



Economic Growth, Entrepreneurship and the Business Environment in Africa

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ABSTRACT:

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1 Introduction

Research on causes of underdevelopment traps and economic growth can be traced back to the work of Young (1928), Rosenstein-Rodan (1943) and Nurkse (1953). The seminal work of Kormendi and Meguire (1985), Grier and Tullock (1998), Barro (1991), Abramovitz (1986) and Baumol (1986), revived the debate on causes of economic growth. Later work by Quah (1997), Salai-I-Martin (1987,2004) has sought to identify the factors driving economic growth across various regions around the world in a manner that would explain why various regions are growing at such different rates. A stark example is the vast differences in growth rates between Africa and Asia. Asia, on one hand, was at the same level of development with most African countries in the early sixties, but has since overtaken Africa in the pace of economic growth. Explanations and solutions for Africa's poor growth are found in the research work by Collier (2004), Berthelemy and Varoudakis (1996), Berthelemy and Soderling (2001), and Sacks, et al (2004). The "big-push" initiative, which argues for financial transfers in developing countries especially, Africa has been pushed heavily by Sacks, et al (2004) and is also linked to the African Commission Report driven by the British government, and accompanied by proposals for debt forgiveness for poorer countries.

Economical analysis in the literature has found that (see Sala-I-Martin (2004)) the most important variables that explain economic growth include East Asian Dummy; Primary schooling in 1960; Investment Price; GDP in 1960; Fraction of the area that is tropical; Coastal population density; malaria prevalence in 1960; Life expectancy in 1960; Fraction of the population that is Confucian; African dummy; Latin American dummy; Fraction of GDP attributable to mining; Being a Spanish colony; years of Open economy; Fraction of the population that is Muslim; Fraction of the population that is Buddhist; Ethno linguistic fractionalization and government consumption share in 1960. These variables turn out to be the most significant drivers of economic growth out of 67 variables tested econometrically across 88 countries, using 89 million randomly drawn regressions. Some of the findings recently have included the level of the financial sector development, and institutional factors (see Collier 2004).

The contribution of this paper is to include the level of entrepreneurship and general private sector factors as drivers of economic growth. We posit that entrepreneurship activity is an important factor in explaining patterns of economic growth around the world. Africa, which has shown relatively low

levels of entrepreneurship activity, has relatively slow growth patterns. On the contrary, the Asian region, which shows high levels of entrepreneurship, has exhibited strong economic growth patterns.

In this paper, we test various institutional factors that create a good environment for the private sector to thrive and general entrepreneurship activity. Such institutional factors define the business environment. The rest of the paper is organized as follows: Section II looks deeper into the entrepreneurship issues and theory, and institutional factors. In Section III discusses policy issues that determine entrepreneurship activity. In Section IV we analyze the degree of correlation between institutional factors and measures of economic growth namely GDP growth, employment growth, and poverty levels. Section IV concludes.

2 Entrepreneurship and the Private Sector Environment

Entrepreneurship has been associated with the capacity of individuals to create new businesses and to innovate. Some of the literature on entrepreneurship has sought to explain it using psychological based analysis and cognitive analysis. Another part of the literature has sought to explain entrepreneurship using the type of human capital investment in entrepreneurs compared to those who prefer employment. Lazear (2003) tested this human capital approach by analyzing students and found that those who follow a broader course selection tend to be more entrepreneurial than those who specialize.

For completeness we present Lazear (2004) theoretical analysis, with an extension where we include capital constraints.

Specialists who become employees only specialize in one skill, while entrepreneurs are generalists who are limited by their weakest skill. Assume there are two types of skills, x_1 and x_2 .

