GROWTH, POVERTY and INSTITUTIONS: IS THERE A MISSING LINK?

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Abstract

The objective of this paper is to explore whether institutions provide a missing link between economic growth and reduction in poverty. Institutions are defined as "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction". The paper uses the Millennium Development Goals (MDGs) of the United Nations system as the appropriate analytical framework. Using a fairly large sample the paper provides evidence that confirms that improvements in institutions are expected to reduce poverty in a statistically significant fashion. The explanatory power of the estimated models, however, is very low. Taking account of the interaction between institutions and the level of development increases power of explanation. Moreover, the results show that the relationship between improvement in institutions and poverty depends on the stage of development.

تهدف هذه الورقة إلى استكشاف ما إذا كانت المؤسسات توفر الحلقة المفقودة بين النمو الاقتصادي والإقلال من الفقر . وتعرف المؤسسات على أنها قوانين اللعبة في المجتمع ، أو بمعنى فني هي كل أنواع القيود التي يبتدعها الناس لتشكل التفاعل فيما بينهم . وتستخدم الورقة الأهداف الإنمائية للألفية كإطار تحليلي ملائم . وتستخدم الورقة عينة كبيرة نسبياً من الدول لتوفر شواهد تؤيد مقترح أن التحسن في المؤسسات يتوقع أن يؤدي إلى الإقلال من الفقر بطريقة معنوية إحصائياً ، إلا أن القوة التفسيرية للنماذج المقدرة قد كانت متدنية . وبعد الأخذ بعين الاعتبار التفاعل بين المؤسسات والمرحلة التنموية تزداد القوة التفسيرية . بالإضافة إلى ذلك توضح النتائج أن العلاقة بين التحسن في المؤسسات والفقر تعتمد على الموسات والمرحلة التنموية تزداد القوة التفسيرية . بالإضافة إلى ذلك توضح النتائج أن العلاقة بين التحسن في

I. Introduction

Over the past twenty years or so the importance of institutions for development has attracted a lot of attention. In view of this it is perhaps not surprising that the World Development Report 2002 has focused on "Building Institutions for Markets". According to the WDR market-supporting institutions perform one or more of three functions: easing or restricting the flow of information; defining and enforcing property rights; and, increasing or decreasing competition. Facets of weak institutions include tangled laws, corrupt courts, biased credit systems, and elaborate business registration requirements. These facets, it is claimed, hinder development and hurt poor people.

While the focus of the report is narrow, the recommended principles to guide policy making in building more effective institutions are couched in very cautious, and generally acceptable, terms. According to the report to ensure effective institutions: (a) design them "to complement what existsin terms of other supporting institutions, human capabilities, and available technologies.... 'Best' practice in institutional design is a flawed concept"; (b) innovate "to identify institutions that workand those that do not"; (c) connect "communities of market players through open information flows and open trade"; and, (d) promote "competition among jurisdictions, firms and individuals" (World Bank (2002: 4 -5)).

The most common understanding of "institutions" in the empirical literature is due to North (1990). According to North (1990: 3-5) institutions "are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic. Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change". According to this understanding institutions include any form of constraint that human beings devise to shape human interaction. These constraints could be formal (such as the rules devised by human beings) or informal (such as conventions or codes or customs). Institutions affect the performance of the economy by their effect on the costs of exchange and production¹.

Building relevant institutions, it is generally recognized, is part and parcel of the development process. It is also generally recognized that institutions evolve over long periods of time in response to the demands of social, political and economic interactions. The evolutionary processes involved are influenced by the history and culture of the societies concerned. In the context of Africa an important historical influence on the long-term evolutionary process of institutions has been the colonial encounter. As will be shown, there is evidence to suggest that where the colonial powers decided to settle they devised what is now called "market-supporting" institutions, it is argued, persisted to the post-colonial period. It will also be shown that, based on various definitions of institutions, Sub-Saharan Africa is characterized by very weak institutions.

The objective of this paper is to explore whether institutions, appropriately defined, provide a missing link between economic growth and reduction in poverty. Perhaps the best way of appreciating the importance of the issue under investigation is to place it in the context of the Millennium Development Goals (MDGs) of the United Nations system. According to the United Nations (UN) the "development goals set out in the Millennium Declaration express the resolve of the world's political leaders to free their fellow men, women and children from the abject and dehumanizing conditions of extreme poverty, to make the right to development a reality for everyone, and to free the entire human race from want" (UN (2002: 8)). The "right to development" is an example of "institutions", or better still is an aspect of "institutions".

As is well known the first Millennium Development Goal (MDG) is eradication of extreme poverty and hunger². The first target under this goal, and the most studied target, is to halve the proportion of people living in extreme poverty (living on less than US\$1.08 per person per day) by the year 2015, starting from the level of extreme poverty of 1990. As is well known, the proportion of people living in extreme poverty is the head count ratio, a measure for the spread of poverty; while the income level of US\$ 1.08 per person per day is the poverty line, a threshold below which people are deemed to be poor. Three indicators have been selected to reflect progress in achieving this target. These include the head-count ratio itself, the poverty gap ratio and the share of the poorest 20 percent of the population in national consumption (i.e. the share of the poorest quintile). It can easily be shown that reducing the spread of poverty by half by the year 2015, with 1990 as the base year, requires an annual rate of reduction of the head-count ratio by about 2.7345 percent. On the basis of such a required rate of reduction of the head-count ratio a corresponding rate on growth of per capita GDP can be calculated. This required rate of growth for poverty reduction depends crucially on the structural features of poverty in the various countries. An aggregative indicator of these structural features is the growth elasticity of poverty. As far as Sub-Saharan Africa (SSA) is concerned, given the structural features of its poverty as well as past growth performance, it has been shown that the attainment of the first MDG will not be feasible³.

Over the past five years since their formulation the MDGs provided a much needed development framework for least developed countries. As a result it is not surprising to find that the recent African initiative of launching a New Partnership for African Development (NEPAD) is closely related to the MDGs. As will be argued NEPAD adopted the "eradication of poverty" as the overarching objective of development in the continent. The priority areas of NEPAD deal with the institutional pre-requisites for achieving the overarching objective of development.

Having noted the above, the remainder of this paper is organized in five sections. Section (II) reviews the various definitions of "institutions" and their use in cross-country growth regressions. Section (III) presents an analytical framework of poverty analysis in the context of which the search for the missing link can be conducted, while section (IV) provides empirical evidence on growth and institutions in SSA, on poverty levels and trends, and on the link between institutions, growth and poverty. Section (V) deals with the implications of the results for the New Partnership for African Development (NEPAD) while section (VI) concludes.

II. Institutions and Economic Growth

2.1. Measuring Institutions

A careful reading of the relevant literature shows that three quantitative measures of institutions could be identified. Despite being quantitative all of these measures are subjective in nature in view of the fact that they are based on perception surveys. Most of these measures are used in the political economy literature dealing with issues of governance, though some of them were specifically designed for assessing the overall investment climate in countries around the world or the overall economic performance of countries⁴.

a) Freedom House Measures: It is by now generally accepted that development is brought about in the context of developmentally oriented societies. A recent consensus seems to have emerged on the major features of an ideal growth and development society. Such a society is seen as one which: (a) would know how to operate, manage, and build the instruments of production and to create, adapt and master new techniques on the technological frontier; (b) would be able to impart this knowhow to the youth by formal education or by apprenticeship; (c) would employ, promote and demote

workers on the basis of competence and relative merit; (d) would afford opportunity to individuals or collective enterprise and encourage initiative, competition and emulation (see, for example, Landes (1998)). Such ideal societies are said to have social and political institutions that would secure rights of private property and personal liberty; enforce contracts; provide stable, responsive, honest, transparent and accountable governments; allow for social and geographic mobility; and evolve a more equal distribution of income supporting a large middle class. Thus the above definition, based on economic history, makes it very clear that institutions are central to the ideal growth and development societies.

The above requirements for the ideal growth and development societies can be looked at in terms of the political freedom indicator produced by Freedom House. This is a composite indicator composed of two measures of political rights and civil liberties. These measures are scored on a scale ranging from unity (for "free" status) to 7 (for "not free" status). The composite indicator is the average of the two scores. The political rights component measures the extent to which a government is chosen by means of free and fair elections of representatives of the people. The civil liberties component measures the extent of freedom from government oppression and covers four broad categories of freedoms: "freedom of expression and belief", "association and organization rights", "rule of law and human rights", and, "personal autonomy and economic rights". Averaging over the two components countries are classified into freedom status such that a country is judged "free" if the average freedom score is in the range 1-2.5, "partly free" if the score is in the range 2.5-5.5, and "not free" if the average score is greater than 5.5. Freedom indicators have been compiled since the early 1970s.

The freedom scores can be used as proxy measures for institutions with higher values indicating weak institutions. Table (1) summarizes the evidence for Sub-Saharan Africa in the form of averages for sub-periods covering the period 1972-2004, where figures between brackets are the average freedom scores.

