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## **Angola's Macroeconomy and Agricultural Growth**

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## **Abstract**

This paper discusses the effects of Angola's mineral wealth on the process of agricultural development. Though Angola has a rich agricultural resource base its history of civil war and extreme real exchange rate distortions has resulted in agricultural stagnation through many parts of the country. Though the security situation is now much improved, current high oil prices along with oil output increases mean that pressures on the real exchange rate will remain a fact of life for the foreseeable future.

# Angola's Macroeconomy and Agricultural Growth

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## I. Introduction

While it is impossible to talk about Angola's macroeconomic situation without reference to its oil income and indeed this will be an important theme in this working paper, it is equally important to understand those parts of Angola's situation which are unique. It is almost a truism that countries with Angola's degree of oil dependence are prone to "Dutch Disease" or the "Resource Curse"<sup>1</sup> but what is less often emphasized is that the history of oil exporting countries shows that the effects of this syndrome are neither inevitable nor are they always the same in each case. A look at examples as diverse as Indonesia and Nigeria demonstrates that the choices made by economic managers and policy makers can have a profound effect on the extent to which oil income can promote or distort the course of development and growth.

Table 1 shows the extent of Angola's oil dependence – it is clear that it is extreme by almost any standard, even by comparison with the oil exporting countries of the Persian Gulf. Recent increases in production and prices have served to increase the apparent degree of this dependence as well as to accentuate the effects of oil price volatility on government finances and the non-oil economy. Oil and to a lesser extent diamonds have provided a fluctuating but increasing revenue stream since Angola's independence in 1975.

The following section of this paper provides an overview of Angola's economy, emphasizing the unique characteristics which differentiate it from other oil exporting countries but also detailing the role oil has played over the years since independence. This is followed by a discussion of Dutch Disease and the ways in which its affects can be ameliorated or compensated for. Of particular interest are its effects on agriculture, which is of special importance for the Angolan case given not only its prominence as a source of income for the population but also because of its sensitivity to exchange rate movements. Emphasis is placed on the policy options confronting the Angolan government with respect to agriculture. This is followed by a numerical exercise demonstrating the effects of the exchange rate on the incentives faced by Angolan producers. Finally, a set of recommendations is offered in the concluding section.

### Table 1

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<sup>1</sup> Dutch Disease or the Resource Curse refers to a common set of distortions and problems which afflict resource rich countries. It is discussed in greater detail in Section III below. See Kyle (2003, 2004 and 2006) for a discussion, as well as Achille Toto Same (2009) World Bank Policy Research Working Paper 4852, World Bank March 2009.

**Mineral Income as Percent of Government Revenue and GDP  
in Mineral Exporting Countries\***

Country	Nonrenewable Resource Revenue as Percent of Total Government Revenue	Nonrenewable Resource Exports as Percent of GDP
Chile	8.6	10.1
Kuwait	59.3	39.7
Norway	14.4	12.1
Oman	77.3	35.9
Papua New Guinea	11.4	27.9
Venezuela	58.2	19.1
<b>Angola</b>	84.0**	48.5***

\* All non-Angolan figures taken from Davis, Ossowski & Fedelino Eds. *Fiscal Policy Formulation and Implementation in Oil Producing Countries*, IMF 2003, p. 275

\*\* Average of 1996-2003

\*\*\* Average of 2002 and 2003

## **II. The Angolan Economy – An Overview**

### **A. Growth**

Tables 2 and 3 show the growth rate and composition of GDP over the past several years. Two facts are immediately evident from the tables - Angola's economy and its overall growth rate are dominated by oil and this dominance has been increasing in recent years. This is to be expected given the increasing price of oil coupled with the sharply higher oil production of recent years, but will likely show some reversal in 2009 due to the collapse of the world oil market with the onset of recession in Europe and the USA. Table 4 shows oil production figures for the past several years. Though it is fair to say that overall growth for the economy is dominated by oil production and oil prices, not all of the population shares in this growth and the oil fueled economy is largely located in Luanda and other large population centers on the coast.

While agriculture accounts for only around 10% of the economy in terms of value added it is far more important in terms of share of employment, accounting for all or the vast majority of income for more than two thirds of the population. Table 5 shows the evolution of staple grain production. It can be seen that production is higher today than it was during the height of the armed conflict in the 1990's but it has not grown markedly, if at all, since the advent of peace in 2001/2002. It is this more or less flat trend that the government is attempting to reverse at the present time.

**Table 2**  
**Angola – GDP Growth 1987-2007 (%)**

<b>Sector</b>	<b>1987</b>	<b>1997</b>	<b>2006</b>	<b>2007</b>
<b>Agriculture</b>	-7.7	12.4	9.8	23.6
<b>Industry</b>	0.3	11.0	20.0	30.1
of which				
<b>Manufactures</b>	-6.9	15.7	44.7	48.0
<b>Services</b>	-3.8	3.1	NA	NA

**Table 3**  
**Composition of GDP – 2004-2007**

<b>Year</b>	<b>Agriculture &amp; Fisheries</b>	<b>Petroleum</b>	<b>Diamonds</b>	<b>Industry</b>	<b>Construction</b>	<b>Commerce</b>	<b>Services</b>
<b>2004</b>	9.20	53.20	3.90	4.30	4.00	17.000	8.30
<b>2005</b>	7.65	62.02	3.66	3.53	3.35	13.55	6.15
<b>2006</b>	8.90	58.43	3.32	4.25	3.63	15.60	5.80
<b>2007</b>	9.36	57.19	3.19	5.01	4.45	15.48	5.24

Source: World Bank

**Table 4**  
**Daily Oil Production**  
(millions of bbl/day)

Year	First quarter	Second quarter	Third quarter	Fourth quarter
2006	1,450	1,330	1,410	1,409
2007	1,556	1,628	1,678	1,778
2008	1,873	1,897	NA	NA
OPEC Quota	1,900	1,900	1,900	1,900

Source: World Bank

**Table 5**

<b>Evolution of Grain Production (MT) - 1996/08</b>				
Crop Year	Maize	Sorgum and Millet	Rice	Total Grains
<b>1996/97</b>	369.505	61.880	0	<b>431.385</b>
<b>1997/98</b>	504.662	88.950	3.596	<b>597.208</b>
<b>1998/99</b>	428.045	101.737	7.402	<b>537.184</b>
<b>1999/00</b>	394.607	105.252	5.777	<b>505.636</b>
<b>2000/01</b>	475.615	144.161	5.335	<b>625.111</b>
<b>2001/02</b>	546.860	161.063	4.890	<b>712.813</b>
<b>2002/03</b>	618.684	83.090	10.831	<b>712.605</b>
<b>2003/04</b>	577.000	123.400	13.000	<b>713.400</b>
<b>2004/05</b>	734.372	137.907	8.650	<b>880.929</b>
<b>2005/06</b>	526.084	144.390	3.831	<b>674.305</b>
<b>2006/07</b>	615.894	156.434	4.635	<b>776.963</b>
<b>2007/08</b>	702.387	27.153	8.416	<b>737.956</b>

Source: Campanhas Agrícolas Anuais. DEI/GEPE e GSA/MINADER

## ***B. The Balance of Payments and International Trade***

Table 6 shows the balance of payments for the past several years. Again, the overwhelming dominance of petroleum is abundantly evident. While there are significant variations in some of the items in the capital account, and there is a marked increase in imports and services in the final year of the table, the overall picture is dominated by oil receipts. The extreme dependence of the domestic economy on imports financed with oil receipts is clear, with the result that Luanda is in large measure economically isolated from the domestic economy.

Tables 7 and 8 show the evolution of domestic grain needs and import requirements. What is most striking is the increasing trend in import needs in basic grains over the entire period covered by the tables. While domestic needs in terms of cassava and other root crops are largely covered by domestic production, the reverse is true of maize and rice. This indicates a major regional disparity in staple food deficits given the concentration of cassava and root crops in the northern regions of the country and the predominance of maize in the central highlands. Also notable is the dependence of Luanda and other coastal cities on imports given the inability of domestic production to cover their requirements.

Table 9 shows the most recent available food balance sheet, with exports, imports, and domestic supplies indicated. While this information is somewhat dated, the current situation is not markedly different from that shown in this table. It can be seen that apart from cassava, there are substantial import needs in all of the major categories. Given the extreme volatility of basic grain prices on the international market in recent years, the cost of these needs has also changed commensurately.

## ***C. Trade Barriers and Taxation***

### *Tariff Protection<sup>2</sup>*

According to the 2007 Diagnostic Trade Integration Study, the nominal average rate of tariff protection for “agriculture, forestry, hunting and fishing” as defined in the International Standard Industrial Classification (ISIC) is 10.3 percent, with average rates for the subsectors “agriculture and hunting,” “logging,” and “fishing,” at 8.2 percent, 20 percent, and 18.9 percent, respectively. Peak rates of 30 percent are applied to items in Harmonized System chapters 5 (products of animal origin), 9 (coffee, tea, maté, and spices), 21 (miscellaneous edible preparations), 22 (beverages, spirits, and vinegar), and 44 (wood and articles of wood). Figure 1 provides an illustration of the overall structure of the tariff system.

