

Chapter 1

Introduction

”*I* UNDERSTAND there is a sign in the audience that once again says: ‘What’s the secret word for tonight?’ The secret word for tonight is...”¹ institutions. Institutions are a buzzword in the recent literature on economic development. No self-respecting policymaker gets away without pointing to improvements in the institutional framework.

The literature contains uncountable references to institutions as means to economic development. For instance, the International Monetary Fund argues in its 2000 World Economic Outlook, that the experience of successful developing countries “[...] clearly points to macroeconomic stability, sound institutional arrangements, and openness to trade that are conducive to [...] high sustainable growth” (IMF, 2000, p 115). The World Bank’s 2002 World Development Report expresses the Bank’s commitment to “building institutions for markets.” The Organisation for Economic Co-operation and Development (OECD) has also joined the ranks publishing numerous papers stressing the role of political and institutional factors in economic growth (see, for example Borner, Bodmer, and Kobler, 2004). Moreover, in 2003 the World Bank introduced the widely acclaimed Doing Business Database, which provides information on the costs and duration of contract enforcement, bankruptcy procedures, and business start-ups. The data is assembled in cooperation with Lex Mundi, a large international association of law firms, following the methodology laid out in Djankow, La Porta, Lopez-de-Silanes, and Shleifer (2003).

The interest in institutions is partly driven by the difficulties in explaining the variance in economic prosperity across countries. The magnitude of this variance is staggering. Inhabitants of high income OECD countries

¹Frank Zappa (1993, intro).

enjoy an average gross domestic product (GDP) per capita of \$30,700, while people in low income economies live on \$452 each.² Moreover, many of the poorest countries show few signs of convergence; on the contrary, it appears as if the gap between rich and poor countries is continuing to widen. This phenomenon is often referred to as *twin peaks* because the density function of the cross-country distribution of GDP per capita characteristically shows two local maxima. Between 1960 and 1985, these peaks became more pronounced as the distance between them widened supporting the notion of a divergent development in prosperity.

Conventional growth theory, following the seminal articles by Robert Solow (1956) and Trevor Swan (1956), does not predict unconditional convergence across countries. Instead, countries are assumed to progress towards their individual steady states which are influenced by country-specific factors. In as much as countries exhibit different fundamentals, so may individual steady states vary. Conventional growth theory is, therefore, not inconsistent *per se* with the twin-peaks view. In fact, if country-specific fundamentals are allowed for, and if the concept of capital is broadened to encompass human capital as well, then the empirical support for this view increases substantially. In an influential study, N. Gregory Mankiw, David Romer, and David Weil (1992) show that a neoclassical growth model, augmented to include human capital, performs quite well in explaining the international growth pattern. Including human capital in the wider concept of capital increases capital's income share which increases the variations in country-specific steady states and reduces the speed of conditional convergence.³ Both fits well with empirical observations.

Two basic problem illustrate the difficulties of this approach. First, the magnitude of income disparities needs to be explained. The differences in GDP per capita between the poorest Least Developed Countries (LDCs) and high income economies amount to a factors of roughly 70. Which country-specific fundamentals best explain such an uneven distribution of prosperity? Second, if country-specific fundamentals are responsible and can be identified, why do they persist? Low incomes may be explained *inter alia* by poor education of the work force, which can potentially drive down labour productivity and slow the adoption of new technologies. However, in this

²Figures are 1995 constant US\$ for 2003 from the World Development Indicators database (2004).

³The speed of convergence is given by $\beta = (1 - \alpha)(\hat{A} + n + \delta)$, where \hat{A} is technological progress, n the growth rate of the labour force, and δ the depreciations rate. The parameter α is the share of income passed to capital. Evidently, a higher α leads to a reduction in the speed of conditional convergence, β (see section 2.2).

situation, highly skilled workers would become a scarce resource and should receive prime wages. This in turn should be a powerful incentive to seek schooling and professional training, which eventually mitigates the dearth in human capital. Hence, whenever there are positive private returns one would expect a tendency to overcome such constraining fundamentals.

Despite the success of human capital augmented growth models in explaining the cross-country growth pattern, these approaches simply pass the puzzle to the next level. Why is it that some countries invest so little to human capital, despite evidence of lucrative payoffs in terms of economic prosperity?

