

Review

## Agriculture as a tool for development in Angola

Jose de Assuncao Sambo Tomas

Department of Agricultural Economics, College of Management, Zhejiang University, Hangzhou, China.

Accepted 21 March, 2011

After a long period of war in Angola, agriculture can contribute significantly to achieving higher sustainable economic growth and greater rural development in all 18 provinces. The Minister of Agriculture in Angola manages Ministry of Agriculture and Development Rural (MADR) including the Forest Sector, which is designated as the Institute of Development Forest (IDF). The most important is the recuperation of infrastructure, trade liberalization and other economic policy reforms to promote agriculture and increased rural welfare in Angola. It should be given more dynamics based on regional economic cooperation, or regional convergence. The increase in agricultural trade in Angola through open economy by the region, with appreciable-too-large infrastructure, agricultural sectors and with revealed international and regional–inter-regional comparative advantage in the agricultural production and yields, agricultural land, agricultural inputs, dairy products, cereal grains, and agricultural raw materials is the most appropriate avenue for improving agricultural growth and its contribution to rural development.

**Key words:** Revealed comparative advantage, convergence, agriculture, rural development.

### INTRODUCTION

Agriculture in Angola has a tremendous potential. Angola is a potentially rich agricultural country. In this study, the typically revealed comparative advantage system was used as a real evidence for the rapid growth of the Angola economy, which is based on ideology of open economic and administrated by the Government of Movimento Popular de Libertação de Angola (MPLA). Based on this system, the growth relationships with China and Angola as well as the benefit of this relationship for the development of agriculture in Angola were compared. From 1975, one of the rich developing countries in Africa (Angola) became a very poor economy (1975 - 2000). Fortunate relationship with Republic Communist of China gave a new breath for Angola from 2002 and it gave a new way to the rapid growth of the economy. The open economy policies was based on the regional economic cooperation, or the regional conver-

gence. Increasing agricultural infrastructure and the trade politics in Angola depends on the government role in trade liberalization and other economic policy reforms to promote agriculture and increased rural welfare in Angola.

### ECONOMIC DEVELOPMENT, AGRICULTURE AND ECONOMY POLICIES

Perspectives of economic development by some traditional partners of Angola include Brazil and Portugal which are the traditional partners of Angola in well alimentary and industrial products. Russia is a traditional partner in military science, politics and exploration of diamonds and the United State of America is a traditional partner of Angola in the oil and gas exploration but, in this

transition period, the real economic partner for Angola is absolutely the communist country of China. The peace period in Angola came in 2002. Today, agriculture now contributes significantly to the economy of Angola.

The economy of Angola hit higher levels of growth rate exploration of oil in the provinces of the Cabinda (75% of oil "petroleum"), Zaire (24%) and Luanda (1%), and the exploration of diamantes in the provinces of Lundas (80%), Bie (18) and Luanda (2%). Fuelled by the high record of international oil prices and the robust growth in both the oil and the diamante sector; Angola has experienced exceptionally high growth rates in recent years. In 2006, real gross domestic product (GDP) reached 18.6% following the already impressive 20.6% in 2005. The International Monetary Fund (IMF) projected that the GDP growth remains high at 23.4% in 2007 and 26.6% in 2008. Meanwhile, inflation has fallen from over 300% in 1999 to 12% in 2006, and surging oil revenues have led to large fiscal and external current account surpluses (Indira and Alex, 2008; IMF Washington, D.C., 2007).

With the end of the war, rapid post-conflict reconstruction has become the government's priority. The People's Republic of China (China) has in particular, played an important role in assisting these efforts. Chinese financial and technical assistance has kick-started over 100 projects in the areas of energy, water, health, education, agriculture, telecommunications, fisheries, and public works. On the occasion of Chinese prime minister; Wen Jibao's visit to Angola in June 2006, Angolan president; Eduardo dos Santos described bilateral relationship as being "mutually advantageous"; partnerships that were "pragmatic" and had no "political pre-conditions" (Angonoticias, 2006). Mellor (1995) said that, agriculture can contribute more in any economic growth, and economic development is a pertinent and insightful theme developed among others. More specifically, this theme contends that, sustained industrial development and economic growth in low-to-middle-income countries requires policies for economic development that yield incentives for efficient expansion of not only industry but also agriculture and the rural sector, despite the expected long-term decline in the relative importance of agriculture in growing economies (Johnson, 1995). Increase in agricultural output stimulates the demand for industrial inputs such as fertilizer and farm equipment ("backward linkage") as well as expanding the supply of agricultural goods used as inputs to non-agricultural production ("forward linkage") (DeRosa, 1988). Agricultural crop and livestock production are generally characterized as "weak" backward linkage and "medium strong" forward linkage, respectively (Hirschman, 1958).