Agricultural inputs are still subject to tariffs, although some only at a nuisance level. Nevertheless, when various taxes are combined even a nuisance tax is more than a nuisance. For example, most agricultural implements and machinery are subject to five

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<sup>2</sup> Sections on tariff and non-tariff barriers and taxation are drawn from the Diagnostic Trade Integration Study (2007)



taxes of 2 percent or less that add up to 8 percent. The total tax burden rises to 26.5 percent when other typical taxes are added (e.g., stamp tax, 0.05 percent; custom service duty, 5 percent; port charges—EP14 and EP17—estimated at 3 percent; transport charges, 10 percent). In principle some agricultural inputs are exempt from some taxes, but in practice even “automatic” exemptions require substantial delays and bureaucratic footwork.

### *Nontariff Border Protection*

Angola’s 2005 Customs schedule bans imports of animals and byproducts from areas affected by epizootic diseases, of plants from areas affected by epiphytic diseases, and of genetically modified or transgenic seeds or grains, except those supplied for food aid programs. Decree No. 92/04 of December 2004 strengthened Angola’s legislation regarding genetically modified organisms (GMOs) supplied for food aid. The decree says that the Ministry of Agriculture must grant permission for such imports and that GM grains and seeds entering the country as food aid must be milled immediately on arrival.<sup>3</sup>

An export tax of 20 percent is levied on hides and skins, and a tax of 10 percent on exports of unworked ivory. Angola is not a member of CITES. Exports of animals, parts, and animal products are subject to permission from the “competent authorities,” and exports of fodder are subject to export permits.

### ***D. Inflation and Exchange Rates***

After repeated episodes of boom and bust with periodic bouts of hyperinflation in the 1990’s, Angolan policymakers have achieved a far greater degree of stability since the advent of peace in 2002. As can be seen in Figure 2 there is a clear break in 2002 when the trend for inflation starts downward and by the end of 2004 it was contained at a level of between 0.5 and 1% a month. Most recently it has had an annual rate in the vicinity of 13%.

The exchange of the Kwanza vs. the US Dollar is shown in Figure 3. It can be seen that the exchange rate depreciated steadily until 2003 after which it stayed within a relatively narrow band until 2007. Since then it has been maintained at a near constant rate of 75 to the dollar. While not officially pegged, the government’s monetary policy has resulted in a situation where large and variable foreign exchange expenditures have been designed to control the quantity of domestic currency in circulation, a policy which is in practical terms indistinguishable from a policy of defending the exchange rate at a chosen level. It is clear that the exchange rate would depreciate somewhat if it were not supported. Indeed, a small depreciation was permitted in April of 2009 to approximately 78 Kwanzas per US Dollar together with new policies to support the new rate by

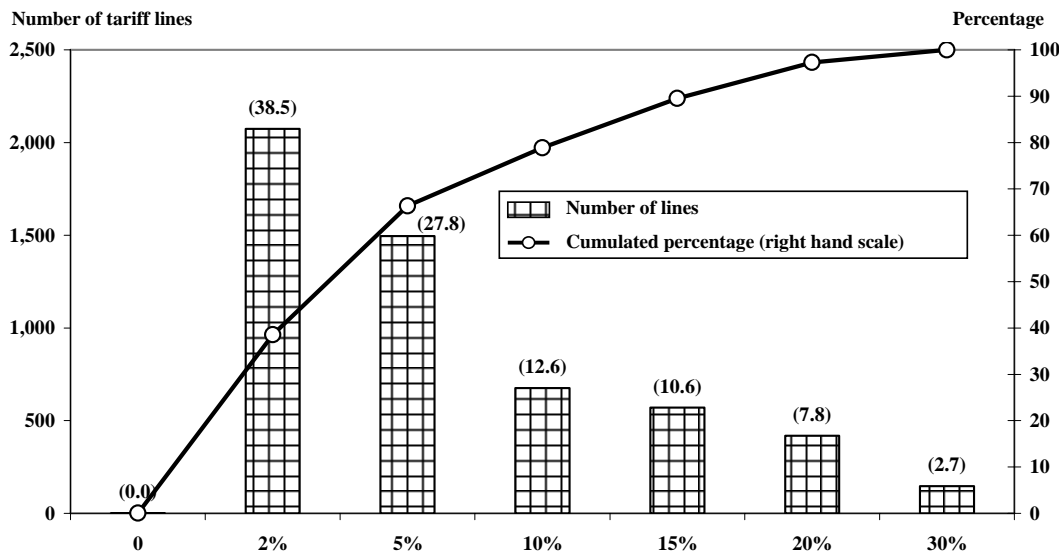
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<sup>3</sup> IRINNEWS.ORG (2004). See also *Science in Africa*, "Angola bans genetically-modified seed," April 2004 (<http://www.scienceinafrica.co.za/2004/april/angolagm.htm>).

reducing the supply of Kwanzas in lieu of using dollar sales as the primary means of controlling the quantity of money in circulation. This was accomplished by announcements raising Kwanza reserve requirements at commercial banks from 10% to 30% in May.

The inflation rate and the nominal exchange rate together have resulted in the real exchange rate trends shown in Figure 4.<sup>4</sup> It is clear that the real exchange rate has steadily appreciated since 2000, and at a very steady rate over the past five years corresponding to the near fixity of the nominal exchange rate and the steady rate of inflation. This result is exactly what would be expected in an oil exporting country such as Angola, absent a policy dedicated explicitly to devaluing the exchange rate *pari passu* with the rate of inflation.

**Figure 1 - Breakdown of Applied MFN Duties**



<sup>4</sup> It is important to note that the real exchange rate is presented as an index – i.e. the absolute level of the index has no significance. Rather the index allows measurement of percentage changes from any given base year directly, or between any two dates based on the values of the index on those dates.

**Table 6**  
**Angola – Balance of Payments 2003-2007**  
Millions of US Dollars

	2003	2004	2005	2006	2007
Current Account	-719,6	686,2	5.137,9	10.689,8	9.402,1
A. Trade Balance	4.028,1	7.643,2	15.756,2	23.084,6	30.734,7
Exports, f.o.b	9.508,2	13.475,0	24.109,4	31.862,2	44.396,2
Petroleum sector	8.684,6	12.619,9	22.854,4	30.483,1	43.003,4
Diamond sector	788,1	789,6	1.092,0	1.154,6	1.182,0
Other	35,5	65,4	162,9	224,5	210,8
Imports, f.o.b	-5.480,1	-5.831,8	-8.353,2	-8.777,6	-13.661,5
B. Service Account	-3.120,1	-4.480,0	-6.614,2	-6.027,0	-12.332,5
Credits	201,1	322,8	176,8	1.484,2	310,7
Debits	-3.321,1	-4.802,7	-6.791,0	-7.511,2	-12.643,2
of which Oil Sector	-1.653,7	-2.167,5	-3.149,4	-3.052,0	-5.447,9
Government	-485,8	-518,2	-464,4	-479,4	-830,6
C. Factor Payments	-1.726,5	-2.483,6	-4.030,9	-6.177,9	-8.778,2
Credits	12,3	33,0	25,8	145,0	33,0
Debits	-1.738,7	-2.516,6	-4.056,6	-6.322,9	-8.811,1
D. Transfers (net)	98,9	6,5	26,8	-190,0	-221,9
Capital Account	1804,21	1232,83	-2746,42	-5.554,61	-5.921,2
A.Net Capital Transfers	22,0	10,6	7,8	1,4	7,2
B. Net Direct Investment	3.481,1	1.414,0	-1.523,2	-228,3	-1.805,1
C.Net Portfolio Investment	1,0	-2,7	-1.267,0	-1.439,5	-2.015,4
of which: Assets	1,0	-2,7	-1.267,0	-1.439,5	-2.015,4
Liabilities	0,0	0,0	0,0	0,0	0,0
D. Net Financial Derivatives	0,0	0,0	0,0	0,0	0,0
E. Other Investment	-1.699,8	-189,1	36,0	-3.888,3	-2.107,8
Errors and Omissions	-821,9	-1.138,8	-574,2	266,5	-461,8
BNA Reserve Assets	-262,8	-780,2	-1.817,3	-5.401,7	-3.019,0

Source: BNA/DEE

**Table 7**

<b>Necessidades Internas</b>				
<b>Produto</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Milho	758.062	737.039	857.156	884.895
Massango/Massambala	213.432	216.001	238.862	233.314
Arroz	293.452	293.030	265.807	274.332
<b>Cereais*</b>	<b>1.530.291</b>	<b>1.511.415</b>	<b>1.607.443</b>	<b>1.645.470</b>
Feijão	332.986	330.418	366.564	379.564
Amendoim	69.733	72.032	87.758	91.906
Soja	ND	ND	ND	ND
<b>Leguminosas e Oleag.</b>	<b>402.719</b>	<b>402.450</b>	<b>454.322</b>	<b>ND</b>
Mandioca	3.590.503	3.646.227	3.829.458	3.953.141
Batata Rena	391.651	366.084	863.735	859.066
Batata Doce	519.168	521.894	728.092	712.373
<b>Raízes e Tubérculos</b>	<b>4.501.322</b>	<b>4.534.205</b>	<b>5.421.285</b>	<b>5.524.580</b>

