PART THREE

Part Three comprises FOUR chapters and has the following objectives

- To introduce certain concepts in Micro-Economics that are needed to complement the largely Macroeconomic approaches to development that dominate Parts I and II of the book (Chapter 11). This will include in particular discussion about the workings of markets and incentives
- To understand how the different motivations and incentives of different "agents" in the economy (producers, consumers and governments) interact together to determine outcomes of importance for economic prosperity (Chapter 12)
- To summarise the main standard propositions of *Welfare Economics* and use these standard propositions to identify the broad types of policy interventions in economic activity that can be justified by this traditional but quite narrow strand of economic theory as part of a policy agenda for effective development (also in Chapter12).
- To identify some newer strands in mainstream neoclassical economics that explains why *uncertainties* about the future and in particular the *Information Asymmetries* that create so many uncertainties are critical "new" types of market failure of which development policy also needs to take due account (Chapter 13)
- To identify the strands in economic thinking associated with what is termed *Institutional Economics* that partly move us outside the boundaries of neo-classical economics. These strands help to further deepen our understanding of the potential role of government by identifying the large agenda of institution-building that is always called for in poorer economies. (Chapter 14)
- To combine the analysis of the previous topics to comment on the issues of potential "government failure"; how this might be assessed, and how it necessarily qualifies any earlier judgements that might be made about the role and likely effectiveness of government action in stimulating development. (also in Chapter 14)

Together these chapters provide the necessary under-pinning for the more extensive discussion of particular *Development Policies* in Parts IV and V of the book. They alert readers to the main theoretical arguments that underpin the extremely complex case for active government involvement in economic activity and the drive for faster rates of economic development. In doing so our analysis now needs to move beyond the bare-bones and very simple propositions that we made use of in Part I. That analysis must also go behind some of the aggregative ideas that characterise the formal growth models as elaborated in Part II. It does so by focusing much more than has so far been the case on the individual actors (or "agents" as they are often referred to) and examines the motivations and actions of people, individual households, companies and small businesses, government officials etc. that together make the myriad decisions that drive economic activity.

Chapter 11: Government Policies, Microeconomics, Incentives and Markets

…."it is not from the benevolence of the butcher, the brewer and the baker that we expect our dinner, but from their regard for their own self-interest…."
Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776

11.1 Introduction

Our discussion in Part Three represents the essential prelude to in-depth discussion of any of the specific government policies – macro or micro - that might be argued to enhance development and improve the lot of poorer people around the world. That discussion will inevitably suggest that there are more effective routes to development than those based narrowly and exclusively on the pursuit of self-interest by the individual persons and companies in developing countries: i.e. there is a role for government even though the self-interest of people symbolised by Adam Smith's butcher, brewer and baker, undoubtedly play a critical role as well.

Look at just a few of the difficult but contemporary questions that development policy and practice need to confront. These include -- how to enhance the physical and financial resources available in poor countries, how best to address the dangers of climate change, how to relieve these countries of their debt burden, how best to deal with the scourge of HIV/Aids and other chronic diseases, how to find more opportunities in education and jobs for the increasingly large numbers of younger people in that world, how to enable poorer countries to get the most out of the global trading system and not become victims of that system. The list is endless but there are some common principles that can be elicited to help address these. Part Three of the book introduces these common principles and thereby provides the basic groundwork of understanding that is needed to justify government policy interventions in these and other matters and in the development process more generally.

The practical reality that lies behind these many questions about development questions is obvious enough. If there are problems in any country, rich or poor, most of us DO look instinctively to "the government" to provide at least a part of the solution. The hole in the road outside my house is not really my problem. The battered wife two streets away certainly is not. Dealing with the consequences of horrendous natural disasters (e.g. the Asian tsunami of 2006 and the Haitian earthquake of 2010) must be the responsibility of guess who? – the government. In short, the popular presumption is that "the government" of any country has not only a ***responsibility*** but also some ***capacity*** to resolve most problems. If there is poor quality education, physical damage to houses after an earthquake, too much crime, too little health care, too few jobs in a particular region, too many infant deaths, too many pot-holes in the roads etc etc,…. "the government" does somehow bear the main responsibility for putting matters right. Or so we tend to believe!

The Partnership of Government and Foreign Aid Donors

But what if the government of a poor country does not have the necessary capacity or the resources to address obvious problems such as HIV/AIDs, the damage from the last earthquake or hurricane or high rates of infant mortality, then it ought to be able to draw on the resources of the richer international community through financial

and technical *foreign aid* to supplement its own efforts and resources. In this case the responsibility and capacity of the *national government* to solve problems is enhanced by the responsibility and capacity of the *international aid or donor community* to help. Indeed, it is one of the strongest beliefs amongst most people interested in development challenges that aid donors can and do make a real difference to the quality of life as well as to the governance of poor countries. In some low income developing countries donors have played such a major role for so many years (e.g. donor aid still provides XXX percent of the government budget in Tanzania more than 40 years after independence) that they have to be regarded as almost permanent and parallel elements of government.

In short the traditional economist debate about the appropriate role of government or state intervention in *developing country* markets, has an additional sub-text about the appropriate role of foreign donors in supplementing such interventions. But these presumptions about the role and effectiveness of both national governments and their aid donor supporters cannot be taken at face value. The historical record of the past fifty years regrettably has produced many problematic examples in the world's poorer countries: Mobutu in Zaire, Mugabe in Zimbabwe and Pol Pot in Cambodia are but the more extreme examples of an all too familiar problem. This is that national governments have too often addressed particular problems in ways which can reasonably be described as irresponsible, or they have failed to address certain problems at all or have done so in ways which are technically ineffective or which are downright corrupt. In the popular parlance of today, "governance" has often been disappointing or downright poor.