However, agricultural growth also raises the real income of farm households and hence it is demanded not only for food, forest products and other agricultural products or agriculture structure, but also, for industrial

goods and services and infrastructures. Consumption linkage effects are critical to the influence of agricultural growth on the overall growth performance of the rural and national economy. Ranis et al. (1989) said that, rural industry growth in turn provides "additional impetus for further increases in agricultural productivity, leading to a mutually supportive cycle of agricultural and industrial growth". The economic growth based on the oil and diamante is the way for rapid development strategies that recognizes the importance of ensuring agricultural and rural development along with industrialization, offer the promise of reducing poverty directly and, more generally, the disparity of access in rural areas relative to urban areas to social services, such as education and health-care. Development strategies should be expected to increase access to many privately provided services, such as banking and retailing of consumer goods, in rural areas. The policies towards agriculture and the rural sector, regional convergence with greater equality of access to economic opportunities, physical infrastructure, and social service facilities in rural areas, should be expected to result in greater agricultural and rural incomes, increasing the effective demand for manufactured producer and consumer goods (Appendix). Greater dynamism in agriculture led by expanded trade is required to achieve higher sustained economic growth and greater rural development in Angola.

## **AGRICULTURAL PRODUCTION, TRADE AND COMPARATIVE ADVANTAGE**

Agriculture in Angola has a tremendous potential. Angola is a potentially rich agricultural country, with fertile soils, a favourable climate, and about 57.4 million ha of agricultural land, including more than 5 to 8 million ha of arable land and about 8 to 14% is currently being used. Before independence from Portugal in 1975, Angola had a flourishing tradition of family-based farming and was self-sufficient in all major food crops except wheat. The country exports coffee and maize, as well as crops such as sisal, bananas, tobacco and cassava. By the end of the colonial period, a variety of crops and livestock were produced in Angola. In the north, cassava, coffee, and cotton were grown; in the central highlands, maize was cultivated and in the south, where rainfall is lowest, cattle herding was prevalent. In addition, there were large plantations run by Portuguese that produced palm oil, sugarcane, bananas, and sisal. Commercial farmers grew these crops; primarily Portuguese, and also peasant farmers, who sold some of their surplus to local Portuguese traders in exchange for supplies. The commercial farmers were dominant in marketing these crops, and enjoyed substantial support from the colonial government in the form of technical assistance, irrigation facilities, and financial credit. They produced the great majority of the crops that were marketed in the cities or

exported. By the 1990s, Angola was producing less than 1% of the volume of coffee it had produced in the early 1970s, while production of cotton, tobacco and sugar cane had ceased almost entirely. Poor global market prices and lack of investment have severely limited the sector after independence.

## REVEALED COMPARATIVE ADVANTAGE IN ANGOLA

The commodity patterns of Angola and China or International and Inter-regional trade can be employed to examine the "revealed" comparative advantage (RCA) based on the regional economic cooperation or the regional convergence countries. The RCA indicator employed here is one commonly specified in applied analysis of international trade relations (Balassa, 1965, 1979). It relates the importance of each member of convergence country in policies of development. The economy of Angola can be improved by building infrastructure and as a supplier of agricultural products, and other products to the world market (and alternatively to markets of this group or another countries) relative to all competing exporting countries. In symbols, the indicator is computed as follows:

International trade

$$RCA_j(i, w) = [X_j(i, w) / TX(i, w)] / [X_j(w, w) / TX(w, w)] \quad (1)$$

Inter-regional or regional trade

$$RCA_j(i, A) = [X_j(i, A) / TX(i, A)] / [X_j(w, A) / TX(w, A)] \quad (2)$$

Where,  $X_j(i, \dots)$  represents exports of commodity,  $j$  by country  $i$  to the world ( $w$ ) and Angola ( $A$ );  $X_j(w, \dots)$  represents exports of commodity  $j$  by the world (that is exports of the commodity by all competing producers) to the same two markets, and  $TX(i, \dots)$  and  $TX(w, \dots)$  represent total exports of all commodities by country  $i$  and the world, respectively. Broadly speaking,  $RCA$  values greater than unity indicates comparative advantage and  $RCA$  values less than unity indicates comparative disadvantage.

