Oil Growth and Sustainability in Angola
A Strategy
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# Table of Contents

1 EXECUTIVE SUMMARY .......................................................... 2

2 INTRODUCTION ................................................................. 4

3 CONTEXT ............................................................................... 4
   3.1 Economy ........................................................................... 4
      3.1.1 Challenges: War, Post-Colonial Transition, and Poverty ...... 4
      3.1.2 Opportunities: Oil-Driven Growth and Foreign Direct Investment ... 5
   3.2 Population ....................................................................... 7
      3.2.1 Young Population ...................................................... 8
      3.2.2 HIV in Angola .......................................................... 8
   3.3 People ............................................................................. 8
      3.3.1 Undernutrition Prevalence ......................................... 8
      3.3.2 Low Life Expectancy .................................................. 8
      3.3.3 Low Education .......................................................... 9

4 FORECAST TO 2050: ALTERNATE BASE CASE (ABC) SCENARIO .... 10
   4.1 Economy .......................................................................... 10
      4.1.1 More Oil-Driven Growth .............................................. 10
      4.1.2 Higher Multifactor Productivity .................................. 11
   4.2 Population ....................................................................... 11
      4.2.1 Lower Total Fertility Rate ............................................ 11
      4.2.2 Demographic Dividend .............................................. 12
   4.3 Major Problems Angola Will Face ................................... 13
      4.3.1 Malnutrition .............................................................. 14
      4.3.2 Low Levels of Education .......................................... 14
      4.3.3 Unsustainability of Oil Growth .................................. 15

5 GOALS AND RECOMMENDATIONS ...................................... 16
   5.1 Maximize Oil Growth ..................................................... 16
   5.2 Sustainability ............................................................... 16
      5.2.1 Poverty Reduction .................................................... 16
      5.2.2 Diversification .......................................................... 17

6 SCENARIO ANALYSIS .......................................................... 18
   6.1 Parameter Changes .......................................................... 18
   6.2 The Results ...................................................................... 19
   6.3 Key Uncertainties in Forecast .......................................... 20
      6.3.1 Predicting Rate of New Oil Discoveries ....................... 20
      6.3.2 Predicting the Likelihood of Political Stability ............ 21
      6.3.3 The Informal Sector .................................................. 22

7 CONCLUSIONS ...................................................................... 22

8 BIBLIOGRAPHY .................................................................... 23
1 Executive Summary

This report explains Angola’s current socio-economic situation and uses the International Futures software to forecast the country’s development trajectory to 2050. Two major issues stand out as key facts that Angolan leadership will need to respond to as it builds a development plan for the future: (1) widespread and deep-rooted poverty; and (2) the unsustainability of oil growth. These two difficulties are explained below.

- First, Angola needs to work to meet the basic needs of its population. Seventy percent of Angolans live on less than $2 per day, and child mortality rates are amongst the highest in the world.\(^1\) Even with low incidence of HIV, life expectancy in Angola is the third lowest in the world at 50 years.\(^2\) Angolan authorities must use the country’s newfound oil wealth to invest in its people. Building equity into the country’s development plan will not only benefit the poorest, but also the country as a whole.

- Second, Angola’s oil production will most likely peak sometime in the next 20 years, and extraction will become more expensive before becoming no longer cost effective. Unless Angola invests in other sectors to prepare for the future, it will not be able to turn its oil wealth into long-term growth.

To address these challenges, Angola’s government must incorporate three goals into its development strategy: (1) maximization of oil growth; (2) poverty reduction; and (3) diversification into other sectors. These three broad goals and the recommendations for each are summarized below.

- First, while Angola has the opportunity to capitalize on its fossil fuel wealth, it should do so in a manner that produces the most profit. The government should seek to attract foreign investment to the oil industry, as large foreign companies will bring technology and employment. The authorities must also use an export-oriented economy to keep Angolan oil at competitive prices on the global marketplace.

