Working paper

International Growth Centre

Learning from Double-Digit Growth Experiences

Rapid Response Note

Eric Werker

March 2012

When citing this paper, please use the title and the following reference number:
S-51001-LIB-1

DIRECTED BY

FUNDED BY

Rapid Response Note:

Learning from Double-Digit Growth Experiences

By Eric Werker
Associate Professor, Harvard Business School
(with research support from Jasmina Beganovic and Andrew Knauer)

March 31, 2012

This extended memorandum identifies episodes of sustained double-digit growth in real GDP, defined as a compound annual growth rate of 10 percent or more over a period of 8 years or longer. Using a measure of real GDP reported in the World Development Indicators, we identify 33 country-episodes of double-digit growth since 1960. The narrative of each episode is presented, and key drivers of growth described. The double-digit growth episodes are then compared to episodes of sustained 6-7 percent growth on a number of economic and development indicators. Statistical tests show that differences in average episode values between the two groups are significant for: Amount of FDI received, the share of natural resource rents in GDP, investment, export growth, industrial composition, and public spending on education. Double-digit growth countries also tended to show worse performance on a number of business environment and governance indicators. From this analysis, lessons are drawn for Liberia. We conclude that with a continued inflow of aid, foreign direct investment, and a rapid increase in natural resource production, Liberia has the potential to achieve double-digit growth. However, as experiences of double-digit growth countries show, the challenge will be to convert the surge in unearned income into sustainable growth, sound policy reforms, and effective governance.

I. Introduction

Current IMF forecasts predict growth in real GDP on the order of 6-7 percent per year for Liberia. The political leadership of Liberia believes that double-digit growth will be required in order to meet the expectations of the electorate, and consequently, lead to greater political stability. Political stability is the *sina qua non* for ensuring peace in Liberia, which, along with improving human development outcomes, is the primary goal of the current government. The President of Liberia, H.E. Ellen Johnson Sirleaf, has requested that the International Growth Centre quickly prepare a policy briefing for Liberia's Economic Management Team that would distill the experiences of other countries that have achieved sustained double-digit growth in real GDP. This would inform the crafting of Liberia's new growth strategy as well as its preferences for a new IMF program and World Bank country assistance strategy. The purpose of this *aide memoire* is to identify such growth episodes and to draw lessons that are relevant for Liberia.

II. Identifying and Describing Double-Digit Growth Episodes

The first step in the analysis is to identify all episodes of double-digit growth. To do so, we utilize all national-level data for the period 1960-2010 available from the World Development Indicators. Using the measure of real GDP (constant 2000 US$), we identify all episodes in which a country experienced an eight-year backward-looking *compound annual growth rate* (CAGR) in real GDP of at least 10 percent.[*] When the filter yields growth episodes that are consecutive, overlapping, or less than two years apart, they are joined into one longer growth episode. The exercise yields 33 growth episodes, which are presented in Table 1. They range in length from 8 years (e.g. Hong Kong 1960-68) to 33 years (e.g. China 1977-2010). Liberia appears on this list during 1992-2004 – a time in which the country was recovering from a catastrophic loss in income.

At first glance, Table 1 reveals that episodes of sustained double-digit growth are rare. The fact that only 33 countries experienced them during the last 50 years, and no country more than once, is telling. Of the cases that we often think of as highly "successful" examples of economic development over this period—namely Singapore, Japan, Hong Kong, Ireland, South Korea, China, Botswana, and Chile—only China is present for the duration of its development period. Singapore, Japan, and Hong Kong each had a brief period of double-digit growth at the beginning of their ascent. Botswana had a much longer one. However, South Korea, Ireland, and Chile do not appear on the table at all. This suggests that *sustaining* less rapid economic growth may be as important as attaining "ultra-rapid" economic growth.

[*] This does not necessarily mean that a country will have achieved growth of 10 percent or more in each year, but rather that over any contiguous 8-year period the economy grew by at least 10 percent *on average* (this is equivalent to cumulative total growth over the contiguous 8-year period of at least 114 percent).

What were some of the characteristics of these growth episodes? Table 1 in the final column summarizes the key features.

Table 1: Episodes of sustained double-digit growth in real GDP

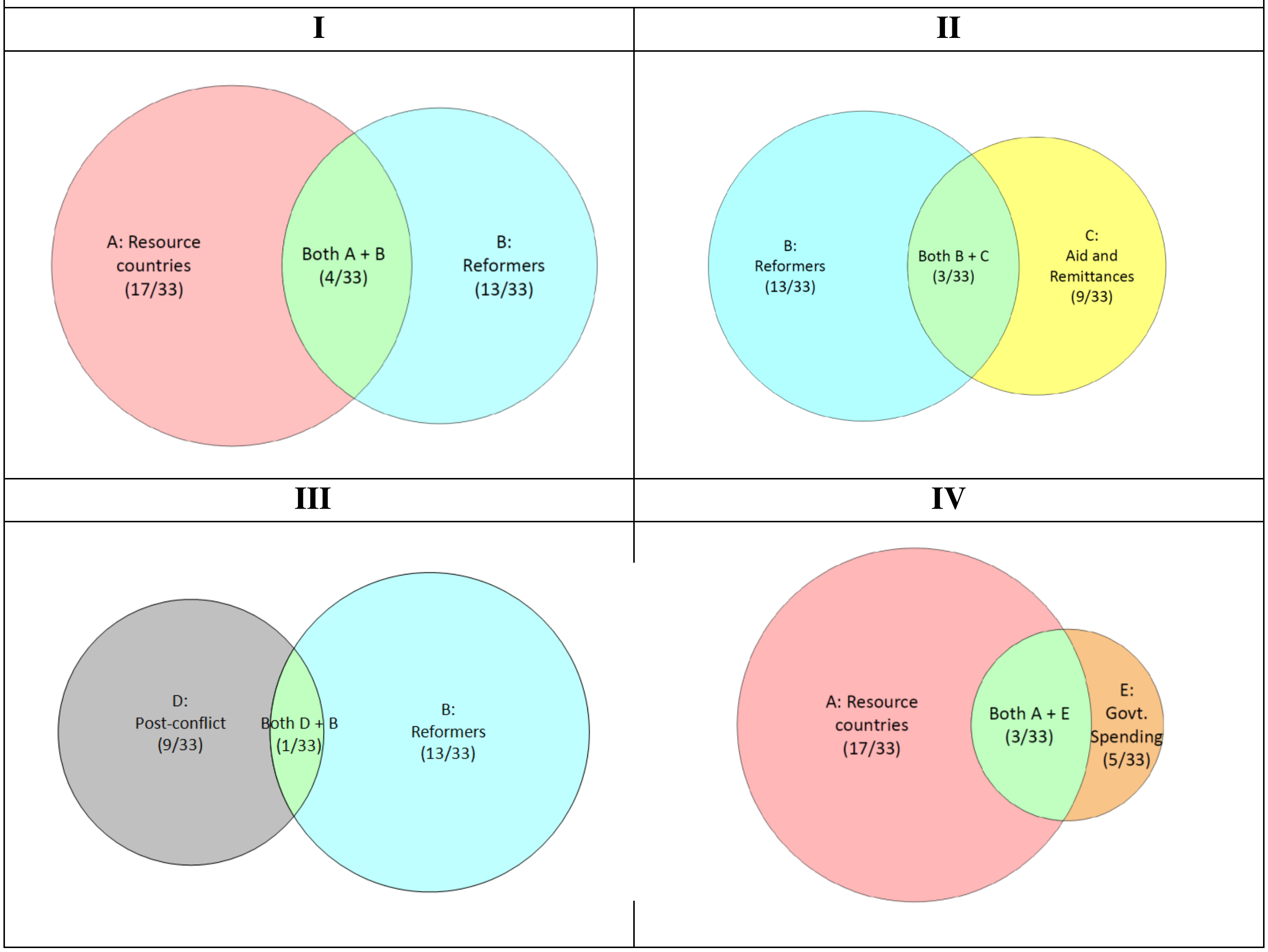
Country	Growth episode[†]	Explanation
Angola	1999-2010	Post-war recovery, oil
Armenia	1998-2008	Market-oriented reforms, external financial inflows
Azerbaijan	1997-2010	Post-war recovery, oil
Bosnia & Herzegovina	1994-2004	Post-war recovery, international assistance
Botswana	1963-1991	Institution building, diamonds
Brazil	1966-1975	Financial reform, economic modernization
Chad	1997-2008	Oil
China	1977-2010	Economic liberalization, market-oriented reforms
Congo, Rep.	1977-1985	Post-war recovery, oil, political stability
Dominican Republic	1968-1976	Financial reform, political stability
Equatorial Guinea	1989-2010	Oil
Gabon	1966-1977	Oil
Hong Kong	1960-1968	Economic liberalization, social and physical infrastructure
Iran, Islamic Rep.	1965-1976	Oil, political stability
Japan	1960-1969	High savings, skilled labor, technology adoption
Jordan	1975-1983	Phosphates, external financial inflows, regional trading hub
Kazakhstan	1999-2007	Oil, market-oriented reforms
Lebanon	1989-1997	Post-war recovery, sound banking, resilient manufacturing
Liberia	1992-2004	Post-war recovery
Macao	1999-2009	Tourism, gambling
Malta	1970-1982	International assistance, tourism, industry
Nigeria	1968-1976	Post-war recovery, oil
Oman	1960-1986	Oil, social and physical infrastructure
Qatar	2000-2009	Oil, natural gas, economic liberalization
Rwanda	1994-2002	Post-war recovery, international assistance, economic liberalization
Saudi Arabia	1968-1980	Oil, physical infrastructure
Sierra Leone	1999-2008	Post-war recovery, diamonds
Singapore	1962-1975	Economic liberalization
St. Lucia	1982-1990	Bananas, economic liberalization, international assistance
Syrian Arab Republic	1967-1981	Oil, economic liberalization, external financial inflows
Turkmenistan	1996-2010	Post-collapse recovery, oil, natural gas
United Arab Emirates	1973-1981	Oil, economic liberalization
Vanuatu	1990-2005	International assistance, offshore financial sector, FDI

[†] The start date of the growth episode marks the first year of the eight year (or longer) period over which the CAGR was more than 10 percent. Thus, a growth episode of 1973-1981 for the UAE implies that the CAGR recorded in 1981 looking 8 year *backwards* was 10 percent or more.