Details	1972-1975	1976-1985	1986-1995	1996-2000	2001-2004
Number of Countries	45	46	48	48	48
Average Freedom Score	5.49	5.59	5.16	4.50	4.33
Number of Countries Free:	2 (2.25)	2 (2.41)	2 (1.92)	7 (1.80)	9 (1.94)
Number of Countries Partly Free:	17 (4.69)	19 (4.82)	26 (4.70)	30 (4.44)	28 (4.38)
Number of Countries Not Free:	26 (6.26)	25 (6.43)	20 (6.09)	11 (6.40)	11 (6.14)

Table (1): Freedom Score and Freedom Status in Africa 1972-2004

Source: Compilation based on Freedom House (2004).

Generally, the table shows that the region has achieved some progress in terms of freedom over the period 1972 to 2004. This is indicated by the reduction in the freedom score from an average of about 5.5 during 1972-1975 to an average of 4.33 for the period 2001-2004, thus indicating a movement from a status of being "not free" to that of being "partly free". This progress is also indicated by the time trend of the number of countries classified by freedom status. Thus the number of countries classified as "free" has increased from 2 in 1972-1975 to 9 in 2001-2004, while the number of those classified as "not free" has declined from 26 during the firs period to 11 during the last period. **b) ICRG Measures:** In the empirical growth literature "institutions" are looked at in terms of a number of measures reported by the Political Risk Services Group (PRS) that constructs the famous International Country Risk Guide (ICRG). These measures are closely related to North's definition noted in the introduction. The ICRG risk rating system assigns a numerical value (called risk points) to a predetermined range of risk components according to a preset weighted scale for each country. Each scale is designed to award the highest value to the lowest risk and the lowest value to the highest risk.

The most important measures of the quality of institutions, frequently used in the empirical literature, are the "government repudiation of contracts", "expropriation", "corruption", the "rule of law", and the "quality of the bureaucracy". The "government repudiation of contracts", scored from zero to ten, is a measure of the risk of a government modifying a contract by repudiating, postponing, or scaling it down due to budget cuts, domestic pressures, change in government, or a change in domestic circumstances and priorities; "expropriation", scored from zero to ten, is a measure of the risk of outright confiscation or forced nationalization; "corruption", scored from zero to six, is a measure of the degree of corruption by high government officials in terms of demanding special payments for discharging their official duties and in terms of illegal payments at lower levels of government; the "rule of law", scored from zero to six, is a measure of the extent to which there are sound political institutions, strong court systems and orderly succession of power); and the "quality of the bureaucracy", scored from zero to six, is a measure of the degree of autonomy of the civil service from political pressures, government policy continuity and the fairness of the recruitment process to civil service positions.

In an important contribution to the empirical growth literature Hall and Jones (1997) use the above ICRG categories to construct a composite measure of what they term "social infrastructure". "Social infrastructure" is supposed to quantify the wedge between the private return to productive activities and social returns to such activities. A good "social infrastructure" ensures that these returns are kept closely in line across the range of activities in the economy; and a possible composite measure of social infrastructure is one that takes into account government anti-diversion policies and openness to trade (Hall and Jones (1999: 97)). According to their interpretation two of the ICRG "categories relate to the government's role in protecting against private diversion: (i) law and order, and (ii) bureaucratic quality. Three categories relate to the government's possible role as a diverter: (i) corruption; (ii) risk of expropriation, and (iii) government repudiation of contracts. Our variable is an equal weighted average of these five variables, each of which has higher values for governments with more effective policies for supporting production. The index is measured on a scale from zero one" (Hall and Jones (1999: 97-98)).

Another important contribution to the empirical growth literature uses an index of protection against expropriation as a measure of institutions. The index varies "between 0 and 10 for each country and year, with zero corresponding to the lowest protection against expropriation. This measure is appropriate for our purposes since the focus here is on differences in institutions originating from different types of states and state policies. We expect our notion of extractive state to correspond to a low value of the index, while the tradition of rule of law and well-enforced property rights should correspond to high values" (Acemoglu, Johnson and Robinson (2001: 1377-1378)). For the purposes of cross-country regressions the average value of the index between 1985 and 1995 is used.

Despite having been compiled since the early 1980s the ICRG categories of "risk of expropriation", and "government repudiation of contracts" are not easily accessible. Other ICRG categories can be downloaded from PRS website. In a recent paper on foreign aid and institutions Brautigam and Knack (2004) used a composite measure of institutions based on three such ICRG categories: bureaucratic quality, rule of law, and corruption. As noted earlier a composite index created by summing the scores of these three categories will be an 18-point scale. Table (2) reports the level

of institutional achievements for 32 African countries for which data is available over the period 1984-2000. The period is divided into three sub-periods: the second half of the 1980s, the first half of the 1990s and the second half of 1990s (albeit up to 2000). The number of countries for the first half of the 1990s is 31 because Namibia is added to the database in 1990. In view of the slow changing nature of institutions such choice of sub-periods is not unreasonable.

The distribution of countries, for each period, is looked at in terms of four ranges of the scores of the composite measure. According to ICRG "brief guide to the rating system" of May 2000 countries are classified as "very high risk" if they have a composite score which less than 50% of the total scores, and are classified as "very low risk" if they have a composite score of 80% or more of the total score. In what follows we interpret "high risk" as "low quality institutions" and "low risk" as "high quality institutions". In between rating categories include high risk (with risk points of 0.5-0.6 of total score), moderate risk (0.6-0.7), and, low risk (0.7-0.8). In the case of Sub-Saharan Africa no high quality institutions are reported for any country out of the 32 countries for which information is available so that the table includes only four risk categories.

Table (2): The Distribution of Sub-Saharan African Countries According to the Quality of Institutions (averages of total sores on law and order, bureaucratic quality and corruption; maximum score is 18)

Details	1984-1989	1990-1994	1995-2000
Very Low Quality (less than 8):	23	20	23
# Countries Average score	5.22	5.33	6.00
Low Quality (8 – 9.6):	4	8	6
# Countries Average score	8.63	8.58	8.55
Moderate Quality (9.6-11.2):	2	3	2
# Countries Average score	9.90	10.53	10.00
Good Quality (11.2-12.8):	2	1	1
# Countries Average score	11.85	11.40	12.30

Source: compiled from PRS.

From the table comparing 1995-2000 with the 1984-1989 it seems like a fair comment to note that the quality of institutions in Sub-Saharan Africa did not change in a significant fashion. Indeed a slight deterioration could be detected on account of the fact that the number of countries with low and very low quality of institutions increased from 27 in the first period to 29 in the last period.

At the level of details the countries with high quality institutions are Botswana (with a score of 11.9) and South Africa (11.8) during the first period; Botswana (11.4) during the second period; and Namibia (12.3) during the last period. The countries with the lowest quality of institutions are the Democratic Republic of Congo (formerly Zaire; with a score of 1.7) and Liberia (2.8) for the first period; Liberia (1.3) and the Democratic Republic of Congo (1.7) for the second period; and, the Democratic Republic of Congo (2.4), Liberia (2.8), and Somalia (2.9) for the last period.

c) Composite Measures: In addition to the above measures, recent research proposed a method for constructing aggregate institutional and governance indicators that incorporate more directly relevant measures of institutional quality (see, for example, Kaufmann et al (1999-a and b)). The method is based on a compilation of a large data set from 13 specialized agencies that monitor various aspects of institutions of governance covering 155 to 173 countries all over the world⁵. Defining governance as "the traditions and institutions by which authority in a country is exercised", the major aspects of governance are identified to include: (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens, and the state, for the institutions that govern economic and social interaction.

A total of 31 indicators are organized in six clusters corresponding to the three major aspects of governance noted above. The governance process has two clusters called "voice and accountability" and "political instability and violence"; the capacity of the government has two clusters called "government effectiveness" and "regulatory burden"; and, the respect for the rule of law has two clusters called "rule of law" and "graft". The "voice and accountability" cluster includes a number of indicators measuring various aspects of the political process, civil liberties, political rights and independence of the media. As such, therefore, this cluster measures the extent to which citizens of a country are able to participate in the selection of governments and are able to monitor, and hold accountable, those in authority. The "political instability and violence" cluster combines several indicators that measure the perception of the likelihood of destabilization and overthrow of governments by unconstitutional or violent means.

The "government effectiveness" cluster combines indicators that measure the quality of public service, the quality of bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and, the credibility of the government's commitment to policies. All of the indicators involved are based on perceptions. The 'regulatory burden" cluster includes variables that measure the extent of government's imposed distortions as embodied in various policies.

The "rule of law" cluster includes indicators that measure the extent to which citizens have confidence in the rules devised by society and the extent to which they abide by such rules. As such the indicators include perceptions on the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. The cluster on "graft" measures perceptions on corruption in the sense of the exercise of public power for private gain.

The data from the various sources was reprocessed so that higher values correspond to better outcomes (e.g. stronger rule of law and less corruption). Moreover, each indicator is re-scaled by subtracting the minimum possible and dividing by the difference between the maximum and minimum score so that each indicator is on a scale from zero to one⁶. Using an econometric model to organize the data from the various sources, and with an appropriate choice of measurement units, a standardization procedure is followed such that the estimate of the distribution of each governance indicator has a mean of zero and a standard deviation of one and the value of the governance indicator would range from about -2.5 to about 2.5, where higher values correspond to better outcomes.