- Second, the leadership should aim to meet the needs of the country’s poor in a number of ways. Investing in smallholder agriculture as well as larger-scale farming is an important step toward reducing malnutrition amongst the poor. Investing in health will also have a substantial role in reducing communicable disease incidence, and returning education to its pre-civil war levels will help build the human capital necessary for long-term growth. Protecting the poorest through welfare payments will be a significant response to poverty, as will the encouragement of women’s participation.

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\(^2\) “World Development Indicators.”
Finally, diversification is the key to a sustainable future. Building up the service sector will be the most important way forward. Financial institutions will offer an important service in providing the credit and insurance necessary for building a thriving business community. Tourism and telecom services could also be lucrative in a world increasingly interconnected through transportation and information. The manufacturing and ICT sectors also present important opportunities.

The final section of this report analyzes three different scenarios, each forecasting to 2050. The first, called Max Oil, encourages economic freedom, uses export-oriented trade policies, and attracts foreign direct investment. The second, called Sustainable, promotes diversification and poverty reduction by investing in health, education, agriculture, and R&D. It also encourages women’s participation and welfare payments. The third and last scenario combines the first two scenarios.

The comparative scenario analysis indicates that neither an oil-first strategy nor a sustainability-first strategy will provide Angola the greatest increases in economic and social development from now until 2050. Maximizing oil growth will produce the greatest increases in GDP as well as GDP per capita, but it will not reduce poverty as well as the more sustainable approaches. The sustainability-first approach will produce better overall poverty reduction than focusing strictly on oil growth, but neither strategy reduces poverty as well as the combination approach of simultaneously maximizing oil growth and promoting sustainability. Consequently, the recommendation of this report is that the Angolan authorities invest heavily in the oil sector while it can, but without neglecting the country’s poor. A combination approach of maximizing oil growth while promoting sustainability will produce economic as well as social growth from now until 2050 and beyond.
2 Introduction

This report uses the International Futures (IFs) software to predict Angola’s development path up to 2050 and provides development recommendations based on the challenges apparent in the country’s current and expected socio-economic situation. Oil stands out as the primary driver of economic growth, but Angola must also aim for sustainable growth through diversification and poverty reduction. By combining oil-led growth with policies that promote sustainable and widespread growth, Angola will see the greatest development over the next 40 years.

3 Context

3.1 Economy

3.1.1 Challenges: War, Post-Colonial Transition, and Poverty

Angola achieved independence from the Portuguese in 1975 but became embroiled in a civil war for the next 27 years. The war was initially a stage in the broader Cold War with the Soviet Union and the United States funding the opposing sides of the Angolan conflict. The Angolan Civil War, though, outlasted the Cold War continuing until 2002, and the protracted conflict dislocated the country’s economy, uprooted the Angolan people, and destroyed their land.

Under Portuguese rule Angola had had a strong agricultural economy based on plantations of coffee, cotton, palm products, corn, cassava, beans, potatoes, and bananas. After independence, globalized markets and the competition these brought about made it increasingly difficult for Angolan farmers to survive by selling these commodities. In addition, the war riddled the countryside with landmines and destroyed infrastructure, further crippling the agricultural sector. The result through most of the war was plummeting agricultural yields (see Figure 1), and millions of rural farmers moved into cities during this time. According to African Economic Outlook, only 30% of Angola’s arable land is currently being used for agriculture.

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Since the end of the war, the Angolan government has worked to repair infrastructure and remove landmines in an attempt to return people to the countryside and alleviate pressure on the already over-crowded cities.6 Today, approximately 40% of Angolans live in the countryside, and most of these engage in subsistence agriculture. Angolans living in the cities aren’t much better off. In 2005, 86.5% of urban dwellers in Angola lived in slums.7 The World Bank found that in 2000, 70.21% of Angolans lived on less than $2 per day.8

