State-Business Relationships and Economic Growth in Sub-Saharan Africa

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ABSTRACT

This paper examines the effect of effective state-business relationships on economic growth in Sub-Saharan Africa. We use a measure proposed by Te Velde (2006) that can capture the various dimensions of effective state-business relationships to estimate standard growth regressions using dynamic panel data methods, along with the more conventionally used measures of institutional quality such as degree of executive constraints, the rule of law, the degree of corruption and the quality of the bureaucracy. Our results show that effective state-business relationships contribute significantly to economic growth in a panel of nineteen Sub-Saharan African countries over the period 1970–2004 – countries which have shown improvements in state-business relationships have witnessed higher economic growth, controlling for other determinants of economic growth and independent of other measures of institutional quality.

CONTENTS

1. INTRODUCTION

There is close to an intellectual consensus that political institutions of limited government which provide for secure property rights for producers in the economy are fundamental determinants of differences in living standards across countries (Hall and Jones [1999], Acemoglu, Johnson and Robinson [2001 and 2002], and Subramanian, Rodrik and Trebbi [2004]). However, this view of the primacy of institutions that constrain the power of the executive in explaining economic growth has been not without criticism. Firstly, Glaeser et al. (2004) argue that neoclassical accounts of economic development that stress the primacy of human and physical accumulation provide a better explanation of economic growth than those accounts based on the quality of institutions. They show that initial levels of constraints on the executive do not predict subsequent economic growth, once one controls for initial levels of human capital. Secondly, Sachs (2003) argues that it is difficult to disentangle geography as an independent determinant of economic growth from institutions since countries with poor institutions are also countries that suffer from weak geographical factors. He shows that the disease environment as measured by the risk of malaria is a predictor of economic growth, even when including institutional quality as an explanatory variable. Finally, there is criticism of the econometrics that underpins most of the empirical studies in the literature. These studies commonly use cross-country cross-sectional regression methods and there is concern that these methods do not adequately control for the possibility of reverse causality of economic development leading to the development of good quality institutions and that the empirical studies are not able to incorporate innate differences in cultural attributes and initial conditions that are unobservable to the econometrician but that may be important determinants of economic growth (Kenny and Williams 2001).

A further limitation of the literature on institutions and growth is that its view of political institutions is essentially that the role of the state is predatory. According to this literature, economic growth occurs in contexts where the state respects the property rights of private producers and where it does not expropriate property or allows others to do so. This view is principally informed by the neoclassical perspective on the state where its role should be confined to providing public goods (law and order, infrastructure, macroeconomic stability, etc.) and not to intervene directly in the activities of private producers. However, as has been witnessed in East Asia, economic growth has occurred in contexts where the state has intervened in the economy so as 'to provide incentives to private capital and to discipline it' (Harriss, 2006). In contrast to the state's predatory role highlighted in the recent empirical literature on institutions and growth, there has been less recognition in this literature of the state's developmental role and the impact it may have on economic growth. In this paper, we are particularly interested in the growth implications of effective state-business relationships – 'the maintenance of benign collaboration between the agents of the state and business' (ibid.). We examine the impact of effective state-business relations on economic growth for a panel of nineteen Sub-Saharan African countries over the period 1970–2005. Previous empirical studies that have addressed the causes of growth in Sub-Saharan African context such as Sachs and Warner (1997) have found institutional quality (as measured by the rule of law or risk of expropriation, for example) to be an important determinant of economic growth. However, these studies have not examined the specific role of effective state-business relationships in Sub-Saharan Africa's growth experience.

In-depth discussions of state-business relations have so far been largely limited to Asian countries such as Korea, Japan, Malaysia, Bangladesh and Thailand.[1] The measurement of state-business relations in sub-Saharan Africa is nearly absent, despite its potential importance for economic development. Hyden et al. focus on six governance categories of which economic society is one; this includes (deliberately) subjective questions covering perceptions of state-business relations. It covers several developing countries, but only two African countries. The Kaufman indicators have become frequently used, but are also about perceptions of governance variables such as government effectiveness and rule of law.[2] Finally, while investment climate measures in the World Bank's *Doing Business Reports* are objective (e.g. number of procedures to obtain a licence) these are unlikely to be fundamental drivers of economic performance, and can rather be seen as outcomes of effective state-business relations. There is therefore a lack of descriptions and comprehensive measurement of SBRs as potentially fundamental drivers of economic growth in sub-Saharan Africa.

Given the significant scale of poverty in Sub-Saharan Africa, it is an important to understand whether effective state-business relationships also have a role to play in reducing poverty and inequality. We also undertake an exploratory analysis of the relationships between effective state-business relationships on one hand and inequality and poverty on the other in the Sub-Saharan African context.

