ERASMUS UNIVERSITEIT ROTTERDAM

GROWTH & POVERTY IN ANGOLA

ERASMUS UNIVERSITY ROTTERDAM

ERASMUS SCHOOL OF ECONOMICS

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‘Ad augusta per angusta’.

Thank God for the good health, nice family and friends.

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Thank you very much to mommy and dad, grand parents, brothers and sisters, friends and my girl for always being there for me and believing in me specially when I barely could do so myself.

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List of Acronyms and Abbreviations

AfBD	African Development Bank
AGOA	Africa Growth and opportunity Act
COMESA	Common Market of Eastern and Southern Africa
CPI	Corruption Perception Index
DFID	Department for International Development
DEPOCEN	Development and Policies Research Center
EU	European Union
GSP	Generalized System of Preferences
IMF	International Monetary Fund
INE	Portuguese for Angolan National Statistics
MDGs	Millennium Development Goals
NEPAD	New Partnership for African Development
OECD	Organization for Economic Cooperation and Development
OGE	Portuguese for Angolan State Budget
PRSP	Poverty Reduction Strategy Paper
SADCC	Southern African Development Coordination Conference
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
UNSA	United Nations System in Angola
WDI	World Development Indicators
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

1. Introduction

Angola is a Sub-Saharan Africa country that have endured more than four decades of war which left a legacy of destruction and scores of people living in poverty. In fact, according to the World Bank and the United Nations Development Programme more than half of the population (64%) is poor: 38% lives below the poverty line of $2 per day and 26% are extremely poor. Meanwhile, after the peace accord the Angolan economy begun to grow significantly.

The World Bank and other renowned international organizations, and several development economists assert that economic growth is an indispensable development premise and so it is central as well in the low income countries efforts in lifting their populations out of poverty. This assumption was proven by Botswana, Malaysia and Vietnam; and lately by the successes of China, India and Brazil; and the current efforts underway in Mozambique and Ghana among several other developing countries.

Consequently, my thesis seeks to establish if in fact a negative correlation can be found between: growth and poverty in Angola. So as if the economy grows, poverty decreases provided the authorities invest in health, education, agriculture and basic infrastructures.

The structure of the thesis is as follows:
Section 1 is the Introduction intertwined with sub-section 1.1 where the background of Angola shall be presented and sub-section 1.2 the research question including the two main hypotheses of the thesis. Namely: i) Alternative Hypothesis: economic growth and poverty are negatively correlated and ii) Null Hypothesis: there is no correlation between both study variables: growth and poverty in Angola.

Section 2 is the Theoretical framework. It shall broach a concise literature review focusing on postulates of the development economists such as Jeffrey Sachs and Paul Collier plus those of international organizations including the World Bank, the United Nations Development Programme (UNDP), the Organization for Economic Cooperation and Development (OECD), the African Development Bank (AfDB) on how growth can/should enable stir up development and contribute significantly in fighting poverty.

Also in this section the responses of all the partial questions, which contribute to answer the main research question of the thesis, will be given.

Section 3 shall present the thesis Methodology and Data through which the main research question is answered making use of the bivariate correlation method in the SPSS statistical packet environment by calculating the Pearson product moment correlation.

In Section 4 the results of the study are presented. We shall see that there is indeed a significant (**P-value = 0, 024**) negative correlation (**r = - 0, 637**) between economic growth and poverty. So as if growth increases poverty will decrease.

Section 5 is dedicated to a case study. Namely we will try to grasp the essence of the factors and policies which made it possible for China to lift millions of its people out of poverty in one generation. We will seek specifically to pinpoint those factors and policies in order to determine how and what other developing countries, such as Angola, can learn from the Chinese experience in reducing poverty. So, we will come to the conclusion that mainly sustained economic growth and reforms (Ravallion 2008), international trade and investments in agriculture but also in health and education have enabled the Chinese success.

Finally, Section 6 is the conclusion.

1.1 Angola: country background

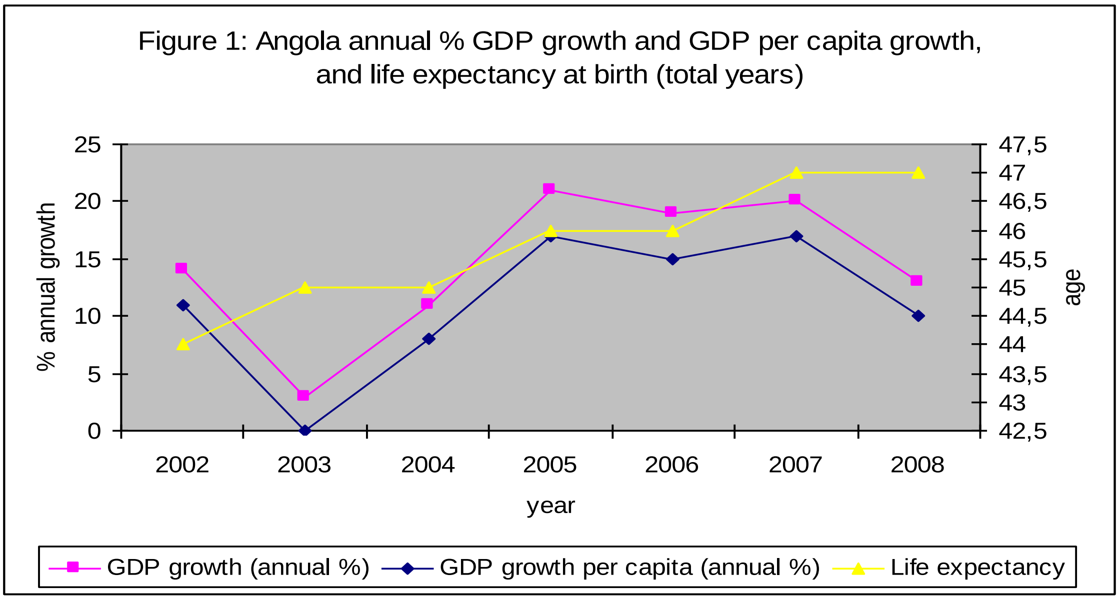
The Republic of Angola has 1.246.700 km², which are home to roughly 18.800.000 inhabitants divided in 18 provinces. The country is relatively young as it only gained independence on November 11, 1975 after 14 years of armed struggle (1961-1975) against the Portuguese its former colonial rulers. From there onwards Angola was devastated by a civil war which came to an end in 2002, April 4 after 27 years of armed conflict (1975-2002).

After the independence, just like several other African countries, Angola opted for a system of governance inspired by the Soviet Union and Cuba with their planned economic policies which from 1975 to 1987 was characterized by the denial of the role and importance of the free market, entrepreneurship and private initiative.

Following the fall of the Berlin wall in 1989 and the end of the cold war, the world was facing a new era which came to be dominated by market/liberal economic policies and democracy championed by the United States of America in particular and the Western world in general. Angola was not immune to the winds of change taking place the world over. Hence, faced with domestic and international pressure to reform plus the heavy burden of the civil war and the total collapse of planned economic policies, the Government begun introducing political and economic reforms which ultimately resulted in the abolishment of the socialist system in favour of democracy and market economy culminating with the first democratic vote in the country in 1992.