A more convincing answer to the twin-peaks pattern is the existence of poverty or development traps. Countries which, for instance, fail to accumulate a certain threshold in physical and human capital, may also attract little investment, and hence remain trapped below that threshold. The economy needs a (big) push to overcome this threshold and break the development trap pattern. Early authors of high development theory argued that many developing countries failed to establish a modern industrial sector because there was insufficient demand for their output. However, more demand would only be created by the wage premium paid in the modern sector. Voilà, a feedback loop: without a modern sector, no additional demand—without extra demand, no modern sector (cf Rosenstein-Rodan, 1943; Nurkse, 1952, 1953; Hirschman, 1958).

The necessary condition for a development trap is the existence of network externalities in certain economic activities. High development theory emphasises pecuniary externalities because the wage premium paid by one modern firm creates additional demand which in turn potentially attracts more modern firms. There is a wedge between private and social returns to investment. Due to the network character of the externality, this wedge is largest when there is little capital in place, and it closes when capital is abundant.

As long as private returns are below opportunity costs, there will be no incentive to invest irrespective of social returns. Some of the early authors therefore concluded that it is necessary to internalise these externalities and to organise collective action, for instance in the form of industrial programming.

Network externalities may be supposed with many economic activities, including human capital accumulation. Being the only skilled worker in a community of low-skilled labour is probably not very rewarding. Imagine a lone rocket scientist in an otherwise agricultural community. However, somebody well trained in irrigation and fertilisation might take full advan-

tage of his extra education and improve his personal standard of living. In this case, positive private returns would constitute incentives to seek education and training and the development trap may be avoided. Some people, though, may simply be too poor to invest in the education of themselves or their children. But if the net present value of education is positive, it would be profitable to create a financing mechanism such as a student loan that can be repaid with later income. This points to a different problem: it may be impossible to maintain such a credit scheme unless institutions are in place which allow the credit contract to be worked out in a mutually beneficial manner.

The appeal of institutions in this context is clearly their network character. Institutions can broadly be defined as rules which structure social interaction. There is little value in rules which are only followed by a few. Institutions become effective only when a critical mass of people comply. Numerous empirical and theoretical contributions document the importance of good institutions—in the form of an efficient bureaucracy, respect of property rights, low corruption et cetera. Moreover, there is a feedback loop between good institutions and economic prosperity because it takes resources to design and implement the rules of the game, and the quality of rules eventually shapes output.

Nevertheless, it is probably easy to overblow the importance of institutions in economic development. For a start, the term 'institutions' is nebulous and there are many different concepts associated with it. Second, the quality of institutions cannot be observed directly. Instead any measure must rely on far-fetched objective proxies, or, more frequently, on the subjective assessments of appointed experts and analysts. These are sometimes provided by commercial suppliers; most notably the PRS Group, Inc whose indicators are published in the Political Risk Services and the International Country Risk Guide (ICRG), and are widely used in empirical analyses. Subjective indicators are more sensitive to reverse causation because analysts may equate good economic performance with good institutions. Finally, the quality of institutions may be a measure of development itself—ie, it may be tautological to ascribe bad economic performance to bad institutions, if bad institutions are defined such that economic performance is low. A more fundamental or deeper determinant of economic development might be missed.

This book follows a broad definition, as given on page 70, which identifies institutions as an important determinant of allocative efficiency. Bad institutions, therefore occur when rules are inappropriately designed or enforced and serve to encourage wasteful activities. However, they are only regarded

as one among other determinants, such as physical and human capital endowment and the level of technology. Institutions may explain why some countries are poorer than others, but other things are important, too.

However, there are different views on the concept of institutions. A narrow view regards institutions as permanent constraints on government behaviour (Glaeser, Porta, de Silanes, and Shleifer, 2004, p 7). Hence, a change in government policy would not necessarily affect institutions as long as constraints on the executive are untouched—which would probably require a constitutional change. In this spirit, Aghion, Alesina, and Trebbi (2002) determine the optimum insulation of a government, given by the fraction of voters needed to block a policy (coded in the constitution), where a high insulation is conducive to economic reform but also more susceptible to government expropriation.

The main focus is on the interaction between private activities and the government, and security of property rights is primarily a protection against expropriation. Such an approach has merits in its own right, but it misses the influence of institutions on the interactions between private actors. Indeed, Glaeser et al (2004, pp 26-27) argue that there is little compelling evidence that political institutions—in their definition—have a causal effect on economic growth.