$RCA$  values reflect not only fundamental factors such as natural resource endowments but also trade distorting factors, such as foreign and domestic protection and also foreign and domestic subsidies to production and trade. In case of this study, the  $RCA$  values computed for Angola trade in agriculture reflect trade-distorting farm policies in Angola and the China financial investment in Angolans economic game. In another hand, two indexes were used, which are Balassa Index and Vollrath Index.

Balassa Index measures the revealed comparative

export advantages ( $RXA$ ) as follows:

$$RXA = (X_{ij} / X_{it}) / (X_{nj} / X_{nt}) = (X_{ij} / X_{nj}) / (X_{it} / X_{nt}) \quad (3)$$

Where,  $X$  represents exports of commodity,  $i$  is a country,  $j$  is a commodity (or industry),  $t$  is a set of commodities (or industry) and  $n$  is a set of countries. If  $RXA > 1$  it shows that the country  $i$  has a comparative advantage in commodity  $j$ . If  $RXA < 1$ , it shows the disadvantages. Vollrath index (Vollrath, TL) also uses the same system to explain the relative import advantage ( $RTA$ ) as follows:

$$RMA = (M_{ij} / M_{it}) / (M_{nj} / M_{nt}) = (M_{ij} / M_{nj}) / (M_{it} / M_{nt}) \quad (4)$$

$$RTA = RMA - RXA \quad (5)$$

Where,  $M$  represents import and the rest is the same as Ballasa Index. If  $RTA$  is positive, it shows the relative trade advantage and vice-versa.

## INTERNATIONAL AND REGIONAL TRADE

The exceptional comparative advantage in International and regional trade deeply shows that the Chinese investment in Angola was apparent in the computed  $RCA$  statistics in the Financial Cooperation (Tables 1 and 2). The bulk of Chinese financial assistance in Angola was reserved for key public investment projects in infrastructure, telecommunications, and agro-businesses under the Angolan government's national reconstruction program. The China Construction Bank (CCB) and China's EximBank provided the first funding for infrastructural development in 2002. The Angolan Ministry of Finance had little input in these arrangements since CCB and Exim-Bank funding was provided directly to Chinese firms. Financial relationship between China and Angola grew in the late 2003, when the Angolan Ministry of Finance and the Chinese Ministry of Trade formally signed the "framework agreement" for new economic and commercial cooperation. On March 21, 2004; the first \$2-billion financing package for public investment projects was approved. The loan was payable over 12 years at a deeply convectional interest rate plus a spread of 1.5%, with a grace period of up to three years. Also, EximBank of China have been invested \$545,009,187.18 in Angola, for complementary action projects about "those money that was spent for the acquisitions of new technology, equipments and instruments" (Angolan Ministry of Finance, 2008). In agriculture, \$249 million permitted the acquisition of new agricultural machinery as well as the rehabilitation of irrigation systems in the localities of Luena, Caxito, Gandjelas, and Waco-Kungo.

**Table 1.** Projects Financed by EximBank of China (Phase I).

<b>Sector</b>	<b>Number of contract</b>	<b>Total value (US\$)</b>
Health	9	206,100,425.42
Education	8	217,158,670.63
Social Communication	1	66,905,200.00
Transport	1	13,840,468.00
Energy and Water	8	243,845,110.58
Agriculture	3	149,753,214.00
Public Works	1	211,684,100.65
<b>Total</b>	<b>31</b>	<b>1,109,287,188.28</b>

Source: Angolan Ministry of Finance (2007) review 2009.

**Table 2.** Projects Financed by EximBank of China (Phase II).

<b>Sector</b>	<b>Number of contract</b>	<b>Total value (US\$)</b>
Health	1	43,805,500
Education	3	229,642,314
Post and Telecommunications "social communication"	4	276,307,189
Energy and Water	3	144,902,615
Agriculture	1	54,006,958
Fisheries	3	266,847,509
Public works	2	89,490,000
<b>Total</b>	<b>17</b>	<b>1,105,002,085</b>

Source: Angolan Ministry of Finance (2007) review 2009.