After regaining peace in 2002, the authorities set course to reconstruct the country. They have introduced several macroeconomics measures intended to balance the deficit, reduce national debt and the inflation rate.

Since then the economy, fuelled above all by high oil prices, has been growing. AfDB/OECD (2007: 10).



Source: WDI (World Development Indicators) of the World Bank

Figure 1 above shows the Angolan gross domestic product (GDP), GDP per capita and life expectancy. Looking at both the GDP growth and GDP growth per capita, beside the year 2003 where there was no data available, the Angolan economy has been growing with double digits per year. As for the life expectancy line, it has been growing as well in relative terms compared in the past with Angola itself. So it can be seen that in 2002 life expectancy for the average Angolan citizen was only 43 and 47 years in 2008: a net gain of 4 years in a time span of 6 years.

Overall the average maximum of 47 years life expectancy in the 21st century leads to the conclusion that Angola is still a poor country. And this conclusion is also corroborated by the Angolan low rank: 143 out of 182 in terms of UNDP Human Development Index (HDI).

Angola though is richly endowed with natural resources: oil, natural gas, diamonds, timber, iron, quartz, ornamental stones and phosphates among many others. In addition, Angola has abundant fertile soils: 5 to 8 millions hectares. PRSP (2005: 57).

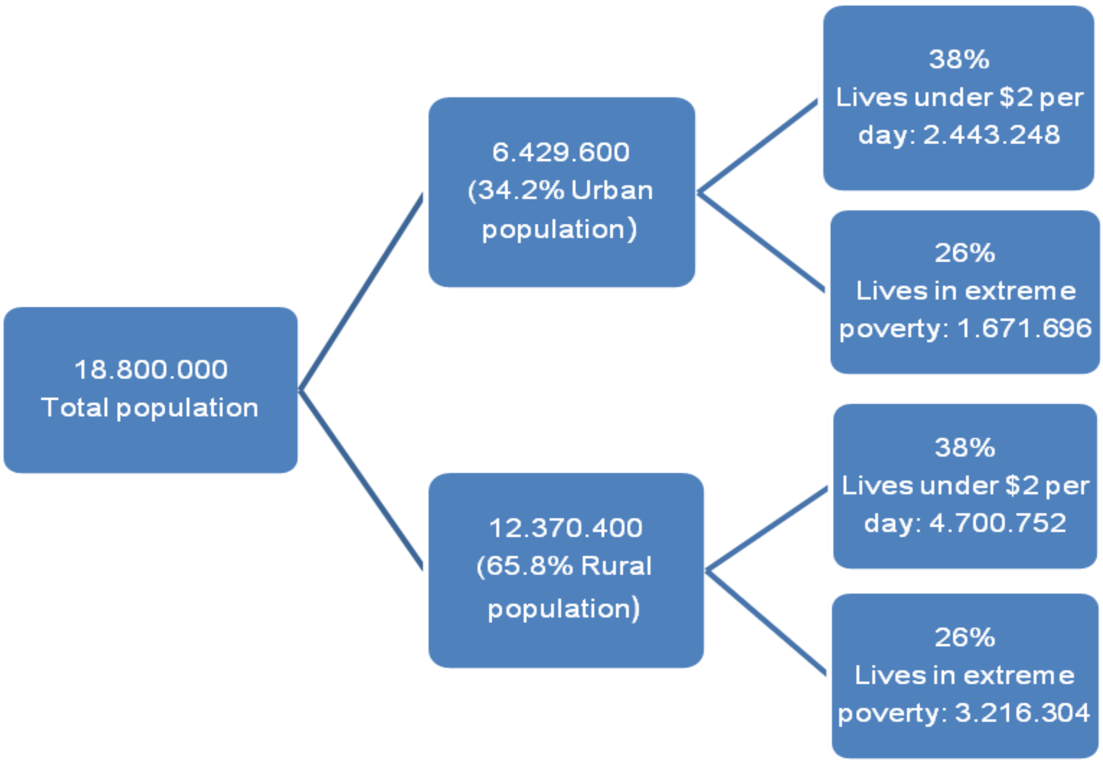
Albeit in small scale Angola does have a production of staple crops ranging from cassava and coffee to maize, potatoes and rice. Cattle are raised over broad areas in the central regions of the country and particularly in the southern provinces. Indeed prior to independence, Angola was the world's fourth largest coffee exporter and did export maize as well, 'making it one of the largest staple food exporters in Sub-Saharan Africa'. (World Bank 2006). Alongside that Angola has very rich flora and fauna, resources untapped still, making the country a potential tourist destination of the likes of Kenya and South Africa.

Angola is also endowed with big rivers such as Kwanza, Chiloango, Cunene and Zambeze that can be made navigable in order to support and diversify the transport infrastructure and industry, and that can be used for irrigation purposes in agriculture and indeed for hydroelectric projects.
Lying on the Atlantic coast, Angola has a massive coast line of 1609km and share borders with Congo Brazzaville, Republic Democratic of Congo, Namibia and Zambia. Due to its location in the inter-tropical and subtropical zones of the Southern hemisphere and its proximity to the sea, the cold Benguela stream and of course its topographical characteristics, Angola has in comparison with other African countries diversified climatic conditions. Hence, 'with its diverse natural resources, climatic variability and strategic location in Africa, Angola has potential to develop a diverse economy based on agriculture , manufactures, services and power, in addition to mineral resources'. World Bank (country study: Angola oil, broad-based growth and equity 2007).

But due to more than four decades of war; plus the macroeconomic mismanagement of the country, IMF (Angola, country report nr 05/125: 2005) Angola produced the most daunting human development indicators[1] which earned the country the ignoble attribute of being one of the world's poorest. World Bank (country study: Angola oil, broad-based growth and equity 2007).

The destruction of vital infrastructures: road network, power stations, water treatment stations, seaports and airports; health and education systems has had as a consequence that more than half of the country is living in poverty. In fact, estimates of the United Nations Development Program (UNDP) show that the majority of Angolans are indeed poor: 38 % of the population lives below the poverty line of $2 dollar per day and 26% in extreme poverty. UNDP/Angola (2007: 1).

Figure 2: Poverty concentration in Angola



Source: Author calculations based on Data from UNDP/Angola

1 See Appendix 1, page 35

Figure 2 is about poverty concentration in Angola. It shows that the vast majority of Angolans are poor and that they live largely in rural areas. This poverty distribution figure maps where the poor are found so that it contributes to help the authorities to develop tailored solutions targeted to those who desperately need them and where they can be most effective.

1.2 Research Question

The main role of sustained economic growth in reducing poverty is well documented. It is emphasized for instance in the United Nations report on economic growth and human development (1990) and in the 2008 report of the Department for International Development: growth building jobs and prosperity in developing countries (DFID 2008). It is reported (assumed) that for countries to be able to lift their populations out of poverty sustained economic growth is a necessary premise (Ravallion 2008). For example, Stanley Fischer on Globalization and its challenges argues that: 'there is no way of lifting the populations of poor countries out of poverty (say, on the scale that has been achieved in East Asia) without sustained growth. Globally, the decline in poverty has been fastest where economic growth has been fastest (in developing Asia) and slowest where growth performance has been worst (in Africa)'. Fischer (2003: 13).