\* Os dados do GSA, para cereais, incluem trigo;

Fonte: GSA Apud Relatórios Anuais das Campanhas Agrícolas DEI/GEPE/MINADER;

**Table 8**

<b>Necessidades de Importação*</b>				
<b>Produto</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Milho	13.690	200.955	231.262	172.508
Massango/Massambala	70.525	66.611	77.428	201.161
Arroz	280.447	284.844	256.817	261.561
<b>Cereais**</b>	<b>625.007</b>	<b>812.755</b>	<b>806.125</b>	<b>883.159</b>
Feijão	221.702	243.337	260.863	253.100
Amendoim	3.732	7.692	21.098	-19
<b>Leguminosas e Oleag.</b>	<b>223.434</b>	<b>249.029</b>	<b>279.961</b>	<b>ND</b>
Mandioca	-5.016.370	-5.410.796	-5.920.803	-6.124.234
Batata Rena	77.775	65.942	367.519	452.859
Batata Doce	-150.119	-168.362	-226.512	-97.180
<b>Raízes e Tubérculos</b>	<b>-5.088.714</b>	<b>-5.513.216</b>	<b>-5.779.796</b>	<b>-5.768.555</b>

\* Valores negativos indicam excesso do produto;

\*\* Os dados do GSA, para cereais, incluem trigo;

**Table 9***Angola Food Balance Sheet, Crop Year 2002-2003, Marketing Year 2003-2004 (tons)*

Availability/ Purpose	Cereals					Other			
	Maize	Millet/ Sorghum	Rice	Wheat	Total cereals	Beans	Groundnuts	Cassava (fresh prod.)	Potatoes and Sweet Potatoes
<b>Total availability</b>	628,684	88,090	14,831	5,000	736,605	234,408	60,849	6,647,758	817,524
<b>Initial stocks</b>	10,000	5,000	4,000	5,000	24,000	2,000	2,000	20,000	5,000
Commercial sector	4,000	0	4,000	5,000	13,000	1,000	1,000	0	0
Producer stocks	6,000	5,000	0	0	11,000	1,000	1,000	20,000	5,000
Total production (2002-2003)	618,684	83,090	10,831	0	712,605	232,408	58,849	6,627,758	812,524
<b>Utilization</b>	<b>717,360</b>	<b>200,419</b>	<b>243,827</b>	<b>225,225</b>	<b>1,386,830</b>	<b>320,792</b>	<b>67,567</b>	<b>3,082,992</b>	<b>830,156</b>
Human consumption	641,496	186,343	239,059	213,225	1,280,123	302,922	61,059	1,339,952	703,228
Other uses	65,864	9,076	768	0	75,707	15,870	4,508	1,723,040	121,928
Seed	16,369	2,429	551	0	19,349	10,263	4,508	0	29,760
Feed	6,187	2,493		0	8,680	0	0	689,216	27,166
Losses	43,308	4,155	217	0	47,679	5,607	2,354	1,033,824	65,002
Final stocks	10,000	5,000	4,000	12,000	31,000	2,000	2,000	20,000	5,000
<b>Imports</b>	<b>88,676</b>	<b>112,328</b>	<b>228,996</b>	<b>220,225</b>	<b>650,225</b>	<b>86,384</b>	<b>6,718</b>		<b>12,633</b>
Surplus								3,564,776	
<b>Exports</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Deficit	88	44	6.1	2.2	53	73	90	216	98

SOURCE: MINAGRI.

The index can be understood as the percentage decline in average profit margins of trade exposed producers over the time period of the index. That is, if the value of the index is 100 in 2001 and 28 in November of 2008, then profit margins have declined by 72% on average over the period. This is a substantial indirect “tax” on agriculture, and one which can, if it continues unchecked actually cause potential profits in many trade exposed activities to disappear entirely. It is worth emphasizing as this is one of the main conclusions of this paper: *If real exchange rate appreciation continues unchecked the question is not whether but rather when rural producers will be unable to compete with imported products in satisfying the demands of the principal urban centers in Angola.*

### ***E. Agriculture and its Importance in the Macroeconomy***

#### *Agriculture and Poverty*

Though agriculture accounts for only about 10% of the national economy in terms of value added (See Table 3 above), it is far more important as a source of income for the poor. More than two thirds of the population earn their income directly from farming. This means that agricultural growth is key to any program of poverty alleviation, a fact recognized and emphasized in the governments food security strategy (Estrategia Nacional de Seguranca Alimentar e Nutricional). However, agriculture is not only highly important for current poverty alleviation reasons but also because of the huge potential that Angola has for expanded production. With a relatively small population but a huge cultivable area with rainfed techniques, there are very large long run returns to be expected from a program of agricultural investment. (See Table 9)

#### *Agriculture, Public Expenditure and Investment*

According to a recent review of public expenditures in Angola<sup>5</sup> only 1.33% of the total budget of the government is spent on agriculture. This is far below NEPAD recommendations of 10% and well below the average for sub Saharan Africa. Within this total the investment budget is overwhelmingly directed toward irrigation projects (70%) and mechanization (21%) largely due to the priorities of external donors. The spatial concentration of these investments is quite concentrated and does not reflect overall agricultural potential.

In terms of investment, agriculture fares a bit better, with 5.12% of the total public investment budget as of the writing of the Public Expenditure Review, up substantially from its 0.30% share of three years before. Much of this investment is quite concentrated in a few budget units but a large portion of agricultural investment is off-budget entirely, being funded from various external sources. Also very important to note is the fact that a huge amount of public expenditure, both on and off budget, is devoted to improving roads, bridges and railroads. While not directly aimed at the agricultural sector, these expenditures directly benefit both producers and consumers in that they bring down the cost of transporting both inputs and outputs.

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<sup>5</sup> “Angola Public Expenditure Review” World Bank Report No. 39710-AO, May 2007.

Overall, the recent spike in oil prices resulted in a massive increase in public spending, estimated by the Banco Nacional de Angola (see data on website) at 39% more in 2008 than the previous year. However, the subsequent drop in prices has meant that budget execution in 2009 is likely to fall short of what was contemplated when the budget was drafted, though exactly what this will mean for particular components of the budget is as yet unclear.

## **F. Agriculture and Credit**

With the return of macroeconomic stability in the past several years, it is now possible to say that the basic conditions for financial growth have been put in place. This is reflected in the data from 2008 which, according to the BNA website, show an increase in credit outstanding to the economy of just under 70% in that year. This means an absolute increase in the amount of \$US 4.656 billion. Interest rates were quite steady over the year, ranging between 14% and 15% on the open market for Treasury obligations, with the rediscount rate offered to banks at 19.5% for the entire year.

However, most of this increase in credit was not channelled to the agricultural sector. Formal commercial enterprises in agriculture do have some access to credit markets but small and medium farmers have very few options and almost none at all in the countryside itself. Several NGO's have micro credit projects, such as the one run by World Vision, in which the NGO serves as a guarantor for small farm borrowing. Direct micro credit financing from formal banks (e.g. Novobanco) is, however, limited to short term trade purposes and is mostly of 30 days duration or less though it is now possible to get loans of up to two years. Interest rates are 2-4% per month.

The government run development bank, Banco de Desenvolvimento de Angola (BDA) does have a mandate to fund projects in the agricultural sector but as of this time are limited to borrowers which have a formal legal existence, typically meaning incorporation. This limits borrowing (as noted above) to formal sector commercial enterprises, since most medium and virtually no small producers can meet the legal requirements to access these credits. The biggest project to date funded by BDA is the purchase of 400 tractors which will be used in "brigadas de mecanizacao" in the countryside. In conversations with BDA it was stated that the bank currently has \$120 million in funds directed toward agriculture and rural areas, with another \$200 million to be provided from oil receipts and to be used for seasonal lending and other purposes in the agricultural sector. It is intended that some of these funds be directed toward small farmers but again, legal requirements may make access difficult.