The second contribution the paper makes is methodological. In contrast to much of the literature on institutions and economic growth which use cross-sectional regression methods, we use dynamic panel data estimation procedures proposed by Arellano and Bond (1991). By limiting our sample to Sub-Saharan

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1. See e.g. Hisahiro, K. (2005) 'Comparative Analysis of Governance: Relationship between Bureaucracy and Policy Co-ordination Capacity with Particular Reference to Bangladesh'. Institute for International Cooperation.
2. D. Kaufmann, A. Kraay, and M. Mastruzzi (2005), Governance Matters IV: Governance Indicators for 1996–2004, draft May 2005

African countries, we are able to a significant extent isolate the effects of institutions on economic growth as distinct from geographical factors, both due to the fact that our measure of institutions is time-varying while geographical factors are not, and that the variation in geographical factors in Sub-Saharan Africa found to be important for economic growth is less than what one may observe in a sample of all developing countries (e.g. distance from the equator and the presence of a tropical climate). Also, we control for time-invariant country-specific factors by the use of the Arellano-Bond dynamic panel Generalised Method of Moments (GMM) estimator which difference the data to get rid of country specific effects. This enables us to meet the criticism that cross-sectional regression methods that do not allow for innate unobservable differences in cultural attributes and initial conditions may be inappropriate in studying the determinants of economic growth. Finally, we can address to a large extent the problem of 'weak instruments' that is endemic in the studies that use cross-country cross-sectional regression methods by the instrumentation of right hand side variables with their lags in levels and differences. This eliminates the inconsistency arising from the endogeneity of the explanatory variables – in particular, institutional quality.

The remainder of the paper is organised as follows. Firstly, in Section 2, we provide a brief overview of the empirical literature on institutions and growth, pointing out its major shortcomings. We then follow this in Section 3 with a discussion of the theoretical basis of why effective state-business relations matters for economic growth. In Section 4, we describe our measure of effective state-business relations (SBR) and provide estimates of it for a set of nineteen Sub-Saharan African countries where we have the necessary data for the period 1970–2004. In Section 5, we discuss our empirical specification, the data used in the regressions and the econometric methodology. Section 6 presents the findings of the estimation of the SBR-growth relationship. Section 7 undertakes an exploratory data analysis of the SBR-poverty and SBR-inequality relationships. Section 8 concludes.

2. THE EMPIRICS OF INSTITUTIONS AND GROWTH – A CRITICAL OVERVIEW

There is a long-standing tradition in the empirical growth literature to incorporate various measures of the quality of institutions as determinants of economic growth across countries. The seminal study has been Acemoglu, Johnson and Robinson (henceforth AJR, 2001) where a serious attempt was made to control for the possibility of reverse causality in establishing a causal role for institutions in economic development.

To estimate the impact of institutions on economic performance that does not lend itself to interpretations of reverse causality, AJR need a source of exogenous variation in institutions. To do this, they propose a theory of institutional differences among countries colonized by Europeans, and exploit this theory to derive a possible source of exogenous variation. Their theory rests on three premises. Firstly, there were differences in colonization policies which created different sets of institutions. At one extreme, European powers set up 'extractive' institutions, exemplified by the Belgian conquest of the Congo. These institutions did not introduce much protection for private property, nor did they provide much checks and balances against government expropriation. The main purpose of these extractive institutions was to transfer as much of the resources from the colony to the colonizer. These institutions were detrimental to investment and economic development. At the other extreme, many Europeans migrated and settled in a number of colonies, where they tried to replicate European institutions, with strong emphasis on private property and checks against government power. These institutions enforced the rule of law and encouraged investment. Primary examples of this include Australia, Canada, New Zealand, and the United States. Secondly, the colonization strategy was influenced by the feasibility of settlements. In places where the disease environment was not favourable to European settlement, the formation of extractive institutions was more likely. The final premise of AJR's theory was that the colonial state and institutions persisted after independence. This is because the political elite that came to power at independence in the previously colonized countries had a strong self-interest in maintaining the extractive institutions established during colonial times and the access to revenues obtained from the control of these institutions.

AJR validate their theory by regressing current economic performance (log GDP per capita in 1995) against current institutional quality (the average protection against expropriation risk for the period 1985–1995), and by the instrumentation of the latter by the settler mortality rate during the colonial period compiled by the historian, Philip Curtin. The settler mortality rate is an indirect measure of the disease environment in the colonies, and thus, measures the likelihood of Europeans settling in a particular colony and setting up institutions of private property. AJR find that there is a high correlation between the mortality rates faced by soldiers, bishops and sailors in the colonies and European settlements and early measures of institutions, and between early institutions and current institutions. AJR estimate large effects of institutions on per capita income using this source of variation. They also find that this relationship is not driven by outliers, and is robust to controlling for latitude, climate, current disease environment, religion, natural resources, soil quality, ethno-linguistic fragmentation, and current racial composition.

Rodrik, Subramanian and Trebbi (henceforth RST, 2004) take the AJR results forward in two ways. Firstly, they introduce a third determinant of economic performance – integration. International trade as a driver of productivity change is often seen as playing an important causal role with respect to economic growth, independent of geography and institutions. RST take geography, institutions and integration to be the three 'deep determinants' of economic prosperity across countries. The second contribution of their

paper is that they embed the three explanations of economic performance within a broader framework that allows for reverse causality from growth to trade, from growth to institutions, and for the indirect effects of geography on incomes through integration and institutions. RST use AJR's settler mortality rate as an instrument for institutional quality and an instrument for trade proposed by Frankel and Romer (1999) – the trade/GDP ratio constructed on the basis of a gravity equation for bilateral trade flows.

