upheaval and political destabilization (Havnevik *et al.* 2007).

#### **5.4 Catalyzing State Failure through Market Primacy Policies**

Beginning with the World Bank’s Berg report (1982) the African state has been blamed for the continent’s agricultural erosion. African governments are assumed to be inefficient and corrupt. The irony is that African governments lost their autonomy in policy decision-making in the process of debt conditionality and have yet to regain the policy initiative. The West has been increasingly blamed for its double standards by which African farmers fertilizer and improved seed subsidies were removed while OECD farmers enjoyed generous subsidies from their respective governments. Now, Western government measures to subsidize and support their flagging economies during the current global recession are in sharp contrast to the stringency of SAP policies that Africa countries were subjected to under debt conditionality when they plunged into deep recession after the 1970s oil crisis.

Since the 1970s oil crises, African agriculture has seriously declined. The continent’s smallholder peasantries have been weakened by a lack of agricultural investment and poor producer incentives for decades. They are producing in an ever more erratic world economy of international recession. Meanwhile the volume of commercial staple food demand has

been spurred by rapid urbanization, compounded by increasing reliance on foreign importation of rice and wheat as urban dwellers' preferences are swayed towards western dietary patterns.

Economic liberalization policies of the 1990s and the implementation of the WTO Agreement on Agriculture have had a marked impact on food import patterns particularly for rice and wheat. Figure 4 shows a very pronounced surge in wheat imports in Tanzania. Imported food is primarily consumed in urban areas. The 'upgrading' of urban diet with the so-called preferred cereals as opposed to local grains and root crops, greatly increases dependency on imported food, which has to be purchased with African nations' scarce foreign exchange. When international staple food prices rise, as they did in 2008, vulnerability to urban food crisis and food riots, can spread rapidly in cities where there is little or no recourse to own farm production. The hazards of concentrated civil unrest for the stability of African nation-states is illustrated by the wave of urban food riots in 2008 connected with the spike in world food prices.<sup>12</sup>

### **5.5 Further Agrarian Labour Displacement as the Solution to Agrarian Crisis?**

The preceding documents the eroding economic sustainability of African peasant agriculture. The conclusion that some policy analysts and others draw is that smallholder agriculture is exceptionally backward and should be replaced by more efficient agriculture. There are different visions of agrarian directions, some being more open-ended than others. Collier (2008) argues for scientifically advanced agriculture using biotechnology. The World Bank (2008) advocates scale economies. Invariably, these trajectories entail extensive displacement of peasant smallholders given their historically disadvantaged capital assets. Despite their avowed poverty concerns, African government officials and development agencies alike tend to tacitly accept smallholder labour displacement as necessary for agricultural modernization.

Sub-Saharan Africa has never had a period for consolidation of its productive capacity and has been continually open to commodity price fluctuations in the global economy, buffeted by oil price rises and agricultural commodity price declines without the cushioning of government subsidy. Despite, the survival of peasant agriculture for millennia, the continent has been witnessing its eclipse since the 1970s oil

crises. African small-scale peasant producers now compete with heavily subsidized large-scale often corporate, industrialized farming (Round 2007).

If it is accepted that African smallholders have faced an exceptionally hostile global market and policy context for the last three decades, is it feasible and worthwhile for national governments and donors to try to resuscitate smallholder agricultural productive capacity now?

Answering this question requires distinguishing African producers' radically different circumstances currently compared with before the oil crisis. Processes of deagrarianization and depeasantization are already advanced in rural areas across the African continent (Bryceson 1996, 2000, 2002). Rural economies are more diversified and trade-oriented. The average age of rural farmers has increased as youth have migrated elsewhere to pursue non-agricultural activities. Nonetheless, the sense of rural home areas continues to prevail not just for emotive reasons, but because migrants are well aware of the vital importance of an agricultural subsistence fallback at their rural place of birth. These social affinities and attendant political loyalties have to be taken into account in policy formulation.