Appendix 1 describes the characteristics of each double-digit growth episode in more detail. Of course, both Table 1 and the summary appendix are by necessity abstractions; a deeper analysis than this briefing is capable of would reveal many more nuances than we present and analyze here. However, when we look for general patterns across the growth episodes, we find the following:

1. Seventeen of the 33 episodes were driven, or enabled, by natural resource exports. Part of this is due to GDP accounting, which measures the value of goods produced within a nation's borders in any year. Thus, the extraction of oil, by definition, will increase GDP by the market value of that oil. A start in oil production, or a trebling of oil prices, can mechanically lead to a large increase in recorded GDP per capita.
2. Thirteen of the episodes were driven, or enabled, by reforms. The reformers, not surprisingly, were later characterized by stronger political development and economic diversification. Interestingly, only 4 of the 17 resource growers also undertook serious reforms: UAE, Botswana, Kazakhstan, and Qatar (see Figure 1, I on following page). Not all the reforms were standard neoliberal reforms or accompanied by democratic opening.
3. Nine of the episodes were driven, or enabled, by foreign aid or remittances. Just like resource rents, foreign aid and remittances are sources of unearned income and can pose similar challenges (e.g. governance, Dutch disease). But foreign aid also comes with additional external pressures. Only 3 of the 9 aid/remittance performers also undertook serious reforms: St. Lucia, Rwanda, and Vanuatu (Figure 1, II).
4. Nine of the episodes were the result, at least in part, of recovery from a very low income level brought on by conflict. When a country is below its natural level of GDP, the "catch-up" growth tends to be quite fast. But the politics of post-conflict recovery can be quite difficult. Out of the post-conflict countries, only Rwanda undertook serious reforms (see Figure 1, III). Together with Rwanda, three of the aid or remittance-funded growth stories were also recovering from conflict: Bosnia, Lebanon, and Sierra Leone.
5. Finally, five of the episodes were driven, or enabled, by government spending on physical infrastructure or human development. Three of the 17 resource-intensive countries spent the money in such a way that it likely helped to enable further growth (notably, none were democratic): Oman, Saudi Arabia, and Syria (Figure 1, IV). Syria's investments were also funded by remittances. The two non-resource funded booms with especially salient public investment were Hong Kong and Singapore. To be sure, foreign aid is also likely to have paid for infrastructure and human capital investments, but perhaps not as dramatically.

Figure 1: Summary Experiences of 33 Double Digit Growth Episodes



Lessons for Liberia:

- Double-digit growth a rare outcome over the last 50 years, even among the most successful countries
    - Besides seeking to grow quickly, Liberia may wish to concentrate on making growth sustainable and irreversible
- Liberia has the potential to leverage *all* of the stylized drivers of growth observed among double-digit growth episodes: boom in natural resource exports; market-friendly reforms; intelligent foreign aid; post-conflict recovery; and intelligent spending on infrastructure and human capital
    - However, experience suggests that countries experiencing ultra-rapid growth find it difficult to reform when unearned income (such as from natural resources and aid) is increasing rapidly or while they are recovering from a divisive conflict. It also shows that in a democracy, it may be difficult to convert natural resource rents into intelligent public spending.

III. How is double-digit growth different from 6-7 percent growth?

In order to inform current policy choices and strategy, the Liberian EMT wishes to know in what ways countries growing real GDP at double-digit rates differ from countries growing real GDP at rates of 6-7 percent, the rate that the IMF currently forecasts for Liberia. This section analyzes whether there are differences in observable outcomes between the group of double-digit growers and an analogous group of countries growing at an average 8-year compound annual growth rate of between 6 and 7 percent and whether these differences are statistically significant.

We first identify country-episodes of sustained 6-7 percent growth, which will serve as the comparison group to the double-digit growers. To do so, we apply the same filter that was used to identify the 33 double-digit episodes, with the exception that the CAGR over the contiguous 8-year period now falls between 6 and 7 percent. This filter identifies 148 separate growth episodes, which are presented in Appendix 2. It is interesting to note that with this filter, not only is the number of episodes is much larger, but also some countries experienced a growth episode more than once (e.g. United Arab Emirates 1976-1984, and 1988-2009) and other countries experienced a growth episode for a very long period of time (e.g. Belize 1966-2006, Botswana 1963-2001, Cape Verde 1981-2010, Malaysia 1960-2000, Singapore 1978-2007).[‡]

Once the two comparison groups of country-growth episodes are established, we select roughly fifty different variables from the World Development Indicators which have been found to be associated with development and growth and group them into six categories: macroeconomic, finance, sources of GDP, human development, business environment, and governance. For each indicator, we calculate the within-group average value of that indicator at the start, during, and at the end of the growth episode, separately for the 148 country-episodes of 6-7 percent growth and the 33 country-episodes of double-digit growth.[§] These are presented in Table 2, together with the most recently available value of each indicator for Liberia.

In the remainder of this section, we describe the differences between the group of double-digit growers (Group 1) and the group of 6-7 percent growers (Group 2) in the variables presented in Table 2 both qualitatively and quantitatively, testing for statistical significance. Finally, we describe how Liberia compares to the double-digit growers.

[‡] As before, growth episodes that are consecutive, overlapping, or less than two years apart, are joined into a longer growth episode. Some countries that appear on the list of double-digit growth also appear on the list of 6-7 percent growth for a different selection of years.

[§] For the average value of an indicator during the growth episode, we calculate both a simple average and a weighted average value within each group, with the weight given by the duration of each episode. Table 2 presents the weighted average other than in instances where data was available for fewer than 15 separate country growth-episode observations (in which case a simple average is used).

Qualitative Differences Between Groups

Macroeconomic

Countries with quickly growing economies have tended to keep a current account deficit of roughly 3 percent of GDP, with no significant differences between the two groups. As they were importing more than they are exporting, many were also attracting significant foreign investment. The double-digit growers tended to have more inward FDI during their growth episodes – on average more than 5 percent of GDP. Both groups of countries had a large share of Official Development Assistance (8 percent and 6 percent, respectively) at the start of the growth episode, but ODA fell during the growth episodes, while FDI increased. This indicates that while funding for growth was often external, the composition was dynamic; countries started with more aid but ended up with more investment. The double-digit countries tended to have lower and less volatile inflation.

Growth in each group was accompanied by an increase in credit to the private sector (which began the episode at over 25 percent of GDP) of roughly 1 percent of GDP per year, indicative of steady financial sector development. The real interest rate (the interest rate minus inflation) was relatively low at 4.5 percent among the double-digit growers and 3.2 percent among the 6-7 percent growers. This means that the cost of capital was higher in the ultra-rapid growers, but presumably this was matched by higher returns in the business environment. The interest rate spread (which can be seen as a measure of risk perception by investors) was higher in the double-digit growth countries.

In both groups, government consumption was roughly 15 percent of GDP (stable). Household expenditures were a frugal 54 percent of GDP in the double-digit growers and 60 percent in the 6-7 percent growers (and falling). Investment started out around 20 percent of GDP but then grew steadily, especially among the double-digit growers. The fall in consumption and rise in investment coincided with growth in aggregate savings, which started in the 15-20 percent of GDP range and grew during the growth episode. Both groups started with shares of exports in GDP of about 30 percent, growing by around 8 percent per year during the growth episode. Resource rents for double-digit growers averaged 24 percent of GDP, compared with 7.5 percent of GDP for the 6-7 percent growers, increasing during the growth episode. In terms of their industrial composition, the double-digit growers had a larger share of industry in GDP – this likely reflects the fact that mining and resource extraction is accounted for in this category. On the other hand, the countries that grew slower had a larger share of manufacturing and services in GDP.

Table 2: Comparing high growth and medium growth countries, select indicators

	Group 1 (Growth >10%)	*Group 2 (Growth 6-7%)*	*Liberia*
MACROECONOMIC			
Current account balance (% of GDP), wtd. period avg.	-3.13	-2.41	-31.63
FDI, net inflows (% of GDP), wtd. period avg.*	5.16	2.93	24.85
FDI, net inflows (% of GDP), avg. annual increase / decrease	0.12	0.26	
Net ODA received (% of GNI), wtd. period avg.	7.74	5.74	78.35
Net ODA received (% of GNI), avg. annual increase / decrease	-0.44	-0.07	
Total debt service (% of GNI), wtd. period avg.	2.47	4.13	9.92
Inflation, consumer prices (annual %), wtd. period avg.	7.25	17.98	5.85
FINANCE			
Domestic credit to private sector (% of GDP), wtd. period avg.	26.31	28.25	16.09
Domestic credit to private sector (% of GDP), avg. annual increase/decrease	1.00	1.37	
Real interest rate (%), wtd. period avg.	4.54	3.20	6.29
Interest rate spread (lending minus deposit rate, %), wtd. period avg.	5.64	4.33	10.08
SOURCES OF GDP			
Government consumption expenditure (% of GDP), wtd. period avg.	15.06	13.88	19.25
Household consumption expenditure, etc. (% of GDP), wtd. period avg.	54.42	60.00	202.25
Gross fixed capital formation (% of GDP), at period start, avg.*	22.3	20.7	16.4
Gross fixed capital formation (% of GDP), avg. annual increase / decrease	0.73	0.26	
Gross savings (% of GDP) at period start, avg.	15.03	19.27	-2.14
Gross savings (% of GDP), avg. annual increase / decrease	0.37	0.22	
Exports of goods and services (% of GDP) at period start, wtd. avg.	29.90	27.61	31.10
Exports of goods and services (annual % growth), wtd. period avg.**	8.46	7.32	
Total natural resources rents (% of GDP), wtd. period avg.***	24.38	7.52	15.63
Agriculture, value added (% of GDP), wtd. period avg.	16.44	18.31	61.30
Industry, value added (% of GDP), wtd. period avg.***	36.51	25.50	16.80
Manufacturing, value added (% of GDP)	10.82	11.38	12.70
Services, etc., value added (% of GDP), wtd. period avg.**	34.92	44.76	21.90
HUMAN DEVELOPMENT			
Primary completion rate, male (% of relevant age group), wtd. period avg.	57.52	54.17	62.68
School enrollment, secondary (% gross), wtd. period avg.	36.19	42.87	36.86
School enrollment, tertiary (% gross), wtd. period avg.	7.43	10.48	17.39
Public spending on education, total (% of GDP), wtd. period avg.**	2.87	3.31	2.77
Mortality rate, under-5 (per 1,000), wtd. period avg.	88.31	75.29	112.00
Life expectancy at birth, total (years), wtd. period avg.	60.50	62.05	58.67
Life expectancy at birth, total (years), avg. annual increase / decrease	0.43	0.30	
Fertility rate, total (births per woman), wtd. period avg.	4.64	4.10	5.81
Fertility rate, total (births per woman), avg. annual increase / decrease	-0.04	-0.05	
Age dependency ratio (% of working-age population), wtd. period avg.	76.21	68.78	84.61