Another line of argument follows the notion of institutional durability and persistence. While institutions may have a sizeable effect on economic output, the roots of institutional change may be outside the economic domain, or at least, react only slowly to economic pressures. There is a link between cultural and traditional features and the influence on transaction costs and resource allocation—an argument advanced most famously by Max Weber (1920), who emphasised the role of protestant ethics in economic success. Cultural roots and traditions adjust only slowly to economic needs. However, attributing variations in institutional quality across countries and across time to cultural and traditional factors alone is (arguably) unconvincing. As illustrated by figure (4.2) on page 82, there is a substantial variance in the quality of institutions across time—as measured by the ICRG composite indicator⁴—and the variance is negatively related to the level of economic prosperity.⁵ This suggests that there is movement in institutional quality within shorter periods of time, and that poor economic performance may be an incentive to institutional change.

⁴The ICRG composite indicator follows the broader definition of institutional quality, which includes constraints on the executive as well as policy choices and policy outcomes.

⁵The variance persists after removing the trend from the time-series; in most countries there is a positive trend.

There is a lively debate on the appropriate weight given to institutions as opposed to other potential candidates, such as an adverse geography, resource endowment, or trade integration. In fact, there may have been some overshoot in regard to the importance of institutions, which has diverted attention away from other relevant factors of economic development. Some of the problems relate to the ambiguity of the concept of institutions: a lack of openness to trade may be interpreted as a form or outcome of bad institutions. Adverse geography may require specific investments, such as improved roads to reduce transportation costs or provisions to fight malaria and other diseases. Failure to deliver these investments may be blamed on bad institutions because the rules of the game are apparently insufficient to encourage either the private or public sector to make such investments. However, this may push the argument too far. Jeffrey Sachs (2003b,a) is among the most outspoken critics of the "institutions only" view. The direction of causality—ie, are institutions the cause or the consequence of development, or both—is an important question beyond academic interest because it has a strong influence on the allocation of international development assistance. As described in sections (4.4.1) and (4.4.2), it is not easy to determine the direction of causality, and the results of efforts to do so are still controversial. Arguably, the most convincing stance is to acknowledge causality in both directions, as done explicitly in chapter (6). Hence, even if institutions are assumed to have a paramount importance to economic development, it does not necessarily mean that all efforts should be concentrated on institutions.

This book is structured around 7 chapters (see table 1.1). Chapter (2) starts with an exposition of the disappointing economic performance of many poor countries during the last 40 years. Despite some successes in the recent years, economic development has been the exception rather than the rule (Shirley, 2003). This book assumes a simple view of economic development in that it looks primarily at per capita income levels across countries and time. There are other important criteria to assess a country's economic performance: the United Nations Development Programme, for instance, publishes the Human Development Indicator which includes education and life expectancy as well as GDP per capita. Although both are desirable goals in their own right the close relation between incomes and human capital appears to justify concentration on the former.

A key observation is the twin-peaks phenomenon—ie, the failure of some of the poorest countries to catch-up with the living standards of the rich world. On the contrary, the emergence of convergence clubs can be ob-

Table 1.1: **Building blocks**

Empirical observations	Non-convergence/ development traps (chapter 2)	Institutions and wealth (chapter 4)
Theoretical approaches	Increasing returns and spillovers (chapter 3)	Private provision of property rights (chapter 5)
Economic development and endogenous institutions (chapter 6)		

served, where a large group of countries cluster around a low per capita income and a smaller group clusters around high incomes (see the kernel density estimates in figure 2.1 on page 38). Although, conventional growth theory does only predict convergence towards individual steady states—ie, conditional β -convergence—it is not entirely clear (i) why these steady states cluster in two distinct groups, and (ii) why the clusters are so far away from each other in terms of GDP per capita.

Moreover, this chapter presents and discusses various development strategies which have received theoretical and empirical support. In particular investments to physical and human capital appear promising because, all things being equal, better educated workers with a higher capital endowment should produce more output. However, these strategies, where applied, were less successful with regard to the poorest countries in the low-income cluster. Forced industrialisation and huge public education programmes have often produced only mixed results. One explanation of this apparent failure is that additional investment was poorly allocated because of bad institutions. High corruption, for instance, increases the chances that resources do not flow towards the most efficient usage, but rather to government cronies and crooks. The phenomenon is not restricted to developing countries: evidence suggests that the success of Structural Funds, disbursed by the European Union towards poorer regions, is also sensitive to institutional quality (Ederveen, de Groot, and Nahuis, 2002).