Some would even argue that governments (and aid donors) have been and will continue to be a part of the problem of development rather than the source of the solution[1]. Similarly that same historical record provides many examples of aid donors doing silly things or doing sensible things badly or supporting corrupt governments and generally wasting their money rather than putting it to good effect in the interests of poorer people[2]. As Easterly has noted "……..*the West spent $2.3 trillion on foreign aid in the past five decades and still had not managed to get twelve-cent medicines to children that could save half of all malaria deaths."*[3] Dambisa Moyo concludes her recent controversial book with the confident assertion that …"***Africa's development impasse demands a new level of consciousness, a greater degree of innovation and a generous dose of honesty about what works \n what does not as far as development is concerned. And one thing is for sure, depending on aid has not worked."*** (pg 154). Even if we disagree with this strong assertion, it remains abundantly clear that aid effectiveness and the contribution to governance that comes from the donor community definitely cannot be taken for granted.

The Missing Ingredients

In this part of the book we try to address these realities of governance in order to understand the scope and limitations of public policy interventions in the process of development whether these interventions are made independently by national governments or are supported (or perhaps "thrust upon them") by international aid

[1] A position close to this is arued strenuously in a book by William Easterly, *The White Man's Burden: Why The West's Efforts To Help The Rest Have Done So Much Ill And So Little Good*. Oxford University Press, UK, 2006

[2] This point has been strenuously argued in a more recent book by Dambisa Moyo entitled *Dead Aid, Why Aid is not working and how there is another way for Africa,* Allen Lane, London 2009.

[3] Easterly, op cit.

donors. We do this by going back to some fundamental *economic* arguments about how the functioning of economies is, or can be enhanced, by the intervention of governments. So the question becomes … *how do economies function in the absence of government interventions and why it is that the individual agents in those economies (households, and businesses such as Adam Smith's self-interested butcher and brewer) sometimes need help from a dose of governmental policy if their own self-serving actions are to produce the good development outcomes in terms of higher incomes, greater equality, social justice etc*?

The answer to this question starts by noting that our analysis so far in this book has shied away from any in-depth discussion of three absolutely essential aspects of the functioning of any economy – rich or poor – namely INCENTIVES, MARKETS and INSTITUTIONS. More specifically there has been no consideration of three main issues:

- What are the *motivations and incentives* faced by economic agents that drive their various economic decisions? These decisions include (i) for producers – what to produce, with what methods and for which markets); (ii) for consumers – what to consume and whether for today or at some future date; (iii) for both households and businesses – whether to invest either in personal assets such as a house or in a business proposition. When in Chapter 14 we add in the explicit institution of "government" we can also incorporate other important decisions that also help to determine development outcomes. Examples are (iv) for politicians and civil servants in government - how to set spend public funds, (v) how to raise the money to finance these expenditures (in what amounts and using what tax and other methods); and more generally (vi) how to set government policies - for which main purposes and for the benefit of which groups in society. The inclusion of government decisions and the associated incentive patterns of both civil servants and politicians that guide such decisions helps us to extend tradition microeconomic analysis to embrace the possibilities of both good and bad government.
- How will the various *markets* of the economy intercede between the actions of the producers, the consumers and government to generate particular outcomes in terms of the prices of particular goods and services, and the volumes available to buy and sell? In addition will might partial or full government control of such markets affect the price and quantity outcomes bearing in mind the actual incentives that the various agents confront?
- What are the main *institutions* that are needed to enable markets to work effectively and how is development impeded when these institutions are absent or incomplete? What can we do about it.

By remedying these three high level omissions – at least partially – we can move forward to offer *generic* answers to policy questions such as those listed below. These generic answers although they emerge in Part Three in rather abstract terms, provide us with a sound basis for examining *particular* policy issues in greater depth in Parts Four and Five of the book.

- Do free markets work?
- What are the idealised circumstances referred to by Joe Stiglitz in the footnote below.[4] that make their efficient working more likely?

[4] "*… the fact that the world is more complicated than any model which we might construct does not absolve us of the need for testing our ideas out using simple and understandable models. If markets do not work efficiently under these idealized circumstances, how can we*

- Are such circumstances more or less likely to be approximated in practice in poor developing countries than in developed ones?
- What are the implications for governments if the conditions for free markets working effectively are not met?
- How do considerations about a "fair" distribution of income and wealth affect judgements about the appropriate level and types of government intervention?
- How best should governments intervene in such cases?
- Can markets be made to work better in order to advance the needs of the poor more effectively or are free markets inherently anti-poor?

These and many related questions have all figured prominently in the development debates of the past few decades. Part Three provides the reader with the essential building blocks needed to answer such questions both in general terms and in relation to particular issues. Some materials are necessarily a bit more abstract than in earlier chapters and readers with a good general understanding of Welfare Economics may prefer to skim over Chapter 12 in particular.

11.2 Outline of Part 3

As we have seen in Parts 1 and 2 of the book we can say a great deal about the processes of economic development and change without deviating too far from mainly macroeconomic and aggregative concepts such as GDP, total consumption, investment etc that figure centrally in the formal growth models. But the measured size of all of these macro aggregates depend upon complex processes involving the interaction of the actions of large numbers of individual (micro) agents. We cannot truly understand the macroeconomic outcomes without a good understanding of the incentives of various types that guide such micro level actions. Nor indeed can governments shape and implement their own policies without a reasonable understanding of what individual households and companies are doing and may do in future in response to new policy directions.

The four chapters of Part 3 approach the task of introducing the microeconomic and policy framework for economic development in *three* separate stages. Following this short introductory chapter we proceed as follows.

First, in Chapter 12 we present, explain and critique some familiar micro-economic theory that shows how individual micro agents (households and companies) interact together through markets. This Economics 101-type of analysis serves to remind the reader of the basic reasons that theoretical economic analysis adduces in order to justify an active role for the government in the processes of economic activity. In brief the government role is justified first and foremost by the fact that unfettered markets are characterised by various *market failures* (e.g. imperfect competition, and externalities including those analysed by some of the new growth models of Part 2) that can prevent the achievement of optimum outcomes. Governments, at least in principle are able to implement policy interventions that can counteract those failures. Additionally, there is arguably a further role for government in mitigating various *inequalities* in those market outcomes that would emerge from a purely free and unfettered market. However, as we shall see these propositions about the *re-distributional* role of government do not emerge as strongly and as unambiguously from the theory as does its possible a*llocative* role.