The composite measure was first constructed for 1997/98 but extended to 2000/2001 in Kaufmann, Kraay and Zoido-Lobaton (2002). A recent important contribution to empirical growth literature uses a "composite indicator of a number of elements that capture the protection afforded to property rights as well as the strength of the rule of law. This is a standardized measure that varies between –2.5 (weakest institutions) and 2.5 (strongest institutions)" (Rodrik, Subramanian and Trebbi (2004: 138)). In the draft version of their paper the authors noted that the advantage of the rule of law measure "is that it is available for a larger sample of countries, and in principle captures more elements that go toward determining institutional quality".

Table (3) reports the distribution of 47 Sub-Saharan African countries according to the averages for the years 1996, 1998, 2000 and 2002, where figures between brackets are the average scores. Recalling that the mean of each indicator is zero the ranges over which SSA countries are distributed starts with the category of "more than zero" to cater for countries with "better than average" levels of institutions.

Institutional Measure	More than 0	-0.5 to 0	-1.0 to - 0.5	-1.5 to -1.0	Less than -1.5
Government Effectiveness	5 (0.386)	13 (-0.254)	19 (-0.730)	6 (-1.159)	4 (-1.782)
Regulatory Quality	6 (0.342)	20 (-0.242)	13 (-0.690)	5 (-1.194)	3 (-2.259)
Rule of Law	4 (0.690)	16 (-0.305)	18 (-0.717)	5 (-1.253)	4 (-1.625)
Control of Corruption	7 (0.357)	14 (-0.316)	18 (-0.775)	7 (-1.218)	1 (-1.563)
Political Stability	15 (0.508)	10 (-0.180)	10 (-0.690)	5 (-1.272)	7 (-1.899)
Voice and Accountability	11 (0.522)	11 (-0.300)	10 (-0.782)	12 (-1.241)	3 (-1.628)

 Table (3) : The Distribution of Sub-Saharan African Countries According to Composite

 Indicators (average standardized scores)

Source: Compiled from Kaufmann, Kraay and Zoido-Lobaton (2002).

The table clearly confirms that the overwhelming majority of SSA countries is characterized by weak institutions in the sense of average scores less than zero. The majority ranges from a high of about 91.5% of the countries for the "Rule of Law" to a low of about 68% of the countries for "Political Stability". The table also shows that SSA countries fare relatively better on measures relating to political governance, as reflected by "voice and accountability" and "political stability" compared to measures dealing with the government capacity (reflected by "government effectiveness" and "regulatory quality"), and the rule of law (reflected by the "rule of law" and "control of corruption").

2.2. Institutions in Growth Regressions

At the outset, it is perhaps important to note that over the past twenty years or so a huge empirical literature has developed in an attempt to explain the major determinants of long-run economic growth. This empirical growth literature, largely developed to understand the determinants of longrun steady state growth in advanced countries, has identified at least sixty-two statistically significant explanatory variables influencing the growth performance of different economies⁷. The empirical framework is one of cross-country panel regressions where economic growth is usually measured as the growth rate in per capita GDP averaged over a period of time, usually over half-decades, for each country in the regression. Of the identified sixty-two variables, three explanatory variables have consistently been reported as significant in all studies. These three variables are in the nature of initial conditions. They include initial real per capita income (reflecting the stage of development of the country and capturing the idea of convergence over long periods of time); initial life expectancy at birth (reflecting the health dimension of the human capital of the country); and initial primary school enrolment ratio (reflecting the education dimension of human capital). All these initial conditions are measured at the start of the relevant time period over which per capita GDP growth rates are averaged. The remaining 59 explanatory variables can be classified as belonging to broad categories of "regional", "political", "institutional", "religious", "economic policy", and "historical" variables. Of these only twenty explanatory variables were found to be robust in the sense that their relationship to growth remains significant in repeated estimation runs with the three initial conditions (see, for example, Sala-I-Martin (1997); but also see Levine and Renelt (1992))⁸

Apart from technical robustness analysis of the explanatory variables this literature has come under close scrutiny by, among others, Collier and Gunning (1999) and Soludo and Kim (2002). Collier and Gunning called for more in depth country studies to explain growth episodes by relating growth performance to the behavior of micro economic agents, markets and institutions. Soludo and Kim (2002), concurring with the need for country studies, noted that the current stage of knowledge is that the empirical growth literature has raised more questions than provided answers.

On a different level, analysis of long time series of growth for a large number of countries has recently shown that modern growth performance has passed through a time break separating two growth periods, irrespective of the policy stance of countries and their level of development⁹. The years of the break separate a high growth period (post-war period up to the mid 1970s) from a low growth period (from the 1970s to the present). In the context of such studies it is found that steady state growth is a feature of advanced countries while volatile growth is a characteristic of the growth process in developing countries. The "rule of growth in developing countries is that anything can happen and often does. The instability of growth around its trend (however defined) means that even over periods as long as a decade, growth can be dominated by shocks and recovery" (Pritchett (2000:247))¹⁰.

Growth and the accompanying structural transformation of economies, it is generally agreed, are ultimately driven by investment, learning and innovation. The role of investment in effecting growth is facilitated by physical infrastructure, macroeconomic stability, rule of law and solid institutions. Thus, according to this view the fundamentals of growth continue to be investment supported by solid institutions inclusive of macroeconomic management. Building relevant institutions, it is generally recognized, is part and parcel of the development process. It is also generally recognized that institutions evolve over long periods of time in response to the demands of social, political and economic interactions. The evolutionary processes involved are influenced by the history and culture of the societies concerned (see, for example, Landes (1998)).

A related literature, also voluminous, attempted to explain the observed differences in income levels between richest and poorest nations in the world. "What accounts for these differences, and what (if anything) can we do to reduce them? It is hard to think of any question in economics that is of greater significance, or of greater relevance to the vast majority of the world's population" (Rodrik, Sunramanian and Trebbi (2004: 132)). The literature that attempted an answer to the question is classified as belonging to three schools: geography, trade (or integration in the world economy), and institutions. Geography is a key determinant of climate, endowment of natural resources, disease burden, transport costs, and diffusion of knowledge across space. As such, therefore, it has a strong influence on the standard of living of different regions, as measured by per capita GDP¹¹. The "trade or integration" school attempts to explain observed differences in GDP per capita between countries by the extent to which countries are open to world trade¹². The third school of explanations "centers on institutions and in particular the role of property rights and the rule of law. In this view, what matters are the rules of the game in a society and their conduciveness to desirable economic behavior" (Rodrik et al (2004: 132))¹³.

An important historical influence on the long-term evolutionary process of institutions has been the colonial encounter. In a recent contribution Acemoglu, Johnson and Robinson (2001: 1370) proposed a theory of institutional differences among countries colonized by Europeans. The theory is based on three premises. The first is that there were different types of colonization strategies that created different sets of institutions. Two extreme types of institutions are noted. Extractive institutions, that did not introduce much protection for private property nor did they provide for checks against government expropriation, occupy the bad end of the spectrum. "In fact, the main purpose of the extractive state was to transfer as much of the resources of the colony to the colonizer". At the other extreme are colonies where Europeans decided to settle. "The settlers tried to replicate European institutions, with strong emphasis on private property and checks against government power". A second premise is that the colonization strategy was influenced by the feasibility of settlement. "In places where the disease environment was not favorable to European settlement the formation of the extractive state was more likely". The third premise is that the colonial institutions, erected by the colonial state, persisted to the post-colonial period¹⁴. For the purposes of cross-country studies, aimed at estimating the impact of institutions on economic performance, settler mortality provided a source of exogenous variation in institutions¹⁵.

III. <u>The Link Between Growth,</u> Poverty and Institutions

The impact of economic growth on poverty is very well established in the theoretical literature on the measurement of poverty. In general, any poverty measure (call it P) could be expressed as depending on mean consumption expenditure in society, μ , a poverty line, z, and on a measure of the underlying inequality in the distribution of consumption, such as the Gini coefficient, θ . Thus, in general form any poverty measures can be expressed in the following form:

(1)
$$P = P(\mu/z, \theta)$$
; $\partial P/\partial \mu < 0$; $\partial P/\partial z > 0$; and, $\partial P/\partial \theta > 0$.

The theoretical restrictions on the above general form are such that as per capita consumption increases (poverty line declines), other things remaining the same, poverty declines. Similarly, as inequality in the distribution of consumption expenditure declines, other things remaining the same, poverty declines. Note that in this general formulation if the poverty line changes by the same rate of change as mean consumption expenditure, other things remaining the same, poverty does not change¹⁶. Note also that if the poverty line is set as a constant proportion of mean consumption expenditure, then poverty changes will only depend on the change in the distribution of consumption expenditure¹⁷.

Logarithmic differentiation of equation (1) with respect to time, t, gives the rate of change of poverty over time, G(P)=[dP/dt[1/t]], as composed of two parts: a growth component and a distribution component. We have:

(2)
$$G(P) = (1 - \varepsilon) \eta G(\mu) + \nu G(\theta)$$

Where ε ($0 \le \varepsilon \le 1$) is the elasticity of the poverty line with respect to income; η (≤ 0) is the partial elasticity of the poverty measure with respect to income; and, ν (≥ 0) is the partial elasticity of the poverty measure with respect to the Gini coefficient.