Finally, section (2.5) illustrates how poverty or development traps are able to explain the twin-peaks picture. The notion of poverty traps is

widespread in the literature on developing and emerging economies.⁶ Bryan Graham and Jonathan Temple (2001) test the explanatory power of multiple equilibria in a highly stylised context. Assuming that all countries are either in a low-income or high-income equilibrium, they are able to assign between 18 and 60 percent of observed differences in incomes per worker to multiple equilibria. This result depends on the strength of an externality parameter which determines the magnitudes of spillovers from certain economic activities: the output of individual firms depends on total employment in this sector, probably because of agglomeration effects. The higher this parameter, the higher the explanatory power of development traps.

Chapter (3) picks up these arguments and presents theoretical models of growth and economic development which take into account spillovers and externalities. It starts with a short exposition of high development theory, a blend of ideas which emerged during the 1940s and 1950s. The key idea is that economic production in poor countries has increasing returns and pecuniary externalities as well as forward and backward linkages. The consequence is that a low production may also have low returns, because the spillovers from other industries and firms are missing. Therefore, it may seem unattractive to be an early investor in a poor country because returns are probably lower than elsewhere. An economy needs a certain threshold of economic activity, a network of production facilities and sufficient incomes, to render further investments profitable.⁷ The early authors concluded that public intervention and deliberate industrial programming are needed to push a poor economy over that threshold (cf Rosenstein-Rodan, 1943). However, they probably underestimated the agency costs of public industrial policy which cast some doubt on the suitability of this instrument (see section 2.3). High development theory has recently received some rejuvenation (see Murphy, Shleifer, and Vishny, 1989; Krugman, 1992), and the key ideas—increasing returns and externalities—are widely applied in models of new economic geography and endogenous growth theory.

Spillover models of endogenous growth show that the efficiency with which input factors are employed—this is often captured with a parameter A : level of technology—may depend on specific economic activities, such as

⁶For instance, Maurice Obstfeld (2004, p 5) writes that "[t]hese countries [in Sub-Saharan Africa], with only a few exceptions, appear mired in low-output poverty traps, made worse by increasing political disintegration and the prevalence of AIDS". Jeffrey Sachs (2003b, p 41) states that "[...] poverty traps are real: countries can be too poor to find their way out of poverty".

⁷Demand spillovers were considered in particular, since most developing countries were relatively closed economies at the time of writing.

research and development or education.⁸ Moreover, there may be a wedge between private and social returns because certain private activities do have a positive (or negative) externality. For instance, private innovations—even if protected by patents and copyrights—may improve the speed of technological progress to the entire economy because they expand the technological frontier and facilitate the generation of new ideas. However, individual firms will only include private returns in their calculations and ignore externalities; therefore, actual investment in R&D is below its optimal level when there are positive spillovers. The wedge between private and social returns is particularly wide with regard to basic science with little short-term business applicability, such as manned space travel. Hence, one would expect few firms to engage here. Poor countries are unlikely to be found on the frontier of scientific advance. However, could sluggish adoption of new technologies explain the lower efficiency of capital employment? And if so, why is adoption so low? Human capital could be a limiting factor. Technological diffusion might need a skilled workforce to succeed; and indeed, a number of studies have augmented neoclassical growth models with human capital and found that it fits the data (see Lucas, 1990; Mankiw, Romer, and Weil, 1992). However, many developing countries are in fact early adopters of technology in cases where technology is capital-saving rather than labour-saving because capital is scarce. According to the International Telecommunications Union (2004a,b), Africa is the world’s fastest growing market for mobile phones.

It is probably deceptive to regard the efficiency parameter purely as the level of technology. The institutional framework, as will be detailed below, has an important influence on resource allocation as well. The main difference between an institutionally and technologically shaped efficiency parameter is that good institutions require ongoing adjustment and enforcement efforts, whereas the stock of technological innovations needs less maintenance once it is generated, and may diffuse more easily across countries.