3.1.2 Opportunities: Oil-Driven Growth and Foreign Direct Investment

Though millions of Angolans live in poverty, in the decade since the end of the civil war, the country has done remarkably well at expanding its economic growth. Angola is now the second largest oil producer in Africa after Nigeria, and in 2007 Angola became a member of OPEC.9 Oil rents account for approximately 50% of Angola’s GDP and 90% of its exports, and since the early 1990s when the oil industry really began to boom, GDP per capita at PPP has grown by approximately $2000.10

The stability of peacetime initially attracted foreign investment into the oil industry, but now foreign companies are also investing in other industries. Investment initially poured in from the Portuguese-controlled Cabinda Gulf Oil Company in the 1950s11 and other

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8 “World Development Indicators.”
10 “World Development Indicators.”
western companies joined in shortly thereafter.\textsuperscript{12} China now gets more oil from Angola than from any other country (see Figure 2), and it approved a $2 billion line of credit to help develop Angola’s infrastructure around the oil industry.\textsuperscript{13}

**Figure 2**

![Angola's Crude Oil Exports by Destination, 2010](image)

*Source: EIA Angola Oil Brief; Global Trade Atlas, FACTS Global Energy, EIA*

Whereas the civil war caused Angola’s economy to shrink by nearly 24% in 1993, growth in 2007 reached a high of nearly 24% (see Figure 3), and the average growth of 17.8% between 2004 and 2008 was the highest in Africa, and one of the highest in the world.


Although Angola could not avoid the slowdown of the global economic crisis of 2008, it maintains a strong growth rate and now boasts the third largest economy in sub-Saharan Africa after South Africa and Nigeria.\textsuperscript{14}

### 3.2 Population

Angola’s population has nearly quadrupled since the 1960s thanks to improvements in medicine and diet. For now the population is young, with every woman having on average 5.75 children during her lifetime. This is relatively high compared to the average for sub-Saharan Africa (see Figure 4) and is extremely high when considered globally.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure4}
\caption{Total Fertility Rate}
\end{figure}

\textit{Source: World Development Indicators 2011}

\textsuperscript{14} Anonymous, “Angola Awakens.”
3.2.1 Young Population

A very young population can put a strain on a country since each adult must care of several children. Angola’s population distribution (see Figure 5) is typical for developing countries where death rates decrease but birth rates remain high. Figure 4 shows that Angolan women are having fewer children than before, but until Angola’s TFR reaches replacement value (about 2.1%), the young population will continue to put pressure on Angolan economic growth.

3.2.2 HIV in Angola

Compared to most sub-Saharan countries, Angola has a low prevalence of HIV. At the relatively low level of 2% for those between the ages of 15 and 49 in 2009, Angola’s economy has avoided, so far, the additional strains that the virus has put on neighboring economies. If Angola is able to maintain low incidence of HIV, the country will likely experience a demographic dividend in the future.

3.3 People

3.3.1 Undernutrition Prevalence

The FAO’s data indicates that Angola’s undernutrition rates are some of the worst in the world. Between 1990 and 1992, an estimated 67% of Angolans were undernourished, and though the rates have been falling consistently since then, undernourishment was still at 41% in 2008.

3.3.2 Low life expectancy

Angolans’ life expectancy is the seventh lowest in the world and four years less than the sub-Saharan average. Figure 6 shows the eight countries with the lowest life expectancy. HIV heavily influenced the life expectancies of the other five African countries shown on Figure 6, but Angola and Afghanistan have relatively low incidences

\[\text{Source: United Nations Population Division 2010}\]

\[\text{Figure 5}\]

\[\text{Population Distribution for Angola in Year 2010 [Base Case]}\]

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15 “Millennium Development Goals Indicators.”
17 “World Development Indicators.”
of the virus. Angola has had low life expectancy since at least 1960, indicating longer-term problems.

Recent trends reflect the end of the civil war and improvements in health. Angolan life expectancy is closing the gap with the sub-Saharan average, although at 46.8 years, it is still extremely low.¹⁸

Figure 6

Source: World Development Indicators 2011

3.3.3 Low education

According to the Human Development Report of 2010, Angolan children can be expected to go to school for only four years. Only Somali children can be expected (on a statistically significant basis) to have fewer years of schooling (Figure 7).