Despite more than two decades of non-agricultural work experimentation, rural producers face uncertain livelihoods. A *laissez-faire* 'let smallholder farmers find work elsewhere' and 'let small-scale agriculture disappear' perspective, in the absence of any policy provision for alternative non-agricultural employment constitutes gross negligence. The politically destabilizing effects of agrarian labour displacement in economies without established industrial growth trajectories or other alternative economic employment opportunities militate for concerted efforts to raise smallholders' productivity through research, extension and input and infrastructural investment. With such policies, public insecurity, violence and civil war are likely to escalate further on the African continent.

Historically, peasantries formed the demographic, cultural and political bulwark of African nation-states, providing the ethical and social foundations upon which national stability has rested. Thus, on grounds of improving human welfare, agricultural productivity and national stability, smallholder agriculture as opposed to large-scale capitalized agriculture is a more just, conflict-preventing and policy-alleviating policy option.

In the World Bank's World Development Report 2008 (WDR 2008) the market is posited as the arbiter. Smallholder farmers who cannot meet the

rigors of the global market are exhorted to achieve economies of scale through producer organizations, which are deemed to facilitate smallholders' ability to meet the delivery specifications of global value chain. Failing this, they should seek alternatives namely: contract farming or wage labour with large-scale agricultural units or leave the agricultural sector and engage in rural non-agricultural income-generating activities or alternatively, migrate to urban areas. The World Bank (2008) along with other donors advocate social protection policies, which are in effect safety nets put in place to alleviate the losers' inevitable economic misery.

Since publication of the WDR 2008, the global food price scare has served as a wake-up call for western donors. The World Bank, the Food and Agricultural Organization (FAO) and many other multilateral and bilateral donors are distancing themselves from this extreme position. The FAO is taking a lead in urging massive investment in smallholder agriculture.<sup>13</sup> What is most important to first recognize and support is the staple food-producing capacity of peasant agriculture. In a 'better late than never' attempt to resuscitate the African Green Revolution that SAP short-circuited in the 1980s, donors are now scrambling to think of ways of boosting smallholder agriculture. The Bill and Melinda Gates-funded AGRA program, to its credit, has already been mobilizing resources to address the problem. It intends to invest heavily in improving agricultural research, extension and input packages for African smallholders prior to the food price scare. It is early days yet for evaluating the programme and its impact on small-scale African agriculture and it remains to be seen how steadfast donors will be in pursuing agricultural productivity improvements in the face of global recession. What is clear, however, is that African farmers, who have been deprived of research, extension and marketing support for decades, are eager to receive yield-enhancing input packages.

## **6. Conclusion**

The record of African agricultural performance has been poor over the last three decades in line with exceptionally slow economic growth overall, yet in the last few years has seen spurts of around 3 percent. These improvements appear to be a result of the rising commodity prices in the global economy rather than an underlying shift in the production conditions in African agriculture.

The hypothesis that the long-term poor agricultural performance in African countries is a consequence of 'poor governance', was taken up in this paper as Hypothesis A. The results of our estimations showed that a

higher level of public security conducive with lower levels of conflicts of an ethnic, religious, and regional nature, correspond with greater agricultural value added per capita.<sup>14</sup> It is interesting that FDI, trade openness and aid did not have a substantial impact on agricultural development, calling into question the view that further African market involvement is likely to improve the income and livelihoods of smallholder farmers. So while more public security is favourable to agricultural development, it is unlikely that greater openness and trade are the solution to agricultural development, particularly as the current spike in agricultural growth appears to be largely due to rising commodity prices rather than an increased volume of trade.

Our Hypothesis B that the policies of the international institutions and donors have caused a fall in agricultural investment and catalyzed the fragility of African states has also been explored here using a historical narrative. The negative impact of the oil shocks of the 1970s, followed by the SAPs in the 1980s and economic liberalization in the 1990s have resulted in a far weaker agricultural sector. As the African economies met the harsh economic conditionalities imposed by international financial institutions they were forced to reduce investment in agricultural research and technologies and abandon Green Revolution efforts similar to those that were completed in Asia. . The straitjacketing and decline of African agriculture occurred at a time when farmers in Western economies were being supported by generous subsidies from their governments.