The comparative disadvantage of the Angola provinces in agriculture stands in contrast to their strong comparative advantage in crude petroleum. The one important exception is fruits and vegetables. Individual Angolan also exhibits substantial comparative advantage in selected agricultural categories and products, relative in colonial period, period of unique party and multiparty period, evidence in international competitiveness in livestock, meats, and dairy products. The Inter-regional RCA statistics gauge the competitiveness of the Angola countries as exporters to one another. As might be expected, the competitiveness of Angola as suppliers of not only crude petroleum but also light manufacturers was reduced, reflecting the similarity of mineral fuel deposits and labor resources in Angola. Of greater interest here is the evidence that the Angola countries have appreciable inter-regional comparative advantage in agriculture, led in particular by strong comparative advantage in livestock, meats, and dairy products, as well as fruits and vegetables. This may reflect not only some sharp differences in agricultural resources and production capabilities between Angola and China but also natural barriers to trade with countries outside, including transportation and handling costs, and general preferences of consumers for regional varieties of agricultural products. In summary, under current

economic and other circumstances, the comparative advantage of Angola is based on two periods, before dependence and from dependence of Angola, which differs depending on whether their exports are destined for world markets or markets in neighboring countries (Tables 3 to 5).

## **BILATERAL TRADE IS A RESULT OF INTERNATIONAL AND REGIONAL TRADE**

Political and economic game between two friendly commercial trades has been growing. Figure 1 shows the sharp increase in Sino-Angolan trade since the mid-1995s. From 1995, bilateral trade between the two countries ranged on average from \$150 million to \$700 million. In 2000, trade exceeded \$1.8 billion, and by the end of 2005, it increased four-fold to \$6.9 billion. Within a year, it nearly doubled to \$12 billion, making Angola, China's largest trading partner in Africa. Crude oil represents over 95% of all Angolan exports, and it is also China's main Angolan import. Over the last six years, China has been the second largest importer of oil from Angola besides the United States, representing roughly 9.3 to 30% of Angola's total oil exports. Despite the fact that, the United State lead in the imports of Angolan oil,

**Table 3.** Agricultural production in Angola.

Cereals in tons											
	Total	Plant forest and wood	Meat and dairy product	Wheat	Rice	Beans and peanuts	Sugar	Coffee	Cotton and Sisal	Fruits and vegetables	Roots and tubers
<b>... to 1974 colonial period government system</b>											
Portuguese	269,509	16 ha X	233,218	X	16.000	79.000	32.000	21.000	50.000	517.000	9.837.000
<b>1975 to 2001 Period of Party Unique government system</b>											
Angolans		0.6 ha X	90.012	X	3.000	56.000	5.000	6.000	7.000	69.000	3.759.000
<b>2002 to 2009 Multiparty government system</b>											
Angolans		2ha X	99.000	X	X	59.000	X	7.000	X	70.000	4.998.000

Source: JAST, 2009±.

**Table 4.** Exports and Imports of Angola by period.

Selected agricultural categories and products												
All produce	Manufactured produce	Mineral fuels	Agricultural produce	Food, live animals	Livestock meats, dairy	Rice	Sugar	Coffee	Cotton and Sisal	Fruits and vegetables	Agricultural raw material	Wood
<b>Colonial period-govern by Portuguese</b>												
10,951(100)	9,342(85)	X(x)	1,473(14)	833(8)	18 (0)	147 (1)	115 (1)	120 (1)	86 (1)	174 (2)	86 (1)	265 (3)
<b>Dependence period from 1975-govern by Party of MPLA</b>												
502(100)	379(75)	49(10)	65(13)	55(11)	10(2)	0 (0)	1 (0)	3 (1)	0 (0)	10 (2)	1 (0)	478 (4)

Source: JAST, 2009±.

**Table 5.** Revealed comparative advantage in international and regional trade.

Selected agricultural categories and products												
All produce	Manufactured produce	Mineral fuels	Agricultural produce	Food, live animals	Livestock meats, dairy	Rice	Sugar	Coffee	Cotton and Sisal	Fruits and vegetables	Agricultural raw material	Wood
<b>Colonial period-govern by Portuguese</b>												
	0.54	X	1.76	2.27	1.36	8.14	0.89	10	5,0	9.88	1.04	7.00
<b>Dependence period from 1975-govern by Party of MPLA</b>												
	1.08	5.98	1.00	0.95	0.05	0.00	0.16	X	X	1.98	0.21	6.00

Source: JAST, 2009±.