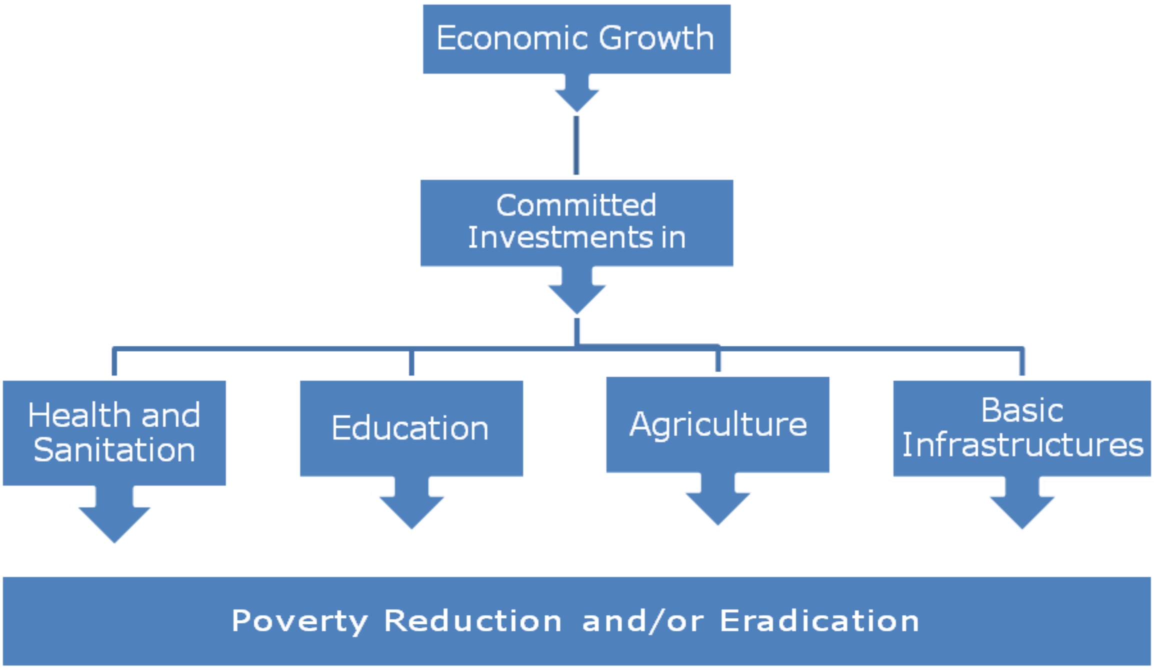
In light of that, my thesis will seek to find out primarily the degree of the negative linear association, that is, the link or correlation between economic growth and poverty reduction and/or eradication in Angola. For that end, the following hypotheses are put forward:

i) Alternative Hypothesis: economic growth and poverty are negatively correlated.

ii) Null Hypothesis: There is no correlation between economic growth and poverty.

The expectation is that a negative correlation will be established which will lead to the conclusion that: the growth of the Angolan economy can enable the country to significantly reduce its poverty levels and ultimately eradicate it. Realizing the broad nature and large scope of the research question, it is deemed important that it has to be reframed in follow up or partial questions. Those will clarify and will contribute to shed more light in the understanding of the main question.

Figure 3: Poverty Fighting Model for Angola



The above figure 3 shows a model for poverty reduction in Angola taking into consideration the fact that most of the Angolan poor are concentrated in rural areas (see figure 2 page 9) and lack education, health services and basic infrastructures.

Hence, figure 3 model implies that economic growth in order to impact positively the fight against poverty has to be synonymous of committed investments in key sectors, such as: public health and Sanitation, education, agriculture and basic public infrastructures which stir up development.

But considering the limitations of the financial resources of Angola and the competing nature of the investments that are needed, choices regarding the nature (in which domains or fields) and the degree (how extensive, big or small) of investments to be made are required. These concerns will be met by answering the following partial questions:
i) Which sectors amongst all that need investments ought to be prioritized?
ii) How could lack of technology, geographical location and natural resources endowments impact the fight against poverty?
iii) What the role of good governance and political commitment?
iv) What are the average low income country poverty reduction costs?

All the partial questions are answered in the following section 2: Theoretical framework. In it the solutions offered by selected development economic literature and international organizations are reviewed.

2. Theoretical framework

Throughout development economics there is a broad consensus about the merits and linkages of economic growth and poverty reduction. Either through the negative association between high poverty rate and growth rate of GDP DEPOCEN (2010) or via the positive association between economic growth and improvements in human developments where a strong correlation is found between the levels of national income of a country and its levels of ,among others, health and education UNPD (2010).

Hence, reducing poverty through sustained economic growth can be achieved as a consequence of the absolute increase of the countries income: 'trickle down strategy': everyone in the society including the poor benefits from the country's growth or by raising the relative position of the deprived people in the country via the deliberate intervention of the authorities in redistributing resources to the poor. Stewart and Streeten (1976: 393).

In the past three decades poverty levels worldwide have been decreasing steadily due to achievements attributable largely to economic growth. Cervantes-Godoy and Dewbre (2010: 4). Research results of the Department for International Development comparing the experiences of a wide range of developing countries found consistent strong evidence between economic growth and poverty reduction. In fact, the single most important tool a country possess to combat poverty is rapid and sustained growth of its economy. For example, estimates of the study showed that if a country grows in average 10 % poverty rate decreases between 20 % and 30 %. DFID (2008: 3).

Around the World there are powerful and multiple examples of a wide range of countries with diversified political governance and economic management that have achieved success in reducing poverty by taking advantage of economic growth. Among them we have: China that lifted over 450 million of its people since 1979 out of poverty; Vietnam where poverty decreased by 7.8 % between 1993 and 2002; EL Salvador, Ghana, India, Tunisia and Uganda each country with decreases in poverty estimated between 3 % and 6 % a year and Mozambique that is estimated to have managed a rapid decrease of its poverty rate with 15% between 1996 and 2002. OECD (2008: 3-4).

But although a country's economic growth is the surest way it has to fight poverty, it must be pointed out that growth is not an end in itself. The

United Nations Development Program on its development Report of 1997 spoke of 'pro-poor growth', the kind of growth which creates jobs, enhances productivity and the income of the poor. UNDP (1997: 109). That is to say that countries should not see economic growth as a panacea against poverty and not pursue it as an aim by itself when the scope is the fight against poverty. Growth is a necessary premise in poverty reduction, but it is an insufficient one. Therefore, the purpose should be the subsequent steps: what to do next once a country's economy is in the path of growth? In which sectors can the benefits of economic growth be invested in so that the rewards for the poor can be maximized? Or how can the poor benefit from the economic growth of a country?