	Group 1 (Growth >10%)	Group 2 (Growth 6-7%)	Liberia
Age dependency ratio (% of working-age population), avg. annual increase/decrease	-0.50	-0.46	
Population growth (annual %), wtd. period avg.	2.78	1.97	3.64
Population growth (annual %), avg. annual increase / decrease	0.06	-0.01	
Urban population (% of total), wtd. period avg.	48.00	45.60	60.82
Urban population (% of total), avg. annual increase / decrease	0.57	0.40	
BUSINESS ENVIRONMENT			
Ease of doing business (1=most business-friendly regulations), period avg.	99.60	90.53	155.00
Strength of legal rights index (0=weak to 10=strong), period avg.**	4.15	5.70	4.00
Time required to register property (days), period avg.	111.25	84.26	50.00
Cost of business start-up procedures (% of GNI per capita), period avg.*	235.33	79.73	54.60
Total tax rate (% of commercial profits), period avg.	64.95	47.95	43.70
Informal payments to public officials (% of firms), period avg.	45.52	40.34	55.22
Electric power consumption (kWh per capita), wtd. period avg.	1,100.88	1,204.36	
Roads, paved (% of total roads), wtd. period avg.	24.05	27.65	6.20
Internet users (per 100 people)	4.32	6.13	0.51
GOVERNANCE			
CPIA business regulatory environment rating (1=low to 6=high), period avg.**	3.01	3.55	3.00
CPIA fiscal policy rating (1=low to 6=high), period avg.	3.61	3.76	3.50
CPIA quality of public administration rating (1=low to 6=high), period avg.	2.92	3.25	2.50
CPIA property rights and rule-based governance rating (1=low to 6=high), period avg.*	2.67	3.17	2.50
CPIA transparency, accountability, and corruption in the public sector rating, period avg. (1=low to 6=high)	2.60	2.93	3.00
Proportion of seats held by women in national parliaments (%), period avg.	10.03	11.22	12.50

Notes: *** denotes significance at 1%, ** at 5%, and * at 10% level in t-tests of differences in means. For purposes of t-test, calculations were performed on differences in simple (unweighted) averages between groups. Data for each group presented refers to the period of the growth episode. Data for Liberia is as of 2010 or most recent available year.

Human Development

The two groups of countries looked fairly similar on human development indicators. Both groups had modest primary completion rates, secondary enrollment, and tertiary enrollment rates. Public spending on education was around 3 percent of GDP, but the level of spending for the double-digit growers was significantly lower than for the slower growing countries, suggesting that growth in GDP translated less than proportionally into education spending. Both groups of countries had relatively low life expectancies (around 60 years) and high infant mortality rates. Countries were partway through the demographic transition, with a fertility rate of over 4 children per mother on average. The double-digit growers had higher population growth on average than the 6-7 percent growers, but this is to be expected since we are using a measure of real GDP (not GDP per capita) and faster population growth will often lead to faster growth in total GDP.

Business Environment and Governance

On average, the double-digit growers exhibited a worse performance on every indicator of the quality of the business environment compared to the 6-7 percent growers. Legal rights were weaker, it took more time to register property, more money to start a business, and there were higher corporate taxes and informal payments to government officials. Infrastructure was poorer for the group of double-digit growers, with lower electricity consumption, fewer paved roads, and fewer internet users. Almost all broad measures of governance were also weaker for the double-digit growers. Indexes measuring the quality of business regulation, fiscal policy, public administration, property rights, and transparency all showed worse performances. Representative democracy, as measured by the proportion of parliamentary seats held by women, was also weaker among the double-digit growers.

Quantitative Differences between Groups

We saw that there were some differences in observables between the group of double-digit growers and the group of 6-7 percent growers. However, even within each group, the specific experiences of countries varied from the average just described. In order to demonstrate which of the differences across the two groups are statistically meaningful, we perform a two-sample t-test of differences in means (assuming unequal variances) of the following form:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

where $\bar{x}_1$ is the mean of the observations in the group with double-digit growth (Group 1), $\bar{x}_2$ the mean of the observations in the group with 6-7 percent growth (Group 2), σ_1 is the standard deviation of the observations in Group 1, σ_2 is the standard deviation of the observations in Group 2, n_1 is the number of observations in Groups 1 and n_2 the number of observations in Group 2. We perform the tests on the average values of each indicator during the growth episode. Under a null hypothesis of no difference in means, we find significant differences in a number of indicators (see Appendix 3). In particular, the double-digit growers had (relative to the 6-7 percent growers)

- More foreign direct investment inflows;
- Higher rates of capital formation;
- Faster growth in exports;
- A much higher share of natural resource rents in GDP;

- A higher share of industry in GDP and lower share of services;
- And lower public spending on education (as a share of GDP).

There is some evidence that the faster growing countries also had[**]

- Weaker legal rights, higher costs of business start-up procedures, and a worse regulatory environment;
- Weaker property rights and rule-based governance ratings.

While the hypothesis tests do not tell us that these differences had a causal effect of GDP growth, they paint a more precarious picture of the ultra-rapid growers, and one that is consistent with the insights of Table 1 and Appendix 1. On the one hand, these countries benefitted more from FDI, higher investment, a growing industrial sector, and growth in exports. On the other hand, these gains are occurred against a backdrop of a weaker legal and regulatory environment and weaker governance.

The indication that ultra-rapid growers are characterized by weaker rules and governance is worth considering. One may consider the hypothesis that a weak legal and regulatory environment is conducive to higher growth. There is a view that in the short run, for weaker states, what matters is not the formal rules but rather the "deals" that are cut and enforced amongst the elite. One may also consider the opposite view, that countries grow in spite of the legal and regulatory environment, and would have grown even faster had they got that right as well. Finally, it may be that double-digit growers, disproportionately dependent on natural resources for growth and exports, are not incentivized to fix their legal and regulatory environments, since the short-run drivers of growth are relatively unaffected by changes in this area.

Our own view is that this latter explanation is most relevant for Liberia. But here the bellwether is the double-digit natural resource growers that to this day, in spite of sustained ultra-rapid economic growth, still have worse corruption ratings than Liberia: these include Angola, Azerbaijan, Republic of the Congo, Equatorial Guinea, Kazakhstan, Nigeria, Sierra Leone, Syria, and Chad. It seems clear that good institutions were not necessary to generate sustained double-digit growth. It seems equally clear that though these countries have grown, they have not developed as they might have had they gotten the institutions right as well.

[**] For these variables, the number of country-epodes for which data is available was less than 15 for the double-digit growth countries. T-test showed significant differences between the groups, however, should be interpreted with greater caution due to the low number of observations in Group1.

Quantitative Differences Between the Double-Digit Growth Group and Liberia

We next ask, what are the observable outcomes on which Liberia today differs significantly from the double-digit growers? To answer this question, we calculate the differences in observable outcomes between Liberia and the double-digit growers in terms of standard deviations. Table 3 presents all the variables for which this difference is larger than one standard deviation from the double-digit mean.[††] If outcomes are normally distributed, this means only roughly one third of double-digit growers would have had outcomes as or more extreme than Liberia during their high-growth period. We use this threshold to characterize Liberia as having a "green light" (when it exhibits strong performance on an indicator), a "yellow light" (for caution with no clear predictions), and a "red light" (for indicators that negatively predict subsequent economic development).[‡‡]

Notably, Liberia's outcomes fall within one standard deviation for a large number of variables, meaning that Liberia today does not look dissimilar to the countries that experienced double-digit growth on most standard measures of economic development. Table 3 below shows those variables for which Liberia falls outside one standard deviation of the double-digit mean, meaning that it does exhibit larger differences, together with the "traffic light" indicator.

Table 3: Comparing high growth countries and Liberia, differences > 1 standard deviation

	Group 1 Average	*St. Dev.*	*Liberia Average*	*Difference (in st. devs)*	*Traffic light*
Net ODA received (% of GNI)	7.74	9.73	78.35	7.3	YELLOW
Household final consumption expenditure, etc. (% of GDP)	54.42	26.01	202.25	5.7	YELLOW
Foreign direct investment, net inflows (% of GDP)	5.16	5.82	24.85	3.4	YELLOW
Agriculture, value added (% of GDP)	16.44	15.58	61.30	2.9	YELLOW
Internet users (per 100 people)	4.32	1.62	0.51	2.3	RED
Current account balance (% of GDP)	-3.13	14.19	-31.63	2.0	RED
Total debt service (% of GNI)	2.47	4.88	9.92	1.5	YELLOW
Industry, value added (% of GDP)	36.51	18.13	12.70	1.3	YELLOW
Gross savings (% of GDP)	15.03	17.52	-2.14	1.0	RED
CPIA transparency, accountability, and corruption in the public sector rating	2.60	0.41	3.00	1.0	GREEN

Note: Sorted by magnitude on "Difference in Standard Deviations". Data for Group 1 refers to the period of the growth episode, as in Table 2.

Some interesting patterns emerge when looking at the variables where Liberia's outcomes are significantly different those of the double-digit countries. The main observation is that Liberia relies on external financing to a much greater extent than the double-digit growers. Specifically,

[††] Appendix 4 presents calculations for all the variables.
[‡‡] Although there are wide–ranging debates of how variables impact income and under which circumstances, the traffic lights are assigned based on commonly held views about the impact.

Liberia's household consumption expenditure (more than 200 percent of GDP) is being financed by a large current account deficit (32 percent of GDP), FDI (25 percent of GDP) and ODA (78 percent of GDP). Until recently, debt was also a financing source and the 2009 statistic shows debt service of 10 percent of GDP (although this may have been an accounting construct under HIPC, during which Liberia was not itself servicing the debt). This aggressive financing stance can bode well for bridging a current internal financing shortfall and facilitating rapid growth today. However, there may be costs of real exchange rate appreciation and sustainability (this falls outside the competence of this briefing). Therefore, we have assigned "yellow" traffic lights to these variables. Liberia's savings rate, which is currently at a negative rate of 2 percent, is also an outlier.

The second group of indicators on which Liberia appears as an extreme outlier relate to the structure of its economy. Specifically, agriculture in Liberia still accounts for more than 60 percent of GDP, compared to 16 percent in the double-digit growers. This ratio is expected to naturally fall in Liberia as resource activity comes on line (which is accounted for as "industry"). However a similar increase in the share of manufacturing and service activity, both of which are needed to diversify the Liberian economy, is unlikely to occur automatically. Here, a significantly larger effort from government, donor, and private sector communities in Liberia will be needed to change the status quo. Liberia is also an outlier in its low share of internet users, which is indicative of poor infrastructure outcomes more generally (Liberia also fares poorly on paved roads; electricity statistics are not available in this dataset).