If it is believed that the inequality in the distribution of consumption, and the poverty line, depend on mean consumption expenditure in society, then a powerful, yet simple, relationship between poverty and economic growth can be established. Note that in this case the poverty measure will be given by:

(3)
$$P = P(\mu/z, \theta) = P(\mu/z(\mu), \theta(\mu)) = P(\mu)$$

This relationship says that changes in poverty over time can always be calculated as a product of the elasticity of poverty with respect to mean consumption expenditure, after taking into consideration changes in the distribution of consumption expenditure, and the rate of change in mean consumption expenditure, i.e. the per capita GDP growth rate. The percentage change in poverty over time is given by:

(4)
$$G(P) = \gamma G(\mu)$$
 10

The elasticity involved, γ , is the "growth elasticity of poverty" and it can be estimated or calculated. Such a relationship is important for the purposes of investigating whether institutions provide a missing link in poverty reduction.

The above framework can readily be used to address the current debate on how to characterize pro-poor growth. In a recent paper Kakwani and Pernia (hereinafter KP; 2000) approached the question of pro-poor growth from a decomposition methodology perspective. Using our notation the KP index for pro-poor growth can be obtained from equation (2), keeping the poverty line constant (i.e. $\varepsilon = 0$):

(5) $G(P) = \eta G(\mu) + \nu G(\theta)$

where, as defined before, $\eta \leq 0$ is the partial elasticity of the poverty measure with respect to income; and, $\nu \geq 0$ is the partial elasticity of the poverty measure with respect to the Gini coefficient.

Normalizing equation (5) by dividing by the growth rate of income we have:

(6)
$$[G(P)/G(\mu)] = \gamma = \eta + \nu [G(\theta)/G(\mu)]$$

Where we have used the definition of the total elasticity of the poverty measure with respect to mean income, which, as noted before, is the growth elasticity of poverty. Note also that the expression $[G(\theta)/G(\mu)]$ is the elasticity of the Gini coefficient with respect to income. This can be positive or negative depending on the stage of development of the country in the inequality-development relationship known as the Kuznets curve, which can be denoted by κ . Thus, the growth elasticity of poverty is given by:

(7) $\gamma = \eta + \nu \kappa$

The KP index of pro-poor growth is defined as:

(8) $\phi = [\gamma/\eta] = [(\eta + \nu\kappa)/\eta] = [1 + (\nu\kappa/\eta)]$

KP correctly note that the value of the index will be greater than unity if the expression ($\nu\kappa/\eta$) is positive, "which means that growth is strictly pro-poor". KP (2000: 13) suggest ranges for judging the degree of pro-poor growth according to the value of the index:

- negative values imply that growth is anti-poor (i.e. $\phi < 0$);
- positive values that are equal to or less than 0.33 imply that growth is weakly pro-poor (i.e. 0 < φ ≤ 0.33);
- values in excess of 0.33 and equal to or less than 0.66 imply that growth is moderately pro-poor (i.e. $0.33 < \phi \le 0.66$);
- values in excess of 0.66 but less than unity imply that growth is pro-poor (i.e. $0.66 < \phi \le 1$); and,
- values in equal to, or in excess of, unity imply that growth is highly pro-poor (i.e. $\phi \ge 1$).

The advantage of our formulation of the KP pro-poor index is that it makes the requirements for pro-poor growth very transparent. In this respect note that a value of the pro-poor growth index greater than unity requires a negative Kuznets elasticity (i.e. $\kappa < 0$) in view of the negativity of the partial elasticity of the poverty index with respect to income (i.e. $\eta < 0$). This in turn implies that for developing countries at the early stages of development growth can never be pro-poor since these countries will be on the upward sloping arm of the Kuznets curve!!!

In what sense does the KP methodology provide a definition of pro-poor growth? Note that the approach is based on changes in the poverty measures, and in that sense it doesn't provide any additional information, or characterization, of the growth processes involved. Further, note that the definition relies on already known poverty parameters (the elasticity of the poverty measure with respect to income and the degree of inequality in the distribution of consumption or income). Thus, it is not clear whether their characterization is one for the "structural features" of the prevailing poverty (i.e. its sensitivity to growth and distribution) or those of the growth process!!

Despite our reservations about the nature of the characterization offered by the pro-poor index of KP (2001), we believe that it signals an approach to investigating the role of institutions in poverty reduction. Such a role could have been inferred from the growth elasticity of poverty. In this respect we note that in the above analytical framework all the elasticity magnitudes involved should be taken as functions of the fundamental determinants of the poverty measures (i.e. per capita consumption expenditure and the Gini coefficient).

IV. Empirical Evidence

4.1. Sub-Saharan African Growth

It is generally recognized that Africa's growth during the period since independence and up to the first oil price shock of 1973 was on par with other regions. Since that time, however, economic growth faltered first and then a process of decline started. Thus, for example, during the 1980s per capita GDP declined by 1.3 percent per annum, a rate that was 5 percentage points below the average for all low-income developing countries. During the first half of the 1990s the growth situation further deteriorated such that per capita GDP declined by an annual rate of 1.8 percent per annum, a rate which was 6.2 percentage points below the average for the low-income developing countries (Collier and Gunning (1999)).

In the context of the methodology used to explain long-run growth a large literature has developed in an attempt to explain Africa's differential growth performance. In world samples used in the specialized literature a large and significantly negative Sub-Saharan African dummy was detected implying that as far as various standard explanatory variables used SSA was somehow different. As a result a new set of studies attempted to devise additional explanatory variables that could explain such a dummy. A representative sample of these studies was recently reviewed. Based on the review, five sets of variables are identified as explaining the observed slow growth in the sub-region. These include "lack of social capital", "lack of openness to trade", "deficient public services", "tropical location and high risk environment", and "lack of financial depth". In assessing such evidence three limitations of the growth regression methodology are noted. First, by focusing on explaining long-term average slow growth of the sub-region the methodology misses the deteriorating performance since 1973. Such deterioration cannot be explained in terms of initial conditions such as geographical location. Second, African growth performance was strongly episodic in nature and as such cannot be captured by the practice of averaging variables over long periods of time. An average episode is one of six years duration during which per capita GDP would fall by about 25 percent. Third, the standard growth regression methodology did not make adequate allowance for the possible neighborhood effects such as pursuing growth-oriented policy that bore fruits in a neighboring country (Collier and Gunning (1999: 65-75)).

Irrespective of its methodological weaknesses the aggregate evidence on the determinants of long-run growth is taken to describe the observed environment in Sub-Saharan Africa as one that is characterized by intrinsic high risks, high transport costs and trade barriers, low levels of education, limited financial markets and high regulation. The response of economic agents, and the functioning of markets, in such an environment are believed to require more analysis with a view of exploring ways

and means of regenerating growth. In this respect it has been argued that the African rural households responded to the highly risky and volatile environment by "self-insurance through diversification, both within agricultural activities and between agricultural activities and non-agricultural activities. They also accumulate assets for consumption smoothing. Both responses are likely to reduce growth, the former by lowering mean income and thereby savings, and the latter by the need to keep assets in liquid form" (Collier and Gunning (1999: 78)).

The response of rural household to an environment that lacked social capital is believed to have been detrimental to growth. Social capital, in this analysis, is looked at as composed of civic social capital that is generated by the community and public social capital that is generated by the government or the state. Civic social capital embodies the economic benefits that accrue from social interaction in the form of reduced transaction costs that arises from building of trust, of knowledge externalities of social networks, and of an enhanced capacity for collective action. Public social capital is defined as the institutions of government that facilitate private activity mostly embodied in the "rule of law". While it is recognized that African traditional societies were able to devise social institutions (kin and village groups) that lowered the costs of moral hazard and adverse selection, their response to changing circumstances developed into a constraint on the growth process. In this respect it is noted that the persistence of traditional land rights, and the inheritance practices, creates increasing divergence in factor endowments that increase the static inefficiency costs and thus reducing the growth rate directly (Collier and Gunning (1999: 80)).

The lack of evolution of rural social capital in Africa in a growth-enhancing direction is also noted with respect to the development of social networks to deepen the process of social learning through interaction and exchange of information. In this respect it is noted that social networks based on kin and village groups in Africa continue to be small, intense and closed largely to serve the fundamental insurance function that requires almost complete information. Such structure of networks is held to be largely inappropriate for the dissemination and exchange of information on various innovations related to production methods.

In terms of the inadequacy of rural public services the underdevelopment of rural credit markets is highlighted as particularly growth retarding. In this respect it is noted that the lack of credit is partly due to the lack of collateral (perhaps due to the land tenure systems). The substitutes for collateral are interlinked economic transactions (e.g. with the labor market) and high observability. Due to the small sizes of the African rural sectors relevant interlinked market transactions are very limited and hence rural credit depended heavily on high observability, which is closely linked to the nature of African rural networks noted above, thus resulting in the lack of observed rural credit. Limited credit opportunities have consequences for investment strategies, choice of economic activities and rural growth. Of particular relevance is the observation that lack of rural credit could result in increased rural inequality with a two-class society in which the relatively wealthy farmers have both higher incomes and better opportunities for investment, while the poor are trapped in poverty.