The economic Nobel laureate Amartya Sen argues that: 'economic growth was no more than a mean to other some objectives…' Indeed, Sen speaks of people's functioning, capabilities and entitlements. People should be given the means (capabilities/entitlements) to work and realize their hopes and dreams (functioning). For instance, in rural areas the poor should be entitled to land as agriculture is the most powerful tool the rural poor have to escape poverty. Sen (1989: 10).

The 2008 Growth Report of the World Bank states that when the economy grows it makes it possible for a country to have resources in order to achieve other objectives such as supporting its health care, education, infrastructures which contribute improving the living conditions of its citizens. World Bank (2008: 1).

2.1 Which sectors amongst all that need investments ought to be prioritized?

Looking back at figure 2 in Section 1.1 which depicts the distribution and concentration of poverty in Angola, it can be seen that most of the poor are concentrated in rural areas. Therefore, with the scope of battling poverty with efficiency, one should prioritize those policies and instruments that have the potential to impact the living conditions of those who suffer the most.

Hence, trying to target the core source of poverty in Angola and most developing countries for that matter agriculture is of paramount importance. Due to its direct impact on improved rural incomes, its effect on cheap food prices for urban and rural people alike, and its contribution to growth and the generation of economic opportunities and jobs for farm and non-farm sectors. DFID (2004).

In fact, there is a strong and proven link between the impact of agriculture and poverty reduction in low income countries. The agrarian reforms of China for instance were credited of having provided huge gains to its poorest citizens and being responsible of the total decline in poverty levels witnessed in the country from 1981 to 2001. Ravallion (2008: 15). Further, an OECD (2004) study about several developing countries on the contribution of different sectors of the economy in reducing poverty found that agriculture 52% was the most important sector compared to remittances 35% and non-agriculture sectors 13%. OECD (2004: 17). [2]

Therefore, investments in agriculture are a strategy which could be replicated elsewhere by developing countries in their efforts of reducing poverty. But to enhance the changes of agriculture having a positive impact the following policies are ought to be implemented: i) agricultural trade policy characterized by free access to the world markets, encompassing as few restrictions as possible, quotas and tariffs and ii) technical advancement, implying that research in agriculture is continuous. OECD (2004: 20).

[2] See Appendix 2 page 36. Major contributor to poverty reduction list

Jeffrey D. Sachs in his book The End of Poverty argues that investments in agriculture, basic health, education, power, transport, and communications services as well as drinking water and public hygiene are the main avenues to eradicate poverty, namely in rural areas. Sachs (2005: 233).

Research results of the Department for International Development show that improvements in economic conditions and a performing agriculture are responsible for 80 % of poverty reduction in rural areas as compared, for example, to people migrating from the countryside to the cities. Cervantes-Godoy and Dewbre (2010: 6).

2.2 How could lack of technology, geographical location and natural resources endowment impact the fight against poverty?

Although technological innovation combined with capital accumulation and population growth are the engines of economic growth according to the Solow model; Burda and Wyplosz (2005: 62); and as it is been argued that economic growth is indispensable in the fight against poverty; in the Angolan context, at least in the short term, technology in the sense that the country has to develop its own capabilities is not deemed of crucial importance. For if it was to come to technology and know how Angola can acquire most of it in the market place. Indeed, 'for currently developing countries a large stock of pre-existing technology is available for import'. Hung and Makidissi (2004: 123).

Furthermore, the World Bank, the African Bank of development, the International Monetary Fund and various aid organizations already have the knowledge and the necessary mechanisms that can help put countries firmly in the path of sustained economic growth. All is needed is that countries work closely with those institutions and organizations in order to use and capitalize the already existing mechanisms. Hope (2002: 2).

On geographical location, there is debate on this issue in the sense that there are development economists who assert that above all Africa is poor because of its tropical climate combined with the fact that several African countries are landlocked. For instance, Jeffrey D. Sachs rejects the idea of good governance as being the rout cause of Africa's prolonged economic crisis and poverty. Sachs (2005: 190). Sachs stresses the impact of the tropical climate and what he calls 'physical geography trap', characterized by the geographical location where a country is situated. This being the case of a country with no access to sea, a country which has no navigable rivers and/or surrounded by high mountains with no proper transportation systems, all of this conditions that impede a country to grow economically and develop. Sachs (2005: 57).

Also Paul Collier, on The Bottom Billion although he emphasizes more governance issues, he speaks as well of what he calls 'the Trap of being landlocked with bad neighbours' as one of the causes of low growth in several poor countries which contributes to the verified high levels of poverty in those Nations. Collier (2007: 53).

2.3 What is the role of good governance and political commitment?

Good governance and political commitment are recognized to be very important factors in the efforts of low income countries in battling poverty. OECD (2008: 2).

Good governance is deemed to make it possible for power countries to put in place pro-growth policies such as lower fiscal deficits, a monetary policy that delivers low and stable inflation, lower import tariffs, eliminating restrictions in order to enable international trade and capital flows, secure property rights and try mostly to live by the rules of the markets in allocating resources. DFID (2008: 12).

As for political commitment, it must be translated in the share of the national income of the country allocated to social services and fight against poverty. The issue is not only the availability of funds in the budget for social causes but the spending units must get hold of these financial resources and indeed have the courage and discipline to materialize the objectives that the budgeted money is intended for. Accountability should be kept high through a check and balances system to avoid inefficiency, misuse of funds and fight corruption. World Bank (Interim Strategy Note, Report nr 39394-AO, 2007).

Paul Collier and Jan Willem Gunning in their paper on the slow economic growth and poverty causes in Africa argue that man made conditions, what they designated as 'Domestic Policy', including undemocratic regimes, ill conceived public expending with wrong priorities are more to blame in comparison with natural circumstances such as the tropical climate or the fact that a country is landlocked. Collier and Gunning (1999: 16-17).

Moreover, research results of the World Bank studies on the impact of good governance on development and poverty strongly back up the necessity and importance of holding countries to higher standards of governance. The Bank found that: 'Improved governance leads to higher standards of living and poverty alleviation... Improving governance in poor countries, such as in Sub-Saharan Africa, for example, would yield significant results. Good governance delivers a large "development dividend" in the form of higher standards of living and poverty alleviation. The indicators show that when governance is improved by one standard deviation, incomes rise about three-fold in the long run, and infant mortality declines by two thirds'. World Bank (The new governance matters, Singapore, 2006).

But it must be said that despite the recognized capital nature of good governance and political commitment in fighting poverty, creating the institutions which will allow good governance and securing the commitment of the policy makers are very difficult to materialize even though countries experience economic growth. Research and experience in these matters have shown that as poor countries grow economically most of the profits, if not well distributed can benefit only a few in the society, increasing inequality as a result. This creates new enriched elites or reinforces the existing ones, including people in decision making positions who are most likely to put in place policies which are intended to preserve and in fact increase their own interests and privileges. Stewart and Streeten (1976: 393).

2.4 What are the average low income country poverty reduction costs?

As difficult as it is to come up with exact figures of how much a Nation's fight against poverty would cost, especially for instance in the Angolan context with serious data scarcity, this study will proceed based on cost estimation for developing countries of the United Nations Millennium Project.