Let the income (Y) of specialists (S) be given by

$$Y_s = \max \{x_1, x_2\} \quad (1)$$

And income of entrepreneurs (E) be given by

$$Y_e = \theta \text{Min} \{x_1 - (1 + r) B, x_2 - (1 + r) B\} \quad (2)$$

The parameter θ is a market-determined parameter that sets the price of entrepreneurial talent so as to equate supply and demand. The assumption

is that the entrepreneur borrows at level B and pays at interest rate r in the next period. In this regard we have extended Lazear characterization to include a budget-constraint or liquidity term, $(1 + r)B$. We could also include the cost-of-equity, in addition to debt but this will not enhance the analytical expose. The assumption is also that the employee has no similar budget constraint.

Let x_{01} be the initial stock of skill which the individual then upgrades to x_1 , and let x_{02} be the initial skill that the individual upgrades to x_2 . The individual obtains the levels of skill x_1 and x_2 , according to the cost function

$$C(x_1, x_2, x_{01}, x_{02}) \quad (3)$$

where all the marginal costs are positive. Let x_1 be the skill that the individual has the largest endowment in. The individual will invest in skill x_1 so as to obtain

$$\max_{x_1} \{x_1 - C(x_1, x_2)\} \quad (4)$$

which the first-order condition

$$1 - C_1(x_1, x_2) = 0.$$

A specialist will invest in only one of the skills, but not both. On the other hand an entrepreneur's binding constraint is his minimum skill, x_2 , and therefore there is no point in them investing in x_1 . Then the solution for x_2 satisfies the condition

$$\theta - C_2(x_1, x_2) = 0 \quad (5)$$

We can consider complex cases where the ability of the entrepreneur to negotiate the interest rate depends on their skill endowment x . Financiers pay attention to the level of skills of the entrepreneur, and consider the less-skilled riskier borrowers who would pay a higher interest rate, which includes a risk-premium.

The contribution of this paper is to include the institutional factors behind successful entrepreneurship. Such institutional factors determine whether an environment is private sector friendly or not.

The entrepreneurship process begins with the education levels and environment that an individual is exposed to. This would capture the human capital element. However, we are unable to test for the diversity of the curriculum that an individual is exposed to. We therefore use a narrow variable

like the level of primary schooling across countries. We also use an index of human development. The entrepreneurship process begins with the legal process of registering a private company. How long does it take to register a company and to acquire the relevant licenses?

Once one has created private property and accumulated wealth to what extent is it protected by property rights? The ability of the legal system to protect property rights is quite important for the promotion of entrepreneurship.

Other institutional factors that influence the growth of entrepreneurship include:

- Government to Business Relations

This refers to the ability of Chambers of Commerce and Industry Associations to provide private sector views to government. Indeed it would include other formal mechanisms for government consultations with business, and use of private sector advisory councils by government, as well as the use of private-public partnerships in government projects.

- Human Resources (also incorporates Entrepreneurship)

Another important factor is the availability of educated, trained and skilled manpower. The availability of institutions for training manpower and managing it, and general investment in education and support for entrepreneurship.

- Financial Infrastructure and Framework

The quality of the financial system and the framework within it operates is vital for the financing of entrepreneurship activities. The Development of capital markets, and stable exchange rates are important for engendering a good entrepreneurial environment. The presence of international standards for accounting and auditing also augur well for the selection of viable entrepreneurial activities.

- Reliable Justice System

The protection of property rights and general recourse to an objective justice system is important for the promotion of private enterprise. The judiciary should demonstrate independence, competence, and honesty. Indeed the right environment for private enterprise, excludes political interference in business.

- Corruption Reduction

The prevalence of corruption increases transactions costs and bureaucratic delays in the conduct of private business. Corruption should be fought in both business and government levels, even by use of legislation against the bribing of public officials.

- Corporate Governance Practices

Entrepreneurship activity is sustainable if it operates in an environment with good corporate governance practices. Corporate governance has to recognize the rights of all shareholders, and use of independent directors, for the good of the business.

- Consistent Policies

Business thrives where government adopt policies which it communicates clearly and implements consistently within a period of time. Policy consistency creates the environment to make long-term investment decisions.