In Appendix 4, we describe—as with Table 3—the difference between Liberia's indicators and the average values for the double-digit growers, but we do not restrict the list to those indicators where Liberia is more than one standard deviation from the sample mean. Liberia performs less well compared to the double-digit growers on its poor doing-business ranking, low quality of public administration, low investment as a share of GDP, high frequency of bribing public officials, and high fertility rate – all of these differences fall between 0.6 and 1 standard deviations from the double-digit group's mean. On the other hand, relative to the double-digit growers, Liberia performs better on indexes of government transparency in the public sector (one full standard deviation above the mean), share of tertiary enrollment, and manufacturing as a share of GDP.

Lessons for Liberia:

- Liberia is doing well
  - Matches the comparison group in many indicators
  - Transparency
  - Macroeconomic stability
  - Corporate taxation and simple business procedures
- Liberia has room for improvement
  - The economy is still undiversified
  - Financial sector development is weak, with high costs of capital and high lending spreads – reliance on external capital is high
  - National savings and investment rates are low
  - Infrastructure (roads, electricity, communications) is poor
  - Infant mortality is high, fertility is high
  - All measures of governance except transparency are weak
- Liberia needs to pay attention to
  - External financing from ODA and FDI is unusually large
  - Consumption as a share of GDP unusually high
  - Mixed blessing of natural resource rents
  - Urban population and schooling enrollment unusually high

IV. Conclusion

Liberia is remarkably well positioned to join the club of double-digit growers. If multiple iron ore mines come on stream, oil is discovered, and aid continues, then Liberia would be unlikely, in our opinion, *not* to grow at double-digit rates from the moment that the ore is exported in quantity, so long as market conditions for natural resources remain strong.

Yet as this paper has shown, countries that attained double-digit growth are not unequivocally a club that one should strive to join. The ultra-rapid growers whose growth has been driven by resources, aid, or remittances have not generally conducted the sorts of reforms to the legal, regulatory, and governance environment that could have generated high growth without such unearned income. They have also not generally invested their rents well in infrastructure or human capital. Moreover, post-conflict double-digit growers have found it difficult to reform or invest well.

Although their macroeconomic numbers look better than the slower growers, the double-digit club looks precarious in other respects—notably governance and the regulatory environment. And many of the members of the double-digit club have failed, even after the high-growth episode, to reduce corruption, to invest in education, and to raise human development indices. This is not to suggest that Liberia not try to obtain double-digit growth, but rather to point out that the correlates of double-digit growth leave question marks as to the broad impact on the population of many of the episodes of such economic performance.

V. Role for IGC-Assisted Research

Liberia is already actively working to improve a number of indicators that appeared in this memo as being weaker than those of the double-digit-growth countries. For instance, Liberia is working aggressively to improve its physical infrastructure, its internet connectivity, governance, and health measures. It is also looking for creative solutions to diversify the economy, especially to spur the growth of local businesses in services, manufacturing, and commercial agriculture, so as to lessen its reliance on FDI, resource rents and aid.

However, the findings of this memo do generate additional questions for Liberia's EMT. The EMT may wish to seek expert advice on economic questions such as the following:

- How to improve financial sector development and lower the interest rate spread?
- How to increase the domestic savings and investment rates?

Also because it is not uncommon for rapidly growing resource-funded countries to face difficulties in *sustaining* their economic growth and governance reforms, the EMT may wish to engage the IGC to undertake more in-depth research asking how the government can choose the best reforms and make them stick. In particular, the IGC could pair interested research economists with Ministries and Agencies in Liberia that are undertaking strong reform agendas. The research economists could help integrate robust monitoring and evaluation into the reform design to give the policymakers an accurate reading on how well the reform is working. They could also help the policymaker choose between strategies, by implementing pilots in parallel, and testing them for effectiveness.

Finally, Liberia has begun to think deeply about the ramifications of being a natural resource exporter. This memorandum has described some additional double-edged qualities of growing through resource exports. On the one hand, many countries that experienced double-digit growth were financed by resources. On the other hand, many of those countries failed to undertake economic and governance reforms, or reduce corruption. IGC-partnered research could assist other efforts already marshaled by the EMT to understand how Liberia can deploy resource revenues both to benefit the wider economy as well as to enable, rather than hold back, improvements in governance and in the business environment.

APPENDIX 1: DEVELOPMENT NARRATIVES OF DOUBLE-DIGIT GROWTH EPISODES

Angola 1999-2010

The 27 year Angolan Civil War ended in 2002, after claiming approximately half a million lives and displacing over one million. Since the end of the war, Angola has experienced a period of relative peace and stability, with economic growth driven primarily by oil and diamonds. In 2008, Angola was China's single largest source of oil, and in 2011 oil accounted for 50 percent of Angola's GDP, 80 percent of government revenue, and 90 percent of export earnings.[1] China has also extended multibillion dollar lines of credit to the Angolan government.[2] However, growth has not benefitted the majority of the population, with resources heavily controlled by the ruling power (MPLA). Angola remains one of the most poorly governed countries in the world.[3]

United Arab Emirates 1973-1981

The unprecedented affluence of the UAE in the 1970s largely depended on the discovery and exploitation of oil.[4] The formation of the UAE in 1971 coincided with the massive increase in oil production and exports, followed by a rise in oil prices in 1973. Between 1970 and 1975, oil production increased from 253 million barrels to 619 million barrels, while oil revenues increased from US $233 million to US $6000 million (due in part to a change in government take).[5] The UAE has enjoyed political and social stability since its formation, with the government pursuing an economic liberalization strategy that encourages competition.[6]

Armenia 1998-2008

The impressive performance in Armenia's GDP can be attributed to "the steadfast pursuit of market oriented reforms, assisted by large external inflows on grant or soft terms."[7] Growth was driven by productivity gains due to macroeconomic stabilization, private market expansion, the public sector remaining a small share of the economy, and the adoption of important institutional measures. These institutional measures ensured free price formation; liberal trade in goods, services, and investment; private ownership of assets (including land); and industrial restructuring. In the late 1990s, the adoption of responsible fiscal and monetary policies curbed inflation and led to predictability in financial policies.[8] Armenia's economic growth has also depended on external factors, such as remittances and assistance from international financial and donor organizations.[9] In 2005, for example, remittances may have reached 20% of GDP.[10]

Azerbaijan 1997-2010

The collapse of the Soviet Union and conflict with Armenia over the Nagorno Karabakh Autonomous Region in the early 1990s contributed to the decline of Azerbaijan's economy by over 60% by 1995.[11] Beginning in the late 1990s, rising oil and gas exports (and rising world prices for oil) contributed to the growth in GDP. Between 2006-2008 some non-export sectors, including construction, banking, and real estate, also experienced double-digit growth.[12]

Bosnia and Herzegovina 1994-2004

The war in Bosnia and Herzegovina in the early 1990s caused the destruction of physical infrastructure and saw GDP fall. The initial recovery was mainly due to reconstruction efforts,[13] with further growth largely attributed to an increase international metal prices, new metal-processing capacity, and earlier reforms.[14] Economic recovery has also been supported by extensive international assistance, among the highest per-capita of all post-conflict countries. Estimates for 1996-2002 are about US $5.2 billion. [15]

Brazil 1966-1975

The military regime which came to power in Brazil in 1964 adopted policies of structural reform and economic modernization.[16] The regime curtailed government expenditure in certain sectors, improved tax-collection mechanisms, and tightened credit. The stabilization program also included measures to eliminate price distortions, which led to the gradual elimination of deficits in various sectors and reduced the necessity for government subsides.[17] The indexing of financial instruments was instituted, as was a capital market law, which provided an institutional setting for strengthening and increasing the use of the stock market. In regards to foreign trade, the regime abolished state export taxes, simplified administrative procedures for exporters, and introduced tax incentives and subsidized credit. During Brazil's period of economic growth, industry was the leading sector, expanding at yearly rates of 12.6 percent.[18]

Botswana 1963-1991

Botswana's economic growth has been remarkable, especially in comparison to other sub-Saharan African countries. The country's growth has been attributed to sound economic policies, chosen due to sound institutions within society. These institutions have sustained for a number of reasons: "First, Botswana possessed relatively inclusive pre-colonial institutions, placing constraints on political elites. Second, the effect of British colonialism on Botswana was minimal, and did not destroy these institutions. Third, following independence, maintaining and strengthening institutions of private property were in the economic interests of the elite. Fourth, Botswana is very rich in diamonds, which created enough rents that no group wanted to challenge the status quo at the expense of "rocking the boat.""[19] Botswana's institutional situation was reinforced by critical decisions made by post-independence leaders.

China 1997-2010

China's "Opening and Reform Policy" in 1978 initiated a period of economic transformation. The Chinese leadership emphasized economic and political consolidation after the upheaval of the Cultural Revolution. Chinese leadership adopted a more pragmatic approach to economic policy considerations and reduced the role of ideology. Economic reforms proceeded gradually in a decentralized manner, avoiding the transformation shocks seen in the post-Soviet Russia. Despite structural deficiencies, economic reforms benefitted from unique conditions seldom found in developing countries: a large rural workforce provided cheap labor for the industrial sector, and despite the existence of a planned economy, a limited public sector. [20] The reform process increased the de facto economic importance as well as appreciation of the private sector, and unleashed individual initiative and entrepreneurship.[21] In the 1980s, the Chinese government pursued agricultural reforms, replacing the commune system with a household system; promoted self-management for state-owned enterprises; increased competition in the marketplace; and facilitated direct contact between China and foreign trading enterprise. China's reliance on foreign financing and imports also increased.[22]

Republic of Congo 1977-1985

Two decades of political instability and crisis followed the Congo's independence from France in 1960. Ethnic rivalry, social and regional disparities, and political struggles over the control of oil greatly hindered the economy. In 1970, two years after a military coup, a "People's Republic" under the one-party rule of the Parti Congolaise du Travail (PCT) was established, and the country became politically stable in 1979 after Dennis Sassou-Nguesso seized power. Under his leadership, the People's Republic consolidated as a self-proclaimed Marxist Leninist state, although Sassou-Nguesso negotiated loans from the IMF and allowed foreign investors from France and the Americas to operate in the oil and mineral extraction operations.[23] Oil prices rose from an annual average of US $17 per barrel during the late 1970s to about US $33 per barrel in the first half of the 1980s. In light of the rising oil revenue, government investment increased by an annual average of two percentage points during the 1970s.[24] In 1981 the government adopted am ambitious Five-Year Economic and Social Development Plan, which further increased government investment.

