

Institutions and politics in a Lewis-type growth model

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Abstract. We examine the impact of politics and institutions on growth in the light of Lewis' writings. The basic approach is to emphasise that the accumulation of 'capitalist surplus', as featured in the Lewis model, is threatened for political reasons if the oppressed decide to rebel against the inequality or the pressure on living standards involved in 'economic development with unlimited supplies of labour'; and therefore it is sensible for governments to invest in political and institutional devices which will insure against such political disturbances provoked by the vulnerability of influential groups. We call such investments a 'social efficiency wage premium', as the argument has analogies with the efficiency-wage theories of labour economics. We find that growth, across a sample of 58 countries between 1980-2001, is significantly associated with the ICRG country risk index, the female/male educational ratio, and 'pro-poor expenditure', all of which we see as correlates of a country's political vulnerability in the sense used above. Standard political/institutional variables in the literature – in particular ethnolinguistic fractionalisation and protection against expropriation risks – fare less well. One lesson, we conclude, is that investments of a country's surplus in measures to reduce political vulnerability are well warranted; we illustrate from the recent 'East Asian' crisis.

1. Introduction

In the preface to his largest but not his best-known work on economic development, *The Theory of Economic Growth* (1955), Arthur Lewis states that 'no comprehensive treatise on the subject has been published for about a century'. In that book he seeks to provide a map 'on a scale more like an inch to a hundred miles [than an inch to a mile]' (Lewis 1955:5) of the principal forces underlying the process of long-period economic development, and although his methodology is very different from that of most practitioners of the 'new growth theory' which hit the world thirty years later, the independent variables which form the thematic headings of *The Theory of Economic Growth* – capital, knowledge, government policies – overlap very significantly with those of new growth theory. Notwithstanding this, and in spite of the massive and continuing salience of 'Economic Development with Unlimited Supplies of Labour' (Lewis 1954), modern work on growth theory has admitted to few influences from any of Lewis' work². It would therefore appear worthwhile to assess what can be learned from him, even in the wake of more than two million regressions, fifty years later.

In this paper we do this in a very partial way. We make no attempt to be comprehensive, and leave several factors seen as crucial both by Lewis and by the new growth theorists - in particular those associated with markets for labour, capital and skill – unexamined here. Rather, we focus on the

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² For example, Lewis does not figure in the index of the standard text on new growth theory (Barro and Sala-I-Martin, 1995)

variables which have entered new growth theory within the last ten years. These include institutional variables (Acemoglu et al 2001), ethnic and political conflict and other indices of government competence and ability to manage crisis (Easterly and Levine 2002); and social capital (Knack and Keefer 1997, Whiteley 2000). Each of these variables, of course, spans the divide between economics and the other social sciences, and reminds us that Lewis was much more than an economist: at a minimum, an economic historian and a political scientist as well. Within the set of factors identified by Lewis as being important in driving the process of long-term growth, therefore, we focus on these institutional and political variables, and leave the contributions more typically associated with Lewis' work to be dealt with by other contributions to this symposium. The contribution made by Lewis in these fields in relation to more recent writers on growth will be examined in section 2, and is embodied in a possible explanatory model in section 3. Empirical tests of this new approach are in section 4, and section 5 concludes.

2. Lewis and others on institutions and political processes in growth

Political forces in development

Lewis was one of the first people, a quarter of a century before the age of structural adjustment, to document the influence of government failure as an influence on developmental failure. As a member of the United Nations task force on *Measures for the Economic Development of Under-Developed Countries* (United Nations 1951) he provided, in conjunction with T.W. Schultz and others, the first post-war critique of the influence of the excessive influence of the state on the economies of developing countries, and in the penultimate chapter of his *Theory of Economic Growth* he lists nine ways in which the state can harm the process of economic development.

These (Lewis 1954:408) are:

- '(1) failing to maintain order;
- (2) plundering the citizens;
- (3) promoting the exploitation of one class by another;
- (4) placing obstacles in the way of foreign trade;
- (5) neglecting public services;
- (6) excessive *laissez-faire*;
- (7) excessive control;
- (8) excessive spending;
- (9) embarking on costly [external]wars'.

There is very little of the 1980s liberal critique of the state's role in developing countries, and of its incorporation into the modern theory of economic growth, which is not prefigured in this list and Lewis's subsequent gloss on it; and indeed prefigured in a suitably balanced way. In particular, the dangers of 'excessive *laissez-faire*' are illustrated in *The Theory of Economic Growth* in a manner which can still provide inspiration to the 'post-Washington consensus' (Stiglitz 1998, Gore 2001) . We are here concerned specifically with two aspects of the manner in which government failure can impact on growth rates; political *systems* and political *stability*.

The role of the formal political process in development is not mentioned amongst the nine elephant-traps, but of course it can impact on all of them. Lewis became increasingly interested over the passage of time with the role of the political process in development and in 1965, in the immediate wake of decolonisation, published *Politics in West Africa* (Lewis 1965). The exposition at times appears to adopt the standard liberal approach of wishing to screen off the executive machinery of economic policy from the political process in the manner favoured by Williamson (1995) :

'mature societies rely for good government on having a trained civil service rather than on the vagaries of politics. West Africa will not begin to make real progress until its people realise that politics is marginally important to the quality of government; reduce the political temperature; debunk the pretensions of politicians; and establish good administrative frameworks. Too much politics is the curse of West Africa' (Lewis 1965:78)³

It is only one step from here to Morrisson et al's plea (1995:) for economic reform tools such as exchange rate management which short-circuit the political process, and indeed only two steps to Deepak Lal's claim(1983: 33) that an effectively reforming government may have to ride rough-shod over the forces of democracy. However Lewis takes neither step. He accepts party politics as a relatively attractive way of achieving mass participation in the allocational choices which no government can avoid, and that if those choices are not taken through a political process they are likely to be taken through a process – for example military or other totalitarian government – which is one way or another coercive for the majority of people.

On this choice, Lewis is unswervingly a democrat, 'not [because] it prevents tension, but because open discussion creates a healthier society than is achieved by suppression'(1965:44); indeed, he elsewhere argues that 'the only important coercion which is crucial to development is taxation' (1965:42). However, as he makes clear in *Politics in West Africa*, he is a democrat of a particular sort: wholly opposed to the one-party systems which have been a feature of many African political systems since independence(1965:chapter II.4)⁴, and disposed to argue in favour of coalitions of ethnically-based parties⁵, of a kind which, however, have only rarely come into being.