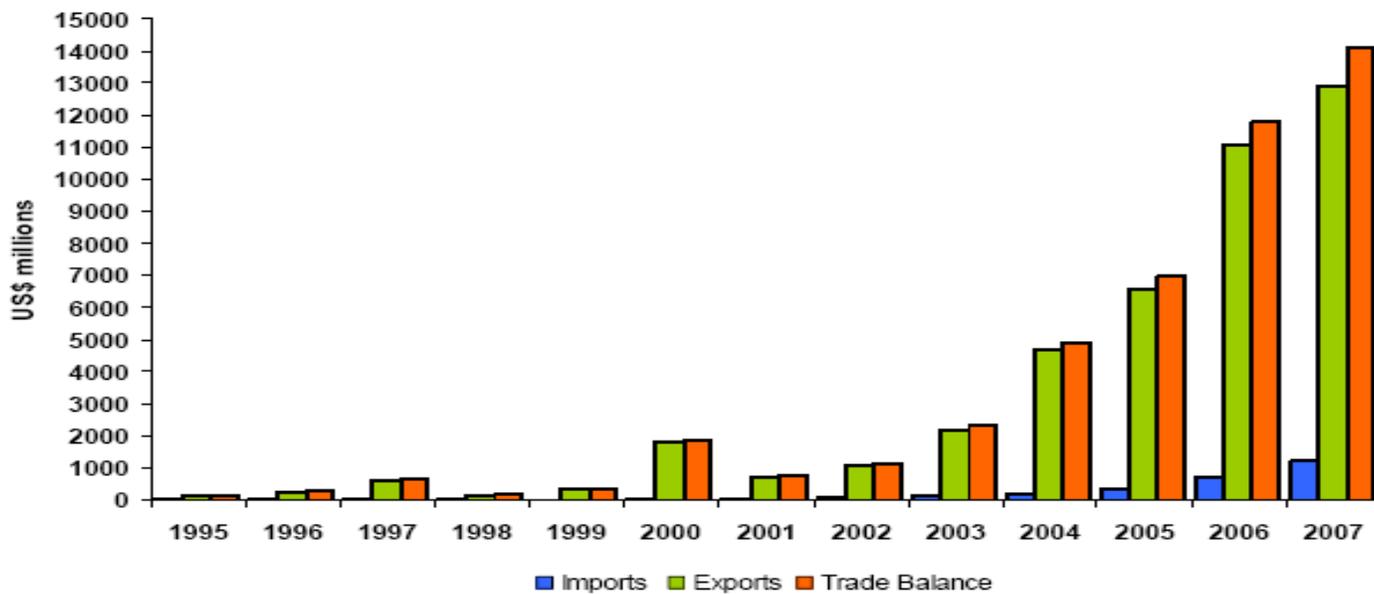


Figure 1. China- Angola Trade Volume (1995 – 2006).

Angolan oil exports to China since 2002 have increased seven-fold, compared to only 3.5 times that of the United States.

Angola's oil exports to China reached \$3.9 billion in 2004, making it a major supplier and ranking it third after Saudi Arabia and Iran. By 2005, Angola had overtaken Iran with exports totaling 17.46 million tons, 45.5% of China's African oil imports. During the first six months of 2006, Angola temporarily leapfrogged Saudi Arabia as the largest supplier of crude oil to China, with 23.45 million tons of crude shipped from the African nation that year. Angolan oil imports now represent over 18% of China's total oil imports, and this proportion is increasing. In recent years, Chinese imports to Angola have also seen a significant increase. In 2004, China became Angola's fourth-largest trading partner at \$194 million, up from being its seventh-largest trading partner the year before. In 2006, China kept its position despite the fact that Chinese exports to Angola quadrupled, with steel and iron bars, batteries, cement, and automobiles as the principal imports.

In early 2007, China surpassed Brazil and South Africa as the second-largest trading partner besides Portugal. Imports reached \$368 million, an increase of 106% from the same period of the year before. Despite the rise in the value of both imports and exports in the period analyzed, Angola has consistently run a large trade surplus with China, owing to the rapidly rising rate of Chinese oil importation. With increase in the infrastructural projects and greater competitiveness of Chinese exports compared to European exports in Angola, it is expected that in the next few years, the penetration of Chinese products in Angola will rise significantly, equalizing the level of Portuguese imports.