Dominican Republic 1968-1976

Improvement in growth rates in the Dominican Republic is attributable in most part to the progress made on structural measures, in particular education and credit to the private sector, as well as increased political stability under the Presidency of Joaquin Balaguer. This progress took place in a broader framework of prudent fiscal and monetary policies, favored by a strong balance of payments position in the early 1970s.[25]

Gabon 1966-1977

Oil is Gabon's key economic resource and was the primary driver of its growth in the 1970s. Petroleum reserves have historically accounted for half of GDP, more than 80 percent of export revenues, and 65 percent of tax revenues.[26] Exploitation of petroleum resources began in 1956, but significance growth commenced after 1967 with the Gamba-Ivinga deposits coming into production and the exploitation of the offshore Anguille deposit.[27]

Equatorial Guinea 1989-2010

Equatorial Guinea's economic growth is directly attributable to improved oil and gas production.[28] As one OECD report comments, "The oil industry has without doubt become the engine of Equatorial Guinea's economy," with the overall contribution of hydrocarbons to GDP in 2006 measuring 87%.[29] The country has also seen a continuously improved performance in the construction sector, banking services, telecommunications, tourism, and wood processing.

Hong Kong SAR, China 1960-1968

Considered one of the four East Asian Tigers, Hong Kong experienced considerable economic growth between the 1960s and 1990s. With a limited domestic market, Hong Kong adopted an outward-looking policy of export oriented industrialism.[30] Resources shifted to manufacturing, with a surprisingly high percentage of small to medium-sized firms.[31] Until the late 1960s, the government did not engage in active industrial planning. Low taxes, lax employment laws, the absence of government debt, and free trade were all pillars of Hong Kong's economic growth.[32] Furthermore, stable macroeconomic performance and management provided a framework for private investment.[33] There were no controls on international flows of capital. Although primarily laissez-faire, the government also pursued ambitious programs of public housing, land reclamation, and infrastructure investment. New industrial towns were built to house immigrants and provide employment for industry. The government also invested heavily in education. By 1966, 99.8 percent of school-age children were attending primary school.[34]

Iran, Islamic Rep. 1965-1976

Iran's economic growth took place in an environment of relative domestic political stability, low inflation, and improved terms of trade. Both oil output and prices increased significantly during

1960-76, with oil production growing at an annual average rate of 10 percent and oil prices relative to import prices increasing by 214 percent.[35]

Jordan 1975-1983

Economic prosperity in Jordan rested on three factors. First, Jordan's status as the world's third largest producer of phosphates ensured a steady flow of export income that offset some its high import costs. Second, Jordan received billions of dollars in foreign aid and remittances from expatriates. These financial inflows permitted domestic consumption to outpace production, with GNP exceeding GDP in the late 1970s and early 1980s by between 10 and 25 percent. High financial inflows allowed Jordan to maintain a low current account deficit without much external borrowing and despite trade and budget deficits. Finally, Jordan capitalized on its strategic geographic location, its educated workforce, and its free enterprise economy to become a regional entrepôt and transit point for exports and imports between Western Europe and the Middle East. These same qualities attracter foreign direct investment, and Jordan became a purveyor of banking, insurance, and consulting services to foreign clients.[36]

Japan 1960-1969

The rapid growth in Japan in the 1960s is largely attributed to three factors. First, private investment in plants and equipment expanded, backed by a high rate of personal savings. Second, a large shift occurred in the working population from primary to secondary industries, with an abundant supply of high-quality labor. Finally, productivity increased due to the rapid adoption of new technologies. [37] Japan's highly acclaimed education system contributed to the modernization process and rapid technological advancement in the economy. [38]

Kazakhstan 1999-2007

Rising oil prices played a major role in Kazakhstan’s economic growth. As the price of oil increased, the share of Kazakhstan’s GDP coming from the hydrocarbon sector increased from 11 percent in 1990 to almost 35 percent in 2007.[39] In 2007, the hydrocarbon sector accounted for 57 percent of the country’s total industrial output and 70 percent of export revenues. Kazakhstan also pursued market-oriented economic reforms, including rapid price and trade liberalization, privatization, sound macroeconomic policy, and the promotion of entrepreneurship. The income and wealth effects stimulated other sectors, primarily financial and general business services and construction/real estate.[40]

Lebanon 1989-1997

The Lebanese civil war, which lasted from 1975-1990, severely damaged Lebanon's economic infrastructure, cutting national output in half. Peace allowed the central government to restore control in Beirut, and begin collecting taxes and managing the port and government facilities. A financially sound banking system and resilient small to medium scale manufacturers contributed to economic recovery. Remittances, banking services, manufactured and farm exports, and international aid provided the main sources of foreign exchange. In 1993, the government launched "Horizon 2000," a US $20 billion reconstruction program.[41]

Liberia 1992-2004

Liberia's extended civil war, between 1989 and 2003, stalled economic activity, and caused a collapse in the central authority and the delivery of services.[42] Between 1987 and 1995, GDP fell a startling 90 percent.[43] When violence subsided in 1996, the economy began to rebound, and elections were held in 1997. However, the war soon reignited, and the economy declined from its rebound.

St. Lucia 1982-1990

In 1982 the government of John G.M. Compton initiated structural reforms with the intention of obtaining International Monetary Fund financing. These reforms included reducing state spending and subsidies, favoring foreign investment, and moving St. Lucia's economy into international markets.[44] External shocks, including the increase in banana prices (one of St. Lucia's primary exports) and increased concessional aid flows, also lead to a strong economic performance. Manufacturing also increased during this time, promoted by low wage rates and favorable trade agreements.[45]

Macau SAR, China 1999-2009

In 1999 Portugal transferred the sovereignty of Macau to China. Economic growth since the transfer has been driven by an increase in tourism, aided in part by China's easing of travel restrictions; increased public works expenditures; and significant investment inflows associated with the liberalization of Macau's gambling industry.[46]

Malta 1970-1982

In 1964 Malta achieved independence from the United Kingdom. The "fourth development plan," adopted by the new government for the period 1973-1980, had two main economic objectives: to increase the productive capacity of Malta so that when aid from Britain ended in 1979 the economy would remain viable, and reduce emigration by creating jobs in the industrial and service sectors. Tourism and industry were heavily promoted, and formed the backbone of Malta's economic growth.[47] External financing was also important to Malta's economy in the post-independence period. In 1970 aid accounted for 8 percent of GDP and was above 5 percent throughout the 1970s.[48]

Nigeria 1968-1976

The 3 year Nigerian Civil War ended in 1970. In the aftermath, Nigeria's government became more centralized. The oil boom of the 1970s provided tax revenue that further strengthened the central government. As a percentage of GDP, national government expenditures rose from 9 percent in 1962 to 44 percent in 1979. Expansion of the government's share of the economy did little to enhance administrative and political capacity, but did increase incomes and the number of jobs available to elites and their clients.

Oman 1960-86

Oil, first discovered in 1964, has accounted for a large majority of Oman's exports and GDP.[49] The reluctance of Sultan Sa'id, who reigned from 1932-1970, to spend financial resources on development delayed the country's progress.[50] In 1970 the Sultan was deposed by his son, Qaboos bin Said, who immediately began an economic development and modernization program. In the early 1970s, substantial progress was made in developing physical and social infrastructure, mainly in the form of roads, a new deepwater port, an international airport, electricity-generation plants, and schools, hospitals, and low-cost housing. [51] Central to Oman's development strategy was the role of oil. On one hand, the strategy sought to maximize the impact of oil revenues through effective resource development and allocation policies. At the same time, the country sought to reduce its dependence on oil by developing new sources of national income to augment and eventually replace oil revenues.[52]

Qatar 2000-2009

Oil is the cornerstone of Qatar's economy, providing more than half of total government revenue, more than 50 percent of GDP, and roughly 85 percent of export earnings. Qatar is endowed with 25 billion barrels of proven oil reserves and the world's third-largest natural gas reserves. As part of its long-term development strategy, Qatar has tapped international financial markets and invited foreign investment in order to finance the expansion of its liquefied natural gas (LNG) extraction and production facilities.[53] LNG output has expanded from 4.5 million tons in 2002 to 43 million tons in 2009, and became the world's largest exported of liquefied natural gas in 2007.[54] Natural gas revenues exceeded oil profits in Qatar for the first time in 2008. The emir of Qatar since 1995, Shaykh Hamad bin Khalifa Al Thani, has undertaken several projects to capitalize on the country's hydrocarbon resources, while also improving educational opportunities for Qatari citizens and pursuing economic diversification. [55] Furthermore, Qatar has fared relatively well through the recession due its long term contracts at fixed prices, which have ensured steady returns from its exports.

Rwanda 1994-2002

The 1994 genocide decimated Rwanda's fragile economic base, impoverished the population, and stalled the country's ability to attract private and external investment. GDP declined by more than 40 percent. Rwanda has since made substantial progress in stabilizing and rehabilitating its economy to pre-1994 levels, with a resultant increase in GDP.[56] Emergency humanitarian aid of US $307.4 million in 1995 was largely directed at relief efforts, while in 1996 aid shifted to reconstruction and development assistance. The Government of Rwanda has focused on poverty reduction, infrastructure development, privatization of government owned assets, expansion of the export base, and trade liberalization.[57]

Saudi Arabia 1968-1980

Oil wealth in Saudi Arabia made rapid economic development possible. Development began in the 1960s, and accelerated through the 1970s, transforming the kingdom. Following the Arab-Israeli war in 1973, petroleum revenues increased sharply, and Saudi Arabia became one of the fastest-growing economies in the world. It enjoyed a substantial surplus in overall trade with other countries, imports increased, and sizeable government funds were available for development, defense, and aid. Saudi Arabia's first two development plans, covering the 1970s, emphasized infrastructure, with impressive results. The total length of paved highways tripled, power generation increased by a multiple of 28, and the capacity of the seaports grew tenfold.[58]

Singapore 1962-1975

Considered one of the four Asian Tigers, Singapore experienced notably high growth rates and rapid industrialization in the 1960s and 1970s. Upon independence in 1965, Singapore faced a lack of resources and a small domestic market. In response, the Singapore government adopted a pro-business, pro-foreign investment, export-oriented economic policy, supported by state-directed investments in government-owned corporations.[59]