Lewis's view of the governance conditions which are favourable for development goes beyond this. He has, as we have seen, placed corruption - - 'plundering the citizens', 'promoting the exploitation of one class by another' and 'excessive control' – at the heart of his analysis of government failure, and indeed at one point asserts, in 1955, that 'most governments are, and always have been, corrupt and inefficient. The art of creating a public service free from corruption... has been learnt only slowly, and only in a few countries' (Lewis 1955: 83). This degree of plain speaking had not even been achieved by the World Bank when it came to write its 1997 *World Development Report*. on governance, and it is one reason why Lewis's career as a policy adviser, treated by other contributions to this symposium, experienced a considerable measure of frustration.

³ Here and elsewhere, Lewis is impatient of the suggestion that the state should govern the market, beyond the provision of public goods; in particular, he brusquely rejects Nkrumah's dictum 'Seek ye first the political kingdom', admirably quoted by many nationalists in the 60s and 70s, as 'an adolescent attitude to politics' (1965: 78)

⁴ On the grounds that they 'cannot represent all the people; or maintain free discussion;or give stable government;or, above all, reconcile the differences between various regional groups' (1965:63).

⁵ This belief is taken to characteristic extremes in places, e.g. 'All good government is coalition government'(1965:70)

Beyond this Lewis, for all his impatience with ‘politics’, had his ear closer to the ground than many academics or IMF staff and was willing enough to see and warn governments of the political limits beyond which policies should not be pushed. He acknowledged that ‘most governments find it easiest to tax those who oppose them and to exempt those on whose support they rely, and this fact plays as large a part in determining the distribution of the tax burden as considerations of equity, of incentives, or of savings. Yet the fact remains that in most of these economies it is impossible for the government to play the roles it needs to play in economic development unless it taxes *all* classes more heavily than at present. The major political problem in most of these countries is to persuade the people that this is so, and to gain their consent to the necessary measures. [In particular] the main problem is whether it is politically feasible to levy adequate taxation upon the peasants’ (Lewis 1955: 401 and 408). By ‘the peasants’ Lewis of course meant a group in the interstices between the two parts of his ‘dual economy’ – neither multinational companies nor subsistence agriculturists, but entrepreneurial rural capitalists of modest means. That this group had the capability to abort a process of take-off into sustained growth, by capital flight or otherwise, was something which Lewis saw clearly. ‘The greatest political question which a country such as India now has to face is whether it can force a doubling or trebling of domestic saving without involving its people in hatred and violence on a large scale’ (1955:382). These political limits to development have been observed in the recent ‘East Asian’ crisis in which fiscally-triggered political disturbances, with a number of deaths, have added a multiplier to the economic damage caused by the slump. In Bolivia in February 2003 the flashpoint for these disturbances was, precisely, a proposed extension of the income tax net, as in Lewis’ example; in Argentina the previous year, a freezing of domestic savings deposits; and in Indonesia in 1998, a rapid devaluation accompanied by a loosening of capital controls and other measures such as user charges designed to satisfy the IMF’s targets for the financial deficit.

Writers in new growth theory have used different approaches to modelling this political limit, and the impact of respecting it or flouting it on the growth process. One approach, used for example by Levine and Renelt (1992) and Easterly and Levine(1997) is simply to use the number of coups and assassinations in a country as an *ex-post* indicator of political vulnerability, and factor this number into a growth regression. More recent literature has sought to try and find indicators for vulnerability to coups and other political disruptions to growth – including of course the political feasibility or otherwise of the policies pursued in the run-up to a crisis. Easterly and Levine (1997:1207, for example, analyse Africa’s ‘growth tragedy’ with the help of an index of ethnic diversity – which, they argue, ‘(a) encourages the adoption of growth-retarding policies that foster rent-seeking behaviour and (b) makes it more difficult to form a consensus for growth-promoting public goods.’ The role of consensus and networking within and between social groups and its influence on the feasibility of growth-promoting policies has of course been studied by the social capital literature, for example Knack and Keefer(1997) and Whiteley(2000). More recently, I have attempted (Mosley 2004; also Mosley, Hudson and Verschoor 2004) to show that the use of

certain policy instruments can increase the possibility of averting a collision between low-income people and government security forces – notably the use of ‘pro-poor expenditure’ policies, which can be adjusted relatively easily and afford the opportunity of building social capital by highlighting how many can participate in the public goods offered in exchange for fiscal impositions.

A provisional verdict on the empirical validity of Lewis’ political arguments must wait until Section 4, but in the interim, Table 1 gives an initial picture of the relationships between the variables visualised by Lewis and other new growth-theory writers.

Table 1. Political influences on growth in Lewis and subsequent commentators

Boldface variables represent variables used in new growth theory regressions.

Variables	Specification in Lewis	Specification in other commentators	Remarks
Legislative structure	(1) Democracy: <i>not</i> one-party (1965, chapter II.4)		
Administrative performance	(2) Corruption (1955, p.408)	Corruption indices .	
Social structure and other	Political limits to capacity to endure taxation and other economic shocks (1955, pp. 400-02)	‘Political instability’ (Easterly and Levine 1997:) – coups, assassinations	‘Africa’s high ethnic fragmentation explains a significant part of political instability corruption, hence ethno-linguistic fractionalisation used by Easterly and Levine as underlying explanatory variable.
		Social consensus; trust measures of social capital	Some attempts made to define those policy measures which will build social capital, notably pro-poor expenditure

Institutional forces in development

A number of recent contributions to new growth theory have also suggested that some indicator of institutional performance may be an important determinant of the incentive to invest, and thence of growth performance; some indeed have gone beyond this, and have specifically argued that '*only* the institutions view can explain the historical development paths of the last 500 years' (Acemoglu et al 2001:517, our emphasis). A 'protection of private property rights' indicator is one of the most popular of these institutional indicators, and is used by Knack and Keefer (1995) and Rodrik(1999) in growth regressions. More recently, Acemoglu et al. (2001), who also use a private property rights indicator as their key independent variable, have argued that current institutional performance is deeply rooted in the historical development of institutions, which in the case of most developing countries is rooted in colonial experience. Specifically, they draw a distinction between former 'colonies of settlement', such as the United States, Australia and Argentina, and 'colonies of exploitation', such as Congo, Bolivia and the West Indies, using the mortality rates of particular occupational groups in colonial times as a discriminator between the two categories. Acemoglu et al. argue that in the former type of colony private property rights were more likely to be entrenched in the law and thus respected, and that from this historical fact stem the different levels of incentives to invest, and thence the patterns of growth and of divergence seen within the development process over the past few centuries.