Figure 2

Angola - Monthly Inflation 1999-2008  
Source : BNA

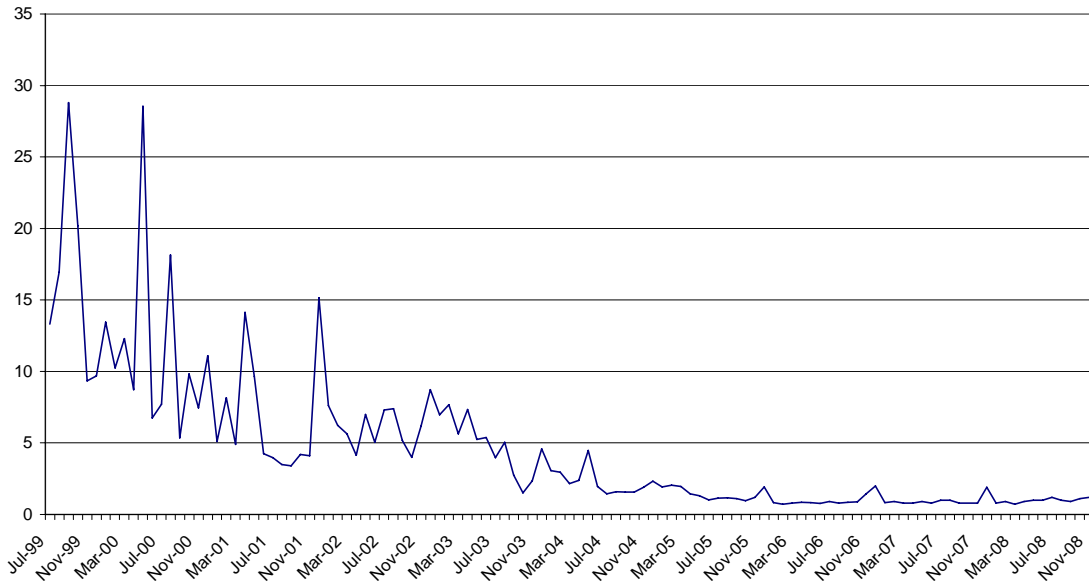


Figure 3

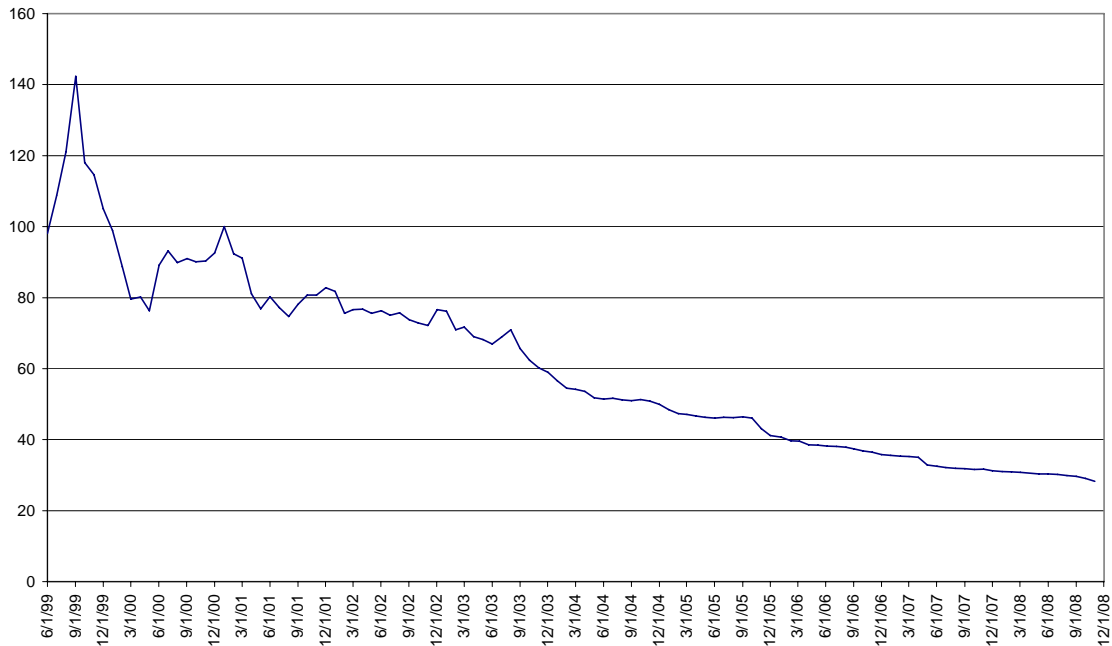
Angola: Nominal Exchange Rate of Kwanza vs. US Dollar 2002-2008





Figure 4

Angola: Real Exchange Rate Index vs. US Dollar 1999-2008  
(Jan 2001 = 100)



### III. Dutch Disease and Angola – An Avoidable Problem?

This section reviews the characteristics of Dutch Disease distortions in the context of the realities of the Angolan situation. It is clear that Angola is not immune from Dutch Disease related problems but it is equally clear that there are various policy options which can reduce or eliminate some of the adverse effects. As with any economic policy decision there are costs and benefits to any choice the government might make but the overall goal of this paper is to outline the role of agriculture in the economy and the effect of different policy options on agriculture.

#### A. Dutch Disease and the Resource Curse – Symptoms or Result of Civil War?

While Angola is often compared with Nigeria, since the two countries are the largest oil producers in Sub Saharan Africa, it is nevertheless true that Angola's case is distinct from that of Nigeria in several respects. First, the geographical realities of the civil war in Angola meant that the agricultural sector was for many years physically isolated from its principal demand centers but more importantly from the point of view of exchange rate effects, it was isolated from competition with international trade as well. While Luanda and other coastal cities were supplied almost 100% with imported food and consumer items, this was less a result of exchange rate overvaluation than it was of

the physical inability to trade between producing and consuming areas in the country. By the end of the conflict mines, bridge destruction and lack of maintenance had made principal road routes from the coast to the interior all but impassable, while rail connections were also non-functional.

**Table 9**  
**Productive Potential in Agriculture – Selected Countries**

Country	Arable Land for Dry Cropping (millions of hectares)
Brazil	582
India	192
Zaire	173
<b>Angola</b>	<b>93</b>
Argentina	87
Sudan	81

Source: Angola – Public Expenditure Review 2007 p. 121

Now that war is a thing of the past the question naturally arises: Can Angola reactivate its agricultural sector and the rural-urban trade that would accompany it, or will Dutch Disease – like symptoms pose an insurmountable obstacle? This paper argues that the economic distortions caused by large oil receipts DO pose an obstacle but that it is NOT insurmountable.

As noted above, the classical resource curse distortion noted in the economic literature is appreciation of the real exchange rate, which causes stagnation in non-oil traded sectors of the economy.<sup>6</sup> An alternative explanation focuses on the volatility of the real exchange rate in a relatively non-diversified economy such as Angola's and finds the failure to diversify to be a result of the inability of capital markets to bear the risk inherent in the wide swings in relative prices and profitability. The end result is similar to that in the classic resource curse literature in that there is underinvestment in non-oil traded activities and an inability of the capital structure to adjust when incentives are

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<sup>6</sup> One of the best summaries of this literature can be found in Max Corden "Booming Sector and Dutch Disease Economics: A Survey," *Oxford Economic Papers* 36(3), November 1984, pp. 359-80. A more recent summary with special reference to Africa can be found in Same (2009) World Bank Policy Research Working Paper 4852, World Bank March 2009.

realigned in favor of these sectors.<sup>7</sup> The sections above describing the current state of the Angolan economy leave little doubt that Angola is indeed suffering from some extent from the distortions that would be predicted by Dutch Disease. The economy is not only heavily concentrated in oil, but it also shows obvious signs of real exchange rate appreciation as well as rent seeking behavior as might be expected given the predictions of the literature on these problems.

One possible reaction to this problem is to do nothing. From this point of view since oil yields huge sums of money over long periods of time dependence is not really a curse at all, and should simply be embraced as a new reality to be lived with. However, there are two problems with this:

1. Angola's current oil receipts are large but oil reserves will eventually be exhausted. Waiting until they run out (or world oil prices fall) is a recipe for disaster in the future since alternative economic income generation sources take many years to develop. Infrastructure planning and construction can take decades so that it is important to plan ahead. Studies of the likely future course of oil receipts given known reserves have emphasized the essentially transitory nature of oil receipts (transitory, that is, when measured in decades).<sup>8</sup>
2. The large size of current revenues compared to the economy as a whole is causing distortions which have very adverse consequences for large segments of the population. In fact the poorest segments of society are part of this majority, including the vast majority of rural smallholders who constitute the bulk of the population. Their welfare and incomes are important, which is why policies to address these problems are essential. In other words, for a majority of the Angolan population, the oil revenues have not only failed to bring any benefits but are in fact imposing large and increasing costs since the prices of the goods they produce are depressed because of exchange rate effects.

It is worth emphasizing the message of the above paragraphs: In effect, the reason "Dutch Disease" is in fact a "disease" is that the large oil and diamond revenues are transitory. A child borne in Angola today will almost inevitable die in a country which is well past its peak production years. Indeed, the fact that massive new oil fields are even now coming on line makes this point even more likely – There is only a small chance that the current rates of growth of oil discovery and exploitation can be sustained over the coming decades. Even if new oil fields continue to be found the growth rate of production will inevitably decline since a given find adds an ever decreasing percentage as the total produced increases (i.e. a 100,000 bbl/day find means a huge percentage increase when production is near zero, but only adds a small percentage growth rate when production is already greater than 2,000,000/day). In addition, old wells eventually decline in productivity and while Angola has yet to see a serious decline in its offshore

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<sup>7</sup> See Ricardo Hausmann and Roberto Rigobon, "An Alternative Interpretation of the Resource Curse", Chapter 2 in Davis, Ossowski and Fedelino Eds. *Fiscal Policy Formulation and Implementation in Oil Producing Countries*, IMF 2003.