RST first estimate their model of economic growth (with the linkages between integration, geography and institutions as described above) first using the 64 country sample of AJR 2001, then a 79 country sample which is largest sample that can be used while retaining the AJR instrument, and finally a 137 country sample, where the instrument for institutional quality is the fraction of populations speaking English and Western European languages (taken from Hall and Jones, 1999). RST find that institutions overwhelmingly trump integration, and do slightly better than geography in explaining cross-country variations in income per capita.

However, there has been criticism of the nature of the instrumental variable for institutional quality used in the AJR and RST studies. Albouy (2005) finds that the settler mortality data that forms much of the basis of the cross-country work on institutions is partly flawed and that when the AJR equations are estimated with revised mortality data, their results turn out to be less robust, less significant and suffering from 'weak instrument' pathologies.[3] Olsson (2005) argues that AJR's approach of treating the heterogeneous colonisation experiences of non-Western countries within a single historical framework is problematic, and finds that once the AJR sample of countries is disaggregated into a Latin American, African and a combined Asian and Neo-European sub samples, the hypothesis of a link between disease environment and institutions is weak or rejected for the Latin American and African sub samples but works well for the other remaining former colonies. Olsson argues that the reason the disease environment does not seem to have a clear negative relationship with institutional quality for the Latin American and African countries is because in the first case, when colonization occurred in the sixteenth and seventeenth centuries, institutions of private property had not yet been established in the colonist countries – Spain and Portugal in this case. Thus, for the mainly Spanish and Portuguese colonies, the choice between extractive and productive institutions does not seem to have been in place. In the second case, with the African countries, colonization occurred after 1885 when medical advances such as the use had dramatically reduced settler mortality in malaria and yellow fever and thus diminished the importance of disease environment for colonial policy.

A second limitation of the AJR and RST studies is that they are not able to disentangle the effects of geography from the effects of institutions on economic growth since the instrument that they use for institutional quality – settler mortality rates – is also correlated with geographical factors. Settler mortality rates will be high in countries with the disease environment led to higher mortality rates as a whole. Sachs (2003) shows that the geography does pretty well as an independent explanatory of income differences across countries if the risk of malaria is used as an instrument of malaria prevalence, in regressions where institutional quality is also included.

A third weakness of these studies is that cross-country regression analysis find it difficult to control for unobserved country specific attributes that are relevant in understanding the heterogeneous growth experiences of developing countries (Kenny and Williams, 2001). As RST themselves note, 'desirable institutional arrangements have a large element of context specificity arising from differences in historical trajectories, geography, political economy or other initial conditions' (pp. 22). The considerable variations among developing countries in relation to various structural features and historical aspects that have a direct bearing upon the impact of institutions on the growth process imply that attempts to characterize the 'average' developing country in terms of a cross-country regression is unlikely to yield sensible results.

In our paper, we propose to address these methodological limitations of the empirical literature on institutions and growth by using dynamic panel estimators which allow for innate differences in initial conditions across countries and which are less subject to the 'weak instrument pathologies' of the studies in the AJR genre. By confining our sample to Sub-Saharan Africa, and by using a time-varying measure of institutions, we can better isolate the effects of institutions on economic growth over geographical factors.

3.   WHY DO STATE-BUSINESS RELATIONSHIPS MATTER FOR ECONOMIC GROWTH?

Effective state-business relations or public-private sector dialogue are important determinant of economic growth at the macro-level. State-business relations affect growth through a number of routes. First they can help to solve information related market and co-ordination failures in areas such as skill development or infrastructure provision. For instance, business associations or government departments may co-ordinate disperse information amongst stakeholders.

Secondly, SBRs provide a check and balance function on government policies and tax and expenditure

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3.   Another of Albouy's criticisms of the settler mortality rate used in AJR is that the data does not distinguish between mortality rates of soldiers at war (campaign rates) and at peace (barrack rates).

plans; thus SBRs may help to ensure that the provision of infrastructure is appropriate and of good quality. The design of effective government policies and regulations depends, among other things, on input from and consultation with the private sector. Regular sharing of information between the state and businesses ensures that private sector objectives are met with public action and that local level issues are fed into higher level policy processes (OECD, 2006). The private sector can identify constraints, opportunities, and possible policy options for creating incentives, lowering investment risks, and reducing the cost of doing business. More efficient institutions and rules and regulations might be achieved through policy advocacy which could reduce the costs and risks faced by firms and enhance productivity.

Finally, effective state-business relations and membership of business association may help to reduce policy uncertainty. Firms operate in an uncertain environment and frequently face risk and resource shortages. They undertake decisions concerning technology, inputs, and production facilities based on anticipated market conditions and profitability. Uncertainty can have significant negative effects on investment, when investment involves large sunk and irreversible costs and there is the option to delay the decision to make the investment until further information becomes available (Dixit and Pindyck, 1994). Businesses that have a better relation with government may be able to anticipate policy decisions.

Harriss (2006) suggests that good SBRs are based on benign collaboration between business and the state with positive mechanisms that enable *transparency*, that is, the accurate and reliable information flow between business and government; ensure the likelihood of *reciprocity* (as, for example, when state actors have the capacity and the autonomy to secure improved performance in return for subsidies); increase *credibility* of the state among the capitalists, and establish high levels of *trust* between public and private agents. They provide a transparent way of sharing information, lead to a more appropriate allocation of resources, remove unnecessary obstacles to doing business, and provide checks and balances on government intervention.