Chapter (4) takes a closer look at the concept of institutions, and the empirical link between institutions and development. This book uses the definition of Douglass North, who defines institutions as “humanly devised constraints that structure political, economic and social interaction” (North, 1991, p 97). To put it succinctly: institutions are the rules of the game (North, 1990). Good rules enable people to make good decisions, provided that the rules are appropriately enforced.

⁸Important contributions are the articles by Kenneth Arrow (1962), Hirofumi Uzawa (1964), and Paul Romer (1986, 1990, 1994).

Good institutions promote economic performance because they facilitate transactions and protect private property from expropriation by other private actors as well as by the state. They provide the incentives for productive activities. Modern economies are founded on specialisation and division of labour, which can only be sustained as long as transactions between specialised actors function smoothly. The higher the degree of specialisation, the more complex transactions are needed, and the more important a good set of rules that governs these transactions will be.⁹ If, for instance, contract enforcement is weak and/or expensive, people may abstain from complex transactions and reduce specialisation, with adverse economic effects.

Rule enforcement is arguably the crucial feature. Talk is cheap—rules are only effective when they are enforced. Public enforcement, ie, by police and courts, is certainly important, but one should not underestimate the input of private enforcement. Private enforcement may have externalities that impact upon institutional quality. An activist investment fund, which pushes the management of a laggard company, does so in order to improve the profits of its own shares, but other shareholders also participate in higher yields. Agency costs decline. This is why stock-prices tend to rise when an activist fund buys a stake. Institutions improve if people keep an eye on the enforcement of rules.¹⁰

Finally, section (4.4) presents a selection of the growing empirical literature on the link between institutions and economic development. Despite the aforementioned methodological caveats, there is a wealth of evidence that good institutions, as measured by a variety of indicators and concepts, are indeed a necessity for economic development. Moreover, there are many attempts to determine the direction of causality. Daron Acemoglu, Simon Johnson, and James Robinson (2001) find support for the institutions-to-wealth causality by looking at exogenous variations in the quality of institutions, here given by settler mortality which determines the installation of development v extractive institutions. Nevertheless, causality may well run in both directions, as illustrated by Alberto Chong and César Calderón (2000).

If institutions explain a large part of the cross-country variation in GDP

⁹Consider, for instance, specialisation in the form a publicly listed corporation, where owners (shareholders) are not necessarily managers. This specialisation has boosted economic performance because rich people are not necessarily skillful managers. However, it is only possible to maintain this specialisation if agency costs do not explode. This in turn requires good institutions, such as laws and regulations as well as scrutiny by shareholders.

¹⁰This is not to deny that private enforcement may have detrimental effects, too; in particular if it takes violent or wasteful forms.

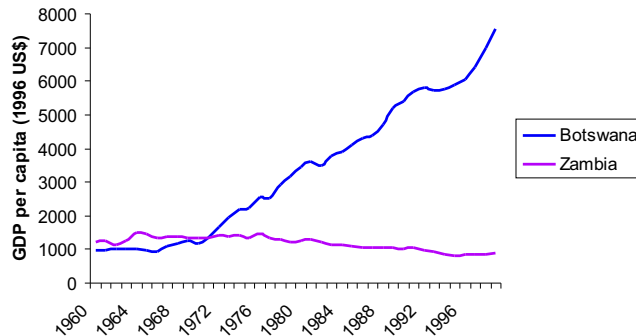


Figure 1.1: GDP per capita 1960-1999

per capita, then what explains the distribution of institutional quality? As mentioned before, reference to social capital or different cultural backgrounds may be insufficient to explain the large variation in institutional quality, in particular where they appear between countries which presumably share a similar cultural history. Botswana and Zambia, for instance, are small and landlocked neighbours in Sub-Saharan Africa. Both are well endowed with natural resources, though Botswana is one of the best performing developing countries with an ICRG of 79.8. Zambia, on the other hand, remains stagnant and its ICRG is only 53 (see figure 1.1). It seems unconvincing to attribute this divergent development solely to differing social capital endowments or to different cultural roots.