It is natural to invoke the commentary on these issues of Lewis, a native of one of the 'colonies of exploitation', who was both an escapee from and a would-be reformer of several of those colonial institutions (see other contributions to this symposium) as well as a theorist of long-period economic growth. In *The Theory of Economic Growth*, Lewis devotes more than a hundred pages to a chapter on economic institutions which, as may be expected, is also heavily informed by study of colonial history. Much of this reiterates the first two of Lewis 's warnings⁶ about the potential harmful influence of the state, and is thus completely consonant with the liberal position of Acemoglu et al.:

'If it is necessary to protect public property from private abuse, it is just as necessary to protect private property from public abuse. The maintenance of law and order is one of the primary conditions of economic growth, and many communities have declined because the state was unwilling or too weak to protect the owners of property against the actions of bandits or mobs. The instinct to invest can survive civil disturbance and even revolution; but if the period of disturbance is long-drawn out, dissaving takes the place of capital formation (1955:61).

However, there is much more than this to Lewis' position. He notes that the incentive to invest depends not only on the ability of institutions to protect the assets of individuals against *expropriation* (by the state or by other powerful individuals), but also on their ability to protect those assets against

⁶ Failure to keep order and plunder of private wealth: see page xx above.

other livelihood risks – climatic, civil disturbance, health shocks and so on – which tend to be more severe in their consequences, the further one moves down the income scale. As Lewis notes (1955: 48), ‘willingness to bear risk is partly a matter of temperament, partly a matter of what one can afford, and partly a matter of the tradition in which one has been raised. The more secure one’s economic foundation is, the more one can afford to risk.’ This has implications for the kind of institutions which need to be designed for participation by low-income customers to materialise – ‘actually the farmer needs insurance, even more than loans’ was one of the implications of this which Lewis noted in the financial sphere (1955:128). But what is crucial about this broadened approach to institutional provision is that it influences the outcome not only in terms of the allocation decisions of low income households, but also in terms of inequality which has a well-established impact both on investment and on poverty. The inequalities which are relevant are multiple but three on which we need to lay particular emphasis are the inequalities between levels of income and wealth, between men and women, and between ethnic groups.

Inequality of income and wealth. Alesina and Perotti (1996) have established a negative empirical cross-section correlation between inequality and investment, hence also growth, across a sample of developing and industrialised countries. Two channels through which this link potentially operates are: (1) greater equality (of income and educational provision) potentially reduces tensions between socio-economic groups or, putting the same point more positively, augments social capital⁷; (2) greater equality augments home consumer demand for mass manufactures, and thereby increases the stability, if not the level, of the growth in overall demand. Indeed one of the great merits of the now neglected 1990 *World Development Report* (World Bank 1990) was to illustrate the role which inequality-reducing institutions could play, and had played in the Far East, in sustaining growth over long periods without undermining the political base of support for it. These institutions (financial institutions for small business development; cooperatives and other institutions for the promotion of rural development⁸; agricultural extension systems⁹; Japanese adaptations of the industrial putting-out system etc.) do not figure amongst the independent variables mentioned by Acemoglu et al. but enabled the countries of the Far East to grow along a labour-intensive growth path whose character had much to do with the stability of the region’s growth process.

⁷ Perceived inequality has strong empirical links with social capital which has exhibited a strong empirical correlation with growth (Knack and Keefer 1997, Whiteley 2000) and we discuss empirically in Section 4 the question of whether the explicit inclusion of the social capital variable adds explanatory power.

⁸ Lewis does not take an absolute position on large versus small scale agriculture, but notes (1955:133-134) three advantages of small scale agriculture (they cultivate more intensively; they make less use of hired agricultural workers; and they do not make large demands on supervisory staff). In making strategic policy recommendations, he comes down in a number of places in *the Theory of Economic Growth* in favour of a national economic strategy which favours the development of small-farm agriculture.

⁹ Lewis noted, in 1955, ‘The UK has a ratio of one extension worker to every 700 persons gainfully occupied in agriculture, but among the poorer countries of the world the only one which spends at this level upon agricultural services is Japan (it is also the only one which has had spectacular increases in peasant productivity)’ (Lewis 1955:188)

Inequality between men and women. Lewis emphasised (1955:116) that ‘restrictions on the work women may do are everywhere a barrier to economic growth... economic growth and a transfer of women’s work from the household to the market go closely hand in hand.’ Two dimensions of such restriction are particularly important: customary restrictions on either the supply or the demand for female wage-labour which inhibit the formation of rural labour markets, and customary allocations of male and female labour to particular tasks which often, but not always, have the effect of causing male labour productivity to be systematically in excess of women’s (Udry 1996). These misallocations are a dimension of overall inequality which appears to have particularly serious consequences in aggravating female poverty in Africa (Mosley et al 2003: Chapter 7). These distortions are correlated with education (and especially female education), and in section 4 below we test the hypothesis that growth, which is restricted by them, is significantly influenced in cross-sections by the ratio of female to male years of schooling.

Inequality between ethnic groups. A factor which, with particular force in Africa, binds together the political and the institutional parts of the argument is ethnic inequality. As we have seen, Easterly and Levine claim, with substantial empirical support, that ethnic inequality is particularly destructive of political stability, even if that inequality is of the ‘horizontal’ type (Stewart 2001) in which ethnic divisions do not in any way correspond to income strata. Again it is fascinating to consider the view on these matters of Arthur Lewis, one of the first black men ever to achieve a position of senior professional responsibility in the UK. Many people, including the present author, have been fascinated by Lewis’ reticent attitude to discussing the racial theme in print¹⁰, but at the end of his life he addressed the theme of racial conflict for the first time in the W.E.B. Du Bois Lectures (Lewis 1985). His emotional involvement with the issue made him more and not less guarded about what he felt able to say. His main suggested therapies for racial discrimination are, first, education and especially vocational training (pp. 59 and 69), and secondly, economic growth itself (p.430. ‘The most effective destroyer of discrimination is fast economic growth’). But he does not commit to speculations on what the removal of such discrimination could do, in the opposite direction, for economic growth.