Hisahiro (2005) argues that various forms of information and resources, which are dispersed among entities in the public and private sector, need to be integrated in a more sophisticated way to jointly co-ordinate policies and provide better public services. It is this combination of insulation and connectedness that minimises the risks and enhances the effectiveness of economic policies. Hence, appropriate government capacity and policy, which is necessary to support private sector development and promote economic growth, can be enabled by good state-business relations and productive public-private sector dialogue.

## 4. MEASURING STATE-BUSINESS RELATIONSHIPS

Testing the effects of state-business relations depends on a good measurement of state-business relations. This is a complex issue (see Te Velde, 2006). We suggest to follow the literature above (section 3) to score the factors associated with effective SBRs. There are four main elements responsible for good SBRs:
   i   the way in which the private sector is organised vis-à-vis the public sector
   ii   the way in which the public sector is organised vis-à-vis the private sector
   iii the practice and institutionalisation of SBRs
   iv   the avoidance of harmful collusive behaviour.

The measurement of the role of the private sector in state-business relations is based on the presence and length of existence of an umbrella organisation linking businesses and associations together. The measurement of the private sector in state-business relations is based on the presence and length of existence of an investment promotion agency (IPA) to promote business. Effective SBRs requires the cooperation of the public and private sector, and we examine a number of factors. This mechanism can come in a number of different forms: it can be open to all and autonomous of government intervention as is the case with a formal existing body, or it can be an informal 'suggestive' body with no entrenched power. The measurement of how the state interacts with business is based on the format, frequency, and existence of state-business relations. Finally, the presence and length of existence of laws protecting business practices and competition measures the mechanisms to avoid collusive behaviour will examine.

Each of the four factors can be measured for a number of African countries over time. We focus on 20 countries for which we have data on each of the four indicators. This leads to four, time-varying indicators per country. In order to obtain a composite measure, we take the average of the above indicators (attaching the same weight to each indicator). Te Velde (2007) shows the raw data for country-specific averages. Chart 1 plots the averages for four groups of countries, ranging from the fastest growing groups over 1970–2005 (group 1) to the slowest growing group (group 4). As expected country groups with higher SBR scores grow faster.

Chart 1: Higher SBR scores for groups of faster growing countries
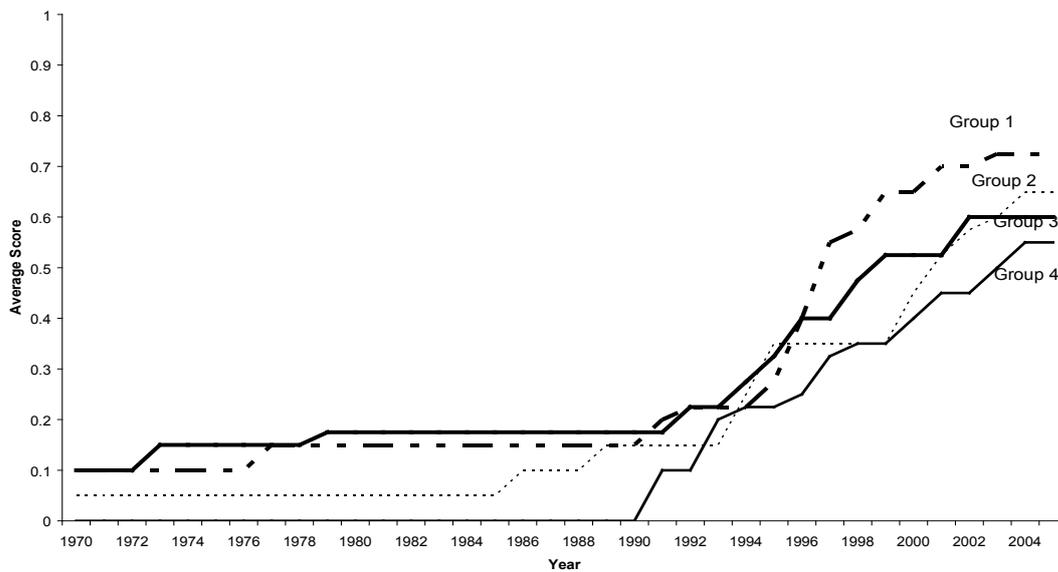
Notes: Group 1 = Botswana, Mauritius, Uganda, Mozambique, Mali; Group 2 = Tanzania, Ghana, Eritrea (part), Senegal, Kenya; Group 3 = Benin, Ethiopia, South Africa, Nigeria, Rwanda; Group 4 = Malawi, Zimbabwe, Madagascar, Zambia, Cote d'Ivoire. Groups based on PPP GDP per capita growth rates over 1980–2004.

5. EMPIRICAL SPECIFICATION, DATA AND ECONOMETRIC METHODOLOGY

In this section, we first discuss the specification to be used in the estimation of the determinants of economic growth. We then describe the data used in the regressions, followed by a brief exposition of the econometric methodology.

Empirical Specification

Our objective in this paper is to examine the effect of effective state-business relationships, SBR (as captured in our proposed measure discussed in the previous section) independent of other factors that have been found to determine economic growth across countries and over time. We start with the formulation of a growth regression in panel data form, with SBR as an additional explanatory variable: :

$$Y_{it} = a_0 + a_1 Y_{it-1} + a_2 X_{it} + a_3 SBR_{it} + v_i + u_t + e_{it} \qquad (I)$$

Where i is country, t is time, and Y is GDP per capita.