Therefore, we argue that the explanation for the poor performance of African agriculture does not automatically lead to the door of African governments but first and foremost to the corridors of power in Western governments and large-scale western agricultural concerns and interests. The solution to poor agricultural performance does not lie in further exposing Africa's smallholder farmers in their present weakened state to the gale force winds of global trade and imbalanced agricultural commodity market competition but to improving the ability of African farmers to benefit from new agrarian technologies that raise staple food productivity, and thereby national stability. It is only through these efforts that countries can move away from labour displacement, food insecurity and fragile states that generate the public insecurity, violence and civil war that Africa has become associated with internationally.

## **TABLES**

**Table 1: Per Capita GDP Growth by Region and Economic Grouping, 1981-2007**

	Average Annual Growth (%)			Overall Growth (%)
	1981-1989	1990-2002	2003-2007	
				1981-2007
World	1.4	1.2	2.3	41.4
Developed economies	2.5	1.8	2.08	67.5
Economies in transition	1.9	-4	7.3	-25.8
Developing economies	1.7	3	5	112.5
Of which:				
Africa	-0.5	0.3	3	16.4
America	-0.3	1.1	3.5	22.7
West Asia	-1.7	1.1	4.1	16
East and South Asia	5.1	5.3	6.3	317.5

*Source: UNCTAD (2007)*



**Table 2: World Primary Commodity Prices,  
2002-2006 (percentage change)**

<b>Commodity Group</b>	<b>2002-2006</b>
Food and Tropical Beverages	48.4
Agricultural raw materials	62.3
Minerals, ores and metals	219.9
Crude petroleum	157.6

Source: *UNCTAD Secretariat calculations, based on UNCTAD Commodity Price Bulletin, Various issues, and UNSD, Monthly Bulletin of Statistics, various issues.* Adapted from UNCTAD (2007)

**Table 3: Sectoral and GDP Growth by Region.  
Annual Growth Rates, 1990-1992 to 2005-2007**

Location	Growth 1990-92-->2005-07			
	GDP	Agriculture	Industry	Services
LOW AND MIDDLE INCOME	4.66	2.83	5.46	4.94
EAST ASIA	8.41	3.52	10.21	8.41
EUROPE and CENTRAL ASIA	2.12			
LATIN AMERICA and CARIBBEAN	3.10	2.51	2.79	3.48
MIDDLE EAST and NORTH AFRICA	3.96	3.31		4.07
SOUTH ASIA	6.01	3	6.63	7.41
SUB SAHARAN AFRICA	3.39	3.14	3.23	3.35

*Source: World Bank World Development Indicators*

**Table 4: Food Production Growth Rate by Region,  
1990-92 to 2002-04**

Location	Food Production 1990-92-->2002-2004
LOW AND MIDDLE INCOME	2.97
EAST ASIA	5.16
EUROPE and CENTRAL ASIA	
LATIN AMERICA and CARIBBEAN	3.63
MIDDLE EAST and NORTH AFRICA	3.69
SOUTH ASIA	2.9
SUB SAHARAN AFRICA	2.77

Source: World Bank World Development  
Indicators

**Table 5 Trend Growth in Sub-Saharan Agriculture since 1970**

Series	Constant, a	Time Coefficient, b	Adjusted R Square	Estimation Procedure
Value Added in Agriculture (2000 US \$)	23.77**	.025**	.99	AR(1)
Food Production Index (1999- 2001 = 100)	3.63**	.023**	.99	AR(1)
Population	3.49	.027**	0.99	AR(2)

Source: World Bank World Development Indicators

**Table 6: Agricultural Value Added Per Worker, 1990-92 and 2001-03. Growth Rate 1990-92 to 2001-03 Sectoral Shares in GDP**