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be confident that they would work efficiently under more complicated circumstances? Only by an act (and indeed a leap of) faith!……" *Joseph Stiglitz, Whither Socialism, 1994.*

Second, in Chapter 13 we explain the consequences of certain types of market failure that have gained much greater prominence in the literature more recently (last 20 years) and especially those failures that arise because of incomplete or imperfect information. The broad label of *asymmetric information* has been commonly assigned to designate these newer forms of market failure. As we will see these information asymmetries have a variety of profound implications for the type of policy interventions that may be justified theoretically and also the prospects of such policies succeeding.

Third, in Chapter 14 we introduce the equally important point that much of the conventional microeconomics found in Economics101-type courses is "institution-free". In other words it discusses the incentives of households and companies to make their various decisions by *assuming* implicitly that the institutions which may affect their decisions and the results of those decisions not only exist but also function effectively. This assumption flies in the face of the reality which we see in most economies but certainly in low income developing economies which are the concern of this book. Such economies lack (either in totality, or for many of its people), basic institutions such as workable laws to defend property rights, legal systems to enforce contracts, an acceptable form of money with which to make payment to others, usable roads and rail facilities to transport goods, functioning markets for the trading of certain goods and services on a "spot" basis and certainly on a "futures" basis, and available insurance markets that might mitigate the huge uncertainties associated with production and commerce in these poorer economies reality in all economies.

Chapter 14 argues among other things that the absence or inadequacy of basic institutions creates another potential role for governments namely that of creating new institutions and reforming/enhancing older institutions. Such a role for government does not play much is any role in the traditional micro theory as summarised in Chapter 12. But it is of absolutely pivotal importance in any practical discussion of the scope and nature of the government role in the development process. Many of the loans and much of the technical assistance provided by international organisations such as the World Bank to help their clients has an "institution-building label attached to it. We intend Part 3 to provide the basic story about this "institutional economics" in order to prepare the way for more specific examples of the type of institutions in question in Parts IV and V. Among other things this enables us to go beyond the simple proposition that government intervention is justified only by market imperfections and failures (as defined in Ch 12), and to also include the possibility that some government interventions (including those supported by foreign aid donors) may be justified by the need to build missing or poor quality institutions. Using similar arguments it is also noted why some government (or donor) interventions might need to be ruled out by virtue of the failures or absence of critical institutions that are needed to support such interventions.

Finally, and also in Chapter 14 we combine some of the analysis of the previous Part 3 topics to comment on the issues of potential "government failure"; how this might be assessed, and how it necessarily qualifies any earlier judgements that might be made about the role and likely effectiveness of government action in stimulating development.

11.3 Learning Outcomes:

Readers who can persevere through the four chapters of Part 3 should acquire

- an understanding of the strict formal conditions that would need to apply IF the dramatic conclusions popularised by Adam Smith about free markets and the invisible hand were to be true in reality
- an understanding of the most important of the FAILURES of those conditions in the real world and the use of this understanding to see how the selfish pursuit of individual gain will cause outcomes that can sometimes deviate from those required by the wider public interest
- some awareness of the types of public policy interventions that may be justified by the divergences of outcome as between individual gain and the public interest. In short this third outcome is to define the exceptions to Smith's comment as quoted earlier that…." I have never known much good done by those who affected to trade for the public good."
- an awareness also of how distributional questions and issues about social justice can be handled by economic analysis
- an understanding about why specific institutions need to figure prominently in most debates about development to and sometimes override arguments that derive from institution-free forms or economic analysis.
- some understanding of the circumstances in which the *a priori* case for government involvement may be over-ridden by a second best approach in which the weaknesses of government itself are explicitly considered.

We complete this introductory chapter by an extended comment on the evolution of the development debate over the past half century. This should help to indicate to readers how our discussion of microeconomics and markets in Part 3 fits with some aspects of economic analysis which they may already be familiar.

11.4 Micro-Issues, Macroeconomics and the Mainstream

The analysis if Parts I and II of this book was essentially *macroeconomic* in nature. That is to say the key economic variables that were discussed were all *aggregates*: - examples used in our discussion of economic growth were total GDP, total income, total consumption, total savings, aggregate capital and the aggregate labour force etc. Although some simple disaggregations were used – examples were industrial versus agricultural production and urban versus rural populations – these were not much elaborated. Part II and its discussion of growth theory has shown how the insights drawn from such an aggregative approach can capture important aspects of the development process. But most of the models discussed there largely abstract from the complex changes in structure going on below those aggregates – i.e. between sectors, types of products, regions etc – that invariably characterise developments in the real world.

Even more important, aggregative analysis cannot tell us much about the first of our missing ingredients namely incentives and how individuals and organisations in developing countries respond to these to drive change (or slow it down*).* This is a significant omission since on all major development issues - including, for example, climate change, debt reduction, population policy - *incentives and responses to them are at the very core of the economic behaviour that influences what is or is not achieved.* For example, it may well be the case that continued high carbon emissions may have a disastrous impact on farmers in low-lying regions of

Bangladesh. But this of itself does not create an incentive to European or American consumers to cut back on excessive use of air travel or their gas-guzzling SUVs. It may also well be the case that a smaller family size may be beneficial to the development prospects of high population-growth countries in Africa. But this of itself does not create any incentive for an individual poor Malawian female to forego the extra child who she sees as part of her security in her old age!

Box 11.1: The Keynesian Influence on the Macro versus Micro discussion

Keynes' General Theory published first in 1936 was truly revolutionary. It eroded the previous view of most economists that changes in *relative prices* in key markets could invariably eliminate discrepancies between supply and demand. Put more simply it suggested that Adam Smith's famous "invisible hand" would sometimes fail to work. Most controversially it pointed out various reasons why high unemployment (an excess of labour supply over labour demand) might fail to be eliminated merely by cuttings wages.

But if changes in relative prices could not restore the equilibrium between supply and demand once it had been disturbed, what would or could achieve that? Keynes' answer at least for some instances of excess supply (e.g. of labour) was an increase in *aggregate demand*. Cutting wages could not always provide for this – indeed it was likely to reduce aggregate demand. In short an increase in aggregate demand would not always be forthcoming on the basis of market forces and changes in relative prices. However, governments could stand in place of the market and resolve the problem of unemployment by creating demand *artificially* via their own public expenditures and especially via public investment projects and expansionary fiscal policies.