X is a vector of standard macro control variables. As is standard in the literature, we use Government Consumption (as a ratio of GDP), Inflation (per cent) and Open-ness to trade, measured by Exports plus Imports as a ratio to GDP (Barro, 1994).

The error terms v_i and u_t capture the time-invariant and country-invariant components of the error term, while e_{it} is the white noise component of the error term.

The presence of the lagged GDP term, Y_{it-1}, is important for two reasons. Firstly, it captures path dependence in growth experiences as has been found to be the case in most historical accounts of economic growth (Rodrik, 2003). Secondly, it captures the conditional convergence hypothesis predicted by the neoclassical theory of economic growth - a negative and significant coefficient on the lagged GDP term indicates that countries relative to their steady-state output level are experiencing a slowdown in economic growth (Caselli et al., 1996).

Given our discussion in Section 4, we postulate that a_3 is positive and is statistically significant.

We would also like to examine whether effective state business relationships matter for economic growth independent of other measures of institutional quality that have been found to be important in the cross-country empirical literature on growth. This also allows us to ascertain whether our measure of effective state-business relationships is simply capturing other institutions that seem to matter for economic growth – respect for property rights or the effectiveness of the bureaucratic quality, for example. We have argued in Section 3 that effective state-business relationships capture an important *independent* dimension of the role of the state in economic growth that has not been adequately addressed in the cross-country empirical growth literature– the state's ability to both facilitate and harness the activities of the private sector so as to maximise the wealth-creating possibilities of the latter. Previous empirical studies of the role of institutions in growth measure institutional quality by the rule of law index (Keefer and Knack [1994], Sachs and Warner [1997]), the risk of expropriation (AJR, 2001), government repudiation

of contracts (Keefer and Knack [1994], Sachs and Warner [1997]), bureaucratic quality (Keefer and Knack [1994], Sachs and Warner [1997]), incidence of corruption (Mauro, 1995) , and constraints on the executive (Glaeser et al., 2004). As we have argued earlier, several of these measures principally capture the state's ability in protecting property rights. To see whether our measure of state-business relationships, SBR, can explain economic growth independent of these other institutional variables, we will augment equation (I) by these measures and test for the significance of SBR in the presence of these variables.[4]

Thus, our augmented regression is:

$$Y_{it} = a_0 + a_1 Y_{it-1} + a_2 X_{it} + a_3 SBR_{it} + a_4 LAW_{it} + a_5 BQ_{it} + a_6 CORR_{it} + a_7 XC_{it} + v_i + u_t + e_{it} \qquad (II)$$

where LAW measures the rule of law and reflects the degree to which citizens of a country are willing to accept the established institutions to make and implement laws and adjudicate disputes; BQ is the bureaucratic quality index and measures autonomy from political pressure and strength and expertise to govern without drastic changes in policy or interruptions in government services; CORR is the corruption in government index and measures whether illegal payments are generally expected throughout government in the form of bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans; and XC is a measure of extent of institutionalised constraints on the decision making powers of chief executives. For all these variables, higher values imply greater institutional quality (that is, higher values of LAW, BQ, CORR and XC imply higher prevalence of the rule of law, better quality of the bureaucracy, lower corruption and greater constraints on the executive). Clearly, the coefficients a_4, a_5, a_6, and a_7 are expected to be positive and significant. Our interest is to determine whether a_3 remains positive and significant in the presence of the alternate measures of institutional quality.

Data

Economic growth is measured by the year to year changes in GDP per capita, where the latter is in 1980 constant price local currency.[5] Data on GDP per capita along with government consumption (GC), inflation (INFL) and open-ness (OPEN) are obtained from the World Bank's *World Development Indicators*. Data on bureaucratic quality (BQ), rule of law (LAW), and corruption (CORR) are obtained from the International Country Risk Guide published by Political Risk Services (PRS). These measures were originally constructed by the Centre for Institutional Reform and the Informal Sector (IRIS) (see Knack and Keefer [1994] for further details). The variables are only available for the period 1984–2004. Data on executive constraints (XC) are obtained from the on-line database of the Polity IV project hosted by the Centre for International Development and Conflict Management in the University of Maryland. This variable is available for the entire period 1970–2004. We use a panel of nineteen Sub-Saharan African countries for the period 1970–2004.[6]

Summary statistics of the variables to be used in the regressions are presented in Table 1. We see wide variation in our sample in our dependent variable – income per capita– and some of macro control variables – inflation and open-ness – and the measure of executive constraints, and less so in our measure of state-business relationships and in measures of the rule of law, bureaucratic quality and corruption. .

We also compute correlation coefficients between the variables of interest in Table 2 to assess the strength of association between each pair of variables that we will be using later in the econometric analysis. The correlation coefficients are quite low in most cases, suggesting that we should not expect multi-collinearity between the SBR measure and the macroeconomic variables, and between the SBR measure and the other measures of institutional quality. The latter is an interesting finding as it suggests that the SBR measure do not seem to be capturing the aspects of institutional quality that are incorporated in the standard measures of institutions. However, there is a strong correlation between the bureaucratic quality measure and the corruption measure.