In Table 2 we bring together the ideas of Lewis and other growth theorists about the role of institutions in growth. As we have seen, Lewis’ views about the requirements for growth-promoting institutions go far beyond the protection of individuals against expropriation risks, clearly stimulated by his first-hand knowledge of the other risks they confront. But the case for examining these other risks is not just related to the possibility of reducing this range of inequalities – what is also important is that high levels of risk prevent markets forming in which the poorest people can participate, and this limits

¹⁰ An interview with a colleague who knew Lewis in the 1940s confirms that he never saw racial prejudice as having been an obstacle to his professional development (interview by author with Phyllis Deane, Cambridge, 2 April 2004). In another interview he laughs off racial obstacles to his advancement with the words ‘My mother used to tell me: “if they can do it, we can do it”’. Meier and Seers eds. (1984) page xx.

their options for escaping from poverty. The argument, in other words, is allocative, and not just distributional.

Table 2. Institutional influences on growth in Lewis and subsequent commentators

Boldface variables represent variables used in new growth theory regressions.

Variables	Specification in Lewis	Specification in other commentators	Remarks
Influence of institutions on incentive to invest	Maintenance of law and order(1955:61)	Protection of property rights against expropriation (Knack and Keefer 1995; Rodrik 1999; Acemoglu et al, 2001)	
	Protection against risk (1955: 382)		
	Built-in incentives to minimise inequality (1955: Chapter 4) Misallocation between men and women (1955:116)	Gini coefficient of inequality (Hanmer and Naschold, 2000, etc.)	Can be rendered by male-female educational differential.

3. **A possible explanatory model**

It was, therefore, Lewis's vision that proper use of the political and institutional variables mentioned would protect the investible surplus of the capitalist sector by counteracting threats to the incentive to innovate and to invest in the local economy. Some of the mechanisms by which this occurs have been discussed above, and they are formalised in the model of Appendix 2. This is a standard Lewis model (in which there are 'unlimited supplies of labour' which are gradually exhausted, and the rate of development is driven by the size of the capitalist surplus) *modified by the proposition that investment needs to be made not only in physical and human assets but also in devices to mitigate the risk inherent in the inequalities which a dual economy creates.* The argument is illustrated by Figure 1, in which the left-hand half is a standard Lewis model of the labour market and the right-hand half is a trade-off between political risk and increase in taxable capacity.

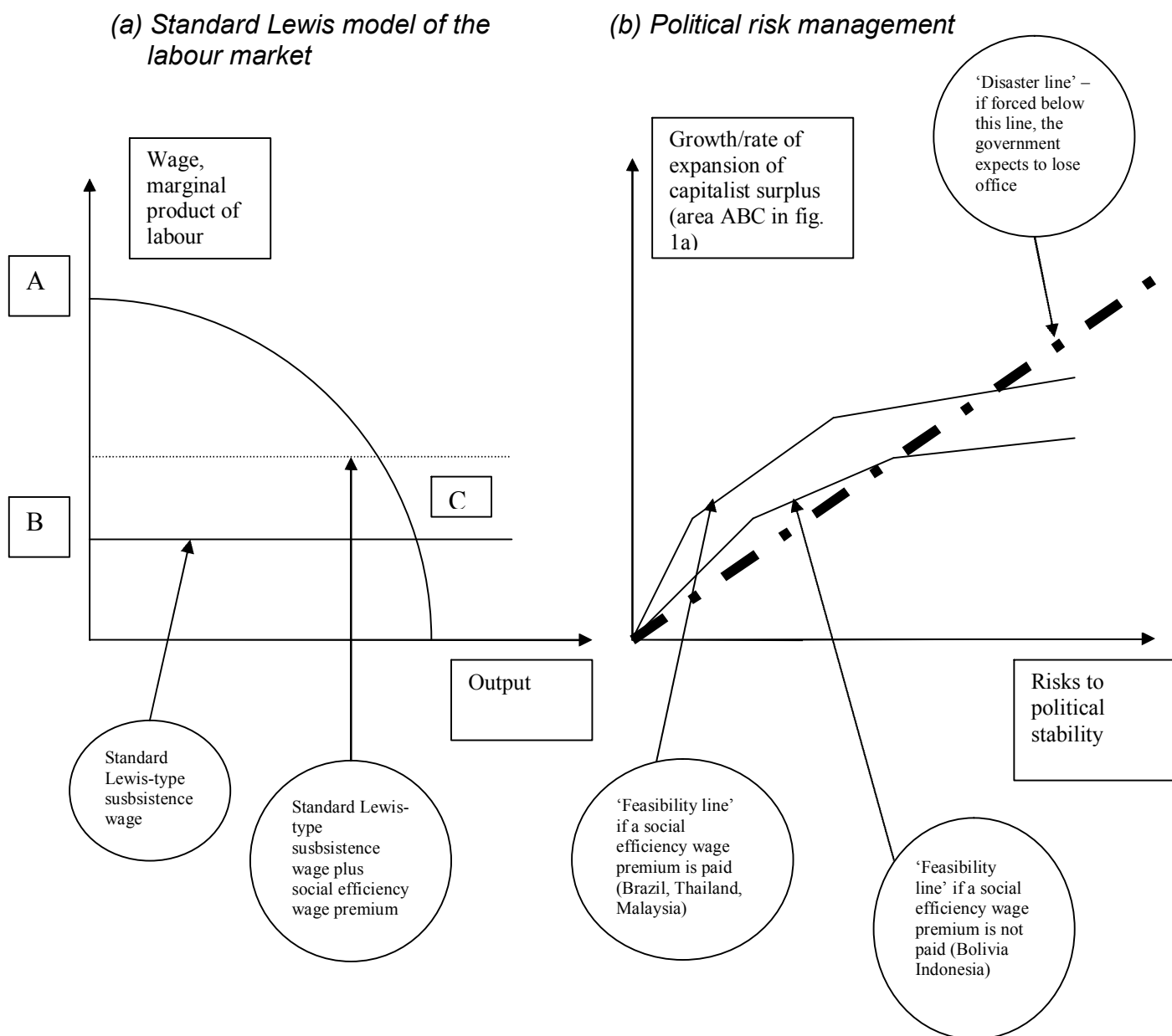
Countries which pay a 'premium' on the basic subsistence wage by investing in social protection and mechanisms for reducing inequality – thereby reducing the 'capitalist surplus' in the left-hand part of the diagram - reap a dividend by reducing the risk of political instability. In the right-hand part of the diagram this is depicted by an upward shift in the trade-off or 'feasibility line' which defines the level of risk for given policy options. Countries which, during a time of social and economic stress such as the east Asian crisis, invest in policies and institutions which increase their ability to manage and mitigate social tensions – such as Brazil and Thailand, as a consequence, experience lower levels of political instability than countries such as Indonesia and Bolivia which did not make this investment¹¹. The approach adopted here has close analogies with the 'efficiency wage' models of microeconomics in which an employer pays a premium above the equilibrium wage in the hope of reaping increases in productivity which are consequential on the higher wage. Indeed what is being suggested here under the inspiration of Lewis' idea of 'political limits on policy' is that it may be, and historically has been, worth a government paying a *social efficiency wage premium* in order to sustain the momentum of accumulation against the threat of political disturbances.