Note that in this admittedly simplified view of the Keynesian idea, the *aggregate* (namely aggregate demand) takes on the analytical role formerly occupied by *relative prices*: it substitutes a macro for a micro concept. In the 1960s and 1970s, this particular aspect of the Keynesian revolution combined very easily (but dangerously as it turned out) with the opinions of the early development economists. They argued that the responsiveness to changes in relative prices of both consumption and production patterns in developing economies would be likely to be low (e.g. peasant farmers were unlikely to grow much more wheat or rice if prices were raised). It was a short step from that opinion to the (then) commonly held view that *relative prices did not matter at all*! The result was (a) a generation of development policies from 1950 to around 1980 that seriously de-emphasised the micro-economic problems that could arise from maintaining the "wrong" prices for food, exports, fuel etc., and (b) an analytical approach that gave too much scientific credibility to methodologies that also failed to assess the role of price changes in the development process (input-output analysis is the prime example of a useful technique that got over-used).

To fix this idea a bit more solidly let us return for a moment on one of the essential ideas found in Adam Smith's 1776 book – *An Inquiry into the Nature and Causes of the Wealth of Nations*: a book that has been a source of inspiration to all subsequent generations of economists. The most remembered result from Smith is that of the "invisible hand". The essential idea is that the pursuit of self-interest by millions of individuals will, of itself, cause the betterment of society as a whole. In a much quoted passage, he wrote:

"Every individual neither intends to promote the public interest, nor knows how much he is promoting it. He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good

done by those who affected to trade for the public good." And as quoted at the head of this chapter…

……."it is not from the benevolence of the butcher, the brewer and the baker that we expect our dinner, but from their regard for their own self-interest…."

This essential idea that narrow self interest drives economies still resonates with many people in the C21st and has been the explicit or implicit inspiration for many of the more influential liberal movements of the past few decades: Thatcherism, Reagonomics and the Washington Consensus for example[5]. In short these ideas collectively embedded the idea that the interests even of poorer economies can be well-served by allowing significantly more freedom to markets

Mainstream" Economics versus "High Development Theory"

Even more significantly from our point of view is the central role that this idea of narrow self interest still plays in what many would regard as today's "mainstream economics" which is also frequently labelled as "neo-classical economics. Let us try to explain the many problems this causes by discussing the two labels –"mainstream economics" and "high development theory" that appear in the title to this sub-section.

Paul Krugman in an essay in honour of Albert Hirschman[6] in 1994 explains that the early development economists of the 1950s and 1960s, including Hirschman himself, but also distinguished scholars such as Gunnar Myrdal and Raul Prebisch found it very difficult to express their ideas "in the tightly specified models that were increasingly becoming the *unique* (my emphasis added) language of discourse of economic analysis." These tightly specified models included above all to the various elaborations of the so-called Arrow Debreu framework (that we explain in Chapter 12 below), which emphasises supply and demand, perfectly competitive markets and the achievement of individual market as well as general equilibrium achieved by the self-regarding actions of many independent agents (firms and individuals). Today this framework – much elaborated, extended in scope and improved of course since the 1960s – is referred to as *neoclassical economics*.

Krugman also takes the liberty of inferring how Hirschman himself had responded to the difficulties of the development economists in accommodating to the mainstream approaches. He did so Krugman asserts by saying …"*that both the theorist and the practical policy-maker could and should ignore the pressures to produce buttoned-down mathematically consistent analyses and adopt instead a sort of muscular pragmatism in grappling with the problems of development"*. In other words the logic was that mainstream economic theory inhabits one world that does not much intersect with the world inhabited by the more pragmatic development economist. This approach in turn led Hirschman and others to the view that was only loosely based in theory of his time…" *that development is a virtuous circle driven by external economies – that is, that modernisation breeds modernization*". Some countries, according to this view, …" *remain underdeveloped because they have failed to get this virtuous circle going, and thus remain stuck in a low level trap. Such a view implies a powerful case for government activism as a way of breaking out of this trap"* (Ibid).

This popular view from the 1960s and 1970s of the necessary policy responses to stimulate development gained further strength from the admission even of the

[5] This consensus is treated in detail in Chapter XXX in Part 4
[6] Paul Krugman, *The Rise and Fall of Development Economics*, 1994. http://web.mit.edu/krugman

mainstream economists – inspired in this matter too by Adam Smith – that the perfectly competitive equilibrium of the Arrow-Debreu paradigm would be compromised by certain acknowledged market imperfections including non-competitive markets, excessive market power to some players, and above all by increasing returns to scale.

The high development theory that was widely taught to economists and popularised from the late 1950s drew loosely on these types of ideas. By doing so it seemed also to provide governments with an almost unqualified legitimacy to intervene in many aspects of development to help their countries escape the *low level traps* and so get the supposed *virtuous circle of development* moving forward: huge public investment projects such as the Volta River scheme in Ghana and Aswan in Egypt, major steel works in Nigeria, the nationalisation of banks in Tanzania and the control of key food and other prices almost everywhere in the developing world. In its most extreme form this theory also provided a justification to the fully-fledged central planning of the Soviet Union and later the People's Republic of China. In its less extreme forms it seemed to justify the heavy state involvement in industry and finance that was seen in almost all African countries and many in Latin America too in the 1960s and 1970s. But as Krugman's paper points out the relatively weak rigour of the arguments *at that time* not only distanced this theory from the normal language of discourse of economic analysis. But more seriously it meant that the flaws of logic led in many cases to wrong policies and to extremely disappointing outcomes in terms of both growth and the achievement of much needed social improvement in the countries concerned. These are weaknesses that the more nuanced approaches available to today's development economists can help to avoid.

In brief the questions that were rarely asked at that time included questions such as: …is the scale and scope of government intervention (from fully central planning at one extreme to almost free markets at the other) commensurate with the damage done by the undoubted failures of markets or would a more modest involvement of government have done the job rather better? And, how do we factor in the undoubted inadequacies of governments themselves and the significant likelihood in many economies of government or bureaucratic failure?