Countries	Agricultural value-added per worker (in 2000 \$)			Value added as percentage of GDP		
	1990-92	2001-03	Annual growth rate (%)	Agriculture	Industry	Services
Low & Mid Income	388	521	2.05	12	43	45
e. Asia & Pacific	303	412	2.83	12	46	42
Europe & C. Asia	1844	1938	0.44	9	30	61
L. America & Caribbean	2152	2856	2.63	6	30	63
M. East & N. Africa	1581	1928	1.82	11	41	48
South Asia	340	393	1.36	18	28	54
Sub-Saharan Africa	304	325	0.62	15	32	52

Source: World Bank economic indicators

**Table 7: Principal Components Analysis of Variables of Public Security in Sub-Saharan Africa**

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.33608	1.02304	0.4672	0.4672
Comp2	1.31304	0.652681	0.2626	0.7298
Comp3	0.660356	0.26078	0.1321	0.8619
Comp4	0.399576	0.108625	0.0799	0.9418
Comp5	0.290951	.	0.0582	1.0000

**Principle Components  
(Eigenvectors)**

Variable <sup>1</sup>	Comp1	Comp2	Comp3	Comp4	Comp5	Standardised Weights
a2000	0.5155	-0.0124	-0.6545	-0.2583	0.4889	0.17
a2001	0.4842	0.2003	0.6509	-0.5436	0.0789	0.2
a2002	0.5483	0.096	0.2104	0.7938	0.1254	0.2
a2003	0.1244	0.7947	-0.2935	-0.0227	-0.516	0.19
a2004	-0.4287	0.5647	0.1321	0.0842	0.6876	0.25

- 1 A2000: Security of persons and goods, A2000;  
A2001:Conflicts of ethnic, religious, regional nature, A2001;  
A2002:Violent actions by underground political organizations;  
A2003:Organized criminal activity (drug-trafficking, arms-trafficking);  
A2004: Violent social conflicts.

Source: ‘Profils Institutionnels’ (available on line: <http://www.cepii.fr/ProfilsInstitutionnelsDatabase.htm>)

**Table 8 Institutions and Sub-Saharan agriculture: A fixed effects vector decomposition (FEVD) analysis**

Regressors <sup>1</sup> etc	I	II	III
FDIGDP	0.0007	0.0009	0.0007
TRDGDP	-0.0005	-0.0005	-0.0005
AIDPC	-0.0002	-0.0001	-0.0001
A200	0.073**		
A2001		0.098**	
A2004		0.005	
A250			0.059**
B403	-0.049**	-0.065**	-0.046**
B703	0.026**	0.018**	0.013*
Constant	4.37**	4.382**	4.522**
Adjusted R Square	0.98	0.98	0.98
Durbin-Watson Statistic <sup>2</sup>	1.38 (1.074234)	1.37 (1.080917)	1.39 (1.072251)
Hausman Test (random effect vis-à-vis FEVD) statistic, $\chi^2$ (probability)	10.29 (0.1128)	10.21 (0.1771)	9.32 (0.1564)

\* Significant at 5 per cent level.

\*\* Significant at 1 per cent level.

- 1 FDIGDP = Net FDI inflow as % of GDP;  
 TRDGDP = (Exports plus Imports) as 5 of GDP;  
 AIDPC = Aid per capita (current US\$);  
 A200 = Internal public security varying from 1 = low to 4 = high;  
 A2001 = Conflicts of ethnic, religious, regional nature varying from 1 = severe conflicts to 4= no conflicts;  
 A2004 = Violent social conflicts varying from 1 = extremely violent to 4=low degree of violence;  
 A250 = Evolution of the security in the past 3 years varying from severely deteriorated (0), deteriorated (1), remained stable (2), moderately improved (3), substantially improved (4);  
 B403 = Administered prices and market prices varying from 1 = large proportion to 4 = very small proportion or nil;  
 B703 = Concentration of agricultural land varying from 1 = highly concentrated to 4 = highly dispersed.
- 2 Durbin-Watson statistic of the transformed equation – AR(1) Prais-Winsten transformation is used for curing the problem of autocorrelation

in the residuals. Durbin-Watson statistic of the original equation is given in parentheses.