Chapter (5) looks at the emergence of property rights protection—an important feature of good institutions—as a consequence of deliberate action, given a certain amount of social capital. Enforcement of property rights is costly, and these costs are a constraining factor. The classical approach of models in this spirit is to see individual decisions as a choice between production, appropriation, and, sometimes, defence: swords or plowshares. Since resources are limited, an increase in appropriation and defence reduces production. On one hand, this reflects again the destructiveness of bad institutions—here in the form of insecure property rights—and on the other hand, it describes how individuals react within such an environment, by protecting their own property and challenging others'. The model introduced by Mark Gradstein (2004) is arguably closest to the ideas of this book. It shows the existence of multiple equilibria because poor countries

may prefer a low level of protection, while affluent ones may opt for a rigorous enforcement. Since the protection of property rights influences investment decisions, a low level of protection may translate into low investments, preventing poor countries from ever becoming rich. Hence, the development trap. The disadvantage in this model is that it allows only for two distinct levels of property rights protection, low and full protection, which establish the low and high income steady state.

Chapter (6) introduces a model which describes the interaction between economic development and the quality of institutions. It draws on the arguments and observations detailed in previous chapters and summarised in table (1.1). The key idea involves creating a feedback loop in the sense that good institutions are conducive to economic output, but also that the institutional quality is itself shaped by the resources devoted towards it. In simple terms each capital owner is assumed to spend a fraction of his stock of capital holdings on design and enforcement of the rules of the game. Hence, the quality of institutions increases, *ceteris paribus*, in the capital stock as well as in the fraction spent.

This gives rise to two potential development traps because (i) the capital endowment in the economy, or (ii) the fraction spent on institutions may be too low. The development trap(s) are illustrated by the evolution of domestic returns in a non-linear fashion (see figure 6.2). Domestic returns are given by marginal returns to capital minus the rate of capital holdings, individual capital owners spend on good institutions. This rate will be referred to as the rate of private ordering in chapter (6). Once domestic returns are below an exogenously given world-interest rate, domestic investments become unattractive and capital accumulation is stalled. In a baseline model, the rate of private ordering is regarded as a tax rate which can be set by collective action so as to maximise domestic returns. However, even in this case, a development trap may appear if the capital endowment per worker is below a threshold and some parameter restrictions are fulfilled. Without collective action (an arguably more realistic case) the parameter restrictions are more relaxed and a development trap becomes more likely.

The model has two key features. First, the quality of institutions is determined endogenously because it follows directly from private profit maximisation. In contrast to previous models (eg, Gradstein, 2004), this allows for the gradual evolution of institutional quality from awful to perfect, and vice versa. Second, a development trap may appear even if sufficient resources were potentially available via an open capital account. Hence it is not that some countries simply cannot afford good institutions, but that

it is not attractive to private capital owners to invest in these countries: domestic returns may fall below the world-interest rate.

A number of extensions are provided to supplement the baseline model. If the assumption of collective action and homogenous capital owners is dropped, the model produces results which appear to fit well with stylised empirical observations. It explains, for instance, why a cliché "banana republic" may boast a high capital endowment per worker and poor institutions at the same time: a highly unequal distribution of capital depresses the allocation of resources towards good institutions because capital owners enjoy economies of scale in protecting their property.

Finally, a variety of policy options are discussed in order to lift an economy out of the development trap. Unsurprisingly, there is no "silver bullet", no simple parameter adjustment which would convincingly do the trick. The most promising way seems a strategy of regional or functional disintegration which would allow efforts to be concentrated to overcome potential thresholds.

A number of limitations should be mentioned. The model assumes a rather simple relation between the quality of institutions and the amount of resources devoted to it. The complexity of actual institutional arrangements is projected into a single dimension: quality. And institutional quality is eventually determined by its effect on output. Although this is a practical approach which makes the concept of institutions easy to control, it certainly misses some important aspects. For instance, some institutions which work fine in a rich country may be ill-suited for poor countries.¹¹ Hence, institutions need to be adjusted to the state of development.¹² This is implicitly assumed, but receives no explicit treatment. A second caveat is that the model does not show a dynamic adjustment between steady-states. It merely illustrates the existence of multiple equilibria and the conditions under which they appear. However, the extensions show that the model nevertheless provides a flexible framework which allows us to study a variety of features and whose results seem to fit reasonably well with stylised empirical observations.

¹¹Djankow et al (2003) find that many developing countries exhibit a too high level of procedural formalism, usually transplanted from former colonial masters, with various negative consequences on economic performance, corruption, and duration of judicial proceedings.

¹²Aghion et al (2002) show that the optimal degree of government insulation may depend on the stage of economic development. Poorer countries might prefer a higher insulation because there are less resources available to achieve economic or political reforms by compensating potential losers.