- Effective Government

An effective government is one that makes well-considered decisions timely. Such a government would also put in place mechanisms for smooth and peaceful transition of power at intervals set by the constitution. An effective government also creates institutions for regulatory activities where required, but avoids over-regulation.

- Efficient Administration

Most formal businesses require licenses to operate. To attract business an efficient administration is required, to simplify licensing procedures, investment processes, standards for quality of service delivery, ease of obtaining information from government departments, and having clear and non-discretionary procedures for implementing policy.

- Free Media

Free media activity is a source of information, sometimes free information. It is well-known that information is a good and an ingredient for private business activity. Indeed, the efficient functioning of financial markets relies of the flow of information. Therefore, for private enterprise to thrive there should be a free media environment.

In some African countries the media is not free to operate, and licensing requirements in the media sector are quite cumbersome.

3 Entrepreneurship Policies in Africa

3.1 Ranking of African Countries in Entrepreneurship Activity

- One way to measure entrepreneurship is to use the Total Entrepreneurship Activity (TEA) Index from the Global Entrepreneurship Monitor (GEM). The GEM defines an entrepreneur as:

“anyone who is either starting a business that he or she will wholly own or is someone who is managing a business that he or she wholly owns that is less than three and a half years old. The business can be in any economic sector, can be any size and can be formal or informal.”

On the back of this definition above, then the TEA measures the proportion of a country’s adults who are involved in entrepreneurship. In the 2004 GEM survey, the two countries in Africa that were ranked are Uganda and South Africa. Among the low income groups Uganda was ranked highly, in the same group as Peru (the highest ranked), Ecuador, and also in the same above-average group including New Zealand, Canada, Australia, Iceland, USA. South Africa was ranked as being below average in entrepreneurship activity in the low-income group along with Croatia Poland, and Hungary, and also along with Slovenia, Portugal Hong Kong, Japan Sweden, Denmark, and Norway. Table 1 below shows the positions of countries relative to the ideal curve relating TEA to Income Level.

3.2 Stimulating Entrepreneurship through Education

- The promotion of entrepreneurship hinges around the exposure to and education of the youth about, entrepreneurship. First, entrepreneurial education instills self-confidence in the students and reinforces their desire and ability to start a business. Second, such education teaches the students about the art of writing a business plan and general financial planning and management.

In most African countries entrepreneurship is not taught in schools, and therefore the benefits of such education are not being imparted.

In South Africa, entrepreneurship courses are taught in private schools but not in state schools, and therefore excludes the bulk of the pupils. There is need to introduce education in entrepreneurship in African countries.

3.3 Government Regulation and impact on entrepreneurship

- Research has shown that the regulatory and institutional environment imposed by governments strongly influence the growth of entrepreneurship activity. The World Bank report, “Doing Business, 2004”, confirms the pivotal role of the regulatory environment in determining the growth of small to medium scale enterprises.

This report mentions three important findings. First, in low-income countries, businesses face far more regulation than in higher income countries. On average businesses face three times the administration costs and nearly twice as many bureaucratic procedures than in higher income countries. Second, in low-income countries, the weak property-rights protection mechanisms, and complex regulatory mechanisms, force small businesses to operate in the informal sector. Finally, regulatory reform and relaxation, allow small businesses to spend less time on regulatory issues and more on business issues. The World Bank report asserts that regulatory reform, also means government can spend more time on service delivery rather than regulatory administration, and this could increase GDP growth by as much as 1.4%, in the low-income countries.

Within the regulatory matrix of factors, some of the most important factors are:

- Number of procedures required to start a business;
- Number of procedures to enforce a contract; and
- Amount of time taken to close a business.

Below is a comparison of countries. From Table 2, we notice the Chad, a country from the African zone, has the highest number of procedures (19) required to start a business, compared to Australia, New Zealand and Canada,

where it takes 2 procedures to start a business. Sierra Leone, also in the African region, is the worst country in the enforcement of contracts, with 58 procedures required, compared with 11 procedures for Australia. In winding down a business, again Chad is the worst country, along with Brazil and India, where it takes 120 months to close a business, compared with 5 months for Ireland. However, both Uganda and South Africa, fare better than average for developing countries.