Sierra Leone 1999-2008

Since independence in 1961, the Government of Sierra Leone has encouraged foreign investment, although the business climate has been hampered by uncertainty surrounding civil conflict. The Sierra Leone Civil War, which lasted from 1991-2002, destroyed much of the country's formal economy and degraded its infrastructure. After the cessation of hostilities, massive infusions of outside aid helped Sierra Leone to recover, and the economy began to bounce back. Sierra Leone has relied heavily on diamonds for its economic base, although the country has historically struggle to manage its exploitation and export. Efforts to improve the management of export trade have met with some success. In 2000, a UN approved export certification system for exporting diamonds was implemented, and led to a dramatic increase in legal exports. In 2001, the government created a mining community development fund, which returns a portion of diamond export taxes to diamond mining communities, giving them a stake in the legal mining trade.[60]

Syrian Arab Republic 1967-1981

Since the late 1960s, Syria has produced heavy grade oils from its fields in the northeast. The dramatic rise in world oil prices in 1973 and 1974 led to increased production from domestic refineries and sustained Syria's high rate of economic growth. Higher prices for agricultural and oil exports, as well as Syria's limited economic liberalization policy, encouraged growth. Syria's economic boom was furthered by increased remittances from Syrians working in other oil-rich Arab states, as well as increased levels of foreign aid. By the end of the 1970s, the Syrian economy had shifted from its traditional agricultural base to an economy dominated by the service, industrial, and commercial sectors. The government also supported infrastructure investment, including increased expenditure for the development of irrigation, electricity, water, road building, as well as social investment, including the expansion of health services and education.[61]

Chad 1997-2008

Since 2000, a consortium of three oil companies - Exxon Mobil, Chevron, and Petronas - has been extracting oil from wells in Chad and sending it via pipeline from Chad through Cameroon to the Gulf of Guinea. The consortium has invested more than $7 billion in the project, which originally had support from the World Bank in the form of loans to enable Chad to participate in the project. In return, the Chad government agreed to a set of mechanisms for collaboration with the World Bank, private sector, civil society, and government that future oil revenues would benefit local populations and result in poverty alleviation. The project has been extremely successful economically, rewarding both the consortium and the Chad government with profits beyond initial expectations. Chad is the sixth-leading African country in oil exports to the US.[62]

Turkmenistan 1996-2010

In the post-Soviet era transition, Turkmenistan experience high inflation, which approached 3000 percent in 1993 and impoverished the nation. Entire branches of the economy collapsed and state wages decreased, with GDP falling to 58 percent of its 1991 level. Economic recovery began in

1996, with Turkmenistan's economic performance highly dependent on the production and processing of natural gas, oil, and cotton. Export revenues increased, and a positive balance of trade emerged. By 2005, these sectors accounted for over 80 percent of exports and over 50 percent of GDP, with natural gas exports accounted for one-third of total exports. Rising oil prices and investments in petrochemical and cotton processing resulting in further economic growth.[63]

Vanuatu 1990-2005

Vanuatu, a small island nation in the South Pacific, achieved political independence in 1980.
Since 1971, it has been designated a Least Developed Country (LDC) by the United Nations Committee on Development Planning. Due to LDC status, the country has been favored by foreign aid in terms of both pure grants and technical assistance from Australia, New Zealand, and the European Union. In addition, Vanuatu has been receiving loan assistance on concessional terms from multilateral funding agencies.[64] Vanuatu was the fourth largest recipient of aid on a per capita basis from 2000-2003.[65] Growth has been driven by foreign investment in tourism and land development, attracted by sound macroeconomic policies, relative political stability, and a liberal tax regime.[66] Furthermore, since the 1970s Vanuatu's offshore financial sector has experienced strong growth. Between 1980 and 1995, growth average 15 percent per year. [67]

APPENDIX 2: SUSTAINED GROWTH EPISODES OF 6-7 PERCENT

Country	Growth episode	Country	Growth episode
Albania	1993-2006	**Lesotho**	1966-1983
Algeria	1964-1978	**Liechtenstein**	1991-2000
Andorra	1996-2008	**Lithuania**	1996-2006
Angola	1993-2004	**Luxembourg**	1982-1993
Antigua and Barbuda	1978-1991	**Macao SAR, China**	1987-2004
Argentina	1990-1998	**Malawi**	1965-1976
Armenia	1994-2010	**Malawi**	2002-2010
Aruba	1988-1997	**Malaysia**	1960-2000
Bahamas, The	1963-1971	**Maldives**	1998-2008
Bahamas, The	1978-1986	**Mali**	1994-2004
Bahrain	1985-1994	**Malta**	1987-1995
Bahrain	1999-2008	**Marshall Islands**	1983-1992
Bangladesh	2002-2010	**Mauritania**	1961-1969
Barbados	1960-1972	**Mauritius**	1980-1993
Belarus	1995-2006	**Mexico**	1961-1982
Belize	1966-2006	**Moldova**	2000-2008
Bermuda	1960-1972	**Mongolia**	1999-2009
Bhutan	1987-2003	**Morocco**	1966-1976
Bosnia and Herzegovina	1997-2005	**Mozambique**	1991-2000
Botswana	1960-1968	**Netherlands**	1961-1969
Botswana	1993-2003	**New Caledonia**	1969-1977
Burkina Faso	1994-2003	**New Caledonia**	1981-1993
Burundi	1962-1971	**Nicaragua**	1962-1970
Cameroon	1979-1987	**Nigeria**	1999-2009
Cape Verde	1981-2010	**Oman**	1971-1979
Chad	1980-1989	**Oman**	1983-1991
Chile	1991-1999	**Pakistan**	1960-1971
China	1961-1982	**Pakistan**	1974-1992
Colombia	1965-1975	**Panama**	1966-1974
Congo, Rep.	1965-1976	**Panama**	2000-2009
Costa Rica	1961-1979	**Papua New Guinea**	1960-1974
Costa Rica	1991-1999	**Paraguay**	1968-1984
Cote d'Ivoire	1971-1979	**Peru**	2002-2010
Cuba	1974-1984	**Philippines**	1970-1980
Cuba	1998-2008	**Portugal**	1960-1971
Cyprus	1977-1992	**Puerto Rico**	1965-1974
Dominica	1979-1988	**Romania**	2000-2008
Dominican Republic	1963-1980	**Russian Federation**	1998-2008
Dominican Republic	1990-2000	**Rwanda**	1972-1982
Ecuador	1965-1973	**San Marino**	1991-2000
Egypt, Arab Rep.	1969-1987	**Seychelles**	1965-1980

El Salvador	1960-1969	**Seychelles**	1984-1992
Estonia	1994-2008	**Sierra Leone**	2002-2010
Ethiopia	1998-2006	**Singapore**	1978-2007
Fiji	1967-1977	**Slovak Republic**	2000-2008
French Polynesia	1975-1988	**South Africa**	1960-1970
Gabon	1960-1981	**South Asia**	1960-1970
Gambia, The	1972-1980	**South Asia**	1997-2008
Georgia	1967-1981	**Spain**	1962-1974
Georgia	1995-2010	**Sri Lanka**	2002-2010
Ghana	2002-2010	**St. Kitts and Nevis**	1981-1993
Greece	1966-1976	**St. Lucia**	1988-1996
Greenland	1970-1978	**St. Vincent and the Grenadines**	1980-1990
Grenada	1981-1991	**Sudan**	1969-1977
Guatemala	1965-1978	**Sudan**	1994-2010
Honduras	1970-1979	**Swaziland**	1973-1994
Hong Kong SAR, China	1981-1994	**Syrian Arab Republic**	1964-1972
Hungary	1965-1974	**Syrian Arab Republic**	1987-1998
Iceland	1969-1978	**Tanzania**	1997-2007
India	1960-1971	**Thailand**	1967-1988
India	1991-2006	**Togo**	1964-1972
Indonesia	1965-1992	**Trinidad and Tobago**	1973-1982
Ireland	1989-2006	**Trinidad and Tobago**	1995-2009
Isle of Man	1984-2007	**Tunisia**	1964-1981
Japan	1967-1975	**Turkey**	1961-1969
Jordan	1979-1987	**Uganda**	1986-2007
Jordan	1999-2010	**Ukraine**	1998-2008
Kazakhstan	1996-2004	**United Arab Emirates**	1976-1984
Kenya	1968-1979	**United Arab Emirates**	1988-2009
Korea, Rep.	1973-1986	**Uzbekistan**	2000-2008
Kosovo	2000-2008	**Vietnam**	1986-2005
Kuwait	1992-2007	**Yemen, Rep.**	1990-1999
Lao PDR	1987-2008	**Zimbabwe**	1962-1970
Latvia	1965-1976	**Latvia**	1995-2004
Country	Growth episode	Country	Growth episode
Albania	1993-2006	**Lesotho**	1966-1983
Algeria	1964-1978	**Liechtenstein**	1991-2000
Andorra	1996-2008	**Lithuania**	1996-2006
Angola	1993-2004	**Luxembourg**	1982-1993
Antigua and Barbuda	1978-1991	**Macao SAR, China**	1987-2004
Argentina	1990-1998	**Malawi**	1965-1976
Armenia	1994-2010	**Malawi**	2002-2010

Aruba	1988-1997	**Malaysia**	1960-2000
The Bahamas	1963-1971	**Maldives**	1998-2008
The Bahamas	1978-1986	**Mali**	1994-2004
Bahrain	1985-1994	**Malta**	1987-1995
Bahrain	1999-2008	**Marshall Islands**	1983-1992
Bangladesh	2002-2010	**Mauritania**	1961-1969
Barbados	1960-1972	**Mauritius**	1980-1993
Belarus	1995-2006	**Mexico**	1961-1982
Belize	1966-2006	**Moldova**	2000-2008
Bermuda	1960-1972	**Mongolia**	1999-2009
Bhutan	1987-2003	**Morocco**	1966-1976
Bosnia and Herzegovina	1997-2005	**Mozambique**	1991-2000
Botswana	1960-1968	**Netherlands**	1961-1969
Botswana	1993-2003	**New Caledonia**	1969-1977
Burkina Faso	1994-2003	**New Caledonia**	1981-1993
Burundi	1962-1971	**Nicaragua**	1962-1970
Cameroon	1979-1987	**Nigeria**	1999-2009
Cape Verde	1981-2010	**Oman**	1971-1979
Chad	1980-1989	**Oman**	1983-1991
Chile	1991-1999	**Pakistan**	1960-1971
China	1961-1982	**Pakistan**	1974-1992
Colombia	1965-1975	**Panama**	1966-1974
Congo, Rep.	1965-1976	**Panama**	2000-2009
Costa Rica	1961-1979	**Papua New Guinea**	1960-1974
Costa Rica	1991-1999	**Paraguay**	1968-1984
Cote d'Ivoire	1971-1979	**Peru**	2002-2010
Cuba	1974-1984	**Philippines**	1970-1980
Cuba	1998-2008	**Portugal**	1960-1971
Cyprus	1977-1992	**Puerto Rico**	1965-1974
Dominica	1979-1988	**Romania**	2000-2008
Dominican Republic	1963-1980	**Russian Federation**	1998-2008
Dominican Republic	1990-2000	**Rwanda**	1972-1982
Ecuador	1965-1973	**San Marino**	1991-2000
Egypt, Arab Rep.	1969-1987	**Seychelles**	1965-1980
El Salvador	1960-1969	**Seychelles**	1984-1992
Estonia	1994-2008	**Sierra Leone**	2002-2010
Ethiopia	1998-2006	**Singapore**	1978-2007
Fiji	1967-1977	**Slovak Republic**	2000-2008
French Polynesia	1975-1988	**South Africa**	1960-1970
Gabon	1960-1981	**South Asia**	1960-1970
Gambia, The	1972-1980	**South Asia**	1997-2008
Georgia	1967-1981	**Spain**	1962-1974
Georgia	1995-2010	**Sri Lanka**	2002-2010