<sup>8</sup> See for example, Kyle 2006 "Oil Revenue and Long Run Growth in Angola" Working Paper contributed to the World Bank Country Economic Memorandum for Angola.

production, its oldest wells are already well past their peak.

Another example makes this point very clear. If Angola had such a huge amount of oil relative to the size of its economy and population that it could in essence assume the oil income to be permanent then there would be no “disease” at all. Some of the smaller Persian Gulf oil exporters are in this situation and have on the order of 500 years worth of oil exports at constant rates. In these cases there is no need to worry about distorting the economy or letting competing sectors stagnate because these competing sectors will never be needed. The problem wouldn’t be how to protect the economy from oil revenue because there would be no reason not to allow oil revenue to take over altogether as a revenue generator. However, if oil revenue can reasonably be expected to decline in a matter of decades as is the case in Angola then the question of positioning the economy for that inevitable future becomes of paramount importance.

The standard analysis which emphasizes real exchange rate appreciation is particularly relevant for the agricultural sector since an appreciated real exchange rate lowers the relative price of those goods which are exposed to international trade while at the same time raising the relative price of so-called “home goods” (or non-traded goods) which are not traded internationally. Agriculture is virtually a textbook example of a sector which is exposed to competition from imports. An appreciated exchange rate means lower prices for all of those agricultural outputs which are either exported, or which face competition from imports. Angola’s shift from a major agricultural exporter to an importer may have been a direct result of the civil war, but the continuing existence of a strong exchange rate has the inevitable result of squeezing the profit margins that domestic producers can gain from selling to coastal markets which have access to cheap imports. Thus, unlike Nigeria, the problem is not one of a healthy agricultural sector which declines and collapses in the face of competition from abroad. Rather, Angola faces the even more difficult task of reactivating an agricultural sector that is already at a standstill in the face of adverse incentives.

In the Angolan case it can be expected that agriculture and the light manufactures which would typically be produced by a country at Angola’s income level would bear the brunt of these distortions given the fact that Angola enjoys a strong potential comparative advantage in the production of agricultural products. Indeed, prior to independence and the beginning of oil revenue flows, Angola was one of the four largest exporters in the world of coffee, and was also a major exporter of maize, a crop which is produced almost exclusively by smallholders using largely traditional technologies. In addition to major exports, domestic agricultural production also supplied virtually all food needs of Angolan cities both on the coast and in the interior.

So, the issue of the present day is that Angola is in a position to reclaim its status as a major agricultural producer as market links between interior producing regions and coastal demand centers and ports have been rehabilitated but production has not yet become sufficient to close the gap with food needs. Angola is still a large food importer, while exports of formerly important cash crops such as coffee have dwindled to virtually nothing. Pervasively low prices for agricultural outputs would contribute to a stagnation

of production and in the long run cause a diversion of investment and labor away from this sector and toward other pursuits.

This is particularly troubling in the Angolan case given the very close association of many of the poorest parts of the population with agricultural sources of income. Stagnation in agriculture means stagnation in efforts to alleviate poverty and the growth of major problems such as excessive urban migration and deterioration of traditional society in the countryside.

### ***B. Policy Options to Promote Agriculture Sector Growth a Resource Rich Context***

Given the general course of the “disease” from mineral receipts to spending to exchange rate appreciation to stagnation of trade-exposed sectors through competition from imports and/or reduction in profit margins, there are a series of possible policies which can ameliorate or compensate for the effects. This section will enumerate these options and discuss them in the Angolan context.

Before discussing these options it is worth noting that it is implicitly assumed that the agricultural sector must take the exchange rate of the Kwanza as a given, determined from outside of the sector. It is not the purpose of this study to analyze or make recommendations in the area of exchange rate policy but it should be noted that at the present time the government is expending large amounts of foreign exchange to control monetary growth, a policy which has the effect of maintaining the exchange rate at the present level.

During the civil war depreciation of the currency would have had clear costs (higher prices for food in coastal cities) but no obvious benefits (because the higher prices could have no effect on the physically isolated producing regions in the interior). At the present time this calculation is in the process of changing – while depreciation would still mean higher prices for urban consumers, now that physical transport links between the coast and the interior have been reestablished, these higher prices could result in increased production in response. Clearly there are arguments that can be made for the appropriateness of any particular exchange rate target but it is worth making clear that from the point of view of the agricultural sector some measure of depreciation would be very beneficial. It is important that policymakers take this fact into account when weighing the pros and cons of maintaining any particular exchange rate target.

The following sections detail the pros and cons of policy options aimed at eliminating or compensating for Dutch Disease effects.

#### *Policies Which Limit Oil Revenue Caused Distortions*

First are those policies which seek to eliminate the problem at its root by delaying or spreading out the expenditures that result from mineral exports. Among these are:

## 1. The “Leave it in the ground” option

Economic theory suggests that one way to deal with the adverse effects of huge inflows of foreign exchange is to simply reduce the size of the flows by pumping out the oil more slowly. In effect, this strategy is to “save” the money by leaving oil in the ground rather than pumping it all out as fast as possible. This strategy is in fact being pursued to a limited extent any time a country restricts oil production due to OPEC targets or indeed any other reason. While it is not possible to attribute production fluctuations to any particular rationale, it may be that Angola could engage in this policy to some degree given recent OPEC calls for production limits in the face of recent price declines. However, from the point of view of the agricultural sector, it is not likely that sectoral considerations will be paramount in production decisions – rather, agricultural outcomes are but one of many factors that must be weighed. It is worth noting that if long run price trends for oil are up, then pumping out oil in the future rather than now could well result in a higher total wealth extraction from the resource, particularly given current low interest rates.

## 2. The “Norwegian” option

A macroeconomically equivalent strategy to leaving the oil into the ground would be to save the money overseas (e.g. by buying investments in financial assets in other countries) rather than injecting it into the domestic economy. This is a strategy often promoted by donors and best exemplified by Norway, which has had a good track record creating and managing an offshore savings account. The oil receipts are received but are insulated from the domestic economy in this way and expenditures can thus be spread out over time. This limits the adverse macroeconomic consequences but also allows future generations to have a say in how oil expenditures are made.<sup>9</sup> It is worth noting that paying off foreign debt (i.e. undoing the “dissaving” of the past) is also macroeconomically equivalent to a policy of using offshore savings account. Angola has done exactly this, over the past few years, eliminating large portions of its foreign debt.

The choice between options 1 and 2 is a straightforward exercise in financial choice. Essentially, the returns on oil left in the ground amount to the present value of the future price of oil and so depend on whether future oil prices are higher or lower than those today. The returns on offshore savings (or dissavings in the case of paying off foreign debt) depend on the interest rate earned on these accounts. Naturally, either of these options can be compared with investing the money domestically where the return on the investment is compared with the return on options 1 or 2.

Angola does have an oil reserve account but it is unclear how much of it is saved offshore and to what extent it is simply a fiscal mechanism for channeling oil financed

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<sup>9</sup> See Davis et. al. 2003a and Davis et. al. 2003b for a discussion of country experience with offshore oil accounts and stabilization funds.

expenditures in desirable directions. There are few examples of successful offshore oil accounts in low income countries, largely due to the multiplicity of pressing needs in any country with a large population below the poverty line. In addition, such funds create incentives for corruption and mismanagement and while these may not be an issue in any particular case this is an important consideration.

### 3. Improved Governance and Transparency

Clearly, management of offshore accounts is not unique in its need for safeguards to avoid corruption and misuse of funds. In fact, *any* country whether mineral rich or not can potentially have such problems – but the problem is most obvious in mineral exporters where the incentives are so great and the costs of poor governance are correspondingly large.<sup>10</sup> This makes the issue particularly prominent in mineral exporting countries, with the result that several international initiatives have been suggested in response.

The argument is that the existence of oil income results in a scramble for these rents rather than efforts to engage in more productive activities. In addition, these effects can cause institutions to become weak, which will itself have a detrimental effect on growth. Isham et. al. find such a relationship in a cross section of countries<sup>11</sup> while Sala-i-Martin and Subramanian<sup>12</sup> study the case of Nigeria.

No observer of the Angolan experience would deny the powerful role that mineral income has played both in prolonging the civil war and in inducing corruption in various institutions of the government. Frynas and Wood have documented direct linkages between oil bonus payments and government offensives during the conflict<sup>13</sup> while numerous authors have written of the corruption surrounding oil revenue in Angola.<sup>14</sup> Even casual empiricism confirms the entrenchment of corruption in everyday dealings with the government and few would argue against the corrosive influence of oil money on many of the institutions that deal with it.

The work of Sali-i-Martin and Subramanian on Nigeria is perhaps the most directly relevant to the Angolan case. They argue that corruption and institutional weakness has had a more important effect on Nigeria than has distortion of the real

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<sup>10</sup> See for example, Mauro, P, (1995) "Corruption and Growth" *Quarterly Journal of Economics* Vol. 90 pp. 681-712, and Leite, C. and M. Weidmann (1999) "Does Mother Nature Corrupt? Natural Resources, Corruption and Economic Growth, IMF Working Paper WP/99/85.