The United Nations Millennium Project[3], though it cautions that for individual countries the costs of meeting the Millennium Development Goals (MDGs) will only be known definitively when a specified country's

[3] 'The UN Millennium Project is an independent advisory body commissioned by the UN Secretary-General to propose the best strategies for meeting the Millennium Development Goals (MDGs)'. UN Millennium Project (2005: 2).

program is under way, UN Millennium Project (2005: 239), the independent advisory body estimates that a low income country, such as Angola, would incur the following costs in order to meet the MDGs from 2006 scaling up to 2015.

Table 1: Low income country estimated costs of meeting MDGs

Type of Costs	Per Capita Cost estimation for 2006	Per Capita Cost estimation for 2015
Capital and Operating expenditures	\$70 - \$80	\$120 - \$160
Health	\$13 - \$25	\$30 - \$48
Education	\$11 - \$17	\$17 - \$25
Hunger	\$2 - \$4	\$8 - \$14
Water and Sanitation	\$2 - \$6	\$6 - \$12
Energy	\$6 - \$20	\$18 - \$23
Slum upgrading	\$2 - \$4	-

Source: Data from UN Millennium Project

Before the costs from table 1 can be tailored and applied to Angola, it is important to make the following remarks:

i) Since we are past the year 2006, the cost estimations related to that year are deemed irrelevant. Therefore, they will not be used.

ii) Only costs estimation of 2015 will be used. Those will be multiplied by the number of poor in Angola, that we calculated based on UNDP data and presented in figure 2 page 9, to come up with a single figure for each selected investment sector.

As it was mentioned in figure 3 of the Angolan poverty fighting model, Sub-Section 1.2, Angola needed to make urgent investments in health, education, agriculture and basic infrastructures. On table 2 costs of hunger will be equated to those of agriculture for the rural poor. Because agriculture has to do with food production, hunger and agriculture in this context can be interchangeably interpreted.

Further, it is clear from the findings of the United Nations System in Angola (UNSA) and the World Bank on Angola that the biggest share of the poor income goes towards food consumption. UNSA (2002: 14).

Water and sanitation, energy and slum upgrading costs will be added together to come up with a single figure which will be taken as the cost of basic infrastructures. For the remaining costs, those of health, education, capital and operating expenses will be taken literally as the cost of these sectors in Angola.[4]

Table 2: Poverty fighting policies cost estimation for Angola based on the UN Millennium Project estimated costs of meeting MDGs.

Poverty Geography	**Poverty Category**	**Type of Costs**	**Per Capita Cost estimation multiplied by the number of poor**
Urban Poverty	People living below the poverty line of $2 per day	Capital and Operating expenditures	$576.092.160
		Health	$73.297.440
		Education	$41.535.216
		Hunger	$19.545.984
		Basic Infrastructures	$63.524.448
	Extreme	Health	$80.241.408
		Education	$41.792.400
		Hunger	$23.403.744

	poor	Basic Infrastructures	$65.196.144
Total Costs of Urban Poverty			**$984.628.944**
Rural Poverty	People living below the poverty line of $2 per day	Capital and Operating expenditures	$1.108.387.840
		Health	$141.022.560
		Education	$79.912.784
		Agriculture	$37.606.016
		Basic Infrastructures	$122.219.552
	Extreme poor	Health	$154.382.592
		Education	$80.407.600
		Agriculture	$45.028.256
		Basic Infrastructures	$125.435.856
Total Costs of Rural Poverty			**$1.894.403.056**

Source: author calculations based on UN Millennium Project

3. Methodology and Data

The main question we seek to answer is: find out primarily the degree of the negative association, that is, the link or correlation between growth and poverty reduction in Angola. (See sub-section 1.2 research question page 10).

Consequently, the following methodology will be used:
Bivariate Correlation method in the SPSS statistical packet environment through the calculation of the Pearson product moment correlation in accordance to the steps described below:

[4] see Appendix 4 page 42 for table 3 details on cost calculations.

First: two test hypotheses are put forward. Those being:

i) Alternative Hypothesis: economic growth and poverty are negatively correlated.

ii) Null Hypothesis: There is no correlation between economic growth and poverty.

Second: we set to find out the association degree of both study variables: growth and poverty in Angola. Paying due attention to the expectation of the study that there should be a negative correlation, and being consequent to the formulation of the test hypotheses above, this study requires a one tailed test which could result in a zero (0), plus one (+1) or minus one (-1) coefficient.

A coefficient of 0 would indicate the absolute inexistence of a linear relationship. Therefore, an increase or decrease of economic growth would leave poverty unaffected. This would then mean that economic growth in Angola will not and can not impact poverty levels in the country.

A coefficient of + 1 would indicate that economic growth and poverty are perfectly positively correlated. So as if economic growth increases, poverty will increase by a proportionate amount. Here, economic growth would have an impact on poverty but not the desired one. Namely, if economic growth increases poverty will do so as well.

Finally, a coefficient of – 1 would indicate a perfect negative relationship. Hence, if economic growth increases, poverty will decrease with a proportionate amount. It is important to underline here though that due to the limited nature of the data from Angola used in this test, a perfect negative relationship is not expected. It is good enough for the purpose of the thesis to just have a significant ($P \leq 0.05$) negative correlation, which in fact will mean that: if economic growth increases, poverty decreases.

Third, use of squared correlation or coefficient of determination (R^2) will be made of in order to determine the amount of variability explained in the fight against poverty due to economic growth from the data used.

About the data itself, World Bank's collection of development indicators (WDI), which are available from 1965 to 2010, will be used. For economic growth, GDP growth (annual %) figures are used. Forced by data availability constraints, only data from 2000 to 2009 concerning Angola is present for economic growth and so used.

As for poverty because there is no specific poverty data for Angola on the World Bank WDI data bank: health, education, agriculture and basic infrastructures expenditures percentages of GDP will be used as proxies of poverty. In the sense that if those expenditures are high the country would be considered alright, rich and if they are low, what we expect in the Angolan context, the country is deemed poor.

Unfortunately the data bank of the World Bank does not offer any figures on education, agriculture and basic infrastructures expenditures. Hence, solely health expenditure percentage of GDP, available from 2000 to 2009, is used as a proxy of poverty.

4. Results

Figure 4: Correlations

7		gdp	poverty
gdp	Pearson Correlation	1	-,637*
	Sig. (1-tailed)		,024
	N	24	10
poverty	Pearson Correlation	-,637*	1
	Sig. (1-tailed)	,024	
	N	10	10

*. Correlation is significant at the 0.05 level (1-tailed).

The results table, figure 4, above shows that: the correlation between economic growth and poverty is **-0,637**. This does indicate the existence of a negative relationship between both study variables. This was exactly the expectation from the outset of the study.

Hence, this negative relationship between growth and poverty shall be the foundation of the premise that economic growth in Angola is an indispensable factor in the fight against poverty. Furthermore, the P-value = 0,024 which is less than the chosen statistically meaningful threshold of 5%, tell us that the correlation is indicative of a genuine and significant effect.