Figure 7

Source: Human Development Report 2010

¹⁸“World Development Indicators.”
4 Forecast to 2050: Alternate Base Case (ABC) Scenario

Using the International Futures forecasting software, this report will determine the likely course of Angola’s economic and social development until 2050. This report uses a customization of the IFs Base Case scenario that increases Angola’s oil reserves and multifactor productivity (MFP) and decreases its total fertility rate (TFR). This alternate forecast is called Alternate Base Case (ABC) and will be the basic forecast for this report.

4.1 Economy

4.1.1 More Oil-driven growth

According to the IFs model, Angola’s GDP per capita (at PPP) will almost triple between 2010 and 2050. This forecast expands on the already upward trend of the Angolan economy during the 2000s, thanks to oil-driven growth. Current estimates place Angolan reserves of crude oil anywhere from 9.5\textsuperscript{19} to 13.5\textsuperscript{20} and with production at current rates Angola’s oil industry would reach its peak production levels between 2015 and 2018 (see Figure 8). But estimates of oil reserves are notoriously inaccurate, and the rate of new discoveries often exceeds expectations. For this reason, the High Oil scenario (see Figure 9), which will be incorporated into the Alternate Base Case scenario, reflects an increase in oil reserves from 13.5 billion bbl in the IFs Base Case to 20 billion bbl. With these higher estimates, Angola will not reach peak oil production until 2024, but production will decrease at a faster rate over the first half of the century.

Figure 8

![Energy Production, History plus Forecast](image)

Source: IFs Version 6.47

\textsuperscript{19} “Angola Facts and Figures.”

\textsuperscript{20} “BP Statistical Review of World Energy June 2011,” accessed November 17, 2011,
4.1.2 Higher Multifactor Productivity

The base case forecast shows Angola’s MFP dropping off at a fairly consistent rate, but Chinese, Portuguese, and American investment in the Angolan oil industry and infrastructure should keep the MFP growth higher (see Figure 9). The High MFP scenario, which will be incorporated into the Alternate Base Case scenario, reflects an additive factor increase in multifactor productivity growth from 0 to 0.01, phased in over a 10-year period.

Figure 9

![Multifactor Productivity Growth, Annual Total Rate](image)

Source: IFs Version 6.49

At such a MFP growth rate, by 2050 Angola could expect a 30% higher GDP (at PPP) and GDP per capita (at PPP) compared to the IFs Base Case scenario.

4.2 Population

4.2.1 Lower Total Fertility Rate

The IFs Base Case model shows the Angola’s TFR slowly decreasing at a rate that does not seem to match the recent trend in Angola, nor the trend of other less-developed countries that are currently experiencing the demographic dividend. Figure 10 compares the IFs Base Case scenario with a scenario (labeled Low TFR) that reduces Angola’s total fertility at a faster rate.
Both the IFs Base Case and the Low TFR models show a decrease in population growth rates from now until 2050. The Low TFR scenario results in a much lower population in 2050 at 32.6 million as opposed to 42.2 million in the IFs Base Case.

4.2.2 Demographic dividend

Figure 11 shows how a lower TFR will increase Angola’s labor participation rate in the first half of the century. This rate will peak around the late 2040s and is expected to reach a maximum rate of approximately 61%, which is about 4% higher than the peak rate in
the IFs Base Case forecast. At this time, Angola will experience a demographic dividend when the majority of the population will be of working age (see Figure 12). With more workers and fewer children per household, Angola will be able to produce more than ever.

**Figure 12**

![Population Distribution for Angola in Year 2050](image)

*Source: IFs Version 6.47*

The forecast entitled Alternate Base Case (ABC) incorporates the High Oil, High MFP, and Low TFR models discussed above. This report will use the ABC model as a basis for the further scenario analysis of Angola’s development trajectory to 2050.