4.　　Unfortunately, data on expropriation risk and government repudiation of contracts is only available for 1987-1994 so we do not use these variables in the augmented regressions.
5.　　We did not use constant PPP prices as there was no sufficient data on PPP prices for all countries in the sample for the period under consideration. However, for a smaller set of countries for a shorter period, we used GDP in constant PPP prices with no change in the results.
6.　　We omit Ethiopia from the final set of countries in our sample, as comparable data is not available for the period of the study.

Table 1. Summary Statistics

Variables	Mean	Maximum	Minimum	Standard Deviation
Log Y	10.12	14.64	5.29	2.37
SBR	0.225	1.000	0.000	0.271
INF	17.46	350.18	-14.17	29.31
GC	14.65	34.33	5.86	4.92
OPEN	58.68	164.24	6.32	26.27
XC	0.35	7.00	-88.00	16.24
LAW	3.00	5.00	0.00	1.16
BQ	2.28	6.00	0.00	1.33
CORR	2.91	6.00	0.00	1.01

Notes: Log Y = Logarithm of Real GDP per capita in local currency, SBR = State Business Relationship Score, GC = Government Consumption / GDP, INF = Inflation Rate (per cent), OPEN = Exports + Imports / GDP, XC = Polity IV score of Executive Constraints, LAW = PRS Measure of Rule of Law, BQ = PRS Measure of Bureaucratic Quality, CORR = PRS Measure of Corruption.

Table 2. Correlation Coefficients

Variables	Log Y	SBR	INF	GC	OPEN	XC	LAW	BQ	CORR
LOG Y	1.00								
SBR	-0.01	1.00							
INF	0.01	-0.09	1.00						
GC	-0.22	0.21	-0.03	1.00					
OPEN	-0.04	0.25	-0.03	0.38	1.00				
XC	0.09	0.09	0.03	0.16	0.15	1.00			
LAW	0.01	0.20	-0.31	0.09	0.24	0.14	1.00		
BQ	-0.04	-0.02	-0.02	0.30	0.09	0.08	0.01	1.00	
CORR	0.13	=0.07	-0.17	0.07	-0.02	0.07	0.19	0.54	1.00

Notes: Log Y = Logarithm of Real GDP per capita in local currency, SBR = State Business Relationship Score, GC = Government Consumption / GDP, INF = Inflation Rate (per cent), OPEN = Exports + Imports / GDP, XC = Polity IV score of Executive Constraints, LAW = PRS Measure of Rule of Law, BQ = PRS Measure of Bureaucratic Quality, CORR = PRS Measure of Corruption.

Econometric Methodology

With the presence of the lagged GDP term in equation (1) and the possible correlation between this term and country-specific time-invariant effects (fixed effects), the preferred estimator is the GMM estimator proposed by Arellano and Bond (1991) which differences the data to get rid of country specific effects or any time invariant country specific variable (such as initial conditions and cultural attributes and time-invariant geographical factors such as distance from the equation and climactic factors). This also eliminates any endogeneity that may be due to the correlation of the country specific effects and the independent variables. The estimator also allows for possible endogeneity of the independent variables, by using two period lags of the right hand side variables as instruments for the possible endogenous variables. Thus, the GMM estimator allows for the possibility that some of the independent variables in equations (1) and (2) such as our SBR measure and other measures of institutional quality, and open-ness are endogenous to economic growth. To test whether the Arellano-Bond GMM estimator is correctly specified, three diagnostic statistics are normally reported – the Sargan test for over-identifying restrictions, and tests for first and second order serial correlation. The GMM estimator is appropriately specified if the over-identifying restrictions are not rejected, the test for first order serial correlation cannot reject the null on no correlation, but the test for second order serial correlation does reject the null of no correlation by any standard levels of significance.

6. FINDINGS ON THE SBR – GROWTH RELATIONSHIP

Table 3 presents the dynamic panel GMM results. We initially included two lags of the dependent variable; however, the second lag was found to be insignificant and was consequently omitted. We treat all our explanatory variables as potentially endogenous and use lags of these variables as instruments for current values. In Col. (1), we present the results of the basic specification, with the SBR measure and the macro controls included, but not the other institutional quality variables. In Col. (2), we include XC, and in Cols (3) to (5), the other institutional quality variables, LAW, BQ and CORR included one by one.

Finally, in Col (6), we estimate equation (2) with all measures of institutional quality included. In the case of the latter three variables, we have data for the period 1987–2004, so the time-series dimension of the panel is greatly reduced for this augmented model which includes all the measures of institutional quality for which we have relevant data.

All the diagnostic statistics reported in the table are satisfactory in all cases. The Sargan test does not reject the over-identification restrictions, the absence of first order serial correlation is rejected and the absence of second order serial correlation is not rejected. Among the macro controls, only the coefficient on inflation is statistically significant and of the right sign (negative) in all the six estimates. The coefficient on Government consumption is negative and statistically significant for all the estimates where we have included measures of institutional quality as additional controls. The coefficient on open-ness is positive and significant (at the 10 per cent level) only for the estimates presented in Col. (5). Thus, the results suggest that higher values of inflation and government consumption as a ratio of GDP lead to lower growth.