The Broadened Perspectives of "Mainstream Economics"

Today's student of development economics should not despair at reading the Krugman critique – the gap between "development economics " and "mainstream economics" has narrowed considerably – and you do not need to sit on the periphery of the subject of economics because you have chosen to study "development" rather than some other branch of the subject! There are two main reasons for this. First the perspectives and the content of mainstream neo-classical economics have widened considerably in the past thirty years. (Box 11.2 describes some important selected examples). Second, as we saw in our extended discussion of growth theory in Part 2, the technical tools of economics have enabled many of the better insights of the early development economists to be captured to a much fuller degree within the frameworks accepted by the mainstream: no longer is "a muscular pragmatism" their principal analytical tool. However, this *modus vivendi* is far from complete and one of the challenges of studying development economics today lies in the need to factor in approaches and lines of enquiry that remain outside the mainstream.

Box 11.2: New Dimensions in Mainstream Economics

Example 1: Rational Man

The first of these advances relates to the economists view of *"rationality".* Economics theorists fall back almost instinctively on the concept of rational behaviour of individuals and firms because they find it really difficult to find a rigorous alternative. But in the mainstream the concept is normally given a very narrow definition in relation to a maximand such as *utility* (for households) or *profits* (for firms). John Kay notes that "the assumption of rationality gives economics a rigour that distinguishes it from other social sciences".[7] Becker and his followers including the recent "Freakonomics" examples from Levitt and Dubner, have shown that the "economic approach" is not restricted to a very narrow set of motivations as often assumed (e.g. financial profit).[8]

In the past thirty years economic science has advanced on the rationality front in several ways. In the work of Gary Becker and others mainly associated with the so-called Chicago School, rationality has been extended to explain more and more things that at first sight appear to be inherent in the human character or more a matter of emotions than of rational economic behaviour. Becker himself developed models of family and other areas of human behaviour and was awarded the 1992 Nobel Prize for his efforts in this area: important examples include economic explanations of marriage, divorce, child-bearing etc. Even what many people regard as deep-seated human traits such as honesty or dishonesty have been explained also using the extended models of economic rationality.

Example 2: Behavioural Economics

Second but pointing in a quite different direction, is the gradual acceptance in some economic circles of the ideas initially from the realm of psychology proposed above all by Daniel Kahneman (who was the 2002 Nobel Laureate) and Amos Tversky [ ]. They established the subject that is now referred to as *Behavioural Economics*. This new field not only challenges the ubiquity of rational behaviour in the real world but also finds more and more examples where real world behaviour is *systematically irrational*. This helps to explain for example why in so many walks of life individuals or firms rely on convention (well-established behaviours of the past) or on rules of thumb rather than on the narrow maximisation of utility or profit, and also why individuals can and do adapt different behaviours when they move into new environments with their own distinct and even eccentric customs and practices. One branch namely *behavioural finance* is one of the few branches of economies that throws any real light on the "idiot" behaviour that preceded the 2007-09 financial crash: e.g. the tendency to extrapolate too readily from small samples (e.g., assuming that because home prices rose in the past few years, they'll keep on rising). This may seem to be of only limited relevance in the debate about development. In fact, it can help us to understand profoundly important matters such as why government corruption may be so much more endemic in some developing countries than elsewhere (the Democratic Republic of Congo versus the UK) and also why change – even if demonstrably for the good – may be so hard to achieve in practice[9]. Among other things it is an approach that can help us understand the powerful force of inertia in human behaviour and in the record of particular countries.

Example 3: The Links between Neoclassical and Institutional Economics

It was a third Nobel Prize winner namely Ronald Coase who made the connection between institutions and neoclassical economics some 30 years before Douglas North himself was awarded the prize in 1993. The crucial factor that connects these branches of the subject is *transaction costs*. Coase noted that the neo-classical results (as described in detail in the next chapter) only apply when it is *costless* to transact. Only under the highly unlikely conditions of costless trading and bargaining will the various agents in the economy reach the solution that maximizes aggregate income regardless of the institutional arrangements. But when, as in all real world countries, it costs time and money to arrange transactions then *institutions do matter*. Significantly it has also been shown by Oliver Williamson and others that in the absence of transaction costs, an economy will have no need of institutions such as "firms" and "money". So much of the familiar macroeconomics which we study would be eliminated if transactions costs were indeed zero as many neo-classical models still assume.

Example 4: Bargaining and Game Theory

This development has much older antecedents but has really only come into full prominence in economic policy debates in the past 20 years. In that period mainstream economics has been able to embrace the explicitly non-individualistic idea namely that individuals frequently need to "bargain" or to otherwise factor in the behaviour of other agents in order to reach certain economic decisions. Many commercial decisions such as

[7] John Kay, *The Truth about Markets,* Penguin Books, 2004, Ch 17.

[8] Becker quoted in Levitt and Dubner (2005) notes that *"… the economic approach is a systematic means of describing how people make decisions and how they change their minds; how they choose someone to love and marry, someone perhaps to hate or even kill; whether, coming upon a pile of money, they will steal from it, leave it alone, or even add to it; why they may fear one thing and yearn for something only slightly different; why they punish one sort of behaviour while rewarding a similar one"* (pg 13)

[9] The link between this advance in relation to rationality and the advances in Institutional Economics (IE) is fairly clear. Once the discipline of economics is prepared to accommodate the greater complexity that is associated with different institutional structures (in different countries or in the same country at different times in history), then it is easy to see why an action deemed "rational" in one structure may appear less so in another. So even something as simple as a grain producer's response to a 10% price increased may vary greatly across these different situations of place and time. The IE approach can also help explain why conventions and rules of thumb are different in different countries and why the deviations

11.5 Back to Adam Smith and Macroeconomics

We can see from the brief review of some of the more recent ideas in Box 11.2 why mainstream economic analysis has been able to move somewhat away from the central ideas due to Adam Smith about the organising and coordinating magic of the (unaided) market. This idea is now recognised by economists (but not by all politicians) as far too simple to explain how real world economies actually work. Markets in the real world actually function with the help of a complex panoply of *institutions* that determine the transaction costs associated with negotiating, producing and trading. For example competitive grain markets may work well in a large economy such as the USA but are highly prone to monopolisation and inefficiencies in much smaller countries such as Zambia or Kenya where lower volumes result in much higher transaction costs for the farmers.