4.3 **Major problems Angola will face**

The ABC model indicates that Angola’s most alarming problems from now until 2050 will likely be undernutrition, low levels of education, and the unsustainability of oil growth. The 2011 Human Development Report uses a diagram (see Figure 13) to illustrate the importance of balancing equity and sustainability. Though the report discusses the concept of sustainability in a strictly environmental context, the diagram is also useful when considering sustainability from an economic perspective. As Angolan leaders build a development strategy, they must consider both the equity of its population and the sustainability of its economy. By reducing undernutrition and improving

**Figure 13**

![Diagram illustrating sustainability](image)

*Source: Human Development Report 2011*
education as well as diversifying the economy away from oil dependence, the country will achieve both of these goals.

4.3.1 Malnutrition

According to the ABC scenario, malnutrition amongst Angolan children will fall gradually from now until 2050 when it will reach a low of approximately 6% (see Figure 14). Though this is a dramatic decrease from the current rate of roughly 30%, the slow decrease indicates that Angola will likely suffer from high levels of malnutrition through most of the period. Even at 6% in 2050, malnutrition will be much higher than anywhere in the developed world.

**Figure 14**

![Graph showing the percentage of malnourished children from 2013 to 2049](image)

*Source: IFs Version 6.49*

4.3.2 Low levels of education

The ABC forecast seems to be very optimistic about education levels until 2050. Primary net enrollment may reach 100% as early as 2040, and secondary net enrollment may reach approximately 85% by 2050 (see Figure 15). This represents a vast improvement on the extremely low current levels, but the historic data shows that the extremely low enrollment rates were a byproduct of the civil unrest during the war. The earliest data available indicates primary enrollment rates were as high as 78% in 1981 but these rates plummeted to 34% in 1997.\(^{21}\) If rates fell so quickly over a 16-year period, it seems feasible, given political stability, that enrollment rates could improve as quickly as indicated in the forecast.

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\(^{21}\)“World Development Indicators.”
4.3.3 Unsustainability of Oil Growth

Oil is a nonrenewable resource that inevitably provides diminishing returns. Diversifying the economy by investing in other sectors is the only way Angola will be able to translate oil wealth into long-term growth. Angola’s oil wealth will not last much further than 2050, so the country should do its best to maximize this wealth while investing in other parts of the economy.

Figure 16 highlights services, manufacturing, and materials as sectors that will be more important than the energy sector by the late 2020s. It is important to note how small the agricultural sector’s contribution is. This is because 70% of Angolan agriculture operates on the subsistence level in the informal sector and is not registered as economic output.22

5 Goals and Recommendations

Angolan leadership should attempt to accomplish three goals in coming years: (1) maximize oil growth; (2) reduce poverty; and (3) diversify its economy. Figure 19 illustrates these three goals by drawing attention to their respective relationships to time. In other words, fossil fuels represent wealth from the past, the Angolan people represent wealth in the present, and diversification represents wealth in the future.

5.1 Maximize Oil Growth

Angola has limited reserves of fossil fuels, so it should foster an economic climate that allows it to maximize energy sector profits. Maintaining an open economic stance with few barriers to trade will encourage foreign direct investment (FDI) and orient Angolan companies toward export. An open economy should set the stage for competition between foreign oil companies over rights to develop Angolan oil reserves, which in turn should allow Angola to negotiate the most advantageous deals possible. Also, by keeping subsidies, tariffs, and quotas low, Angolan oil prices will be competitive on the global marketplace.

5.2 Sustainability

Since oil growth is not sustainable in the long-term, Angola must seek to build sustainable economic development that will bring wealth to its population years after its oil reserves run dry. Poverty reduction and diversification are the two most important ways Angola should aim to promote economic sustainability. Figure 17 illustrates these overarching goals and the policy recommendations associated with each. By comparing economic sustainability to a seed, the diagram highlights the ways that Angola can grow its economy for future generations.