¹¹ For the east Asian cases, this has been noted by Rodrik:

'Even though democratic institutions developed relatively recently in Thailand and South Korea, they helped these two countries adjust to the crisis in a number of ways. First, they facilitated a smooth transfer of power from a discredited set of politicians to a new group of government leaders. Second, democracy imposed mechanisms of participation, consultation and bargaining, enabling policymakers to fashion the consensus needed to undertake the necessary policy adjustments decisively. Third, because democracy provides for institutionalised mechanisms of 'voice', the South Korean and Thai institutions obviated the need for riots, protests, and other kinds of disruptive actions by affected groups, and, furthermore, undercut support for such behaviour by other groups in society.

[By contrast] this sense of shared sacrifice and compromise has been conspicuous in Indonesia by its absence. The financial difficulties spawned by the economic crisis were exacerbated by President Suharto's unwillingness to relinquish power, the lack of voice mechanisms (such as independent parties and free trade unions), and a generalised sense that the costs of the crisis would be passed on to the workers and the poor. Anti-Suharto sentiment welled up and exploded in the form of riots, looting and other violence, some of it aimed at the country's ethnic Chinese minority. To divert blame from the government, some officials apparently incited ethnic tensions.' (Rodrik 1999: 91-94).

Figure 1. The modified Lewis model: the ‘social efficiency wage premium’



In Appendix 2 this approach is developed into the specification of a standard ‘new growth theory’ reduced form for estimation purposes:

growth ← (a) initial income, physical investment, education
 [standard new growth theory variables]
 (b) political and institutional variables
 (c) extraneous shocks (1)¹²

¹² Equation (3'') from the appendix.

The issue on which we particularly wish to focus is whether, within the set of political and institutional factors which influence growth, sufficient explanatory power is provided by the variables currently in the literature such as protection against expropriation risk and ethnic division, or whether additional insight is added by bringing into the story elements of the social efficiency wage premium, as discussed above. The elements of what is needed will vary from country to country and only a preliminary specification is possible here. But in the next section we shall feed in elements of the premium into a growth equation in order to see whether they improve our explanation of the growth process.

4. Empirical tests

We have argued that the explanation of growth processes can benefit from Lewis' insight both in terms of the specification of the independent variables and in understanding the process which connects them to growth. In this section we confront the problem of embodying these insights in a testable model.

The model we shall use is the reduced form of equation (1), disregarding the term in extraneous shocks:

Growth is determined by...	1. Base year income, investment, education enrolments	2. Democracy (overall and one-party), corruption, vulnerability to political shocks	3. Expropriation risk, ethnolinguistic fractionalisation, Inequality (Gini coefficient, financial inclusion and gender inequality indicators),
	<i>Orthodox 'new growth theory' variables</i>	<i>Political variables</i>	<i>Institutional variables</i>

The sample used for estimation consists of 58 developing and transitional economies, listed in Appendix 1. Estimation is both by ordinary and two-stage least squares, embodying Lewis' insight in *The Theory of Economic Growth* (1955: 57)¹³ that there is two-way causation between economic growth, on the one hand, and institutions¹⁴ and pro-growth attitudes, on the other.

¹³ 'If institutions are favourable, willingness to make effort is encouraged and grows; and if this willingness is strong, institutions will be remodelled to accommodate it'.

¹⁴ As one illustration, Lewis argued in 1985 that 'the most effective destroyer of discrimination is fast economic growth' (Lewis 1985:43)

The main findings from this basic model are set out in table 3. We begin with a formulation (equation 1) which, beyond the basic ‘control variables’ of initial income, investment and human capital (years of schooling) contains only one political culture variable (ethnic fractionalisation, as emphasised by Easterly and Levine (2002)) and one institutional variable (protection against the risk of expropriation, as emphasised by Acemoglu et al. (2001)). The last two variables are insignificant at the 5% level, and the multiple correlation coefficient is 23%. In the hope of improving the predictive power of the relationship, we next experiment with a range of additional political and institutional variables from the list of ‘Lewis-type’ variables examined in section 2. In equation 2, we add two institutional variables (the Gini coefficient of inequality and a measure of male-female inequality in education) and one political variable (the Observer human rights index¹⁵, used as an indicator of ‘genuine democracy’ on the premiss that the existence of democratic institutions is not a true indicator of free speech or of wide participation in the political process). The correlation coefficient doubles, but what mainly gains in statistical significance through this exercise are the *basic explanatory variables* in the model, especially investment and initial income – the political and institutional variables do not, at this stage, show any significance. But when, in equation 3, we add in one further ‘Lewis-type’ variable, the ICRG composite country risk indicator, that is significant with the right sign, and so also now is the measure of male-female educational differentials. The correlation coefficient increases further. The variables mentioned retain significance when endogeneity of the right-hand side variables is taken into account through two-stage least squares estimation (equation 4).