- 3 The null hypothesis (difference in coefficients not systematic),  $H_0$  is accepted in each case. FEVD estimates are efficient under  $H_0$ .

Source: Estimated from data available in 'Profils Institutionnels' (available on line: <http://www.cepii.fr/ProfilsInstitutionnelsDatabase.htm>) and World Bank World Development Indicators.



## Notes

<sup>1</sup> The referee asks why we did not study the dynamics of the movement of the commodity prices. The simple answer is that this was not the object of the paper. The rise in commodity prices was being cited only as a reason for the possible relaxation of the balance of payments constraint, and for indicating the impact of the latter on agricultural and overall production. See further UNCTAD (2008)

<sup>2</sup> The referee has queried the meaning of these dates. They simply measure the change from an average of the figures for 1990, 1991, 1992 to the average of the figures for 2005, 2006, 2007. Instead of taking the end points to be the output of a single year, this procedure takes the average of three years as the end point. This provides a better measure of change as it reduces the stochastic variation at the terminal points.

<sup>3</sup> This is one of the most important tables in this section. It covers the period 1970-2007. The referee seems to have overlooked the significance of this table for the argument of this section. It does cover a period of three to four decades.

<sup>4</sup> See for example Stiglitz 2002 ,and Stein (2008)

<sup>5</sup> On the theory of structural change, see the classic studies by S. Kuznets, N. Kaldor, and H. Chenery, For recent contributions to the literature see Dasgupta and Singh, 2004, 2005.

<sup>6</sup> Stewart and Brown (2009) indicate that the conflict over oil in Nigeria is exacerbated by the fact that the rising oil revenues occur in a context where there has been a fall in agricultural investment in Nigeria since 1970, which was previously the mainstay of the economy. As agriculture still employs about 70 per cent of the country's population and accounts for 40 per cent of GDP there is heightened relative inequality in the oil rich region of the country.

<sup>7</sup> Asia's Green Revolution efforts had started almost a decade before those of Africa and had not only registered success but also achieved sustainability by the late 1970s. With national economies strengthened by reliable domestic food production, they were far less vulnerable to debt and the imposition of SAP the aftermath of the 1970s oil crises.

<sup>8</sup> In 2006, almost \$286 billion was paid to OECD farmers in the form of subsidies, which amounted to approximately 27 per cent of their total farm receipts (OECD).

<sup>9</sup> The EU (2007) has voiced its concern for smallholders: ‘Globalisation and the increasing role of trade, changing food markets (with longer food chains) and integration of agricultural supplies (retail concentration) impact on agriculture. This provides increased opportunities as well as a risk of marginalisation of resource-poor non-commercial farmers, particularly in developing countries.’

<sup>10</sup> Large-scale farming is defined here as capitalized agricultural enterprises operating as businesses often of a corporate nature, using wage and salaried labour, deploying intensive agricultural techniques to maximize commercial output. Smallholder farming on the other hand entails family labour producing for commercial sale and household subsistence.

<sup>11</sup> This is increasingly the case as biotechnology conquers barriers to tropical plant production in temperate climates.

<sup>12</sup> A succession of food riots occurred in February and March 2008 concentrated in West Africa Burkina Faso, Senegal, Mauritania and Cameroon in February 2008, (<http://www.irinnews.org/report.aspx?ReportID=76905>), followed by Mogadishu, Somalia in May 2008 ‘Two killed as Somalis riot over high food prices’ (<http://www.msnbc.msn.com/id/24463508/>)

<sup>13</sup> At a recent UN summit, Jacques Diouf, Director-General of the FAO, called for \$22 billion pledged by governments since June 2008 to be released to address rising global food prices (‘The Poor Still Face Hunger’, *New Scientist*, 31 January, 2009).

<sup>14</sup> This result is in keeping with the concept of Horizontal Inequalities put forth by Frances Stewart. The importance of public delivery by the state is regarded as a measure of state effectiveness (Stewart and Brown 2008).

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