#### CHINESE INTEREST IN ANGOLA BY CONVERGENCE INTERNATIONAL REGIONAL TRADE

China has great interest in oil and other industries of Angola. Throughout the 1990s, bilateral trade between the two countries ranged on the average from \$150 million to \$700 million. In 2000, trade exceeded \$1.8 billion, and by the end of 2005, it increased four-fold to \$6.9 billion. Within a year, it nearly doubled to \$12 billion, making Angola China's largest trading partner in Africa. Following the opening of China's first credit line to Angola in March 2004, China Petrochemical Corporation, better known as Sinopec Group, acquired its first stake in Angola's oil industry, 50% of the BP-operated block 18. Sonangol Sinopec International (SSI)-a joint venture between Angolan National Oil Company, Sonangol and Sinopec was created to explore the stake on the block. Sinopec Group holds a 55% stake in the joint venture and Sonangol the remaining 45%. Although BP's former license partner Shell had agreed to sell its stake to India's state-owned Oil and Natural Gas Corporation (ONGC), the Chinese on their first involvement in the Angolan oil industry sidelined ONGC with an offer that media sources estimated at \$725 million (ONGC, 2006). The company reportedly spent an additional \$1.5 billion for the development and exploration of the block (International Herald Tribune, 2006).

Additionally, the two parties also signed a memorandum to jointly study the plans for the exploration of the shallow offshore blocks 3/05 and 3/05A (previously known as block 3/80) that was withdrawn from the French Group Total in late 2004. Later that year, the two parties agreed that China Sonangol International Holding (CSIH), a subsidiary of Sonangol E. P., jointly owned by Beiya

International Development Limited, would explore the 25% stake. In March 2006, the Sino-Angolan joint venture SSI acquired three new Angolan offshore oil blocks with proven reserves of 3.2 billion barrels. It offered \$750 million for 20% of ENI-operated block 15 and made a record bid of \$1.1 billion as signature bonus payment for each of the relinquished offshore of block 17/06 (27%) and 18/06 (40%). In addition to the bids for the rights to prospect for oil, the joint venture earmarked \$200 million for social projects. Both companies also agreed to jointly study plans for a new \$3 billion oil refinery in Lobito (Sonaref) with a capacity of 240,000 barrels per day (Angola Press News Agency, 2006).

The Chinese have also shown an interest in Angola's diamond. The Angolan Council of Ministers accepted a joint venture agreement between Angola's state-owned diamond company, National Enterprise of the Angola Diamantes, Exploration and Production (Endiama, EP), and CIF. It also approved Endiama's participation in the creation of Endiama China International Holding Limited (Endiama China) to prospect, produce, and market diamonds, including diamond cutting and production of jewelry in Hong Kong but the Chinese interest in Angola have not ended.

## CONCLUSIONS

The government of Angola has developed strategies to revitalize agricultural sector. The relationship and convergence with Chinese government gives new dynamic to Angolan's government. It will increase agricultural output in many sectors. Therefore, Angola faces three key socioeconomic challenges which include eradicating poverty, ensuring food security, and protecting the environment. To address these challenges, Angola will have to generate growth in the agricultural sector. During the years from 2002 to 2009, the GDP share of the industrial, agricultural and service sectors had changed dramatically while industrial sector became the second biggest sector after service sector. That is a completely reverse picture of the sector shares when compared to the Colonial period governed by Portuguese (1974), Party Unique period governed MPLA (1975 – 2001) and Multiparty period governed by MPLA (2002 – 2009). It showed that during this period, with the help of the Chinese Government, it speeded to about 2 billions for the recuperation of infrastructure.

Chinese financing offers better conditions than commercial loans, lower interest rates, and longer repayment time. Non-Chinese credit lines that Angola secured in 2004 demanded higher guarantees of oil, with no grace period and with high interest rates. Since Angola started pumping oil in the early 1970s, the United States has been the main importer followed by China. Although the United States remain the number one importer of Angolan oil, its share has significantly decreased in contrast to those of China and South Africa,