Table 3. Regressions with ‘Lewis-type’ and other institutional variables

Independent variables:	Dependent variable: growth in real GDP(1980-2001)					
	(1)OLS	(2)OLS	(3)OLS	(4)2SLS	(5)OLS	(6)OLS
Equation number and estimation method						
Constant	-3.19 (1.50)	-2.85 (1.43)	-4.11 (0.95)	-51.8 (0.29)	-6.26** (4.72)	
<i>Standard ‘new growth theory’ variables:</i>						
Income per capita in 1980	-0.001 (1.39)	-0.0008 (1.68)	-0.097* (1.76)	-0.005** (5.87)	-0.009** (6.41)	
Investment as % GDP	0.06 (0.71)	0.14** (2.55)	0.23* (2.13)	0.83 (3.87)	0.10** (3.20)	

¹⁵ A gloss on the Observer human rights index (and a reprint of the original dataset) is provided by the Open University (2001).

Years of schooling	0.21 (1.11)	0.31 (1.36)	-0.37 (0.68)			
<i>Recently-emerged socio-political explanations:</i>						
Risk of expropriation	0.60 (1.86)	0.57 (1.35)				
Ethno-linguistic fractionalisation	0.04 (0.39)					
<i>Additional variables from Lewis:</i>						
<i>Political 'General democracy variable':</i>						
Observer human rights index		0.014 (0.94)				
One-party democracy					-0.28 (0.48)	
<i>Institutional</i>						
ICRG country risk index			0.078* (2.44)	0.94** (4.57)	0.13** (6.90)	
Gini coefficient of inequality		0.005 (0.37)	-1.69 (0.17)			
Female schooling as % of male		3.8 (1.48)	3.13** (2.73)	2.19* (2.66)	-1.17 (1.07)	
PPE index			0.028 (1.55)			
Loans to lower income groups						
r ²	0.230	0.483	0.911	0.06	0.627	

Sources: see Appendix 1.

Notes: figures in brackets below coefficients are Student's t-statistics: * denotes significance at the 5% level and ** denotes significance at the 1% level.

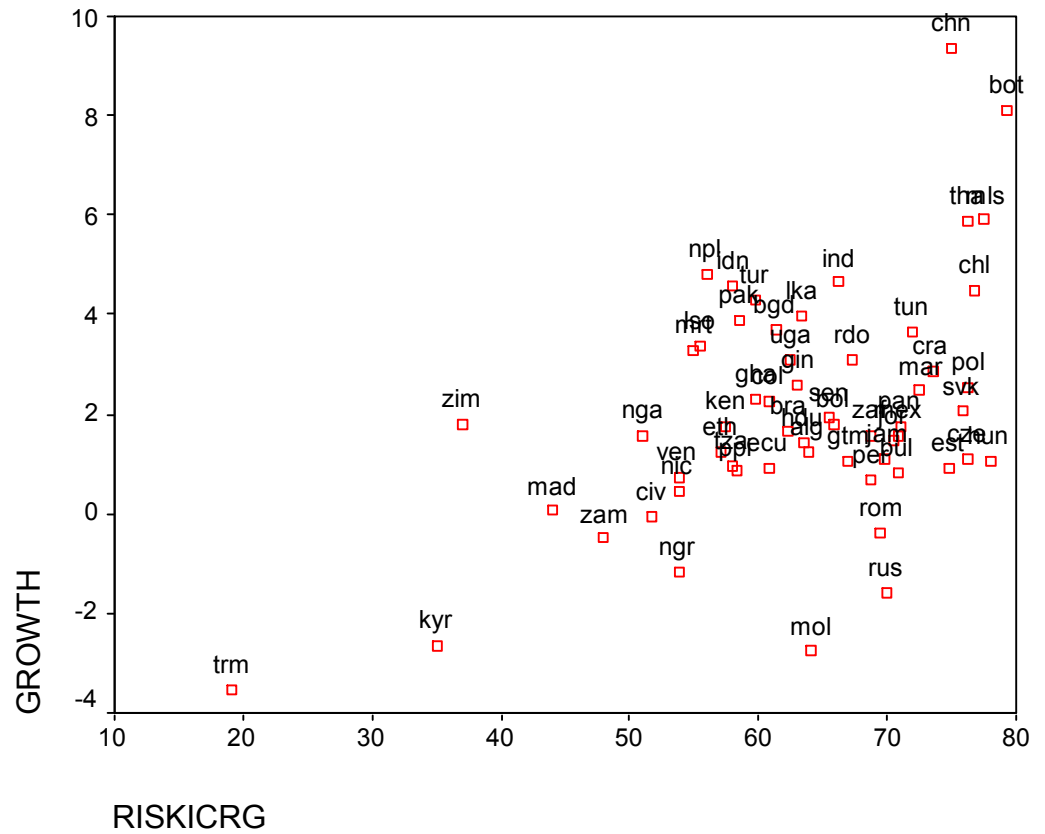
The conclusion we draw is, firstly, that in this branch of new growth theory, as in others, what explanation of growth is accepted as convincing depends enormously on what independent variables are used as controls; but if a completely 'orthodox' set of controls is used, the comparison appears to be favourable to at least some of the Lewis-type social and political variables we have included in this paper.

As mentioned above, these findings are consistent with the view that the countries which are successful in terms of growth are those which invest not only in institutions which defend against the risk of expropriation but also those which invest in devices which buffer the state against the various threats to it. These devices become particularly important in times of political stress such as the east Asian crisis. We illustrate this principle – and the various country cases which confirm or contradict it – in Figure 2, which consists of three scatters related to variables which emerge as frequently significant from the regressions of Table 3:

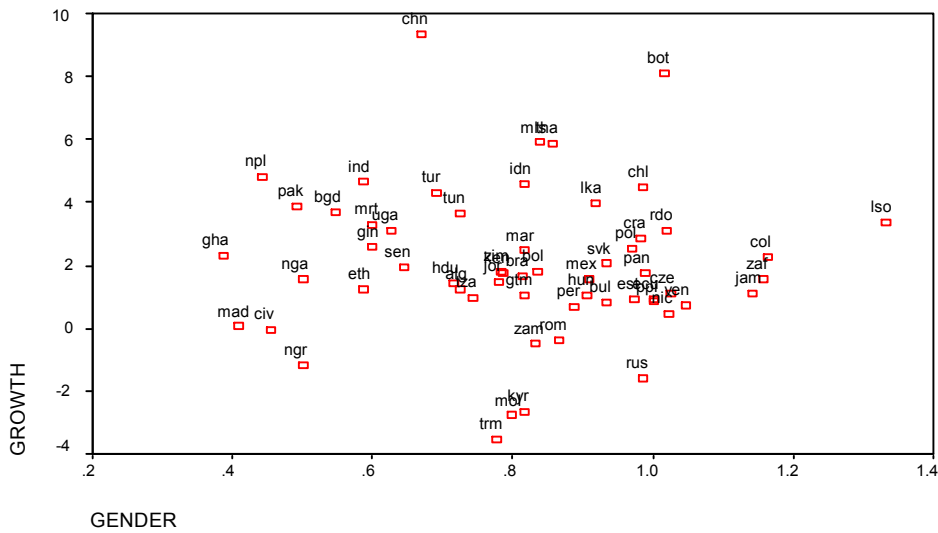
- (i) *the ICRG country risk indicator* - governments unable to rescue their countries from a vicious circle of low growth, high political instability, low ICRG risk indicators (ie high risks) low foreign investment and low growth (Turkmenistan, Nigeria, Zambia, Zimbabwe and recently Bolivia as discussed in section 3) tend to suffer chronically low levels of growth. Countries with better capacity to manage threats to political stability (Chile, Thailand, Botswana) perform better, not because the same threats do not arise, but because they are coped with more effectively.
- (ii) *The female-male schooling ratio* – countries with low inequality in female schooling rates (Botswana, Malaysia, Indonesia, Sri Lanka, Uganda, to some extent Lesotho) tend to experience less of the loss of efficiency due to misallocation between male and female that Lewis noted, and partly as a consequence experience higher growth rates. The exception to this trend is Russia, Romania, Turkmenistan and other countries in Eastern Europe/former Soviet Union, where gender equality in education is high and growth rates low notwithstanding.
- (iii) *The PPE ratio* (nb non-significant in the regressions) – countries able, sometimes under pressure from aid donors, to direct a high proportion of public expenditure towards sectors which benefit low income groups such as primary education and agricultural extension become thereby better able to head off mass protest – and in addition to attract the aid flows which will help them do this. In Africa, Ghana, Mozambique, Ethiopia and especially Uganda are skilled practitioners of this art (Mosley et al. 2004)

Figure 2. Scatters of social and political variables against growth

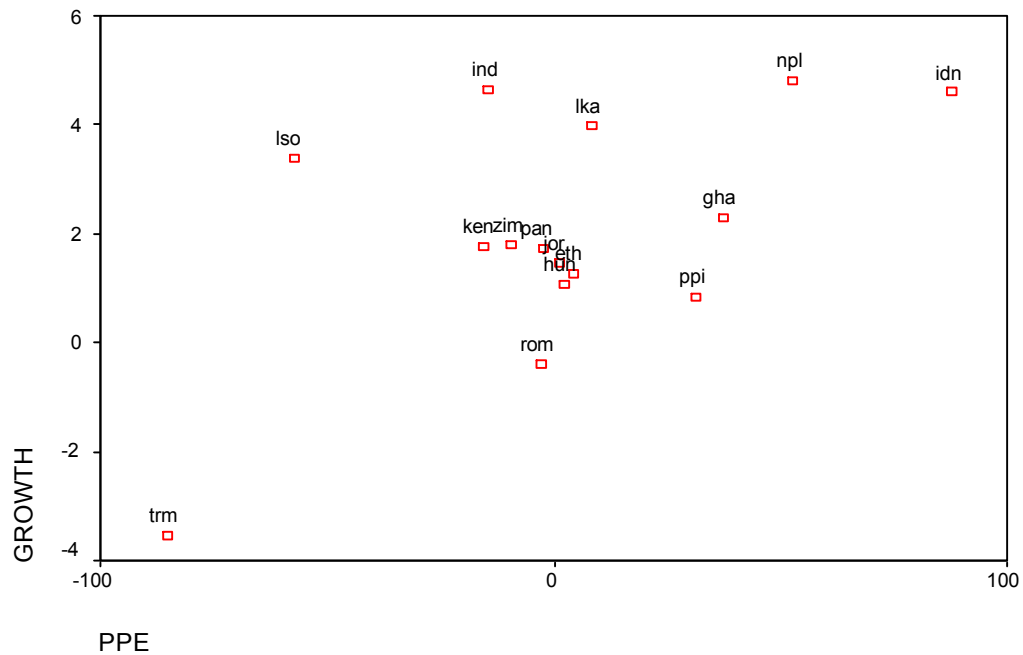
(a) ICRG country risk indicator



(b) Education gender equality (ratio of female to male years of schooling)



(c) The pro-poor expenditure (PPE) ratio



Embedded in the original 'Lewis model', in other words, is a threat of which its author was perfectly well aware: namely that any process of development in a dual economy sets up inequalities between the modern and the traditional sector, and that unless those inequalities are counteracted by either political or institutional means there is the possibility of violent protest and political instability which derails the development process. It is that process of 'counteracting inequalities by political or institutional means' that we have sought to embed, embodying insights from Lewis' own writings, into a standard new growth theory model. Other variables billed as offering a clinching explanation of long-period growth trends - such as protection of property rights - offer, in our judgment, only a partial explanation of incentives to invest, because they embody only the idea of (threats to) opportunities to invest by private individuals and not any idea of the non-property-rights-related risks associated with those investments and with the consequent pattern of development. The merit of this approach, we would argue, is that it factors those risks also into the analysis.

5. *Conclusions*

It has not been the purpose of this essay to argue that ‘Lewis always got it right’, and indeed part of our story has been to illustrate what can be learned from some of the ways in which, with the wisdom of hindsight, he seems to have got it wrong. In particular, his condemnation of one-party democracy, admittedly made in the very early days of decolonisation, sits uncomfortably with the fact that many of the economic success stories of Africa since the mid 1990s, and in particular Tanzania, Ethiopia(*de facto*) and Uganda, have adopted this form of governance.