The above examples of impediments to growth in the rural sector gleaned from available evidence at the household level are taken as confirmation to the results reported on the basis of aggregate cross-country growth regressions. It is noted, however, that a better understanding of the constraints to the growth of the rural sector would require more probing of the rural household level behavior. Heeding the suggestion of Collier and Gunning (1999) in-depth African country case studies have been undertaken for 27 Sub-Saharan African countries in the context of AERC collaborative project on "Explaining African Economic Growth". O'Connell (2004: 15-16) summarized the major emerging lessons from these case studies, with emphasis on political economy concerns, as follows:

- (i) "when institutions are weak, the ex ante variance of growth- even medium-run growthmay be dominated by uncertainty about the quality of the executive". There is case-study evidence to suggest that ethno-regional interests had a profound effect on the growth process in a number of SSA countries;
- (ii) there is case study evidence to suggest that a narrow interest group, occupying power, is capable of choosing ex ante growth ruinous policies;
- (iii) there is case study evidence to suggest that the non-sustainability of rapid growth episodes in SSA could be explained in terms of cycles in government expenditure; and,
- (iv) the "case study evidence suggests that inefficient transfers may be required to 'buy peace' when geographically-based polarization is initially high" (O'Connell (2004: 15). There are, however, cases where the trade-off between growth and redistribution has been managed successfully.

These lessons find support in the cross-country results of Nkurunziza and Bates (2003: 23) who conclude that "democracy and political stability are good for growth… (but) the impact of tenure on growth varies with the level of democracy. Long term authoritarians appear to be better for growth than democratically elected politicians who succeed in prolonging their term of office". As usual Nkurunziza and Bates (2003) used measures of democracy and political stability from existing data sets¹⁸.

4.2. Poverty in Sub- Saharan Africa

Before proceeding to investigate whether institutions provide a missing link in the growthpoverty relationship, it is perhaps instructive to appreciate the extent of poverty incidence in Sub-Saharan Africa. The most recent estimates of poverty by world regions are reported in Chen and Ravallion (2004). Drawing on a sample of 454 national sample surveys from 97 countries, poverty results are reported for two African sub-regions: Sub-Saharan Africa (SSA; with 28 countries and 60 surveys) and North Africa (as part of the Middle East and North Africa region of the World Bank, with 4, out of seven countries, and 12 surveys)¹⁹. The results of the absolute poverty approach (i.e. a constant poverty line of US\$1.08 per person per day in 1993 PPP) for Sub-Saharan Africa as a region compared to other regions are reproduced in table (4).

	`		-	L	8 /			
Developing World Region	1981	1984	1987	1990	1993	1996	1999	2001
Sub-Saharan Africa	41.6	46.3	46.8	44.6	44.1	45.6	45.7	46.4
Middle East and North Africa	5.1	3.8	3.2	2.3	1.6	2.0	2.6	2.4
East Asia	57.7	38.9	28.8	29.6	24.9	16.6	15.7	14.9
China	63.8	41.0	28.5	33.0	28.4	17.4	17.8	16.6
East Asia Excluding China	42.0	33.5	27.0	21.1	16.7	14.7	11.0	10.8
Eastern Europe and Central Asia	0.7	0.5	0.4	0.5	3.7	4.3	6.3	3.6
Latin America and the Caribbean	9.7	11.8	10.9	11.3	11.3	10.7	10.5	9.5
South Asia	51.5	46.8	45.0	41.3	40.1	36.6	32.2	31.3
India	54.4	49.8	46.3	42.1	42.3	42.2	35.3	34.7
South Asia Excluding India	42.2	37.0	41.0	38.7	33.1	19.7	22.9	21.0
Total	40.4	32.8	28.4	27.9	26.3	22.8	21.8	21.1
Total Excluding China	31.7	29.8	28.4	26.1	25.6	24.6	23.1	22.5

Incidence Poverty in Sub-Saharan Africa and Developing World Regions (poverty)
line = US\$ 1.08)
(Head-count Ratios in percentage)

Source: Chen and Ravallion (2004: 152, table 3).

According to the above results in the early 1980s Sub-Saharan Africa, with a head-count ratio of 0.42, ranked as the third highest poverty incidence region all developing world regions; with East Asia (a head-count ratios of about 0.58) and South Asia (a head-count ratio of about 0.52) ranking as the highest and second highest poverty incidence regions. By 1984, SSA became the second highest poverty incidence region (with a head-count ratio of 0.463 compared to 0.468 for South Asia) and by 1987 it became the highest poverty incidence region.

In terms of time trends the results in the table show that for all regions, except for Sub-Saharan Africa and Eastern Europe and Central Asia, poverty incidence declined over time. The reduction in the incidence of poverty was most dramatic for East Asia that saw its head-count ratio declining by about 43 percentage points from about 0.58 to about 0.15; and, the decline was systematic over the time period with a very clear trend. At the other extreme the increase in the incidence of poverty was most pronounced Sub-Saharan Africa, albeit not in a systematic fashion. The incidence of poverty increased by about 5.2 percentage points between 1981 and 1987, but then declined by about 2.7 percentage points between 1987 and 1993 before increasing again by 2.3 percentage points between 1993 and 2001. The second half of the 1990s saw poverty incidence to increase in a systematic fashion. The increase in the incidence of poverty was also significant in Eastern Europe and Central Asia that saw its head-count ratio to increase form 0.7% in 1981 to a high of 6.3% in 1999 before declining to 3.6% in 2001. Using end-points poverty incidence increased in this region by about 2.9 percentage points.

By the beginning of the Millennium Sub-Saharan Africa was by far the poorest region among developing world regions with about 46% of its total population living below a poverty line of US\$1.08 per person per day applied to all regions and over time, the above poverty estimates can be considered as underestimates. With a lot of reluctance Chen and Ravallion (2000) started to report poverty estimates after allowing the poverty line to change with the standard of living, and hence to vary between regions. Their procedure is to allow the initial poverty line is to change with per capita consumption expenditure in each country such that the poverty line would satisfy the US\$ 1 a day per person as a minimum. Thus, the poverty line is defined as the maximum of (0.33 of consumption expenditure per person per day and \$ 1 per person per day). Following that the poverty line is kept constant over time for each country. While in the new Chen and Ravallion (2004) results the relative poverty lines are not reported, and in view of the fact that the initial poverty lines are kept constant, we report in the table below the Chen and Ravallion (2000) relative poverty lines for illustration purposes²⁰.

Developing World Region	Poverty Line (\$/ person/day)	1981	1984	1987	1990	1993	1996	1999	2001
Sub-Saharan Africa	1.33	45.93	50.48	51.27	47.61	47.56	48.71	49.66	50.18
Middle East and North Africa	1.78	37.36	33.40	21.80	19.29	17.58	17.16	18.26	16.91
East Asia	1.92	63.15	44.45	33.92	35.31	30.17	21.48	20.86	19.69
Eastern Europe and Central Asia	2.71	8.11	7.53	6.41	7.77	22.65	23.17	27.17	21.49
Latin America and the Caribbean	3.31	40.55	45.37	42.34	43.28	44.97	39.39	38.98	39.77
South Asia	1.08	58.17	50.65	47.72	41.45	40.33	36.87	32.09	31.41
Total		50.10	42.00	36.60	35.30	34.90	30.60	29.80	28.80

Table (5): Incidence of Poverty in Sub-Saharan Africa and Developing World Regions (Head-count Ratios in percentage)

Source: Chen and Ravallion (2004: 160, table 8) except for the poverty line column which is from Chen and Ravallion (2000: table 5).

Looking at the poverty line column, it is perhaps clear that on average the practice of calculating poverty measures on the basis of the international poverty threshold of US\$1 per person per day grossly underestimates the incidence of poverty in all regions except that of South Asia. The most significant underestimates are for the Middle East and North Africa region (where the 1981 head-count ratio needs to be revised upwards by 32.26 percentage points); Eastern Europe and Central Asia region (where the 2001 head-count ratio needs to be revised by 17.89 percentage points); and, Latin America and the Caribbean region (where the 1981 head-count ratio needs to be revised by 30.85 percentage points)!!

Despite the revisions the ranking of Sub-Saharan Africa in terms of the incidence of poverty remains as noted above. By the beginning of the Millennium Sub-Saharan Africa was by far the poorest region among developing world regions with about 50% of its total population living below a poverty line of US\$1.33 per person per day in 1993 purchasing power parity²¹.