5.2.1 Poverty Reduction

Investing in poverty reduction will not only help Angola’s poor, but it will enable Angola to build economic sustainability into the future. Improving health care services will tackle the pervasive problem of communicable disease and will help to increase the country’s extremely low life expectancy. The country’s leadership must also invest in education, which will help Angolans to become more competitive for positions within foreign and national companies.

Investing in agriculture is another way the country can protect its poor for extreme poverty. China’s township and village enterprises (TVEs) can serve as an example in this regard. Through strong central
planning, and by increasingly rewarding local farm and business owners, China was able to provide stability to weak rural economies and, in the long term, generate economic growth in areas that were once made up primary of subsistence farmers.23 Angolan farmers could benefit from strong leadership, and if the government invests in agriculture and the poorest populations, the country will become stronger.

Urban agriculture may also present a solution. Many countries have regulations against farming inside city limits. By removing these limitations and encouraging agriculture, governments may be able to reduce malnutrition among the urban poor.24

Angola should build reliable financial institutions that can provide the microloans and insurance needed for small business ventures. If Angola hopes to become a competitive player in the global economy, it must grow a thriving business community.25

Another of the most promising ways a country can do this is by investing in women. Since women are often the primary providers in low-income households, investing in women is one of the most reliable methods of improving well-being in a community.26

The authorities must also improve its capacity for delivering welfare payments to the poorest in society. For those who are unable to provide for themselves, Angolan leadership must rise to the challenge and use its oil wealth to help protect these people from the lowest levels of poverty.27

5.2.2 Diversification

According to the ABC model, services and manufacturing will likely add more to Angola’s economy than energy by the 2030s. China can provide an example of how to achieve economic growth through manufacturing. Angola’s growing population, low wages, and political stability could work together to provide the ideal conditions for the high-labor economic climate required by the manufacturing sector. This may especially be true as China transitions from a low-income manufacturing-led economy to a rich service-led economy. China will not be able to keep its exchange rate low indefinitely, and when this bubble bursts, foreign companies will look for new promising economies to invest in. Angola could be the perfect candidate.

25 The World Bank, Angola: Oil, Broad-Based Growth, and Equity, 86.
27 The World Bank, Angola: Oil, Broad-Based Growth, and Equity, 123-138.
Modern technology has vastly improved opportunities in the service sector in developing countries. The efficiency of transportation has allowed Dubai to become an important tourist destination in less than a decade. By nurturing political stability and attracting foreign businesses, Angola could become a popular tourist destination in Africa. Its warm climate, scenic and diverse inland beauty, and miles of white-sand beaches could help reshape Angola’s economy. Telecommunications is another promising opportunity. Like the call-center industry that India has developed in the past 10 years, Angola could do the same in the Portuguese-speaking world.

Angola leadership must also invest in future growth by putting money into infrastructure and R&D. The country still suffers from poor infrastructure from years of war, and improving these basic services will help all aspects of the economy. Similarly, R&D will help Angolan companies adopt new technologies quickly and enable them to gain an edge in global markets. Photovoltaics (PV) is such a technology that is on the verge of substantial breakthroughs in efficiency because of carbon nanotube and quantum dot technology. Angola could position itself as a regional leader in PV technology and capitalize on its proximity to the low-income communities of sub-Saharan Africa. In this way, R&D could help Angola translate its current economic growth into long-term sustainable growth.

6 Scenario Analysis

This section compares three scenarios based on the ABC model: (1) a scenario called Max Oil that projects Angola’s development course if it were to emphasize the oil industry above all else; (2) a scenario called Sustainable that charts Angola’s course if the country were to pursue diversification and poverty reduction; and finally (3) a scenario called Combination that incorporates the parameter changes from the other two models. These three scenarios are also compared to the ABC forecast. The goal of the analysis is to determine the positive and negative aspects to each possible development path and to attempt to discover the best course of action for Angola from now until 2050.