<sup>11</sup> See Isham, J, L. Pritchett, M. Woolcock, and G. Busby 2003 "The Varieties of the Resource Experience. How Natural Resources Export Structures Affect the Political Economy of Economic Growth" mimeo, World Bank 2003.

<sup>12</sup> See Xavier Sala-i-Martin and Arvind Subramanian, "Addressing the Natural Resource Curse: An Illustration from Nigeria" NBER Working Paper 9804, June 2003.

<sup>13</sup> See Frynas JG, Wood G. "Oil & War in Angola", *Review of African Political Economy* 28(90): 587-606, 2001 for a discussion of this phenomenon.

<sup>14</sup> See, for example, Ian Gary and Terry Lynn Karl, "Bottom of the Barrel – Africa's Oil Boom and the Poor", Catholic Relief Services, June 2003.

exchange rate and say that even though Nigeria invested a large proportion of their windfall, the weakness of their institutions resulted in “bad” investments with very low returns. They further argue against the importance of real exchange rate effects due to the fact that agriculture has remained stagnant even after appreciation has been reversed. Their solution is that oil revenues should simply be distributed to citizens rather than spent by the government and that this would result in an increase in welfare.

While they may be correct in an ex post sense in the Nigerian case, there are reasons to doubt that their result is entirely applicable to the current Angolan situation. First, to say that Nigerian investments were bad is not to say that all government investments will necessarily be bad. Certainly the case of Indonesia provides a counterexample while in Angola there is no question that there are massive investments in public goods that are needed to rehabilitate the damage caused by the war. Second, there are various reasons for the non-reversibility of agricultural stagnation, among them the fact that most migrants to urban areas were averse to remigration to rural areas, as well as adverse international market conditions for several of Nigeria’s former exports. Indeed, it can be argued that the difficulties of reversing agricultural stagnation strengthen rather than weaken arguments for preventing this problem in the first place. Third, distribution of oil proceeds as recommended by Sali-i-Martin and Subramanian may well result in superior distributional consequences in a static sense, but they ignore intertemporal distribution issues between current and future generations. This is particularly important in Angola given the huge need for public investments in physical infrastructure of all kinds as well as in education to allow the accumulation of human capital.

One instrument a country can use to diminish the impact of institutional weaknesses or potential corruption is to join the Extractive Industries Transparency Initiative (EITI). For all member countries of the EITI, both companies and governments report the amount of payments made and received from large extractive industry operations (mining, oil and gas), subject to a credible, independent audit, applying international auditing standards. Angola has endorsed the principles of EITI and has maintained an observer status of the convention. The government has taken its own steps toward transparency without officially implementing the initiative and while all would agree that more progress can be made, there is no question that the government has made great strides in the past years, including IMF endorsed audits of oil revenue.

With respect to limiting the effects of Dutch Disease, initiatives like EITI or the equivalent in domestically initiated policies, can help limit diversion of funds away from channels chosen by the government. Insofar as this prevents the distortions that are at the root of the problem (e.g. if diverted funds are used to purchase a high consumption lifestyle rather than investments in productivity then limiting such things would be advantageous.) then it can be regarded as a policy which helps to prevent Dutch Disease. While Angola has made great progress in controlling and accounting for its oil revenue, improvements are of course always possible, though the extent to which international assistance is desired is of course a political decision.



## *Policies Which Limit the Effects of Distortions on Agriculture*

While adhering to a savings strategy is obviously always a possibility, not just to spread out expenditures but also to reduce the effects of oil price volatility, it is nevertheless likely that much if not most of oil and diamond revenue in Angola will be spent as it comes in over the near future. Certainly expenditures will remain large relative to the non-oil economy for the foreseeable future particularly because the country is engaged in a massive rebuilding program to repair and replace infrastructure damaged or degraded during the long civil war.

This implies that some degree of real appreciation of the Kwanza is virtually unavoidable even if every possible effort is made to keep it to a minimum. This means that there will be some inevitable disincentive effects on trade exposed sectors in terms of output prices, making necessary a strategy that takes this fact into account. Essentially, the problem is to maintain viability in those sectors in which Angola has a comparative advantage. It is clear that agriculture is one of these in addition to being the source of employment for the majority of the population. Hence, ensuring that agriculture remains profitable preserves it for the future while also preventing adverse social consequences in the present.

The following policy options all have the capacity to protect agriculture, but each has a different set of side effects and costs:

### 4. Protecting exposed sectors with tariffs

Perhaps the most obvious solution would be to protect the agricultural sector by imposing tariffs on competing imports. Domestic prices would consequently be higher and this would obviously increase the potential profit margin of producers who compete with imports to supply domestic urban markets such as Luanda. According to the WTO the average tariff on agricultural goods in Angola is 10%<sup>15</sup> a level which is not extremely high by world standards but which does give a measure of protection to local producers.

There are numerous economic studies extolling the problems with tariff protection and indeed many of these concerns are valid and must be balanced with the legitimate goal of preventing a collapse of the agricultural economy. However, to the extent that alternative policies are available (see below) they are preferable due to the long known problems with tariffs. Among the most important of these problems is the tendency for tariffs, once implemented, to become *de facto* permanent features of the economic landscape due to the difficulty in overcoming the resistance of those who benefit from them. Further, tariff barriers can fuel rent seeking rather than productive behavior though it must be noted that Angola's rate of 10% is far below those which typically inspire such problems. Finally, Angola is a signatory to international trade agreements in SADCC and more broadly that commit the government over the long term to tariff reduction.

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<sup>15</sup> See "Angola, Diagnostic Trade Integration Study" 2006, World Bank, Chapter V.

While there is considerable flexibility built in to these agreements, movements in the opposite direction would be best kept to a minimum.

In the short run there is a clear tradeoff involved with the use of tariffs on food imports. Though such taxes can indeed protect the profit margin of domestic producers, they do so at the expense of domestic consumers since food prices are higher after imposition of a tariff. In effect, urban consumers in Luanda and other cities would be paying more and farmers would be reaping the benefits. Given the already high costs of living in Luanda there is a limit to the extent to which the government might wish to favor farmers at the expense of urban consumers.

However, there is a readily available way to use the tariff structure to protect producer profit margins without a corresponding increase in food prices – all tariffs on agricultural inputs (fertilizers, machinery, etc.) could be eliminated thus lowering unit costs for producers without affecting output prices at all. At the present time, many of these inputs are indeed eligible for exemptions but since these exemptions must be applied for each time a shipment is made there are in fact fairly substantial bureaucratic costs involved. One recommendation might be to attempt to streamline this process by publishing a positive list of exempt items for which no additional paperwork is required.

##### 5. Promoting exposed sectors with investments in productivity improvements

Reducing unit costs of production is the option with the most favorable characteristics to maintain the viability of the agricultural sector in the face of exchange rate induced distortions. Not only can these investments reduce costs and thus increase profits for farmers, they can also actually result in lower prices for consumers as well. As Angola develops and its economic structure shifts increasingly toward manufacturing and other secondary sectors, it is necessary for productivity increases in agriculture to occur so as to avoid the need for increased imports.

Particularly important in the Angolan case are efforts to take advantage of potential yield increases from agricultural research. The country has in effect lost decades of progress due to the civil conflict, with the result that yields for major crops in Angola are less even than neighbors with equal or less favorable agroclimactic conditions. This means that it is very likely that there is some “low hanging fruit” in the form of easily made improvements in seeds and technologies which can rapidly increase yields. Of course, a viable extension system is needed to effectively transfer any improvements to smallholders. Other sections of this report go into great detail in these areas but it is important to underline that these areas are exactly those which are in line with the existing and probable future macroeconomic conditions.

One area that is very important to mention is fertilizers. While Angola can expect yield improvements even without a major increase in fertilizers there is no question that fertility improvements are needed to get maximum benefit from improved seed and other technological changes. Angola is fortunate in this area in two important ways: First,

fertilizer use is already known and understood in the smallholder sector in several areas in the central Planalto, making the work of extension substantially easier upon reintroduction of sufficient quantities in the future. Second, Angola has its own sources not only of petroleum and natural gas feedstocks, but also of rock phosphates in the northwestern provinces of the country. Thus it is entirely feasible and worth investigating the possibility of fertilizer production for both domestic use and for export.

It is important to mention that any program of agricultural investment must be paired with a program of infrastructural and marketing improvements if it is to result in additional marketed surpluses for cities. Marketing and road improvement are also treated elsewhere in this report but it is worth emphasizing that roads can not only reduce the costs of transporting output to market, but can also reduce the delivered costs of inputs as well. Another effect of transport improvements which operates to the detriment of producers but is less commonly recognized, is that lowered transport costs apply equally to imported competing products, increasing the areas in the country where they can effectively compete with domestic production.