In addition to the above global estimates of poverty there is evidence to suggest that Sub-Saharan African poverty is dominated by rural poverty. For a sample of 19 SSA countries for which data on the distribution of consumption expenditure is available from World Bank sources Ali (2001-a) provided detailed estimates, based on country specific poverty lines, for rural, urban and national levels. The evidence is summarized as follows:

- (a) that SSA rural poverty is characterized by a high level of capability deprivation as reflected by educational enrollment ratios, literacy rates, access to sanitation and access to clean potable water. Average net primary enrollment ratio is 34% (with variation from a high of 75% to a low of 13% only); average net secondary enrollment ratio is 11% (with variation from a high of 38% to a low of only 1%); average literacy rate of 37% (with variation from a high of 92% to a low of only 4%); average access to sanitation of 41% (with variation from a high of 92% to a low of only 5%); and an average access to clean water of only 13% (with variation from a high of 41% to a low of only 1%);
- (b) that African rural poverty is wide spread, deep and severe as reflected by conventional money metric measures of the head-count ratio (that ranges from a high of 81% to a low of 34%), the poverty-gap ratio (that ranges from a high of 48% to a low of 8% implying an average income of the poor that ranges from a high of US\$24 per person per month to a low of about US\$10 per person per month), and the squared poverty-gap ratio (that ranges from a high of 35% to a low of 2%); respectively;
- (c) that rural poverty is characterized by its very low response to its fundamental determinants: economic growth (as captured by changes in mean consumption expenditure) and the distribution of consumption expenditure (as summarized by the Gini coefficient). The absolute value of the elasticity of the head-count ratio with respect to mean consumption expenditure varies from a high of 2.4 to a low of 0.38 while its elasticity with respect to the Gini coefficient varies from a high of 1.05 to a low of zero for eleven of the countries of the sample. The depth and severity of poverty as measured by the poverty-gap ratio and the squared poverty-gap ratio are also characterized by relatively low response. One possible interpretation of this is that rural poverty is structural in nature;
- (d) that rural poverty dominates African poverty in the sense of its share in total poverty at the national level. The share of rural poverty in the incidence of total poverty ranges from a high of 91 percent to a low of 62 per cent; its share in the depth of poverty ranges from a high of 93 percent to a low of 62%; and its share in the severity of poverty ranges from a high of 96 percent to a low of 63%;

- (e) that a peculiar feature of the African rural sectors is that even its rich are poor in absolute terms. The average consumption expenditure of the rural rich varies from a high of US\$85 per person per month (i.e. US\$2.8 per person per day) to a low of US\$27 per person per month (i.e. only 90 cents per person per day); and,
- (f) that the incidence, depth and severity of African rural poverty do not seem to be responsive to macroeconomic policies. This feature, however, needs more investigation as relevant information becomes available.

4.3. The Link Between Institutions and Poverty

At the outset of this sub-section it may be instructive to note that Kaufmann, Kraay and Zoido-Lobaton (1999: 26-27, tables 2 and 3) used the standardized measures in a causal econometric model to see the effect of governance on development outcome indicators: per capita GDP, infant mortality rate and adult literacy rate. Each governance indicator was found to be a significant determinant of the above development outcomes. In a broad sense each of these development outcome indicators can be viewed as a poverty measure. Table (6) summarizes these results which are based on a two-stage least squares procedure for a sample of countries that excludes OECD countries²². The size of the sample for each governance (institutional) indicator is shown between brackets under column titles. In the text of the table figures between brackets indicate the standard error of estimate.

Development Outcome	Government	Regulatory	Rule	Control of	Voice and	Political
	Effectiveness	Quality	of Law	Corruption	Accountability	Stability
	(132)	(142)	(142)	(131)	(149)	(131)
Log per capita GDP	1.561	0.880	2.079	1.192	0.685	1.811
(in PPP\$)	(0.452)	(0.169)	(0.67)	(0.317)	(0.143)	(0.532)
Log Infant Mortality Rate per 1000 live births	-1.573 (0.590)	-0.812 (0.186)	-2.211 (0.977)	-1.495 (0.533)	-0.636 (0.169)	-1842 (0.722)
Adult literacy rate (%)	44.342	22.281	54.679	36.789	15.857	55.701
	(13.8)	(4.2)	(21.8)	(8.3)	(2.7)	(20.1)

Table (6) : The Effect of Institutions on Development Outcome Indicators:Kaufmann et al Results

Source: Kaufmann et al (1999: 26-27, tables 2 and 3).

As the table shows improved institutions lead to improved development outcomes such that it increases per capita income and the adult literacy rate and reduces the infant mortality rate. The result relating to per capita GDP is particularly relevant to an investigation seeking to explore the "missing link" in the relationship between growth and poverty. According to the authors, recalling that the standard deviation of governance across countries is equal to one, "the coefficient on governance can be interpreted as the $100x(e^{\beta} - 1)$ -percent increase in per capita incomes due to a one-standard deviation improvement in governance". Thus, for example, the first row of the table indicates that a one-standard deviation improvement in institutions leads to between 1.4-fold (in case of regulatory quality) to 6.9-fold (in case of the rule of law) increase in per capita GDP. "These results clearly indicate that there is a large payoff in terms of per capita income to improvements in governance" (Kaufmann et al (1999: 15-16)). The above results, and other similar results, may be used in the context of the framework of the fundamental determinants of poverty provided by equation (3) to infer the relationship between poverty and institutions. A more direct approach, however, would try to estimate the relationship directly to explore the link. Table (7) provides the descriptive statistics of the variables used.

Detail	Head-count ratio (%)	Per capita GDP (\$)	Government effectiveness (GE)	Regulatory quality (RQ)	Rule of law (RL)	Control of corruption (CC)	Composite Index (CI)
Mean	55.14	2504	-0.36	-0.20	-0.30	-0.36	-0.31
Standard deviation	23.70	2010	0.51	0.63	0.60		0.51
Maximum	98	9695	0.95	1.28	1.19	1.19	1.15
Minimum	6	216	-1.78	-2.40	-1.73	-1.85	-1.87
Number of countries	108	94	107	107	100	89	107

Table (7): Poverty and Institutions: 1996 Descriptive Statistics

In table (8) we report a set of preliminary results of such an approach where we use a sample of developing countries for which head-count ratios are reported in Dollar and Kraay (2001). The head-count ratios are estimated on the basis of an international poverty line of US\$2 per person per day for the mid-1990s. We use as our measure of institutions the average of four of the standardized measures for 1996 from Kaufmann, Kraay and Zoido-Lobaton (2002): government effectiveness, regulatory quality, rule of law and control of corruption. We also use per capita GDP in PPP international dollars of 1985.

Explanatory variables	1	2	3	4	5	6	7
Per Capita GDP (y)	-0.00016 (8.20)*						-0.0001 (7.22)*
Government Effectiveness (GE)		-0.2898 (2.91)*					
Regulatory Quality (RQ)			-0.1816 (2.11)**				
Rule of Law (RL)				-0.2554 (3.05)*			
Control of Corruption (CC)					-0.2015 (2.16)**		
Composite Index (CI)						-0.2891 (2.82)*	-0.2381 (2.05)**
(Per Capita GDP)x CI							0.000055 (1.74)***
Constant	4.3611 (95.02)*	3.7824 (67.04)*	3.8502 (75.22)*	3.8077 (69.89)*	3.7741 (57.58)*	3.7986 (71.75)*	4.2616 (56.09)*
R-squared	0.4509	0.0739	0.0437	0.0733	0.0401	0.0730	0.4744
F-statistics	75.5380	8.3733	4.7965	7.7477	3.6365	8.2692	26.7808
Number of Observations	94	107	107	100	89	107	93

The first column of the above table reports the original relationship between poverty and the level of income as per equation (3) in the analytical framework. As is expected growth will reduce poverty. In this specification the growth elasticity of poverty increases is higher in absolute value for higher levels of income (and is given by $\gamma = -0.00016$ y). Note that per capita GDP explains about 45% of the variations in observed poverty among the countries of the sample. Per capita GDP being a fundamental determinant of poverty, this result should not be surprising.

As expected the above results show that improvements in institutions are expected to reduce poverty in a statistically significant fashion. This holds true for each measure of institutions (columns 2-5) as well as for the composite measure (column 6). The explanatory power of each, and the composite, measure, however, is very low. This suggests that perhaps institutions exert their effect on poverty through the mediation of other channels. An obvious channel is the level of development as reflected by per capita GDP. In the last column this effect is explored by using an interaction term. The results show that the power of explanation of the model now increases significantly, largely due to taking into account per capita GDP as a fundamental determinant of the spread of poverty, as already noted. Moreover, the results show that the relationship between improvement in institutions and poverty depends on the stage of development. Thus, it can be shown that improvements in institutions tend to reduce poverty up to a per capita GDP level of \$4329, thereafter poverty may increase.

V. <u>Implications for NEPAD</u>

We now turn to the implications of the above results for the New Partnership for Africa's Development (NEPAD)²³. According to its website NEPAD is a "vision and a strategic framework" for Africa's renewal". The primary objectives of NEPAD are enumerated to include the eradication of poverty; the achievement of sustainable growth and development; and the halting of the marginalization of the continent in the global economy.

Important for the purposes of this paper is the African Peer Review Mechanism (APRM) defined as an "instrument voluntarily acceded to by member states of the AU as an African selfmonitoring mechanism". The primary purpose of APRM is to "foster the adoption of policies, standards and practices that lead to political stability, high economic growth, sustainable development and continental economic integration through sharing of experiences and reinforcement of successful and best practice, including identifying deficiencies and assessing the needs of capacity building". The policies, standards and practices that are to be adopted are supposed to cover the four major areas identified in the base document of APRM and the declaration on Democracy, Political, Economic and Corporate Governance endorsed by the inaugural Summit of AU. The four areas are: "democracy and political governance"; "economic governance and management"; "corporate governance"; and, "socio-economic development". To facilitate the measuring of performance and progress in the four areas the Technical Secretariat of APRM (hereinafter TSAPRM; 2003) proposed a framework composed of key objectives, standards (meaning the agreements and conventions signed by member states that provide the political and institutional basis for the objectives), criteria (to facilitate judgment on whether the country has taken the necessary steps to achieve the objectives), and indicators (i.e. the means by which it is determined whether the criteria have been met). Without getting involved in detailed discussion table (9) summarizes the content of TSAPRM framework.