From the value of the R^2 = 40, 6%, [5] which is the measure of variability in poverty explained by economic growth, can be concluded that GDP growth accounts for about 41 % of variation in poverty. This implies that the 51% of the variation in poverty which is not directly explainable in this test data by GDP could well be by other factors, such as GDP per capita, committed investments in health and sanitation, education, agriculture and basic infrastructures, just as it was indicated earlier, for example from figure 3 of the poverty fighting model in Angola, Sub-Section 1.2, page 11.

5. Case Study: lessons from China's poverty alleviation strategies

China is a country that has succeeded in, depending on the estimates, to lift over 450 million (DFID 2008: 4) or 600 million[6] out of poverty over the course of a generation (1979-2001). The question before us is: how did the Chinese manage it? And, mindful of the natural socio-economic, political and demographic differences, are there lessons that other developing countries can take from the Chinese experience in order to fight poverty?

China that since 2010 has overtaken Japan, second only to the United States of America as the world's largest economy[7] , as of 1978 when the country begun its market reforms, its economy was predominantly rural and agricultural. Sachs (2005: 158). Afterwards, in 1980's and 1990's people and goods were allowed to move freely around the country, making it possible for people to find jobs in rural industries. Subsequently international trade and investment were liberalized. This step was of capital importance for China as it made possible for foreign investors to bring into the country proven foreign technology and capital which were combined with the abundant low-wage workers to produce labour intensive goods largely destined for international markets. Sachs (2005: 161).

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[5] Correlation: -0,637 = [-0,637] ^{2} = 0,405769 = 40, 6%

[6] See results: China poverty reduction. Http://www.worldbank.org/china

[7] See China overview/context. Http://www.worldbank.org

For the Chinese their point of origin, where they were coming from as a country is very important. The rise of China as an economic power house and the subsequent lifting of millions of its citizens out of poverty, started from investments in agriculture followed by reforms: socio-economic and agrarian. (Ravallion 2008). China was a poor rural or agricultural economy and therefore, modernizing agriculture and making it profitable was a priority.

Furthermore, the Chinese success is founded in the combination of development economic principles and policy measures (Chengwei 2008)[8], including: i) the pace of economic growth, ii) economic reforms and opening up the country to international trade and direct foreign investment, iii) government leadership (guidance and decentralization), iv) international aid (learning from the work experiences with UN institutions, aid groups and donor countries), v) investments in education, heath and empowering the poor (Guoliang 2008)[9] and finally, viii) macro-economic stability including tackling inflation, tax policies and a stable exchange rate regime. Ravallion (2008: 18).

In an attempt to apply the development lessons from China: economic growth and reforms (Ravallion 2008) which Angola could emulate in order to fight poverty, we are going to briefly focus solely on trade. For international trade can be an important vehicle of growth and prosperity. Behar and Edward (2011: 2).

Making use of the three modern principles of manufacturing, namely: i) make what you can make best: specialization. In China's case it focused predominantly on making high volume low value products, ii) make use of the resources at hand: China has abundance of low-wage labourers and

[8 & 9] See Appendix 4 page 37 for details.

iii) be flexible and adaptable in order to compete, China managed to accumulate trade surpluses with the rest of the world, securing the country enormous resources and capabilities that contributed in its efforts of lifting millions of its people out of poverty. Chengwei (2008: 10).

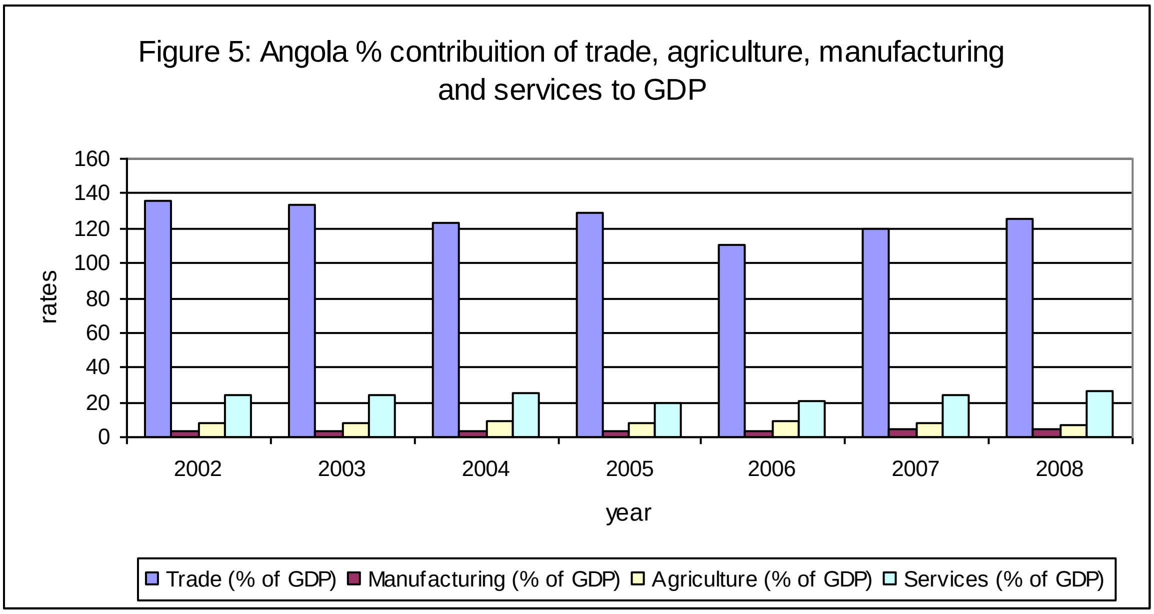
Trade considered as a positive sum game is beneficial to all countries that engage in it. From the classical economist Adam Smith and David Ricardo, who laid down the foundation of international trade, we know that a country can benefit from trade due to advantages based in technology differences. And those are twofold: i) an absolute advantage, that is, if a country produces a good more efficiently than the other so that it specializes in its production. Wonnacott (1994: 50). And ii) a comparative advantage if a country can produce a good relatively cheaper than its competitor. Wonnacott (1994: 672). And as long as the opportunity costs differ there will be comparative advantages and countries are set to gain by specializing and trading with each other. Van Marrewijk (2007: 67).

The neoclassical view of trade argues that a country has advantages based on differences in factor abundance. For the neoclassical school (Heckscher-Ohlin) international trade is made possible because between the trading partners there are differences in factor endowments. That is, if a country has abundant cheap labour which is mainly employed in agriculture growing food, this country will export food. In other words: a country will export those goods and services that use intensively its abundant factors of production. Van Marrewijk (2007: 131).

Consequently, when a country engages in trade, its national industries will be stimulated to produce efficiently and be more competitive. As they seek to gain a share in international markets for their products resulting in the economy as a whole benefiting from the new gained dynamism. Collier (2007: 167).