The market solutions that we can prove mathematically (see Chapter 12) rely on very narrow ideas of economic rationality which are increasingly disproved by new advances in the subject. The *independence* of individual decision-makers that these solutions typically assume, is invalidated by the complex interactions between persons that can result in the multiple (possible) equilibria that are proven by formal game theoretic approaches.

But even if Smith's basic proposition were fully true, the individual incentives that drive the market forces so central to Adam Smith's insight connects at best uneasily with *aggregative* economic concepts such as total consumption and industrial employment. Macroeconomic textbooks may say things like "total consumption will increase *in response to* a rise in income" or "industrial employment will fall when a minimum wage is introduced" but these are just semantic short-hands. They lack any real explanatory content in terms of the behaviour patterns of the many millions of individual decisions that together cause aggregate consumption or industrial employment to change.

So although many economists and econometricians earn their living observing and elaborating statistical relationships of the type – "movements of aggregate consumption relate strongly to aggregate income over the same time period" – this activity by itself does not reveal much about how individual choices about spending are made, how they vary across different groups of consumers, and above all how the incentives that drive *individual* behaviour actually work in practice. Good macroeconomists and econometricians invariably justify their aggregative relationships by reference to some underlying theory of (micro) behaviour that generate those relationships.

In the real world it is micro units - people (individuals and families) and organisations (enterprises and governments) for whom incentives matter and shape decisions. These "agents" in any economy make myriad separate decisions about what to consume, what to produce, where to live, where to study, what to study, whether to

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from the narrow economist's view of rationality may in fact be well founded in the formal and informal rules of different economies.

[10] A good non-technical explanation is available in Abhinay Muthoo, " A Non Technical Introduction to Bargaining Theory, World Economy, Vol. 1 No 2. April-June 2000. More technical detail is in Abhinay Muthoo, *Bargaining Theory and Applications*, Cambridge University Press, 1999.

have children, how much to tax[11] and spend from the public purse etc. .It is these incentive-driven decisions (sometimes fully rational but not necessarily so given the type of insights coming from economists such as Kahneman and Tversky) that drive real economies in practice. So in studying development we really do need to understand how these decisions get made. In the process we will better understand whether ideas such as those propounded by Adam Smith really do have any relevance for poor countries in the modern world.

Can free markets and their invisible hand really play any part in the solution of global poverty or is this just so much nonsense that we had best forget?

In the next chapter we review this question largely from a theoretical perspective by putting substance on the main ideas that have developed from the narrow Arrow Debreu ideas of the 1950s and through the new thinking that was briefly discussed above. The Anne to this present chapter attempts to put a bit of substance on the often abstract idea of a "market" by considering a few important examples of different types of markets of relevance to developing countries

[11] We have included governments who choose tax and expenditure levels as "agents" motivated by incentives of various types.

Annex to Chapter 11: What do we mean by "Markets"? - Some Real World Examples

1. Local Commodity Markets

Markets in basic physical commodities trace back to the very earliest societies and so back some 10,000 years at least to when settled agriculture first began in the fertile crescents of the Middle East. Most readers of this book will be familiar with the modern day equivalent of these – the physical famers and other markets in most towns and larger villages of the developed and the developing world. The distinctive feature of such markets is that they do indeed have a physical presence in a well-defined geographical place or area.

As in the past these physical markets trade cereals, fruits, vegetables, fish, meat and other basic commodities. In the UK and the USA, specialised farmers markets trade mainly locally grown produce. In even the poorest of developing countries, large networks of local commodity markets provide the basis for the livelihoods of many poorer families. Most countries have specialised wholesale variants of these retail markets – Smithfield and Covent Garden in the UK and the huge flower market of Amsterdam are examples. Trading in new and second-hand manufactured goods is common in permanent or periodic markets in many countries: labels such as "flea markets" and "car boot sales" are among the many labels used to describe them. Long-standing trading nations such as Dubai maintain huge versions of such markets fed in that case by the "dhow trade" into the Indian Ocean – large specialised areas for textiles, auto parts, jewellery and electronics are a notable feature.

These markets have one thing in common apart from their physical existence in a well defined place. While they will invariably have some minimum regulation - traders may need a license or permit for example – no individual organisation will typically control the trades that are made and the price deals that are struck. These emerge from the atomistic relationships between large numbers of individuals. So the outcomes – prices and volumes of trade – will be the result of the un-coordinated interface between large numbers (often very large numbers) of buyer and sellers. And yet there will be order in this uncoordinated system: the prices of similar products are unlikely to differ on any one day from one end of the market to the other. Of course, prices will rise and fall in line with seasonal shortages/gluts of particular products such as strawberries and beans, but these price changes will also come about without any explicit coordination of the market participants. The more standardised are the products on sale – in the whole market or in a particular specialised commodity areas as in Dubai - the more closely aligned are prices likely to be.

There would be very little basis for criticising such markets on the grounds either of their *efficiency* (they are typically good at matching the needs of many sellers with those of any even large number of buyers and at prices that most would regard as fair) nor their fairness (only the infrequent participant such as the cruise-ship once-in-a lifetime tourist) is likely to get seriously over-charged. Such markets are ubiquitous and vibrant in most low income countries. In some such as Bangladesh and Vietnam the casual visitor is often amazed by the density of such markets in the major population centres and by the large numbers of people engaged in operating them. Even many of the strongest critics of "market solutions" to development problems would exempt these local markets from the brunt of their criticisms!

2. International Commodity Markets

Staying with physical commodities but at the other extreme in terms of scale are the large international markets in basic commodities such as oil, coffee, tobacco, cocoa, tea and copper. These differ from the local commodity markets in that they are no longer uniquely associated with one particular geographical place where the trades take place. There may be auctions houses in some producing countries – for the tobacco and tea crops for example – but a great deal of the trading will take place remotely using electronic communication. Typically the prices of these commodities are struck in large-value auctions either at the site of supply or in major national or international markets such as the Chicago Mercantile Exchange - the world's largest livestock exchange, the Chicago Board of Trade and the New York Mercantile Exchange.