NEPAD Priority Area	Overall Objective	Number of Key Objectives	Number of Standards	Number of Criteria	Number of Indicators
Democracy and Political Governance	Consolidate a constitutional political order in which democracy, respect for human rights, the rule of law, the separation of powers, and effective, responsive public service are realized.	9	16	34	41
Economic Governance and Management	Establish good economic governance and management.	5	15	16	15
Corporate Governance	Align the interests of individuals, corporations and society within a framework of sound governance and common good.	5	8	6	10
Socio-Economic Development	Eradication of poverty and fostering of socio-economic development.	6	12	20	27

Table (9): NEPAD Priority Areas and APRM Framework: A Summary

Source: own compilation from TSAPRM (2003).

Despite being classified as an overall objective of a NEPAD priority area the NEPAD literature clearly states that the "eradication of poverty and the fostering of socio-economic development" are "the overarching twin objectives" of development in the continent. In this sense it will be reasonable to suggest that the other three areas are considered by NEPAD as "preconditions and foundations of sustainable development and the eradication of poverty" (TSAPRM (2003: 5))²⁴. A careful reading of the details of the three areas of "political governance", "economic governance and management" and "corporate governance" will show that they deal with improving the institutional structure of the continent. Indeed it can easily be shown that the 19 key objectives of the three areas can be mapped into the six governance clusters of the composite index of institutions. A summary of such mapping is given in table (10) where NEPAD key objectives are identified by the numbers given to them in TSAPRM (2003) and where the first number is that for the NEPAD area of priority. As per our understanding the key objectives of the fourth area are not included in the mapping. Note that NEPAD key objective (2.3) on "promoting sound public finance management" appears, for obvious reasons, under the capacity of the government as well as under the rule of law and corruption.

	Table ((10):	Map	ping	NEPAD) Key	Ob	jectives	s into	the	Com	posite	Index	of	Institutio	ons
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Major Aspect of Governance	Governance Clusters	NEPAD Key Objectives
Process by which governments are	(i) Voice and accountability.	1.1; 1.2; 1.3; 1.4; 1.7; 1.8; 1.9; 3.b;
selected, monitored and replaced	(ii) Political Stability.	3.d.
Capacity of the government to	(i) Government effectiveness.	1.5; 2.1; 2.2; 2.3; 3.a; 3.c.
effectively formulate and implement	(ii) Regulatory quality.	
sound policies		
Respect of citizens, and the state, for	(i) Rule of law.	1.4; 1.6; 2.3; 2.4; 3.e.
the institutions that govern economic	(ii) Corruption.	
and social interaction.		

Given the above mapping it is perhaps reasonable to suggest that NEPAD aims at improving the institutional structures in the continent in order to achieve the overarching goal of socio-economic development of eradication of poverty. Indeed the details of the key objectives in the fourth priority area confirm that none of them falls into the clusters of the composite index of institutions. According to TSAPRM (23-28) the six key objectives of the fourth priority area are:

- (i) "promote self-reliance in development and build capacity for self- sustaining development;
- (ii) "accelerate socio-economic development to achieve sustainable development and poverty eradication";
- (iii) "strengthen policies, delivery mechanisms and outcomes in key social development areas (including education and combating of HIV/AIDS and other communicable diseases);
- (iv) "ensure affordable access to water, sanitation, energy, finance (including micro-finance), markets and ICT to all citizens, especially the rural poor";
- (v) "progress towards gender equality, particularly equal access to education for girls at all levels; and,
- (vi) "encourage broad-based participation in development by all stakeholders at all levels".

In view of the above, the NEPAD initiative can be looked at as based on the assumption that improving institutions will lead to poverty reduction in the continent. However, our results clearly show that "institutions" as conventionally measured are not likely to have a major impact on poverty reduction and that their most influential impact is probably mediated through income via the growth process. Moreover, in view of the fact that SSA poverty is dominated by rural poverty a search needs to be mounted to identify, understand and enhance institutions relevant to the rural sector rather than to the overall national levels. This, of course, does not mean that the type of institutions identified by NEPAD are not important in their own right.

VI. Concluding Remarks

Do institutions provide the missing link between growth and poverty? Or alternatively, is there a missing link between growth and poverty? In this paper, after reviewing the various definitions of "institutions" as a variable used in growth regressions, we argued that from an analytical perspective there does not exist a missing link between growth and poverty reduction. Further, from an empirical point of view it is shown that while improvements in institutions, as expected, do reduce poverty in a statistically significant fashion, their explanatory power is weak.

Taking into account the historical roots of current institutions, there is general agreement that perhaps the most important institutions to be built, or to strengthen where they exist, include property rights, regulatory institutions, economic management institutions, institutions for social insurance, and institutions for conflict management. The New Partnership for Africa's Development (NEPAD), it is argued, can be seen as an attempt to reform the inherited weak institutions in Sub-Saharan Africa. It is these weak institutions that have failed to effect the development process in Africa in the sense of sustaining a growth process that reduces poverty.

Despite this, however, it needs to be noted that most of the definitions of "institutions" used in the literature revolve around the idea that "political institutions of limited government cause economic growth". Central to this idea is the underlying notion of secured property rights that are supposed to provide the right incentives to entrepreneurs to accumulate and innovate by ensuring adequate control over the return to the assets that they produce or improve. According to Rodrik (1999-b: 3) "the key word is 'control' rather than 'ownership'. Formal property rights do not count for much if they do not confer control rights". In this respect it is also noted that establishing property rights is not simply a matter of passing legislation. "Legislation in itself is neither necessary nor sufficient for the provision of the secure property rights. In practice, control rights are upheld by a combination of legislation, private enforcement, and custom and tradition" (Rodrik (1999-b: 3))²⁵.

Given Africa's colonial encounter secured property rights continue to be a major, vexing, issue in rural areas. The root of the difficulty seems to lie in the definition of land as a customary possession. This is a legacy of late colonialism where "the general rule was that land could not be a private possession, of either landlords or peasants. It was defined as a customary communal holding, to which every peasant household had a customary access, defined by state-appointed customary authorities" (Mamdani (1996: 22)). The institutional complications in this definition of "property rights" in the African rural areas relate to three related consequences of the all-embracing world of the customary. The first is that customary "law was defined in the plural, as the law of the tribe, and not in the singular, as the law for all natives. Thus, there was not one customary law for all natives, but roughly as many sets of customary laws as there were said to be tribes" (Mamdani (1996: 22)). The second consequence is that the concept of the "customary" was bestowed on the monarchical, authoritarian and patriarchal African ruling arrangements at the time which were arrangements with the least historical depth. Customary law was administratively driven in the sense that those who enforced custom were in a position to define it in the first place. The third, and important, consequence is that because land was defined as a customary possession the market was only a partial institution. Beyond the market, only the use of force was available to draw land and labor out of the world of the "customary".

The persistence of the colonial institutions to the post-independence state in Africa preserved the world of the "customary" due to the failure to dismantle and reorganize the local state in the rural areas as a genuine democratization shift. If the "customary" was defined in the plural to refer to tribes, real or contrived, then building relevant development institutions in the rural areas would need as a first step a move to detribulize the local state in the rural areas. In this process, and given the history, it will probably be a mistake to equalize the "customary" with the "indigenous". In the spirit of popular participation both the "customary" and the "indigenous" should be left to be defined by the rural people themselves. Once this is done the relevant "property rights" will emerge as they do in an evolutionary sense²⁶.

In addition to the above, it needs to be noted that in view of the wide spread poverty in SSA and, in view of the fact that such poverty is dominant in the rural sectors of the continent, it seems reasonable to suggest that perhaps the institutional content of NEPAD is a shade lacking in terms of identifying the institutional prerequisites for poverty reduction in the continent. NEPAD lacks emphasis on institutions for social insurance. There is now an emerging agreement that such institutions are needed to cater for the protection of the poor during economic crises²⁷.

Contrary to previous concerns about the central importance of fiscal prudence in designing macroeconomic policy packages an emerging consensus sees setting-up effective safety nets for the poor as a long-term investment in institutions. This consensus is based on lessons drawn from past country experience. Two major, and related, lessons have been emphasized. The first lesson is that safety net mechanisms, when they exist, are too often inadequate. This is especially true in rural Africa where informal, family-based or kin-based, safety nets have been weakened by natural as

well as man-made disasters (e.g. droughts and civil conflicts respectively). When formal safety nets exist their coverage is often limited, the resources available to provide assistance are very limited, the leakage of benefits is high, and the poor are too often residual claimants due to unawareness or lack of empowerment. The second lesson is that safety nets are best set-up during good times rather than at times of crises (Ferreira et al (2000: 10)).

In advocating safety nets as crucial to any development strategy that aims at reducing poverty it is recognized that the comparative advantage of these mechanisms is that they provide a more cost effective insurance for the poor against income losses. Traditional insurance mechanisms, by comparison, entail high costs to long-term progress of the poor especially in the struggle to escape poverty. In the context of a rural development strategy public safety nets can easily be incorporated as an integral development component.