Quite clearly, countries in Africa have to begin to make improvements in the regulatory environment as is shown in Table 2.

4 Analysis of Institutional Factors Determining Entrepreneurship, Economic Growth, Employment and Poverty

In analyzing the impact of the institutional factors that define the business environment and finally economic growth, we utilized data from the Commonwealth Business Council (CBC).

Data for the institutional factors discussed in section II above, were gathered for the year 2003. Figure 1 below shows each of the factors above for the African region comprising 14 countries, namely Botswana, Cameroon, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

Each of the institutional indicators were added up and averaged the 14 across countries.

Figure 1 shows the average indicator for each of the 10 institutional factor averaged across 14 African countries, compared to the UK. In Figure 2 we average across ten (10) factors for each country, and present an institutional indicator for each country.

Botswana has the best institutional environment, followed by Ghana, both above 3, and fall in my Category A. Cameroon, Namibia, South Africa, Tanzania, Uganda and Zambia have institutional indicators between 2.5 and 3, and fall in Category B. In Category C, with indicator between 2 and 2.5, we have Kenya, Lesotho, Malawi, Mozambique, and Nigeria. In category D, below indicator 2, we have Zimbabwe. In terms of this categorization we expect formal entrepreneurship to thrive in countries in Categories A and B, with moderate activity in Category C. In Category D, entrepreneurship is expected to be minimal and indeed fall in activity.

Next, we consider the impact of the institutional factors above beyond entrepreneurship, into how these factors influence economic growth namely, *GDP growth, employment growth, and general poverty reduction*.

First, let us consider the levels of GDP Growth, employment growth, and poverty levels for each of the 14 African countries discussed above. Figure 3 shows the average GDP growth rates for the 14 countries for the period 1990-2002.

Mozambique and Uganda, both *post-conflict economies*, show high average GDP growth rates, followed by Botswana which has been stable political and economically in the last 50 years. Zimbabwe and Zambia, on the other had, recorded low average economic growth.

Next we consider employment growth, another economic growth indicator. Figure 4 below shows employment growth rates for the 14 African countries for the period 1980-2002.

Regarding poverty levels, we consider the percentage population that lives below US\$1 a day for each country. Figure 5 shows the poverty patterns for 13 countries, excluding Uganda where data could not be found easily.

Notice that Nigeria, Zambia, Ghana and Malawi have poverty levels above 40% while South Africa has the lowest level at below 20%.

Next we analyze the extent to which the three measures of economic growth, including income distribution, are correlated with the institutional indicators in Figure 1. Table 3 shows the correlations.

Both the three growth indicators have reasonably strong correlation with institutional factors, while income distribution, as measured by the *Gini* index for each country, has weak correlation. The implication is that getting these institutional factors right and implementing the right reforms, has the capacity to improve economic growth, reduce poverty, and generate employment, but cannot effectively improve income distribution.

Generally there is meaningful correlation between the ten(10) institutional factors and measures of economic growth, which confirms the findings shown in Table 3. What could be interesting is to run a multiple regression, but the problem is that the factors are correlated among themselves due to the fact that they all, to some degree, reflect the quality of governance in a country.

5 Conclusion

The paper has sought to show a strong relationship between economic growth indicators and various institutional factors that define an environment for the operation of the private sector. While other factors have been identified by other researchers in this area, this paper fills a gap in identifying detailed institutional factors underpinning economic growth patterns around the world.

The factors that we have tested include quality of government and business relations, free media, reliable justice, efficient administration, effective government, corporate governance standards, management of human resources, financial infrastructure and framework, effort in reducing corruption and prevalence of consistent policies from the government.

These institutional factors, which define an enabling business environment, have an impact on economic growth indicators such as GDP growth, employment growth and poverty patterns.