Furthermore, trade brings about development for through manufacturing or other productive sectors of the economy in one hand; it creates jobs that lift from poverty the people employed and their families, contributing to enhance the welfare of the entire country. In the other hand, trade brings development through the exchanges of ideas, transfer of know-how and technologies that it makes possible. Consider for instance the positive impact of the multinationals Corporations and the direct foreign investment they bring about. Dornbusch (1992: 75).

Hence, free trade and policies that contribute to a more open, freer economic environment must be a high priority for the authorities. Findings of several studies strongly suggests that trade liberalisation contributes positively to economic performance, (Winters 1992), and that trade flows lead to efficiency gains and welfare improvements for a country as a whole. Van Marrewijk (2007: 16).

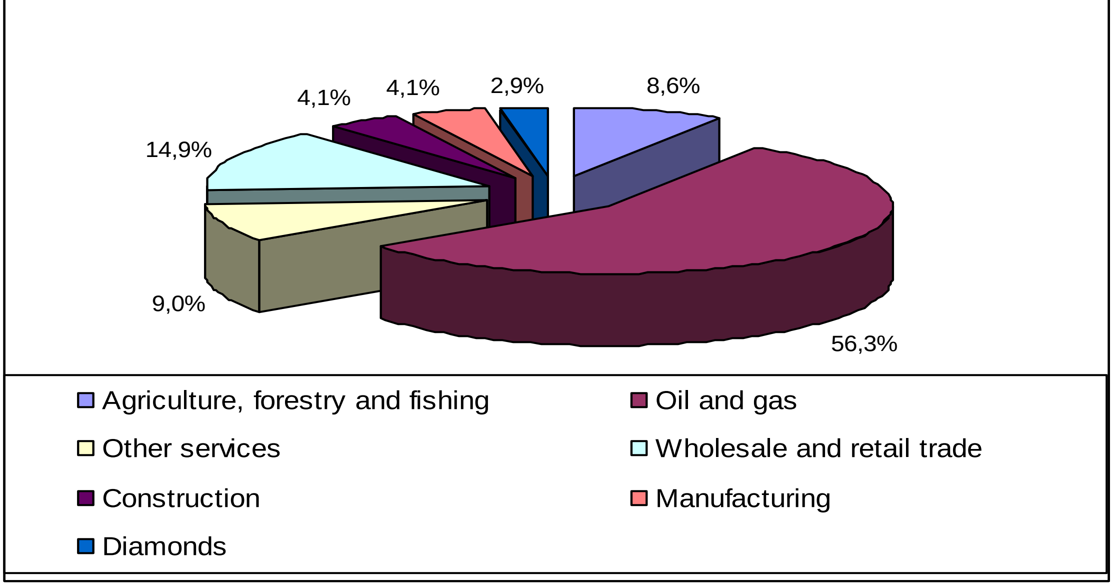


Source: WDI of the World Bank

Figure 5 above which depicts the contribution of different sectors of the Angolan economy to GDP, namely: trade, manufacturing, agriculture and services shows that trade is by far the most important sector. So there is a strong incentive for continued efforts in trade liberalization and reforms in Angola.

A cautionary note though has to be made interpreting figure 5 above because the trade flows in it are too heavily influenced by oil, gas and diamonds that constitute the main export products of Angola. World Bank (country study: Angola oil, broad-based growth and equity 2007).

Figure 6: Angola % GDP by sector



Source: OECD

Looking at figure 6, which shows the Angolan GDP composition, we can see that indeed more than half of the economy in Angola is overwhelmingly dominated by oil and gas (56.3%). But as good as this development can be, the Angolan economy needs diversification. For the exclusive oil dependence means that trade and consequently the economic performance of the country is dependent on how the oil prices behave in international markets. And those prices are known to be very volatile and prone to the randomness of international affaires. Collier (2007: 40). Furthermore, the relative ease with which oil dollars come into the country can encourage corruption and lead the authorities to completely disregard the other sectors of the economy. (See figure 6 above).

Therefore, inserting dynamism in the rest of the economy is indispensable because the other sectors of the economy are simply not competitive enough. This lack of competitiveness is due to a multitude of causes. For example: high costs in agriculture caused by inefficiencies, lack of investments and deficient road network which makes it very difficult to transport agricultural produce from the rural areas to the cities. The business environment is cumbersome. For instance, it takes on average 146 days to establish a business in Angola and that is twice as much compared to regional practice average. It can take up to a year in order to comply with all licensing and permit requirements. Business related dispute settlements are lengthy and time consuming. Namely 1,011 days from the time a plaintiff files a lawsuit until the possible settlement of the case. That compared for instance to some countries in the region Angola comes out worse. For it takes 274 days in Zambia, 270 days in Namibia and only 154 days in Botswana to settle a legal dispute. (World Bank 2007). Financial institutions are not sound, so there is an urgent need for reforms.

Table 3: Comparison on selected trade factors between Angola and selected economies

Region or economy	Document to export (number)	Time to export (total days)	Cost of export (US$ per container)	Documents to import (number)	Time to import (total days)	Cost of import (US$ per container)
Angola	11	65	2,250	8	59	3,240
South Africa	8	30	1,531	9	35	1,807
SADCC	7,4	35.1	1,903.7	8.8	42.4	2,348.3
Sub-Saharan	7,8	33.6	1,941.8	8.8	39.4	2,365.4

Africa						
East Asia and Pacific	6.7	23.1	909.3	7.1	24.3	958.8
OECD	4.3	10.5	1,089.7	4.9	11	1,145.9

Source: World Bank Development Research Group Working Paper 5625 (2011)

Table 3 shows a comparison between Angola and South Africa, SADCC, Sub-Saharan Africa, East Asia and Pacific and OECD on selected factors of trade such as number of documents and costs per container calculated in US dollars of export and import flows.

It can be seen from the table that Angola still has a lot of reforms to do if it is to tackle trade impediments in the country and take advantage of it. For instance, it only takes eight documents in South Africa and almost twice as less in OECD countries (4.3) to export goods whereas in Angola 11. And to export a single container it takes more than twice the total number of days required in Angola than in South Africa: 65 days and 30 respectively. On exports costs, while it costs an economic agent in East Asia and Pacific region roughly $ 910 to export a container for Angolans is more than double. Exactly: $ 2, 250.

In fact, the Angolan trade regime has been one of highly regulated for more than three decades: from the 1975s until the mid 1990s. In that period for example all imports were restricted through a foreign exchange budget and through licensing according to a positive list. Only government entities could export and import goods. But since becoming a member of the WTO in 1996, Angola has been reforming. According to the World Bank: 'Angola's tariffs, like its import system overall, has been considered revised and liberalized'. [10]

On the regional level Angola is a member state of The Common Market of Eastern and Southern Africa (COMESA) and of the Southern African Development Community (SADC).

Angola also benefits from non-reciprocal preferential treatment from many industrialized countries under the Generalized System of Preferences (GSP) including the EU's Everything But Arms (EBA) Initiative and the US's Africa Growth and Opportunity Act (AGOA). (World Bank 2006).