Such markets do attract significant criticism from those who shy away from "market solutions" to development problems.

Significantly the first of these organisations started life in 1874 trading just one commodity namely eggs. The Chicago Board of Trade (CBOT) emerged even earlier - in 1841 – as an informal club of members founded by a grain broker (W.I. Whiting) and a grain elevator operator (Thomas Richmond). Starting out merely by setting inspection standards for grains, pork, beef, lumber etc for largely local produce, it moved into reporting daily prices and market conditions. Then in the unsettled condition of the American Civil War, it took on a new role involving the establishment of agreed values at which member could trade the promissory notes of various state banks. On the commodity front, and from a starting point of almost no grain production in the Western US, the CBOT by the 1870s was responsible for the grading and a daily telegraphic international market information service relating to more than 15 million bushels of annual wheat sales to London and Liverpool (75% of all US exports to these destinations).

The characteristic feature of such markets both then and now is that the deal sizes are typically large – measured in millions of dollars – and the number of participants on both the demand and the supply side of the market will typically be relatively small. Insofar as the supply of the commodity in question originates with very large numbers of small producers as in the case of coffee and tea from African small-holders, their "supply" will typically be represented by larger marketing organisations or by larger commercial producers of the same commodities.

And yet, experience shows that there is normally enough depth of participation on both the supply and demand side of these markets to ensure that the price outcomes in these large markets have many of the same features as those that emerge from the more localised commodity markets discussed above. Certainly there have been many attempts by powerful individuals or governments in the past thirty years to "control" these markets by artificially manipulating supply or demand. But these attempts have enjoyed only mixed success and have sometimes led to large losses for the perpetrators of the manipulation. The big questions about whether these markets are fair especially to the smaller producers of some of the commodities hinges mainly around the question of how if at all monopolistic elements manage to control prices and volumes.

Manipulation by Governments

Easily the most well-know example is the OPEC oil cartel that in 1973/74 artificially restricted the supplies of oil to the markets and so managed a large 400% overnight

rise in the world price of oil that was extremely disruptive to economic performance in many countries – especially low-income countries. But this initial success was relatively short lived since the high price induced new exploration and production of oil especially in Northern Europe and Alaska. The new production that resulted eventually took the total oil supply substantially away from the control of OPEC. The OPEC action failed long term for the good economic reasons that it could not control the incentives (to explore for new oil supplies in the North Sea and Alaska) that were stimulated by its initial hike in prices. Today it is recognised that if the OPEC ministers agree to restrict or expand supplies, they can change the price of oil products but only at the margin. The far bigger effects on the oil price over time are coming from the gradual changes in world supplies and demands from a variety of sources: recently the very rapid growth of incomes in China that between 2005 and 2008 drove up oil prices from around $20 per barrel to over $120 per barrel by exerting major pressure on the demand side of the market.

In the early 1970s after the foundation of UNCTAD in the mid-1960s and the early successes of OPEC, there was a strong international move for a New International Economic Order (NIEO). This included the idea of generalising from the commodity specific agreements then in place (oil, tin, tea and coffee) to a broader global support system for many commodity prices (specifically ten core commodities and seven slightly less important ones). In one manifestation of this there was a proposal to index commodity prices to the rising prices of developed countries manufactured goods. [12] In the event and after a number of UN Special Resolutions, the NIEO as such never became more than a rallying cry for developing country interests. Partly this reflected the balance of international political power. But the idea also foundered because the true agenda was not to produce merely *stable* prices but permanently *higher* prices for the producing countries. The financial costs of achieving this – via buffer stocks and a common fund to purchase commodities on world markets – were way in excess of anything that the richer countries were prepared to contribute. Nonetheless several manifestations of the basic ideas behind the NIEO persist today and are briefly discussed below.

Similar examples with similar problems are to be found in a variety of government and UN-led individual commodity agreements that have been in force from time to time – and as far back as the 1930s in the case of commodities such as tea. Such schemes attained their prominence in the 1950s when the ideas of Raul Prebisch and Hans Singer [ ] were particularly prominent in the development economics debate. These ideas emphasised the significant and damaging volatility of primary commodity prices and the allegedly long-run tendencies of such prices to fall (relative to, in particular the prices of manufactures). Five main agreements under UN auspices were signed in the years 1954 to 1980. (Sugar, Tin, Coffee, Cocoa and Natural Rubber)[13]. In 1975 the UNCTAD finally helped to establish The Common Fund for Commodities which since 1988 has provided liquidity support to try to stabilise the prices of ten core commodities. In 1963 the IMF added a Compensatory Finance Facility to its other programmes of balance of payments support. This was designed to compensate for large swings in net export earnings (rather than price

[12] Robert Looney, New International Economic Order, in R.J.B. Jones (editor) Routledge Encyclopaedia of International Poliltical Economy, London, Routledge, 1999.
[13] The contemporary market-influencing roles of these and similar organisations remain significant. The main extant organisations include the International Cocoa Organisation (ICCO); the International Coffee Organisations (ICO); the International Grains Council (IGC); the International Jute Organisation (IJO); the International natural Rubber Transition (INRO); the International Sugar Originations (ISO); and the International Topical Timber Organisation (ITTO). All have their own web site where their activities can be reviewed in depth.

movements in *individual* commodities). It was reconstituted in 1988 as the Compensatory and Contingency Financing Facility with a rather broader remit. In 1975, as part of the first Lome Agreement with former colonial countries, the EU established its own compensatory financing schemes namely STABEX and SYSMIN to provide assistance to combat commodity instabilities in African, Caribbean and Pacific (ACP) Countries

Most single commodity agreements typically involve the governments of both producing and consuming nations and have the twin objectives of assisting poor county producers by establishing better prices and by limiting the instability of prices – which also helps consuming countries. They fail most frequently because the funds to artificially boost the demand for the commodity are insufficient (hence the International Tin Council that sought to do this ran out of funds and the International Cocoa Organisation suspended its own buffer stock transactions in 1988). Producer nations in practice cannot easily agree if and by how much to restrict supplies, and consumer and producer governments find it quite easy to disagree in their bargaining about the operations of the schemes (for example the US withdrawal from the coffee agreement in the 1980s because of its perception that prices were being set too high).