Indeed, while arguments for more financial aid as enshrined in UN Millennium Development Goals (MDGs) and UK's African Commission Report are important, the quality of the institutions in the recipient countries could prove to be an impediment to success. Indeed, this paper suggests that institutions should be developed and strengthened as part of this international aid flows under the renewed global initiative.

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Table 1: Countries' position with respect to the fitted U-shaped curve
Income level (GDP per capita)

	Low	Middle	High
Above the curve	Peru (PE) Uganda (UG) Ecuador (EC)	New Zealand (NZ)	Canada (CA) Australia (AU) Iceland (IS) United States (US)
On the curve	Jordan (JO) Brazil (BR) Argentina (AR)	Israel (IL) Greece (GR) Singapore (SI) Spain (ES)	France (FR) Germany (DE) Netherlands (NL) Belgium (BE) United Kingdom (UK) Finland (FI) Ireland (IE) Italy (IT)
Below the curve	Poland (PL) South Africa (SA) Croatia (HR) Hungary (HU)	Slovenia (SI) Portugal (PT) Hong Kong (HK)	Japan (JP) Sweden (SE) Denmark (DK) Norway (NO)

Source: GEM 2004

Table 2: Business Procedures

	Number procedures to start a business	Number of procedures to enforce a contract	Months to close a business
Best country	2 (Australia, Canada, New Zealand)	11 (Australia)	5 (Ireland)
Worst country	19 (Chad)	58 (Sierra Leone)	120 (Brazil, India, Chad)
Argentina	15	33	34
Brazil	17	25	120
Chile	9	28	67
India	11	40	120
Mexico	8	37	22
South Africa	9	26	24
Thailand	8	26	31
Uganda	17	15	25
Venezuela	13	41	48
Average for developing countries only	12	30	56

Source: Doing Business, World Bank, 2004

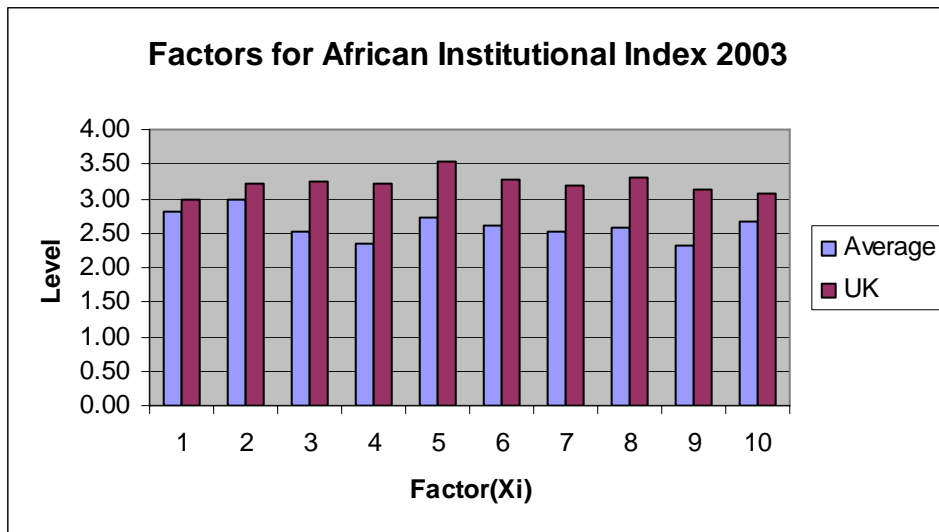
Table 3: Correlation between Institutional indicators and GDP growth, income distribution, poverty levels

Variable	Correlation(%)
GDP Growth %: 1990-2002	30.5%
Poverty: % of Population below US\$1 a day	37.4%
Income distribution: Gini Index	4.3%
Employment Growth %: 1980-2002	30.6%

Table 4: Correlation between Institutional Factors with GDP Growth, Poverty and Employment Growth for African Countries