6.1 Parameter Changes

The parameter changes to the ABC model for the Max Oil and Sustainable scenarios are summarized in the table below. The Combination scenario combines all of the parameter changes used in the other two scenarios.

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30 No parameter changes were made to account for improvement in infrastructure since this is likely to happen in all scenarios and is represented in the increased MFP growth incorporated in the ABC model.
Table 1

<table>
<thead>
<tr>
<th>Max Oil</th>
<th>Sustainable</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% increase in exports</td>
<td>20% increase in agricultural yield</td>
</tr>
<tr>
<td>10% decrease in import prices</td>
<td>67% increase in the annual rate of decrease of cost of renewable energies</td>
</tr>
<tr>
<td>20% increase in economic freedom</td>
<td>20% increase in government spending on R&amp;D</td>
</tr>
<tr>
<td>100% increase in oil production</td>
<td>20% increase in government spending on education</td>
</tr>
<tr>
<td>100% increase in gas production</td>
<td>20% increase in government spending on health</td>
</tr>
<tr>
<td>100% increase in the rate of discovery of oil</td>
<td>20% increase in government to household welfare transfers</td>
</tr>
<tr>
<td>40% increase in the rate of discovery of gas</td>
<td>20% increase in emphasis (toward female) in education</td>
</tr>
<tr>
<td>100% increase in investment in oil</td>
<td>20% decrease in government spending on military</td>
</tr>
<tr>
<td>100% increase in investment in gas</td>
<td></td>
</tr>
<tr>
<td>50% increase in FDI</td>
<td></td>
</tr>
</tbody>
</table>

6.2 The Results

Table 2 summarizes the forecasts to 2050 of the three scenarios (Max Oil, Sustainable, and Combination) and the ABC forecast for several important economic and development measures.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Alternate Base Case</th>
<th>Max Oil</th>
<th>Sustainable</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP at PPP (in Billion $)</td>
<td>1,011</td>
<td>1,122</td>
<td>1,070</td>
<td>1,084</td>
</tr>
<tr>
<td>GDP per Capita per PPP (in Thousand $)</td>
<td>30.82</td>
<td>34.21</td>
<td>32.71</td>
<td>33.13</td>
</tr>
<tr>
<td>HDI</td>
<td>.759</td>
<td>.768</td>
<td>.772</td>
<td>.772</td>
</tr>
<tr>
<td>Malnourished Children (Percent)</td>
<td>6.123</td>
<td>5.919</td>
<td>5.931</td>
<td>5.914</td>
</tr>
<tr>
<td>Population with &lt;$1.25 per Day (in Million People)</td>
<td>.042</td>
<td>.071</td>
<td>.066</td>
<td>.066</td>
</tr>
<tr>
<td>Infant Mortality per Thousand</td>
<td>17.68</td>
<td>16.46</td>
<td>16.33</td>
<td>16.22</td>
</tr>
<tr>
<td>Years of Education Obtained by Population 15+</td>
<td>9.917</td>
<td>9.962</td>
<td>10.24</td>
<td>10.23</td>
</tr>
</tbody>
</table>
Compared to the ABC model, the three scenarios forecast improvements by practically every measure. In purely economic terms, the Max Oil scenario seems to produce the greatest increases, while the Sustainable scenario produces the least. The Max Oil scenario produced the greatest increase in GDP and the Sustainable scenario produced the smallest increase. The estimates for GDP per capita at PPP showed the same trend, with Max Oil producing the greatest increase and Sustainable the least. It should be noted that for both GDP and GDP per capita, the differences between the forecasts were small. Though extreme changes to a country’s development path are possible, it seems more prudent to conclude that only limited improvements to the status quo can be made by 2050.

The scenarios gave some interesting results with regard to measures of development and poverty. The Sustainable scenario forecasted the least improvement in percent of malnourished children, and the Combination scenario forecast the most. This seems counter-intuitive and could point at the importance of oil growth. The Combination scenario also forecast the greatest decrease in infant mortality rates, and the Sustainable and Combination scenarios estimated the same (or practically the same) results for HDI, the number of people with less than $1.25 per day, and years of education obtained by those over age 15. The data seems to point to the conclusion that the Combination scenario is more effective at reducing poverty than the Sustainable scenario.