### ***III. A Numerical Example of the Effects of Exchange Rates on Producer Profits***

All of the theoretical considerations boil down to a very simple proposition: A strong exchange rate allows cheap imports to enter the country which in turn depresses the price that a domestic farmer can get for competing products. Numerical calculations based on empirical data from Angola can make this crystal clear, and this section will show that the “breakeven” point at which imported maize costs no more (or even less) than local maize even in major producing areas was perilously close in the central planalto in 2004 but was negative closer to the coast, and has actually become more unfavorable to most local producers at the present time.

First, consider the case of maize as it appeared in 2004. At this time peace had come but major transportation routes had not yet been fully rehabilitated. The prices measured for a ton of maize in different points in the country in April 2004 in local markets upon delivery by informal truckers from farm areas were reported by the World Bank in 2004 to range from less than \$100/MT in Kwanza Sul to \$184 in Huambo, \$230 in Benguela and more than \$300 in Luanda. The prices of imported maize averaged about \$115/ton in 2004 while transport from producing countries to Angola cost approximately \$47.50. If we add \$20 for port costs and taxes (a reasonable estimate) we arrive at a landed price of \$184 per ton. It is immediately obvious that imported maize is cheaper than Angolan maize in the large coastal port cities. However, to arrive at the cost of imported maize in the interior, we must add the cost of trucking from the port to these locations. If we add the reported trucking cost of \$50/MT from Lobito to Huambo to the landed cost of imported maize we get a figure of \$244 which is only \$60 above the local price. This competitive edge had the potential to be eroded either by further appreciation of the real exchange rate or alternatively by a drop in the cost of trucking maize from the coast to the interior which could mean that Angolan farmers could become uncompetitive

with imported product *even in their own province or village*.

Indeed, since that time the exchange rate has become stronger, and transport has become cheaper but the international price of maize has been quite volatile. Table 10 shows a calculation relating the current international price of maize to the price of maize in the interior of Angola at the present time. The international price of \$232/MT<sup>16</sup> is historically high but nevertheless yields results that indicate the narrow margins upon which domestic producers operate as compared with imported product. If we add international transport costs, domestic port costs, and domestic transport costs from port to provincial capitals, we can derive the implied price of imported maize in the provincial capitals of Huambo and Kwanza Sul.

If we compare these prices to the actual domestic prices in these interior cities as reported by the Ministry of Agriculture<sup>17</sup> we can see that at the current exchange rate of about 75 Kwanzas/ US Dollar producers in Huambo can supply their provincial capital only Kz 1,400 more cheaply than imported maize can be trucked to that same location. If the exchange rate were to appreciate further that positive profit margin would be turned into a negative number of Kz -3,880, indicating that domestic producers could be undercut by imported product. (It is important to note that the same effect can be achieved if the exchange rate is constant but inflation continues to raise internal prices). Conversely, if the exchange rate were to depreciate to Kz 100/ US dollar, the positive margin for producers in Huambo supplying their own provincial capital would rise to Kz 10,200 per MT.

If we look at the analogous calculation for Kwanza Sul we can see that domestic producers are undercut by imported product at every exchange rate considered. This is in line with the current situation where we see the vast majority of grain needs in coastal areas supplied from imports. However, it is fair to ask how domestic producers in Kwanza Sul can survive at all given the cost differentials presented here. The answer lies in the current problems experienced by freighters wishing to unload in the Port of Luanda. At the present time the wait time for ships to approach a dock can range as high as a month or more, adding considerably to the landed cost of imports due to the added cost of transport. Indeed, it is not uncommon to see as many as two dozen ships at anchor waiting to unload at Luanda. This *de facto* “protection” from imports cannot, however, be expected to last indefinitely since the government plans to expand and improve port operations in the near future.

If we take our analysis one step further and look at the implied price of imported product *at the farmgate*<sup>18</sup> in each of the two provinces, we can see that even after adding the cost of intra-provincial transport to the implied price of imported maize, farmers can

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<sup>16</sup> Price taken from UNCTAD Commodity Price Bulletin, October 2008. \$232/MT is the average FOB price of No. 3 Yellow Maize in US Gulf ports averaged over October 2007- September 2008.

<sup>17</sup> Internal prices and transport costs reported by Gabinete de Seguranca Alimentar, Minagri.

<sup>18</sup> This price is derived by adding the intra-provincial average transport costs reported by the Gabinete de Seguranca Alimentar of Minagri. These were reported to be Kz 3,000/MT in Huambo and Kz 8,000/MT in Kwanza Sul.



**Table 10**  
**Effect of Exchange Rate and International Prices on Domestic Grain Prices**

**International Grain Price \$232/MT**

(all prices quoted in US Dollars/MT)

FOB Price US Gulf Coast	232
Transport Cost to Angola	50
Port Costs*	20
Landed Price of Maize in Luanda	302
Transport Cost to	
Huambo	50
Kwanza Sul	30
Implied Price in Provincial Capital (US Dollars)	
Huambo	352
Kwanza Sul	332
Implied Price in Provincial Capital (Kwanzas)	
	<u>Kwanzas/US Dollar</u>
	<u>60                  75                  100</u>
Huambo	21,120          26,400          35,200
Kwanza Sul	19,920          24,900          33,200
Difference with Actual Provincial Price**	
Huambo	<b>-3,880          1,400          10,200</b>
Kwanza Sul	<b>-18,080      -13,100      -4,800</b>
Difference with Actual Farmgate Price***	
Huambo	<b>-880          4,400          13,200</b>
Kwanza Sul	<b>-10,080      -5,100          3,200</b>

\* Note that at the present time ships must wait as long as 4-5 weeks to unload in Luanda. These additional costs will be eliminated when port improvement projects are completed

\*\* Actual provincial prices of Huambo 25,000/MT and Kwanza Sul 38,000/MT from Gabinete de Seguranca Alimentar, Minagri, Luanda

\*\*\* Intra-provincial transport cost of Huambo 3,000/MT and Kwanza Sul 8,000/MT from Gabinete de Seguranca Alimentar, Minagri, Luanda.

be undercut even on their own farms in Kwanza Sul at current exchange rates. In

Huambo this could happen only if further currency appreciation occurred or if the equivalent percent inflation occurred with a stable exchange rate.

Given the historically high international grain prices of the recent past and the very strong possibility that prices could return to more “normal” levels, the above analysis was recalculated using the average international maize price of the previous year (October 2006 – September 2007) of \$163/MT<sup>19</sup>. The result is shown in Table 11. It can immediately be seen that the results are markedly less favorable for domestic producers with both provinces showing negative margins for competing with imports in provincial capitals at current exchange rates while farmgate comparisons also look similarly unfavorable. This indicates that competitive pressures could be felt in the near future even if no changes at all occur in domestically controlled variables such as exchange rates and inflation.

#### ***IV. Policies to Stimulate Demand in the Rural Economy***

The long civil conflict and the consequent destruction and dislocation left a rural economy that has been badly decapitalized and remains so even 7 years after the end of the conflict. While trunk roads have been largely reestablished there remains a serious lack of public and private infrastructure in the form of secondary roads, water systems, markets, warehouses, etc. Farm populations are equally if not more decapitalized since animal populations were virtually destroyed outside of cattle regions in the south, and many families have resettled on land with little more than the seed and tool starter packs provided by aid organizations. Clearly, though a start has been made, there is still work to be done to recapitalize the rural economy.

The first step toward recapitalization is a revitalization of the rural trading system which was totally destroyed during the conflict. Perhaps even more fundamental is a need to inject cash into the rural economy in order to stimulate demand for consumer products. This type of policy is essentially Keynesian in nature and is clearly indicated as the rural economy is basically stuck in a low level equilibrium where producers cannot sell their output and cannot buy inputs or consumer goods. There are several policy options to achieve the stimulus desired:

1. It is essential to provide a market for domestic output in order to give an incentive to produce marketed surplus in return for cash. The government’s PRESILD program of “Centros Logísticos” which purchase local produce is an effort directed at exactly this goal. However, most of the goods for sale are imported while most smallholders cannot easily access the system in order to sell produce. Given the uneven history of government run agricultural parastatals it is advisable that these centers be sold off to the private

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<sup>19</sup> Price taken from UNCTAD Commodity Price Bulletin, October 2008. \$163/MT is the average FOB price of No. 3 Yellow Maize in US Gulf ports averaged over October 2006- September 2007.