Ghana	2002-2010	**St. Kitts and Nevis**	1981-1993
Greece	1966-1976	**St. Lucia**	1988-1996
Greenland	1970-1978	**St. Vincent and the Grenadines**	1980-1990
Grenada	1981-1991	**Sudan**	1969-1977
Guatemala	1965-1978	**Sudan**	1994-2010
Honduras	1970-1979	**Swaziland**	1973-1994
Hong Kong SAR, China	1981-1994	**Syrian Arab Republic**	1964-1972
Hungary	1965-1974	**Syrian Arab Republic**	1987-1998
Iceland	1969-1978	**Tanzania**	1997-2007
India	1960-1971	**Thailand**	1967-1988
India	1991-2006	**Togo**	1964-1972
Indonesia	1965-1992	**Trinidad and Tobago**	1973-1982
Ireland	1989-2006	**Trinidad and Tobago**	1995-2009
Isle of Man	1984-2007	**Tunisia**	1964-1981
Japan	1967-1975	**Turkey**	1961-1969
Jordan	1979-1987	**Uganda**	1986-2007
Jordan	1999-2010	**Ukraine**	1998-2008
Kazakhstan	1996-2004	**United Arab Emirates**	1976-1984
Kenya	1968-1979	**United Arab Emirates**	1988-2009
Korea, Rep.	1973-1986	**Uzbekistan**	2000-2008
Kosovo	2000-2008	**Vietnam**	1986-2005
Kuwait	1992-2007	**Yemen, Rep.**	1990-1999
Lao PDR	1987-2008	**Zimbabwe**	1962-1970
Latvia	1965-1976	**Latvia**	1995-2004

APPENDIX 3: RESULTS OF T-TEST OF DIFFERENCES IN MEANS

	Group 1			Group 2			
	Obs	Mean	St. Dev.	Obs	Mean	St. Dev.	p-value
MACROECONOMIC							
FDI, net inflows (% of GDP)	27	5.694	5.821	116	3.574	4.869	1.755
Gross fixed capital formation (% of GDP)	32	26.125	8.781	129	22.955	6.672	1.910
Gross capital formation (% of GDP)	31	27.226	9.394	133	23.724	6.473	1.969
Exports of goods and services (annual % growth)	21	13.940	8.724	114	9.337	4.870	2.352
Total natural resources rents (% of GDP)	31	24.499	29.458	141	7.793	13.287	3.089
Industry, value added (% of GDP)	28	39.323	18.132	127	28.750	11.812	2.951
Services, etc., value added (% of GDP)	28	42.589	18.144	128	50.794	13.751	-2.255
HUMAN DEVELOPMENT							
Public spending on education, total (% GDP)	28	3.391	1.578	110	4.384	4.165	-2.001
BUSINESS ENVIRONMENT AND GOVERNANCE							
Strength of legal rights index (0=weak to 10=strong)	11	4.145	1.110	44	5.695	2.098	-2.357
Cost of business start-up procedures (% of GNI per capita)	11	235.326	350.216	47	79.734	200.882	1.980
CPIA business regulatory environment rating (1=low to 6=high)	6	3.013	0.734	22	3.553	0.490	-2.154
CPIA property rights and rule-based governance rating (1=low to 6=high)	6	2.667	0.606	22	3.168	0.528	-2.003

Note: All t-tests were performed as unpaired tests of differences in means assuming unequal variance. Only results that are significant at the 1%, 5%, as 10% levels are shown. Group 1 includes double-digit growth episodes; Group 2 includes growth episodes of 6-7 percent. In each case, the number of observations corresponds to the number of different country-episodes averages for which data is available. The mean in each case represents the (unweighted) average value of the indicator during the growth episode within the respective group.

APPENDIX 4: LIBERIA VERSUS DOUBLE-DIGIT GROWERS, ALL VARIABLES

	Group 1 Average	*St. Dev.*	*Liberia*	*Difference (in St. devs.)*	*Traffic light*
Net ODA received (% of GNI)	7.74	9.73	78.35	7.3	YELLOW
Household final consumption expenditure, etc. (% of GDP), weighted period avg.	54.42	26.01	202.25	5.7	RED
Foreign direct investment, net inflows (% of GDP), weighted period avg.	5.16	5.82	24.85	3.4	YELLOW
Agriculture, value added (% of GDP)	16.44	15.58	61.30	2.9	YELLOW
Internet users (per 100 people)	4.32	1.62	0.51	2.3	RED
Current account balance (% of GDP), weighted period avg.	-3.13	14.19	-31.63	2.0	RED
Total debt service (% of GNI), weighted period avg.	2.47	4.88	9.92	1.5	RED
Industry, value added (% of GDP)	36.51	18.13	12.70	1.3	YELLOW
Gross savings (% of GDP) at period start, avg.	15.03	17.52	-2.14	1.0	RED
CPIA transparency, accountability, and corruption in the public sector rating, period avg.	2.60	0.41	3.00	1.0	GREEN
Ease of doing business index (1=most business-friendly regulations), period avg.	99.60	59.56	155.00	0.9	RED
General government final consumption expenditure (% of GDP), weighted period avg.	15.06	5.48	19.25	0.8	YELLOW
School enrollment, tertiary (% gross), weighted period avg.	7.43	13.08	17.39	0.8	GREEN
CPIA quality of public administration rating (1=low to 6=high), period avg.	2.92	0.57	2.50	0.7	RED
Services, etc., value added (% of GDP)	34.92	18.14	21.90	0.7	RED
Manufacturing, value added (% of GDP)	10.82	8.60	16.80	0.7	GREEN
Gross fixed capital formation (% of GDP), at period start, avg.	22.30	9.69	16.44	0.6	RED
Informal payments to public officials (% of firms), period avg.	45.52	16.50	55.22	0.6	RED
Fertility rate, total (births per woman), weighted period avg.	4.64	2.04	5.81	0.6	RED
Interest rate spread (lending rate minus deposit rate, %), weighted period avg.	5.64	8.13	10.08	0.5	RED
Urban population (% of total), weighted period avg.	48.00	24.31	60.82	0.5	YELLOW
Cost of business start-up procedures (% of GNI per capita), period avg.	235.33	350.22	54.60	0.5	GREEN

Time required to register property (days), period avg.	111.25	119.79	50.00	0.5	GREEN
Roads, paved (% of total roads), weighted period avg.	24.05	37.29	6.20	0.5	RED
Domestic credit to private sector (% of GDP), weighted period avg.	26.31	22.24	16.09	0.5	RED
Age dependency ratio (% of working-age population), weighted period avg.	76.21	22.62	84.61	0.4	RED
Population growth (annual %), weighted period avg.	2.78	2.54	3.64	0.3	RED
Mortality rate, under-5 (per 1,000), weighted period avg.	88.31	73.16	112.00	0.3	RED
Proportion of seats held by women in national parliaments (%), period avg.	10.03	7.68	12.50	0.3	GREEN
Total tax rate (% of commercial profits), period avg.	64.95	69.69	43.70	0.3	GREEN
Total natural resources rents (% of GDP), weighted period avg.	24.38	29.46	15.63	0.3	YELLOW
CPIA property rights and rule-based governance rating (1=low to 6=high), period avg.	2.67	0.61	2.50	0.3	RED
Real interest rate (%), weighted period avg.	4.54	8.26	6.29	0.2	RED
Primary completion rate, male (% of relevant age group), weighted period avg.	57.52	28.06	62.68	0.2	GREEN
Life expectancy at birth, total (years), weighted period avg.	60.50	10.59	58.67	0.2	RED
Strength of legal rights index (0=weak to 10=strong), period avg.	4.15	1.11	4.00	0.1	-
CPIA fiscal policy rating (1=low to 6=high), period avg.	3.61	0.93	3.50	0.1	-
Inflation, consumer prices (annual %), weighted period avg.	7.25	18.78	5.85	0.1	-
Public spending on education, total (% of GDP), weighted period avg.	2.87	1.58	2.77	0.1	-
Exports of goods and services (% of GDP) at period start, weighted avg.	29.90	26.73	31.10	0.0	-
School enrollment, secondary (% gross), weighted period avg.	36.19	27.71	36.86	0.0	-
CPIA business regulatory environment rating (1=low to 6=high), period avg.	3.01	0.73	3.00	0.0	-

REFERENCES

Acemoglu, D. & Robinson, James, 2010. Why Is Africa Poor? *Economic History of Developing Regions*, 25(1), pp.21-50.

Acemoglu, D. & Robinson, James, 2008. Persistence of Power, Elites, and Institutions. *American Economic Review*, 98(1), pp.267-293.

Acemoglu, D. & Verdier, Thierry, 2000. The Choice between Market Failures and Corruption. *The American Economic Review*, 90(1), pp.194-211.

Aghion, P. et al., 2008. The Unequal Effects of Liberalization: Evidence from Dismantling the License Raj in India. *American Economic Review*, 98(4), pp.1397-1412.

Alesina, A. et al., 2005. Regulation and Investment. *Journal of the European Economic Association*, 3(4), pp.791-825.

Arezki, R., Gylfason, T. & Sy, A., 2011. *Beyond the Curse Policies to Harness the Power of Natural Resources*, International Monetary Fund.