However, in other ways we have found it possible to improve on the account of political and institutional factors in growth offered by other authors under the inspiration of Lewis’ *Theory of Economic Growth* and other writings. In particular, the idea of a ‘political limit’ to the process of extraction of surplus, explicit in the *Theory of Economic Growth*, develops easily into the proposition that governments need to invest in defences against the political threats to long-period growth caused by a squeeze on the standard of living of the politically influential, either through acts of policy – for example exercises in participation and pro-poor expenditures – or through acts of institution-building – for example measures to equalise the gender ratio in education and broaden the base of agricultural extension. Such actions can be seen as an investment in future political stability, just as the payment of efficiency wages can be seen as an investment in the stability of the labour force. We have tested a set of political and institutional variables, inspired by Lewis’ own political economy, which may be used for the purpose of augmenting the ‘social efficiency wage’, and we find that they have greater explanatory power within an orthodox new-growth theory model than the variables currently most fashionable as representations of the political and institutional impact on growth – namely ethnolinguistic fractionalisation and protection against the risk of expropriation – essentially because the range of risks which face poor people, and which governments have to contend with, is broader than that contained within such variables.

Thus, even though Lewis may often have expressed exasperation with the political process, that process and the way it is managed have the ability to promote or wreck a country’s long-term growth prospects, in ways that still have not been properly internalised by the economics literature. They were recognised early on as significant by Lewis because he was much more than an economist. As he said on the last page of his last book - and these may be very nearly his last published words- ‘In the end, economics is not enough’ (Lewis 1985: 121). True; and the awareness of this is a large part of what makes Lewis’s contributions to development distinctive.

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Data appendix

Country sample (three-letter country codes in brackets)

- 1 Cote d'Ivoire(CIV)
- 2 Ethiopia(ETH)
- 3 Ghana(GHA)
- 4 Kenya(KEN)
- 5 Lesotho(LSO)
- 6 Madagascar(MAD)
- 7 Niger(NGR)
- 8 Nigeria (NGA)
- 9 Senegal (SEN)
- 10 Tanzania(TZA)
- 11 Uganda(UGA)
- 12 Zambia(ZAM)
- 13 Zimbabwe(ZIM)
- 14 China(CHN)
- 15 Indonesia(IDN)
- 16 Philippines(PHL)
- 17 Thailand(THA)
- 18 Algeria (ALG)
- 19 Jordan (JOR)
- 20 Morocco(MAR)
- 21 Tunisia (TUN)
- 22 Brazil (BRA)
- 23 Chile (CHL)
- 24 Colombia (COL)
- 25 Costa Rica (CRA)
- 26 Dominican Republic (RDO)
- 27 Ecuador (ECU)
- 28 Guatemala(GTM)
- 29 Honduras (HDU)
- 30 Mexico(MEX)
- 31 Panama(PAN)
- 32 Peru(PER)
- 33 Venezuela (VEN)
- 34 Bulgaria (BUL)
- 35 Czech Republic (CZE)
- 36 Estonia (EST)
- 37 Hungary (HUN)
- 38 Kyrgyz Rep(KYR)
- 39 Moldova (MOL)
- 40 Poland(POL)
- 41 Romania(ROM)
- 42 Turkmenistan (TRM)
- 43 Bangladesh (BGD)
- 44 India(IND)
- 45 Pakistan (PAK)
- 46 Sri Lanka(LKA)
- 47 Bolivia (BOL)

48 Guinea (GIN)
49 Malaysia(MLS)
50 Mauritania (MRT)
51 Nepal (NPL)
52 Nicaragua (NIC)
53 Slovakia(SVK)
54 South Africa (ZAF)
55 Jamaica (JAM)

Variables used in regressions and data sources

Real GDP growth 1980- 2000: World Bank, *World Development Indicators 2003*, table 4.1

Income per capita in 1980: World Bank, *World Development Report 1982*, Appendix Table 1.

Investment as a percentage of GDP: World Bank, *World Development Indicators 2003*, table 4.9.

Average years of schooling, male and female: World Bank, *World Development Indicators 2003*, table 2.13.

Expropriation risk: from Acemoglu et al.,(2001), appendix table A2, p1398.

Ethno-linguistic fractionalisation: from Easterly and Levine (1997), table III, p. 1220.

Observer human rights index: from reprint in Open University, *Summer School Guide U208 2000*, appendix.

ICRG human rights index: World Bank, *World Development Indicators 2003*, table 5.2.

Gini coefficient of inequality. World Bank, *World Development Indicators 2003*, table 2.8.

PPE index: from Mosley, Hudson and Verschoor(2004), appendix 1.

Appendix 2. A model of the ‘social efficiency wage premium’ and the reduced form of the estimating equation

(a) Political-economic optimisation by the recipient government:

The LDC government seeks to maximise the probability of survival: to attain an optimum point on the locus (the curved line in Figure 1b) relating ‘rate of expansion of the capitalist surplus’ to ‘risks to political stability’. Faster economic growth caused by greater compression of living standards of poor people (e.g. through tax increases) pushes one east along the locus; less compression of living standards pushes one west. Within the standard Lewis model of the labour market (figure 1a) we have argued that pressure on living standards can be mitigated by paying a ‘social efficiency wage premium’, which may consist simply of an increase in the private wage, but which more typically consists of an increase in the social wage designed to buy off political opposition. There are various ways in which this can be achieved – pro-poor expenditure, increases in participation, financial services for low income groups. Many of these modalities share the common characteristic that they reduce *inequality* – gender inequality, ethnic inequality, or simply inequality in the most general sense. This social efficiency wage premium, in the right-hand part of the diagram, raises the ‘feasibility locus’ – that is, it gives the government more room for manoeuvre, and increases the probability that growth will not be interrupted by political tensions.

Thus, the government maximises a utility function consisting of two elements: the size of the capitalist surplus (X) and risks to political stability (R)

$$U = f_1(X, R) \quad (1)$$

where the capitalist surplus X is, as in the canonical Lewis model, the difference between the marginal product of labour (L) and its cost, which consists of the wage (w) plus any social efficiency wage premium (p) that is paid

$$X = g(L) - w - p \quad (2)$$

The growth rate of labour productivity, $\partial g(L)/\partial t$, depends fundamentally on the standard factors of production emphasised both by Lewis and the newer growth theory literature (capital K, skills H, initial income Y_0 , etc); but also on the risks of political instability, R.

$$\partial g(L)/\partial t = f_2(Y_0, K, H; R) \quad (3)$$

The risks to political stability, including the associated risk of conflict, depend on initial conditions (social capital, inequality, history of conflict, etc) and on incidental shocks. But they also, and this is the main novelty of the paper, depend on the size of the social efficiency wage premium (p) which is paid:

$$R = f_3(I, S, p) \quad (4)$$