Institutional factor	Correlation with GDP Growth(%) 1990-2002	Correlation with Employment Growth(%) 1980-2002	Correlation with Poverty Indicator: % population below US\$1 per day (%)
Govt to Business Relations	29.3	32.4	16.9
Free Media	27.1	3	28.6
Reliable Justice	23.8	23.7	8.2
Efficient Administration	29.7	27.3	31.4
Effective Government	35.8	25.4	40.3
Corporate Governance	19.7	40.8	40.3
Human Resources	1.9	50	10.9
Financial Infrastructure	28.7	22	56.4
Corruption reduction	24.5	24.9	40.6
Consistent Policies	33.2	20.3	39.4

Figure 1: Africa Institutional Factors 2003



- X1: Government Business Relations
- X2: Free Media
- X3: Reliable Justice
- X4: Efficient Administration
- X5: Effective Government
- X6: Corporate Governance
- X7: Human Resources
- X8: Financial Infrastructure and Framework
- X9: Corruption Reduction
- X10: Consistent Policies

Figure 2: Africa Institutional Indicators by Country: 2003

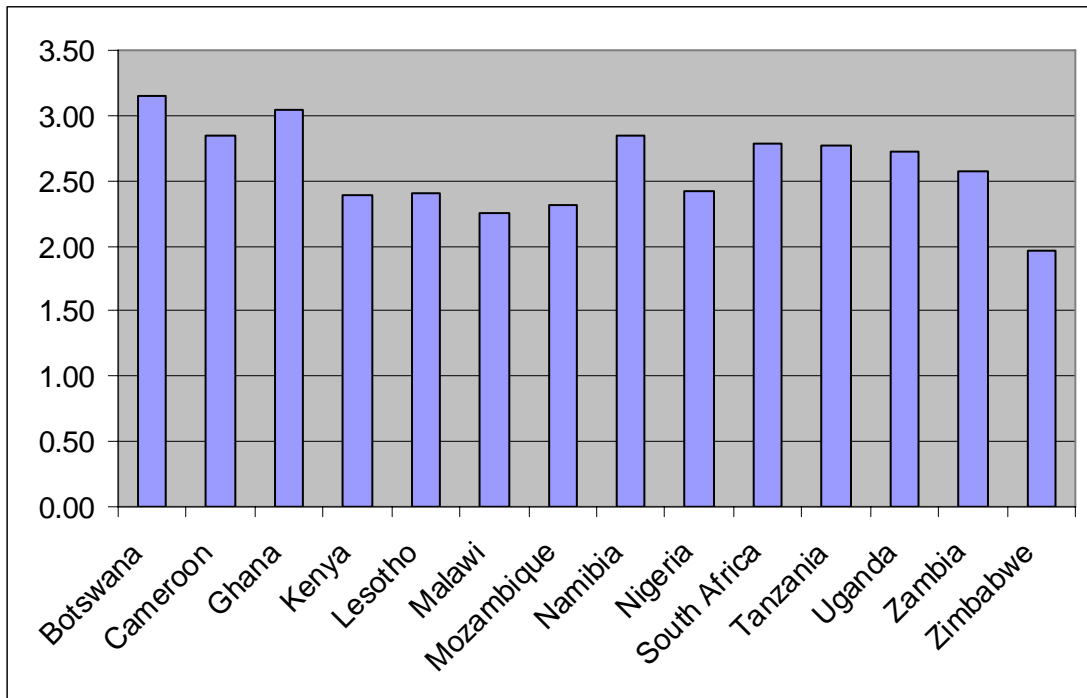


Figure 3: Average GDP Growth Rates for African Countries: 1990-2002

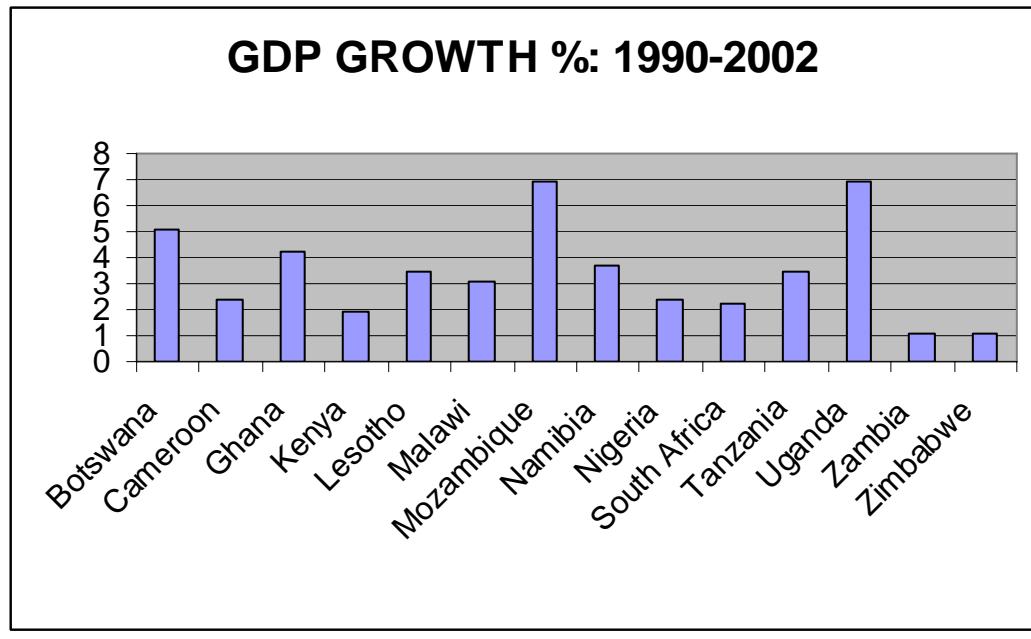


Figure 4: Employment Growth Rates for African Countries: 1980-2002

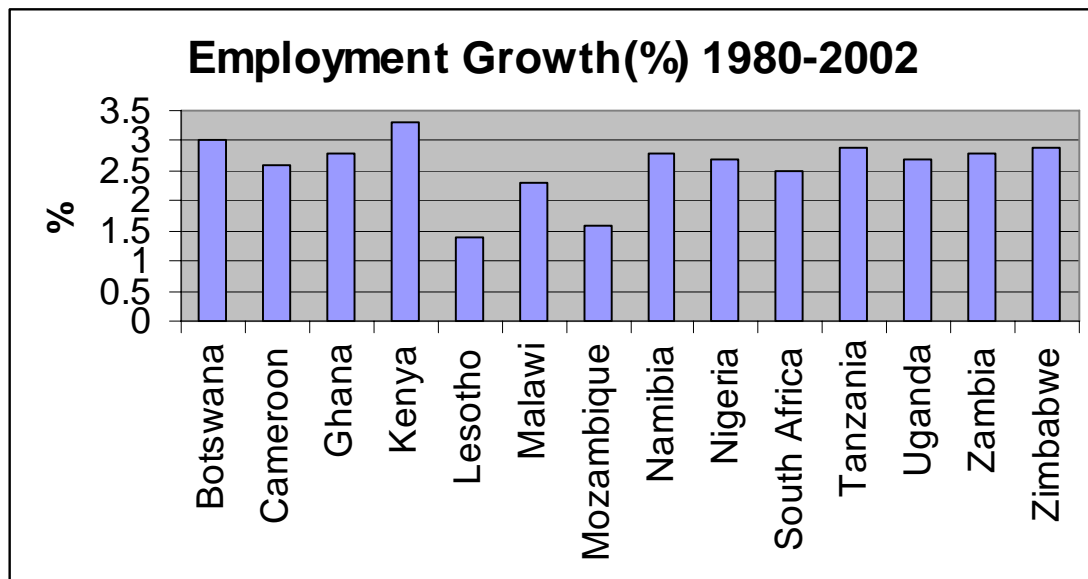


Figure 5: Poverty Levels: % of Population living below US\$1 a Day