Besley, T., 1995. Property Rights and Investment Incentives: Theory and Evidence from Ghana. *Journal of Political Economy*, 103(5), p.903.

Borensztein, E., Gregorio, J.D. & Lee, J., 1998. How does foreign direct investment affect economic growth. *Journal of International Economics*, 45, pp.115-135.

Chang, R., Kaltani, L. & Loayza, N.V., 2009. Openness can be good for growth: The role of policy complementarities. *Journal of Development Economics*, 90(1), pp.33-49.

Collier, P., 2004. Aid, Policy and Growth in Post-Conflict Societies. *European Economic Review*, 48(5), pp.1125-1145.

Cooley, T., Marimon, R. & Quadrini, V., 2004. Aggregate Consequences of Limited Contract Enforceability. *Journal of Political Economy*, 112(4), pp.817-847.

Djankov, S., Mcliesh, C. & Shleifer, A., 2007. Private credit in 129 countries. *Journal of Financial Economics*, 84(2), pp.299-329.

Fisman, R & Svensson, J., 2007. Are corruption and taxation really harmful to growth? Firm level evidence. *Journal of Development Economics*, 83(1), pp.63-75.

Fisman, Raymond, 2001. Estimating the Value of Political Connections. *American Economic Review*, 91(4), pp.1095-1102.

Freund, C. & Bolaky, B., 2008. Trade, regulations, and income. *Journal of Development Economics*, 87(2), pp.309-321.

Hausmann, R., Kennedy, J.F. & Rodrik, D., 2005. Growth Accelerations. *Journal of Economic Growth*.

Jones, B.F. & Olken, B.A., 2005. The Anatomy of Start-Stop Growth. *NBER Working Paper No. 11528*.

Kaufmann, D. & Kraay, A., 2008. Governance indicators: Where are we, where should we be going? *The World Bank Research Observer*, 23(1).

Levine, R., 1997. Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, 35(2), pp.688-726.

Rajan, R.G. & Subramanian, A., 2005. What Undermines Aid's Impact on Growth? *IMF Working Paper*, (05/126).

Robinson, J, Torvik, R. & Verdier, T, 2006. Political foundations of the resource curse. *Journal of Development Economics*, 79(2), pp.447-468.

ENDNOTES

[1] http://www.bloomberg.com/news/2011-08-25/angolan-economic-growth-to-jump-to-8-in-2012-on-spending-world-bank-says.html
[2] http://www.cfr.org/economics/angolas-political-economic-development/p16820
[3] http://www.oecd.org/dataoecd/37/55/47466469.pdf, http://www.economist.com/node/12009946
[4] http://www.uaeinteract.com/uaeint_misc/pdf/perspectives/12.pdf P. 250
[5] http://www.uaeinteract.com/uaeint_misc/pdf/perspectives/10.pdf P. 208
[6] http://www.bti-project.org/countryreports/mena/are/
[7] http://siteresources.worldbank.org/INTARMENIA/Resources/ArmeniaCEM_Volume1.pdf Page xiii
[8] http://siteresources.worldbank.org/INTARMENIA/Resources/ArmeniaCEM_Volume1.pdf Page xiii
[9] http://www.caps.am/files/ACR%20Printed-eng-09-06-08.pdf Page 6
[10] http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9361.2010.00598.x/abstract Introduction. See also http://pdf.usaid.gov/pdf_docs/PNADB948.pdf
[11] http://www.fas.org/sgp/crs/row/97-522.pdf Page 9
[12] https://www.cia.gov/library/publications/the-world-factbook/geos/aj.html "Economy – overview"
[13] http://web.undp.org/evaluation/documents/ADR/ADR_Reports/BiH/BiH.pdf P. 9
[14] http://siteresources.worldbank.org/INTBOSNIAHERZ/Resources/CPS131107.pdf P. 5
[15] http://web.undp.org/evaluation/documents/ADR/ADR_Reports/BiH/BiH.pdf P. 9
[16] http://books.google.com/books?id=c2eEuHOSr9wC&pg=PA72&lpg=PA72&dq=brazil+economic+growth+1960s&source=bl&ots=IgGQ1r2PK8&sig=zl71laHA1Zp37z8Z4KqHkwVSa4Q&hl=en&sa=X&ei=AMR0T4qUOMa00QHfsKn_Ag&ved=0CC4Q6AEwAjgK#v=onepage&q=brazil%20economic%20growth%201960s&f=false P. 73
[17] http://books.google.com/books?id=c2eEuHOSr9wC&pg=PA72&lpg=PA72&dq=brazil+economic+growth+1960s&source=bl&ots=IgGQ1r2PK8&sig=zl71laHA1Zp37z8Z4KqHkwVSa4Q&hl=en&sa=X&ei=AMR0T4qUOMa00QHfsKn_Ag&ved=0CC4Q6AEwAjgK#v=onepage&q=brazil%20economic%20growth%201960s&f=false P. 73
[18] http://books.google.com/books?id=c2eEuHOSr9wC&pg=PA72&lpg=PA72&dq=brazil+economic+growth+1960s&source=bl&ots=IgGQ1r2PK8&sig=zl71laHA1Zp37z8Z4KqHkwVSa4Q&hl=en&sa=X&ei=AMR0T4qUOMa00QHfsKn_Ag&ved=0CC4Q6AEwAjgK#v=onepage&q=brazil%20economic%20growth%201960s&f=false P. 75
[19] http://www.colby.edu/economics/faculty/jmlong/ec479/AJR.pdf Abstract
[20] http://www.bti-project.org/countryreports/aso/chn/
[21] http://www.state.gov/r/pa/ei/bgn/18902.htm
[22] http://www.state.gov/r/pa/ei/bgn/18902.htm
[23] http://www.bti-project.org/countryreports/wca/cog/
[24] http://www.imf.org/external/pubs/ft/wp/2006/wp06185.pdf P. 9
[25] http://www.imf.org/external/pubs/ft/wp/2007/wp0763.pdf P. 19
[26] http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/10/07/000012009_20041007164956/additional/101501322_20041117175002.pdf P. 8
[27] http://books.google.com/books?id=jj4J-AXGDaQC&pg=PA440&lpg=PA440&dq=gabon+economic+growth+1970s&source=bl&ots=JIocr6tlBs&sig=hribYJkxgW3fSdMCH_LbJO2_7cM&hl=en&sa=X&ei=XNx0T_TfI8nf0QG67Nm_DQ&ved=0CDQQ6AEwATgK#v=onepage&q=gabon%20economic%20growth%201970s&f=false P. 440
[28] http://www.oecd.org/dataoecd/12/56/40577917.pdf p. 287
[29] http://www.oecd.org/dataoecd/12/56/40577917.pdf P. 288
[30] http://www.nber.org/chapters/c6928.pdf
[31] http://eh.net/encyclopedia/article/schenk.hongkong
[32] http://eh.net/encyclopedia/article/schenk.hongkong
[33] http://www.nber.org/chapters/c11011.pdf P. 234
[34] http://eh.net/encyclopedia/article/schenk.hongkong

35 http://www.imf.org/external/pubs/ft/scr/2004/cr04308.pdf Page 7
36 http://countrystudies.us/jordan/45.htm
37 http://www.stat.go.jp/english/data/handbook/c03cont.htm#cha3_1
38 http://countrystudies.us/japan/98.htm
39 http://mercatus.org/uploadedFiles/Mercatus/Publications/Kazakhstan%20-%20Economics%20Transformation%20and%20Autocratic%20Power.pdf P. 1
40 http://mercatus.org/uploadedFiles/Mercatus/Publications/Kazakhstan%20-%20Economics%20Transformation%20and%20Autocratic%20Power.pdf P. 1
41 http://web.archive.org/web/20070604195718/http://teacherlink.ed.usu.edu/tlresources/reference/2001WorldFactbook/LEBANON.PDF
42 http://www.unctad.ch/en/docs/pouncldciiicp14%28lib%29.en.pdf
43 http://www.cgdev.org/files/14912_file_Liberia_Growth.pdf
44 http://desastres.usac.edu.gt/documentos/pdf/eng/doc8150/doc8150-31.pdf
45 http://www.eclac.cl/publicaciones/xml/1/10021/carg0586.pdf P. 3
46 http://www.state.gov/r/pa/ei/bgn/7066.htm
47 http://onlinelibrary.wiley.com/doi/10.1111/j.1467-7660.1977.tb00754.x/pdf P. 525
48 http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/5646E735F5A27471C125787000542A87/$file/SP%20in%20Malta.pdf P. 22
49 http://www.state.gov/r/pa/ei/bgn/35834.htm#econ
50 http://www.relooney.info/Rel-WIDER-09.pdf P. 4
51 http://countrystudies.us/persian-gulf-states/47.htm
52 http://www.relooney.info/Rel-WIDER-09.pdf P. 6
53 http://www.fas.org/sgp/crs/mideast/RL31718.pdf P. 7
54 http://www.fas.org/sgp/crs/mideast/RL31718.pdf, P. 7
55 http://www.fas.org/sgp/crs/mideast/RL31718.pdf "Summary"
56 https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html "Economy - overview"
57 http://www.state.gov/r/pa/ei/bgn/2861.htm
58 http://globaledge.msu.edu/Countries/Saudi-Arabia/economy
59 http://www.state.gov/r/pa/ei/bgn/2798.htm#econ
60 http://www.state.gov/r/pa/ei/bgn/5475.htm#econ
61 http://countrystudies.us/syria/39.htm
62 http://www.state.gov/r/pa/ei/bgn/37992.htm
63 http://www.bti-project.org/countryreports/pse/tkm/
64 http://www.unescap.org/pdd/publications/apdj_13_2/jayaraman_ward.pdf P. 94
65 http://www.ausaid.gov.au/publications/pdf/vanuatu_change.pdf P. 6
66 http://www.ausaid.gov.au/publications/pdf/vanuatu_change.pdf
67 http://www.ausaid.gov.au/publications/pdf/vanuatu_change.pdf P. 7

The International Growth Centre (IGC) aims to promote sustainable growth in developing countries by providing demand-led policy advice based on frontier research.

Find out more about our work on our website
www.theigc.org

For media or communications enquiries, please contact
mail@theigc.org

Subscribe to our newsletter and topic updates
www.theigc.org/newsletter

Follow us on Twitter
@the_igc

Contact us
International Growth Centre,
London School of Economic and Political Science,
Houghton Street,
London WC2A 2AE

IGC
International Growth Centre

DIRECTED BY
LSE
UNIVERSITY OF OXFORD

FUNDED BY
UKaid
from the British people

Designed by soapbox.co.uk