Among the conventional measures of institutional quality, the coefficient on executive constraints is positive and significant in the estimates presented in Cols (2) to (6), and the coefficient on the rule of law is positive and significant when the variable is included singly or with the other variables of institutional quality drawn from the same PRS data-base (bureaucratic quality and corruption). However, neither bureaucratic quality nor corruption re found to be important determinants of per capita GDP, with the values of the coefficients for these variables below conventional levels of significance. The striking result is that the coefficient on SBR is positive and significant at the 5 per cent level or less for all six estimates presented in Cols (1) to (6). The value of the coefficient on the SBR variable is in the range of 0.03 to 0.04 in all the six estimates, and the magnitude of SBR's impact on per capita income is remarkably robust to different specifications of the growth equation. The significance of the SBR variable remains even when the more commonly used measures of institutional quality are included, such as the degree of executive constraints, the rule of law, corruption and the quality of the bureaucracy. This suggests that our measure captures a different dimension of institutional quality from those ordinarily studies in the literature on institutions and growth. Our results present strong support for the proposition that effective state-business relationships matter for economic growth in Sub-Saharan Africa, independent of other measures of institutional quality and macroeconomic factors.

Table 3. Growth Regressions

	Col. (1)	Col. (2)	Col. (3)	Col. (4)	Col. (5)	Col. (6)
GDP (-1)	0.94 (63.39)***	0.94 (63.17)***	0.91 (39.29)***	0.91 (38.94)***	0.91 (38.86)***	0.91 (38.29)***
SBR	0.03 (2.51)**	0.03 (2.95)***	0.03 (2.80)***	0.04 (3.07)***	0.03 (2.77)***	0.03 (2.02)**
Inflation	-0.0003 (3.95)***	-0.0003 (3.91)***	-0.0002 (3.00)***	-0.0002 (3.97)***	-0.0003 (4.06)***	-0.0002 (3.13)***
Govt. Consumption	-0.001 (1.52)	-0.001 (1.63)*	-0.001 (1.73)*	-0.001 (1.96)**	-0.001 (1.98)**	-0.001 (1.77)*
Open	0.0003 (1.61)	0.0003 (1.44)	0.0001 (0.95)	0.0003 (1.56)	0.0003 (1.69)*	0.0001 (1.04)
Executive Constraints	- - -	0.0003 (1.54)	0.0003 (2.24)***	0.0003 (2.63)***	0.0003 (2.72)***	0.0003 (2.26)**
Law	- - -	- - -	0.006 (2.12)**	- - -	- - -	0.007 (2.16)**
BUC Quality			- - -	0.001 (0.41)	- - -	0.0004 (0.12)
Corruption			- - -	- - -	-0.002 (0.74)	-0.004 (1.12)
Sargan Test (p value)	472.5 (0.99)	470.45 (0.99)	311.44 (1.00)	311.76 (1.00)	311.61 (1.00)	309.17 (1.00)
First Order Serial Correlation test (p value)	-9.29 (0.00)	-9.29 (0.00)	-7.28 (0.00)	-7.27 (0.00)	-7.29 (0.00)	-7.29 (0.00)
Second Order Serial Correlation test (p value)	-1.50 (0.13)	1.22 (0.22)	0.29 (0.77)	0.40 (0.69)	0.48 (0.63)	0.38 (0.71)
Cross-sections Included	19	19	19	19	19	19
Number of Observations	560	313	313	313	313	313

7. Do More Effective State-Business Relationships Lead to a Decline in Poverty?

As we have argued in Section 3, there are clear theoretical arguments that link effective state-business relationships to economic growth. However, from a theoretical perspective, it is less clear why a synergistic relationship between the state and the private sector should necessarily lead to a decline in poverty. For example, Qureshi and te Velde (2007) find that small firms benefit the most in terms of higher productivity by joining a business association. Large firms may not need to use business associations for lobbying the government for a more conductive investment climate if they have other and more informal ways of doing so. In this case, effective state-business relationships will impact on the positive growth of small firms relative to large firms, and may have a positive effect on poverty both by increasing the rate of economic growth and reducing inequality. On the other hand Rodrik and Subramanian (2004) and Kohli (2006) make the argument that it is the formal manufacturing sector that benefit the most from a pro-business attitude of the government, since the transactions costs of ant-business attitude of the state is the largest in this sector. In this case, a more effective relationship between the state and the business sector may lead to an expansion of the formal manufacturing sector. Given that incomes tend to be higher in the latter as compared to the agricultural and informal manufacturing sector, it is likely that with the growth of the formal manufacturing sector, inequality will increase for some time (in a standard dual economy model, with a perfectly elastic supply of labour curve to the formal manufacturing sector in the initial stages of industrialisation, the expansion of the latter will not have a strong positive effect on wages in agriculture and the informal manufacturing sector in the transition stage). Even with strong economic growth driven by the formal manufacturing sector, the impact on poverty is not clear (especially in a relative sense) with the increase in income inequality. Thus, whether effective state business relationships lead to lower poverty or not is an empirical issue.

We provide summarized information on measures of poverty and inequality changes in the countries in our sample for which we have data, along with the absolute change in our SBR measure. The data on poverty and inequality is only from mid 1980s to the mid 1990s so we restrict our calculation of the change in the SBR measure to this period (1985–1995). We present the three standard measures of poverty: the head count ratio, the poverty gap index and the squared poverty gap index; along with a measure of inequality (the Gini) and a measure of growth in income – the change in the mean consumption for all households.