Another notable aspect of the forecast is that life expectancy estimates for 2050 are essentially the same in all scenarios at approximately 70 years. This is surprising considering the 20% increased spending on health in the Sustainable and Combination models and may reflect the inability of governments to increase spending in many areas at once.

6.3 Key Uncertainties in Forecast

6.3.1 Predicting rate of new oil discoveries

As discussed in Section 4, it is difficult to predict the total reserves of oil or gas that a country has. Companies sometimes discover new reserves, and new technologies (such as oil sands extraction processes and hydraulic fracturing) sometimes make it cost effective to extract from reserves that were not previously economically feasible to do so.

The ABC model used in this report raised the oil reserves to 20 bbl, up from 13.5 in the IFs Base Case. If Angola’s overall fossil fuel quantities were actually triple current estimates, energy production in Angola would be much greater yet (see Figure 18).
At such levels, Angola would be able to rely on its oil wealth for much longer, but avoiding oil dependency would become even more challenging. Diversifying and investing in poverty reduction would be just as important in such a scenario. The leadership’s response to the country’s oil wealth (however much greater it might be than current estimates) will be the ultimate factor that determines the country’s development trajectory.

6.3.2 Predicting the likelihood of political stability

Angola’s 27-year civil war is only nine years in the past. If the newfound political stability deteriorates into political, ethnic, or regional conflicts, the optimistic forecasts discussed in this report will be unlikely. Like many developing countries now, Angola has a high proportion of youth. Youth are the most likely to stir up violence in a country, and youth will make up more than 50% of Angola’s population until about 2025, at which point the percentage will slowly decrease (see Figure 19). Though the forecasts in this report are largely optimistic, the probability of civil unrest in Angola in the next 40 years is high. Another war could replicate the social and economic dislocation of the Angolan Civil War.
Poor governance could also contribute to political instability. Transparency International gave Angola a 1.9 out of 10 in its Corruption Perceptions Index for 2010, ranking it 168th out of the 178 countries surveyed. The probability of civil unrest will remain high while the rule of law is weak.

6.3.3 The informal sector

As mentioned previously, approximately 70% of Angolans engage in subsistence agriculture. Since the food one grows for oneself does not register as economic output, this means that the vast majority of work done in Angola happens in the informal sector. World Bank data confirms this, estimating that the informal sector accounts for approximately 65% of the Angolan economy. Since Angola's value-added does not account for the informal sector, this makes it difficult to obtain a complete picture of the current economic situation and thus future estimates.

7 Conclusions

Angola’s economy has progressed considerably since the civil war ended nearly 10 years ago, but the leadership must now aim to make the country’s growth more equitable and more sustainable. Development for Angola cannot only mean increases in GDP and GDP per capita but must also improve the well-being of the approximately 70% of Angolans who live on less that $2 per day. Improving health care services, education, and the agricultural sector will be important steps toward reducing the widespread and deep-rooted poverty in the country. The authorities must also aim to improve financial services to help the Angolan business community, and women must also become more important players in the formal, and not just the informal, economy. Increasing welfare payments is another important way that the government can help protect the poorest from extreme poverty. Diversification into the manufacturing, services, and ICT sectors will provide important opportunities for growth, and Angola must balance all of these recommendations with a determined effort to maximizing oil rents while it can. An open economy will attract foreign investments and make Angolan companies competitive on the global market, and not just in the oil sector. By employing a strategy that combines oil-led growth with policies that promote poverty reduction and diversification, Angola will not only grow richer, but will do so more equitably and with better prospects for the future.

32 The World Bank, Angola: Oil, Broad-Based Growth, and Equity, 124.
33 The World Bank, Angola: Oil, Broad-Based Growth, and Equity, 87.
8 Bibliography


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