While the design of public safety nets will vary from one each country to another, given country circumstances, experience has shown that two central elements of such mechanisms are public work programs and public transfer programs. Public work programs are expected to provide employment for those who are able to work, while the transfer programs are expected to provide support to those who can not, or should not, work.

Be the above as it may, the results of this paper suggest three major areas for further research. The first area drives from the analytical framework and is closely related to the overarching objective of poverty reduction in NEPAD and the MDGs. If, as in the first MDG, a quantitative goal for poverty reduction is specified (e.g. reducing poverty by half by a given date) then clearly the required per capita growth rate will depend on the growth elasticity of poverty. Under such a strategy it may be important to look at the effect of institutions, over and above their effect through the growth process, in changing the responsiveness of poverty to growth. This requires more work on exploring the effect of institutions on the growth elasticity of poverty.

A second area that needs further investigation is the nature and pattern of change of institutions in the traditional, rural, sectors. Given the dominance of rural poverty in Sub-Saharan Africa there is a need to look at whether traditional institutions play a role in the persistence of poverty. Closely linked to this is the third area of investigating the nature of traditional safety nets and their role in poverty reduction.

Footnotes

- ¹ In a recent contribution Glaeser, La Porta, Lopez-de-Silanes and Shleifer (2004: 275) note that the key word in North's definition is the word "constraints", thus "constitutions and electoral rules are good examples of institutions, but good policies chose by dictators who have a free hand are not". Moreover, they note that another essential aspect of institutions is that the constraints "need to be reasonably permanent or durable".
- ² The other MDGs deal with increasing he coverage of primary education, promoting gender equality and the empowerment of women, reducing child mortality, improving maternal health, combating HIV/ AIDS and other diseases, ensuring environmental sustainability, and forging a global partnership for development. Except for the last goal, which is organizational in nature, all of the other goals can be taken as related to a broader concept of "poverty" in a sense of capability deprivation ala Sen.

³ See, for example, Ali (2001-b) and Collier and Dollar (2001).

- ⁴ The World Bank has an internal measure called "country policy and institutional assessment", denoted CPIA. The measure is based on assessing the situation in a given country on four broad categories, each with a number of components, with 20 total components. Each component "is rated ordinally by country specialists, on a scale of 1-6, using standardized criteria" (Collier and Dollar (2002: 1477-8)). All components are equally weighted and a simple average of all components gives the CPIA that can be normalized. See Collier and Dollar (2002: 1498, table 8) for details of the components. For a critical review of the use of these measures in political economy of governance literature see Keefer (2004).
- ⁵ The sources used are: Business Environment Risk Intelligence; Wall Street Journal; Standard and Poors; European Bank for Reconstruction and Development; Economist Intelligence Unit; Freedom House; Gallup International; World Economic Forum; Heritage Foundation; Political Economic Risk Consultancy; Political Risk Services; Institute of Management Development; and, World Bank.
- ⁶ This has become a common method to standardize indicators. Thus if we denote an indicator by I and its normalized value by I* then the normalized value is given by the following: $I^* = [I I_{min}]/[I_{max} I_{min}]$.
- ⁷ According to Barro (1998: 8) the framework for the determination of growth can be written as $Dy = f(y, y^*)$, where Dy is the growth rate of per capita output, y is the current level of per capita output and y* is the long-run or steady state level of per capita output. The growth rate is diminishing in y, given y*, and increasing in y*, given y. The steady state level of per capita output, y*, depends on an array of choice and environmental variables.
- ⁸ For an excellent, non-technical, summary of the empirical growth literature as it relates to developing countries see Easterly (2001-a).
- ⁹ See, for example, Ben-David and Papell (1995, 1998) and Pritchett (2000).
- ¹⁰ A relevant finding in this respect is that of Easterly (2001-b) where it is noted that despite improvements in the policy stance indices of a large number of developing countries over the period 1960-1994, especially in the context of policy-based lending that started in the 1980s, a lot of these countries stagnated. A possible explanation of the stagnation of a number of countries despite improvement in policy is external shocks emanating from the slow-down of growth in advanced countries.

- ¹³ Rodrik et al (2004) tested the propositions of the three schools by estimating a model of the form log $y = \mu + \alpha R + \beta T + \gamma G + \varepsilon$, where R is a measure of institutions, T is trade (or integration), and G is a measure of geography. Two-stage least squares are used where in the first stage R and T are treated s endogenous depending on appropriate instruments for earlier institutions (settler mortality) and trade and G.
- ¹⁴ See also Mamdani (1996:19) who argues that the colonial state in Africa was "a double-sided affair. Its one side, the state that governed a racially defined citizenry, was bounded by the rule of law and an associated regime of rights. Its other side, the state that ruled over subjects, was a regime of extra-economic coercion and administratively driven justice".
- ¹⁵ Acemoglu et al (2001) estimated an equation of the form log $y_i = \mu + \alpha R_i + X_i \gamma + \varepsilon_i$, where y is income per capita, R is a measure of current institutions, X is an appropriately defined vector of other variables. The equation is estimated by two-stage least squares where the measure of current institutions, R, is modeled in the following fashion: $R = \zeta + \beta \log M + X \delta + \nu$; where M is a measure of settler mortality. The interest of the estimation is on α .
- ¹⁶ This is the property of zero homogeneity of the poverty measure with respect to mean consumption expenditure and the poverty line. This property is thought to hold for most of the widely used poverty measures.

¹¹ See, for example, Diamond (1997), Landes (1998) and Sachs (2000).

¹² Important contributions in this school include Frankel and Romer (1999) and Sachs and Warner (1995).

- ¹⁷ This can easily be established by direct substitution in equation (5). Setting the poverty line as a proportion of he standard of living (e.g. median income) is the common practice in Europe (see Atkinson (1998).
- ¹⁸ See also O'Connell and Ndulu (2000: 39, table 5.3.1) who find that political instability has a negative and significant effect on per capita GDP growth.
- ¹⁹ SSA countries in the sample are: Botswana (2 surveys); Burkina Faso (2), Burundi (2), Cameron (1), Central African Republic (1), Cote d'Ivoire (4), Ethiopia (3), Gambia (2), Ghana (3), Kenya (3), Lesotho (3), Madagascar (3), Mali (2), Malawi (1) Mauritania (4), Mozambique (1), Namibia (1), Niger (2), Nigeria (3), Rwanda (1), Senegal (2), Sierra Leone (1), South Africa (3), Swaziland (1), Tanzania (1), Uganda (4), Zambia (4), and, Zimbabwe (2).
- ²⁰ In the case of Sub-Saharan Africa the case for the relative poverty line has een made by Professor Thorbecke and myself in a number of contributions in the context of AERC collaborative project on "Poverty, Income Distribution and Labor Markets" that was launched in 1997. See, for example, Ali and Thorbecke (2000) and Thorbecke and Mwabu (2003).
- ²¹ Our own estimates using a sample of 19 SSA countries for which data for the 1990s is available and using country specific poverty lines gives an estimate of an average head-count ratio of 55.6%. The estimated head-count ratio varied from a low of about 31% for Ghana (for a poverty line of \$32 per person per month) to a high of about 83% of the population for Ethiopia (with a poverty line of about \$24 per person per month). Thorbecke and Mwabu (2003) report head-count ratios based on case studies for the second half of the 1990s that range from a low of 35% for Uganda in 2000 to a high of 82% for Mozambique for 1997/98.
- ²² The 2SLS is used to take into account possible reverse causality between governance and income level, omitted variable biases, and measurement errors.
- ²³ NEPAD was initiated by the heads of state of Algeria, Egypt, Nigeria, Senegal and South Africa on a mandate from the Organization of African Unity (OAU). The 37th Summit of the OAU, held in July 2001, formally adopted the strategic framework document. NEPAD is now a programme of the African Union (AU), the successor organization to OAU. The inaugural Summit of AU as held in July 2002 in Durban, South Africa. The highest authority of NEPAD is the heads of state and government Summit of AU. There is a heads of state and government Implementation Committee (3 states per region) that reports to the AU Summit on an annual basis and there is a steering committee that oversees the development of projects and programmes. In addition a NEPAD's Secretariat that coordinates the implementation of approved projects and programmes.
- ²⁴ For a similar understanding of NEPAD's goals see Funke and Nsouli (2003).
- ²⁵ The development experience of Taiwan, South Korea and China is usually invoked as evidence in this context; see Glaeser et al (2004).
- ²⁶ Soludo (2000: 15) poses the question "do indigenous land rights constrain agricultural investment and productivity?" and cites evidence that shows that "indigenous tenure systems have been flexible and responsive to changing economic circumstances". In this respect it may be useful to note that these "indigenous" systems could be referring to "customary" land systems.
- ²⁷ In a recent report UNECA (2005: vii) identified ten good governance priorities. Nine of these are conventional in nature but the on "maximizing the contribution of traditional modes of governance" is relevant to social safety nets. The report notes that given "the enduring vital role of traditional modes of authority in many areas of the continent, particularly in communities, it is important to constantly find ways to increase their efficacy in the modern setting. Traditional systems can complement the resources of government in providing such services as health, education and infrastructure".

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Previous Publications

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