6. Conclusion

Having found a significant indication (P-value = 0,024) of a negative correlation (r= - 0,637) between the two study variables: growth and poverty in Angola, it is plausible to conclude that growth can contribute positively in the fight against poverty. Provided, of course, committed investments are made in those sectors that can impact the most the living conditions of the poor. And those are, as it was indicated in figure 3: Angola poverty fighting model: health, education, agriculture and basic infrastructures.

The thesis has shown also that although the economic growth is an indispensable premise in fighting poverty, the Angolan authorities commitment in the battle against poverty attached to good governance are key factors as well. Hence, the authorities should for instance commit in cutting defence expenditures and invest instead in social programs. A good mechanism of checks and balances should be put in place after allocating funds to anti poverty projects in order to deter corruption, fight embezzlement and inefficiencies.

[10] See World Bank. 2007. Angola Country economic Memorandum: Oil, Broad-Base Growth, and Equity. Report nr 40531-A0. Page 145.

Because the country faces huge reconstruction and poverty eradication challenges, as shown for example by the Angolan poor human development indicators, caused by the decades long of war, deficient governance and corruption, Angola has a very heavy burden. Translated in financial terms and capital resources that are needed, it was shown in the poverty cost calculations that nearly three billion US dollars (those being approximately one billion US dollars ($984.628.944) for urban poverty and over two and half billion US dollars ($2.879.032.000) for rural poverty) are needed in order to finance the anti poverty strategies.

But despite this huge poverty price tag, Angola has the potential through its natural resources, geographical location combined with the aid in terms of capital and know how from its international partners and aid agencies to come up with the means in order to improve the daunting conditions facing the country and its citizens.

Moreover, lessons from the Chinese experience that sustained economic growth and reforms: socio-economic and agricultural are key to eradicating poverty, should be embraced. Special attention should be dedicated in diversifying the economy, opening up the country further to international trade and take the advantages it offers to develop and battle poverty.

Because the majority of the Angolan poor are situated in rural areas investing in agriculture and rural infrastructures as well as heath facilities and education should be a priority.

Finally, in order to attract direct foreign investment the authorities should invest in good governance including macro-economic stability, rule of law, enforcement of propriety rights, and political commitment.

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APPENDIX 1

Angola: country profile of Human Development Indicators

Health	Value
Prevalence of undernourishment in total population (% of population)	**44**
Expenditure on health, public (% of GDP)	**2.0**
Under-five mortality (per 1000 live births)	**220**
Life expectancy at birth (years)	**48.1**
Malaria 2006-2009 % under-fives with fever receiving anti-malarial drugs	**29**
% of under-fives (2003-200() suffering from underweight (WHO) moderate & sever	**16**
% under-fives (2003-2009) suffering from stunting (WHO) moderate & sever	**29**

Education

Adult literacy rate (both sexes) (%aged 15 and above)	**67.4**
Combined gross enrolment ratio in education (both sexes) (%)	**65.3**
Expenditure on education (% of GDP)	**2.6**
Internet users (per 100 people)	**3.3**
Mean years of schooling (of adults) (years)	**4.4**
Expected years of schooling (of children) (years)	**4.4**

Income

GDP per capita (2008 PPP US$)	**5,959**
GNI per capita (2008 PPP US$) LN	**8.5**

Inequality

Income Gini coefficient	**58.6**
Inequality-adjusted education index	**0.207**
Inequality-adjusted HDI value	**0.334**

Poverty

Multidimensional poverty index	**0.452**
Intensity of deprivation	**58.4**

Source: UNDP, UNICEF & WHO

APPENDIX 2

Major contributor to poverty reduction

Economic sectors	Agriculture	Non-agriculture	Remittances
Countries	Brazil Cameroon Chile Costa Rica Dominican Republic Egypt Malaysia Mali Mexico Nicaragua Panama Tunisia	China Mauritania Thailand Vietnam	Gambia Ghana Guatemala Honduras Indonesia Kenya Philippines Senegal Mexico Tajikistan

Source: OECD

APPENDIX 3

Table 3 Cost Calculations elucidation:

i) Capital and Operating expenditures costs appear once for each: Urban and Rural poverty. The reasoning behind the calculations is that the investments made in capital and the operating expenses of the projects/social policies they do not need to be distinguished in two: a) for people living under the poverty line of $2 and b) those in extreme poverty. Therefore, once those investments are made will serve for both groups.

ii) Calculations:

Cost of Capital and Operating expenses:

a) Urban Poverty:

$140 (120 + 160/2) X 2.974.944 Total Urban poor (1.303.248 + 1.671.696) = $416.492.160

b) Rural Poverty:

$140 (120 + 160/2) X 7.917.056 Total Rural poor (4.700.752 + 3.216.304) = $1.108.387.848

c) Regarding the calculations of Health, Education, hunger (for the Urban poor) and Agriculture (for the Rural poor), and basic infrastructures the reasoning is the following:

The UN Millennium Project estimated for the year 2015 costs within a certain lower and upper range (s). Now, paying due attention to the distinction made in figure 2 page 8 about the poverty concentration in Angola: those living under $2 per day and the extreme poor, it was chosen to allocate the lower bound cost figure to the former group and the upper bound for the latter.

For example:

c_1) Rural Poverty Health:

- People living under: $2 per day: $30 X 4.700.752 people = $141.022.560
- Extreme poor: $48 X 3.216.304 people = $154.382.592

APPENDIX 4

Factors and Policies measures which impacted positively the Chinese fight against poverty

For Wang Guoliang[11] the Chinese successful efforts in fighting poverty can be summarized in the following principles:

i) 'Emancipating mind' implying that the authorities should pay maximal effort in reducing poverty which could be interpreted as being government commitment in lifting its people out of poverty

ii) Socio-economic reforms and opening up policies including opening up to international trade and direct foreign investment

iii) Government leadership which encompasses:

a) making poverty reduction measures and development part of the social and economic national planning

b) set up and improve the administration system for poverty reduction
c) whenever necessary increase the financial resources of the programs
d) Make the fight against poverty relevant for all the stakeholders by mobilizing social forces including local governments, non profit organizations, volunteers, United Nations institutions and international partners or donor countries
iv) The anti-poverty measures must be development centred. That is to say: focusing investments in rural infrastructures development and improved agricultural productivity
v) All around development comprising amongst other measures: 9 years compulsory education, providing free text books and free access to schooling for rural pupils, actively incentive birth control, setting up health centres, etc. Guoliang (2008: 22).

Huang Chengwei[12] argues that China's impressive results in battling poverty can be summed up in what he calls 'major experiences'. And those are: adoption of market system, strong government guidance, the mode of development-oriented poverty reduction, continuously adjusted poverty-targeting mechanism, empowering the poor and participatory implementation, broad social participation and international cooperation'. Chengwei (2008: 11).

Source: Http://www.oecd.org/dac

[11] Wang Guoliang, Deputy Director of the Chinese State Council Leading Group Office of Poverty Alleviation and Development. See Retrospect of Poverty Reduction and Development Policies in China.

[12] Huang Chengwei, Deputy Director, International Poverty Reduction Center in China. See pro-poor development policies in rural China.