We observe that among the ten countries for which we have data on poverty and inequality over time, Kenya, Senegal, Tanzania and Uganda are the star performers with declines in *both* inequality and poverty. On the other hand, Mali, Nigeria and Zambia have witnessed an increase in both inequality and poverty. Ivory Coast and Ghana have seen a fall in inequality but an increase in poverty. Botswana has seen an increase in inequality but a fall in poverty (and an extremely high rate of growth of mean consumption). What do these figures suggest about the SBR-poverty and SBR-inequality links? From the limited number of observations on which Table 4 is based, we do find that an improved state-business relationship leads to a decline in inequality and poverty – the correlation coefficient between the SBR measure and the Gini is a negative 0.54 and the correlation coefficient between the SBR measure and the head-count ratio is a negative 0.72. This is also clearly seen from two country examples – Mali has seen **no** improvement in the SBR score in 1985–1995 and has the highest increase in poverty and inequality, and Uganda has the most improved SBR score for 1985–1995 and has seen significant declines in poverty for the period 1989–1996. Therefore, the data seems to suggest that more effective state-business relationships lead not only to higher rates of growth, but also to higher rates of pro-poor growth.

Table 4. The Relationship between SBRs and Measures of Poverty and Inequality

Countries	Percentage change in:					Absolute change in SBR
	Gini	Head Count Ratio	Poverty Gap	Squared Poverty Gap	Mean Consumption	
Botswana	16.3	-6.0	-3.9	-2.8	54.0	0.375
Ivory Coast	-11.0	103.4	77.1	56.8	-41.9	0.25
Ghana	-15.3	22.5	50.5	77.7	13.4	0.5
Kenya	-21.9	-37.2	-51.8	-60.3	-7.6	0.5
Mali	38.3	377.8	808.9	1270.0	-57.7	0
Nigeria	30.7	6.0	18.1	25.0	9.2	0.25
Senegal	-23.7	-43.7	-64.4	-74.8	6.5	0.375
Tanzania	-35.4	-61.6	-79.1	-86.6	10.6	0.25
Uganda	-15.4	-43.3	-60.5	-69.9	16.0	0.625
Zambia	8.9	12.1	8.8	3.7	-1.5	0.375

Source: Kraay (2006) and te Velde (2006)

Notes: Period covered for the poverty/inequality data: Botswana – 1985–1993, Ivory Coast – 1985–1995, Ghana – 1987–1999, Kenya – 1992–1997, Mali – 1989–1994, Nigeria – 1985–1997, Senegal – 1991–1994, Tanzania – 1991–1993, Uganda – 1989–1996, Zambia – 1991–1998.

8. CONCLUSIONS

So far, the literature on institutions and economic growth has focused its attention primarily on the predatory role of the state. The main finding of the empirical studies that for the basis of this literature is that economic growth has occurred in contexts where the state has respected the property rights of private producers and where it did not expropriate property or allows others to do so. However, these empirical studies have been subject to criticism in not being able to adequately isolate the effect of institutional quality from that of geography, to take into account innate country-specific differences in culture and initial conditions, and to satisfactory address the possibility of reverse causality from economic development to improvements in institutional quality.

In this paper, we address an over-looked aspect of institutional quality in the empirics of economic growth – the effectiveness of the relationship between the state and the business sector – which we argue can play a decisive role in economic growth, independent of other factors that have been found to be important in explaining economic growth across countries… We propose a measure that can capture the four dimensions of effective state-business relationships: i) the way in which the private sector is organized vis-à-vis the public sector; ii) the way in which the public sector is organized vis-à-vis the private sector; iii) the practice and institutionalization of SBRs; and iv) the avoidance of harmful collusive behaviour. We find that this measure shows an unambiguous improvement in state-business relationships in Sub-Saharan Africa over 1970–2004, though there are significant differences in the rate of improvement across countries.

Using this measure, we estimate standard growth regressions in panel form for 19 Sub-Saharan African countries with other controls for the macroeconomic environment, along with the more conventionally used measures of institutional quality in the empirical literature. We adopt dynamic panel GMM methods to address the problem of reverse causality and omitted country-specific attributes and initial conditions. Restricting our sample to Sub-Saharan African countries also help us to a large extent to control for the independent role of geography on economic growth. Our results show that effective state-business relationships contribute significantly to economic growth in Sub-Saharan Africa – countries which have shown improvements in state-business relationships have witnessed higher economic growth, controlling for other determinants of economic growth. Our results indicate the importance of benign collaboration between the state and the business sector in bring about improvements in living standards in Sub-Saharan Africa.

Our exploratory data analysis of the SBR-poverty-inequality relationships suggests there may be a negative relationship between effective SBRs on one hand and poverty and inequality on the other. Combined with our finding that improved SBRs lead to higher growth, this suggests that a more effective relationship between the state and business can have a strong positive impact on pro-poor growth. However, there is clearly a need for more rigorous analysis of the impact of SBRs on pro-poor growth, both using cross-country econometric methods and historical case-studies of individual countries. Furthermore, there is need for further research in understanding why there has been differential improvement in the relationship between the state and the business sector in different parts of Sub-Saharan Africa.

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