which have more than doubled. Although, there are signs of growing Chinese FDI to Angola, such investment remains small when compared to Western FDI. Outside the extractive industry, the Portuguese still dominate, with over \$200 million invested in 2006 alone, representing 57% of total FDI to Angola. Angola welcomes any investment in the non-oil sectors and the recent trade mission by Japanese, British, Turkish, Indian, and Pakistani businessmen clearly demonstrates this. Likewise, despite China's efforts to enter the oil sector, production is still dominated by Western companies such as Chevron, Total, BP, and ExxonMobil. With Angola's increased dependence on China's energy security, one can expect China to be visible in the 2008 bidding round for 10 new blocks. The Chinese Government and Chinese private sector have been interested in full cooperation with Angolans Government in Agricultural Science especially in the forest industry. It is no secret that the reason is Maiombe forest, which gives more medicinal plants. According to the needs for rehabilitation or recuperation of all infrastructure and structure in all 18 provinces and development of agriculture and other industries in Angola, government needs more than 2 billion of the Chinese money (they need more or about 18 billion US\$), but real success of the government in finance and economic activity is clearly politics in national and international game transparency.

## ABBREVIATIONS

**GDP**, Gross domestic product; **IMF**, International Monetary Fund; **RCA**, revealed comparative advantage; **CCB**, China Construction Bank; **ONGC**, Oil and Natural Gas Corporation.

## REFERENCES

- Angola Press News Agency, Jose PM (2006). Sonangol rubrica acordo para desenvolvimento da refinaria do Lobito, [J] Luanda, Jornal de Angola.
- Angonoticias* (2005). Comissão Permanente do Conselho de Ministros reuniu sob orientação do Presidente da República, [J] Luanda Diary informative.
- Balassa B (1965). Trade Liberalisation and 'Revealed' Comparative Advantage", The Manchester School. P. 33.
- DeRosa DA 1988. Asian preferences and the gains from MFN tariff reductions. [B] World Econ. 11:377-396
- Hirschman AO (1958). *The strategy of economic development*. New Haven [J] Yale University Press.
- Indira C, Alex V (2008). ANGOLA and CHINA - A Pragmatic Partnership, (Working Paper Presented at a CSIS Conference), "Prospects for Improving U.S.-China-Africa Cooperation", [J] Chatham House, London.
- International Herald Tribune (2006). China Buys More Angolan Crude than Saudi, [J] Diary of Portugal.
- Johnson DG (1995). The limited but essential role of government in agriculture and rural life. In *Agricultural competitiveness: market forces and policy choice*, eds., G.H. Peters and D.D. Hedley. Hants, England: Dartmouth Publishing Company for the International Association of Agricultural Economists [J] England press.
- Mellor JW (1995). *Agriculture on the road to industrialization*. Baltimore:

- Food Policy Research Institute. [J] Johns Hopkins University Press for the International.
- Ranis G, Stewart F, Reyes EA (1989). Linkages in development: A Philippine case study. [J] Working Paper Series No. 89-02. Manila: Philippine Institute for Development Studies.
- Sinopec Beats ONGC (2006). Bets Angola Block, [J] *Financial Express*, as cited by China Institute, University of Alberta.
- The Economist Intelligence Unit (2004-2005). Angola at a glance, [J] Angolans Country Report 2005.

## APPENDIX

### Agricultural policy

The Government of the Republic of Angola has shown that it is committed to promoting the revitalization of the agricultural sector. The Ministry of Agriculture and Rural Development had developed specie programmer "The Economist Intelligence Unit (2004-2005)" which states that the government's program in the agricultural sector gives special importance to:

- (1) Rehabilitation and/or construction of basic infrastructure to support production.
- (2) Agriculture expansion and rural extension.
- (3) Seed propagation, production and multiplication.
- (4) Conducting basic and applied research on agriculture and livestock.
- (5) Encouragement of agriculture, livestock and forestry production.
- (6) Technical and professional training.

Specific goals related to crop production set forth for the 2004/2005 programs are:

- (1) To increase food production by restoring the ability to supply inputs to farmers and products to private agriculture and livestock-linked businessmen.
- (2) To integrate agriculture-oriented refugees and demobilized people, into the agriculture, livestock and forestry activity.
- (3) To promote sustainable rural trade by emphasizing the commercialization of cereals, roots and tubers.
- (4) To boost agriculture expansion and rural extension programs.

- (5) To rehabilitate and reactivate production-supportive infrastructure such as hydro-electric projects, by-roads and other rural engineering infrastructure
- (6) To boost the rehabilitation of coffee, sugar and sisal production and promote its commercialization.
- (7) To provide incentives and stimulate the creation of middle- and large-sized agriculture and livestock farms.
- (8) To ensure the sustainable management of natural resources.