**Table 11****Effect of Exchange Rate and International Prices on Domestic Grain Prices****International Grain Price \$163/MT**

(all prices quoted in US Dollars/MT)

FOB Price US Gulf Coast				163
Transport Cost to Angola				50
Port Costs*				20
Landed Price of Maize in Luanda				233
Transport Cost to				
	Huambo			50
	Kwanza Sul			30
Implied Price in Provincial Capital (US Dollars)				
	Huambo			283
	Kwanza Sul			263
Implied Price in Provincial Capital (Kwanzas)				
		<u>Kwanzas/US Dollar</u>		
		<u>60</u>	<u>75</u>	<u>100</u>
	Huambo	16,980	21,225	28,300
	Kwanza Sul	15,780	19,725	26,300
Difference with Actual Provincial Price**				
	Huambo	-8,020	-3,175	3,300
	Kwanza Sul	-22,220	-18,275	-11,700
Difference with Actual Farmgate Price***				
	Huambo	-5,020	-175	6,300
	Kwanza Sul	-14,420	-10,275	-3,700

\* Note that at the present time ships must wait as long as 4-5 weeks to unload in Luanda. This imposes substantial additional costs which will be eliminated when port improvement projects are completed

\*\* Actual provincial prices of Huambo 25,000/MT and Kwanza Sul 38,000/MT from Gabinete de Seguranca Alimentar, Minagri, Luanda

\*\*\* Intra-provincial transport cost of Huambo 3,000/MT and Kwanza Sul 8,000/MT from Gabinete de Seguranca Alimentar, Minagri, Luanda



sector as soon as viable operators can be found – indeed the government has stated that this is its policy in the long run but a specific transition plan coupled with support to the private sector through guarantee funds or some other mechanism would help promote private sector growth. Given that the major impediment to private sector activity seems to be the inability of credit markets to adequately support activities in rural areas it would be far preferable to have government support in overcoming credit market inefficiencies than direct government ownership of the businesses themselves.

2. Also preventing efficient functioning in the marketing system is the continuing existence of regulations limiting the profit margins of rural traders. These regulations are not consistently applied and their existence, together with that of the Economic Police, is a deterrent to a well functioning market. Rather than trying to control trader profits directly, experience in these issues has shown that it is far more effective to control them indirectly by promoting competition between them. It should be noted that current plans promoted by the Ministry of Commerce designed to reimpose government controls on rural trading are a step away from the kind of free functioning market that can operate on the basis of private sector operations.

2. Rural labor programs such as labor brigades to rehabilitate secondary and tertiary roads can play an important part not only in injecting cash into local economies at the most micro level, but also in eliminating physical bottlenecks which can strangle marketing or production. In addition, programs modeled along the lines of the successful FAS program, but directed toward productive investments rather than social ones have the potential to remove obstacles to marketing and production.

3. Micro credit schemes are capable of directly injecting money at the micro level and should be encouraged and supported wherever possible. Mobilization of savings through such institutions as village savings and loan schemes is key to developing a viable rural financial system in the future, but it is simply not reasonable to imagine that desirable rates of growth can be achieved by mobilizing small farmers own savings alone. Given their near-subsistence level income, savings rates cannot be expected to be very high, and in many cases would be negative under any conceivable concept of optimal evaluation of consumption smoothing, risk and return.

This means that outside investment is needed, not only for off-farm public and private infrastructure, but also for on farm investments. It is not reasonable to hope that a well functioning commercial financial system will operate in rural areas any time in the near future. Such systems are “late” developers in the overall process of rural development, and will face additional obstacles in Angola given the long absence of a money economy of any type through much of the country.

Fortunately, the macroeconomic stability that is a prerequisite for financial development and growth is now much more evident than it was even a few years ago. As noted above, the government has maintained a relatively stable rate of inflation for several years and as confidence in the permanence of that stability becomes stronger savers, borrowers, and lenders will increasingly be able to engage in longer term

contracts than was the case previously.

However, in the short to medium term, smallholders will have to look to more informal means to get the needed credit with which to build capital. In pre-independence times, small rural shopkeepers fulfilled this function, providing in-kind credit for short periods. While these small traders are virtually all gone, it is still likely that credit for smallholders will be provided as a package with the inputs/capital items they are meant to finance.

Small scale village credit schemes, or more formal schemes such as those supported by NGO's such as ADRA and World Vision are very important components of an eventual rural financial system. What must be recognized, however, is that such efforts are of necessity very long term propositions. This means that they should be started as soon as possible but that results may lag for quite a number of years. This is what dictates that other means of recapitalization be considered wherever possible. There is one important caveat to this: These statements should NOT be taken as an endorsement in any way of subsidized rural credit schemes such as have resulted in widespread problems and failure in dozens of countries in the past. There is simply too long and dismal a history of such projects to promote them in Angola.

### Specific Recommendations

The above discussion has several implications for appropriate next steps/reform opportunities for Angola's development plans.

1. Awareness of real exchange rate issues remains uneven, particularly in the Ministry of Agriculture itself. It is important to educate and inform all who are connect with the sector on the nature of the problem and the effects it has on agriculture in order to allow them to better advocate for sector interests and needs.
2. The government should consider how to transition to private sector marketing and supply systems in the near future. There are valid reasons for the government programs that currently exist but it is natural (and indeed the government has stated its intention) to transition to a more efficient private sector model motivated by profit. Current efforts to reactivate the functions of parastatals in the past through initiatives such as input distribution through EDA's and de facto price interventions via such networks as PRESILD have had some degree of success in the stated goals of injecting money into the rural economy and/or stimulating production but will retard the development of the private sector in these areas without a specific transition plan. Accordingly, an immediate privatization and/or phasing out of these efforts is indicated, in favor of supporting private sector operators who can take over through loan guarantee funds or other means.
3. Every effort should be made to maintain free and uninhibited import of agricultural

inputs and machinery.

4. Form a loan guarantee fund to support commercial bank and micro credit lending to rural traders and retailers.

5. Promote and encourage micro credit penetration to the micro level in important agricultural production areas.

6. Initiate projects designed to assist smallholders directly in producing marketed surpluses such as those supported by NGO's and that being funded by the World Bank.

7. Study the feasibility of domestic fertilizer production together with ways to promote fertilizer use among smallholders, particularly in phosphate poor regions.

8. Continue to advocate for an increased share of expenditure on agricultural development since this will be beneficial in terms of economic growth, poverty alleviation, balance of payments, and politically.

## Bibliography

- Corden, Max "Booming Sector and Dutch Disease Economics: A Survey," *Oxford Economic Papers* 36(3), November 1984, pp. 359-80.
- Davis, Ossowski & Fedelino Eds. *Fiscal Policy Formulation and Implementation in Oil Producing Countries*, IMF 2003.
- Davis, Jeffrey, Rolando Ossowski, James A. Daniel and Steven Barnett, "Stabilization and Savings Funds for Non Renewable Resources: Experience and Policy Implications", Ch. 11 in Davis, Ossowski and Fedelino Eds. *Fiscal Policy Formulation and Implementation in Oil Producing Countries*, IMF 2003.
- Frynas J G, and Wood G. "Oil & War in Angola", *Review of African Political Economy* 28(90): 587-606, 2001.
- Gary, Ian and Terry Lynn Karl, "Bottom of the Barrel – Africa's Oil Boom and the Poor", Catholic Relief Services, June 2003.
- Jose Gasha and Gonzalo Pastor "Angola's Fragile Stabilization" IMF Working Paper WP/04/83 May 2004.
- Gelb, Alan *Oil Windfalls, Blessing or Curse?* Oxford University Press 1988.
- Hausmann, Ricardo and Roberto Rigobon, "An Alternative Interpretation of the Resource Curse", Chapter 2 in Davis, Ossowski and Fedelino Eds. *Fiscal Policy Formulation and Implementation in Oil Producing Countries*, IMF 2003.
- Hodges, T. *Angola from Afro-Stalinism to Petro-Diamond Capitalism* Indiana Univ. Press 2001.
- Isham, J, L. Pritchett, M. Woolcock, and G. Busby 2003 "The Varieties of the Resource Experience. How Natural Resources Export Structures Affect the Political Economy of Economic Growth" mimeo, World Bank 2003.
- Katz, Menachem, Ulrich Bartsch, Harinder Malothra and Milan Cuc "Lifting the Oil Curse - Improving Petroleum Revenue Management in Sub-Saharan Africa, International Monetary Fund, 2004.
- Kyle, Steven "Development of Angola's Agricultural Sector" *Agroalimentaria* No. 4, June 1997, pp. 89-104.
- Kyle, Steven, "The Political Economy of Long Run Growth in Angola - Everyone Wants Oil and Diamonds but They Can Make Life Difficult" Department of Applied Economics and Management Working Paper 2002-07, April 2002.

Kyle, Steven “Oil Revenue and Long Run Growth in Angola” Working Paper written for World Bank Angola Country Economic Memorandum, April 2006.

Mauro, P, (1995) “Corruption and Growth” *Quarterly Journal of Economics* V. 90 pp. 681-712.

Ministry of Planning and Finance of Timor Leste, “Establishing a Petroleum Fund for Timor-Leste”, Public Consultation Discussion Paper, Ministry of Planning and Finance, October, 2004.

Achille Toto Same (2009) World Bank Policy Research Working Paper 4852, World Bank March 2009.

Xavier Sala-i-Martin and Arvind Subramanian, “Addressing the Natural Resource Curse: An Illustration from Nigeria” NBER Working Paper 9804, June 2003.

World Bank, "Angola: Strategic Orientation for Agricultural Development - An Agenda for Discussion", World Bank, June 1994.

World Bank, “Toward A Strategy for Agricultural Development in Angola - Issues and Options” AFTS1, December 2004, draft.

World Bank, “Angola Public Expenditure Review” World Bank Report No. 39710-AO, May 2007.

World Bank, “Angola – Diagnostic Trade Integration Study” (draft 2007)

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