Private manipulation
Private manipulation of the international commodity markets are inherently more difficult because of the generally lower levels of resources and controls available to private traders than to governments. Where such initiatives have sought to control particular commodity prices, they have normally failed in quite dramatic style. The main example in relatively recent times relates to the world silver markets. Huge losses were sustained by the sons of the Texan oil baron H.L Hunt when they tried to monopolise this market in 1979: the outcome was a huge crash in the price of silver. De Beers and diamonds is normally cited as the only *sustained* example of a successful private influence over a major market.

Fair-trade prices
So subject to these various attempts and exceptions, many of the major international commodity markets still retain the features of competitiveness and incentive compatibility that we see also in the localised markets that we discussed first. The prices are set through a largely uncoordinated process, the price established for each commodity is largely a single reference price (e.g. Brent or West Texas in the case of oil) and for a standardised commodity (a barrel of oil for example). However, note that this single price is a *wholesale* prices and so can differ hugely from the price actually received by the grower/producer of the commodity in question. The retail-wholesale price gap reflects the trading margins at different parts of the supply chain to the market and also the profit of the various intermediaries involved. So although the international market for, say, coffee may be competitive and in that sense “fair”, there is scope for disproportionate power at one or more points of the distribution chain that can result in unfair prices for the grower or producer. There is an increasingly strong argument that says that steps should be taken to deliver a similarly fair price to the grower.

In the world of the early 21st Century the term “Fair Trade” conjures ideas of a particular recent movement which we discuss first.

The Fair Trade Movement began only about a decade ago but now operates in some 60 developing countries and covers products as diverse as tea, coffee, wine, cocoa, some fruits and nuts. The purpose is to agree trading standards that ensure a fair deal for the (small) producers including a *fair trade price* which is a reasonable

percentage of the final selling price of the product in Western markets. The system also provides for the audit of prices and standards. As of July 2005 there were around 900 Fair Trade retailers in the UK including Coffee Direct and, closer to home, the University of Warwick. There are many more in the USA. But note that this movement does not contradict anything said earlier about the way in which the international commodity markets work and the *wholesale* prices get set. It plays its role by ensuring that a larger share of the market price gets paid to at least some growers of the crop rather than to intermediaries. The difference is made up by some combination of higher retail prices (in fair trade outlets than elsewhere), in lower margins in the distribution chain and to a degree in the donor support that has helped to succour the movement.

Domestic (national)Price Interventions

A much more enduring concept of the fair (or unfair) trade concept in relation to the main global commodity markets relates to the policies which *national governments* themselves choose to adopt to differentiate the equilibrium world prices of these commodities from the prices paid to their own local farmers of miners. This differentiation happens in almost all countries to some degree. But the high support prices that countries in the European Union, in the USA and in Japan pay to their farmers represent easily the major source of the complaint that international agricultural trade practices do harm to the incomes and the development prospects of the farmers in poorer countries (this is an issue discussed in depth in Chapter XXX).

There are many graphic ways to illustrate the iniquity of this system. One is to note that in 2005 subsidies to farmers in the USA cost the federal government over $20 billion which was significantly more than the USA spent on foreign aid to poor countries[14]. But even this was far less that the total subsidies enjoyed by farmers in the European Union. In very sharp contrast – and somewhat puzzllngly - it has been the tradition in many low income developing countries for the government to *choose* to pay their farmers a price significantly *lower* than the world prices for the relevant commodities. This was commonplace during the years of High Development Theory. It was justified by the idea that industrialisation was critical to the big push necessary to escape the low level equilibrium trap(s) that were central to this view of development. But in an initially agricultural dependent economy, where do the investment resources come from? The answer is that they have to be found by taxing agriculture in one way or another. Establishing a margin between the prices received for a commodity in export markets and the price paid to the farmers was an easy way to raise such taxation,

A landmark study by Anne Krueger and others published in 1991[15] showed that in 18 countries in three continents the effective *reduction* in farmers incomes associated with national government policies varied from a 25% reduction in Asia and Latin America to over 50% in Sub-Saharan Africa. In the World Bank's World Development Report for 199X, a striking graphic shows the systematic underpayment of farmers (relative to the world price) for a wide variety of commonly produced crops. (Examples to follow).

[14] *The Economist*, September 9th 2006.
[15] Anne Krueger, Maurice Schiff and Alberto Valdes*, The Political Economy of Agricultural Pricing Policy*, Vol. 3, Africa and the Mediterranean, Johns Hopkins University Press, Washington DC 1001.

In summary

Although the large global commodity markets undoubtedly involve elements of monopoly , inefficiency and unfairness, most of the more compelling contemporary criticisms directed at agricultural markets today relate to the perceived errors of national governments in relation to these markets rather than to the performance of the markets themselves. *It is one of the strangest and most striking facts of development practice that the rich country governments subsidize their farmers very generously even though they are relatively few in number while poor country governments are more likely to tax their much more numerous farmers.*

3. Markets for Staple Foods[16]

These markets – for wheat, rice, maize etc are unusually important for the livelihoods of poor families in poor countries since they frequently account for very high proportions of incomes (through the food grown) and consumption (through the food consumed) of poor households. Although these markets are predominantly local in nature, they have a significant intersection with the international markets through imports and potential exports. However, they also represent an important sub-component of the broad-based government intervention in commodity markets that was discussed above. For staple crops, these interventions often had their roots in the 1930s, and were commonly motivated by a variety of objectives including: the need to reduce the risks of famine; a desire to reduce import dependence; to achieve cheap and stable prices for consumers ; to achieve higher and stable producer prices; and to achieve a more efficient and non-exploitative marketing systems. Unfortunately, the various instruments employed – administrative price controls, establishment of monopolistic state-owned marketing agencies, and other legal limits on competition – have often had unintended and adverse consequences. These have included higher marketing costs due to inefficiencies in some state marketing agencies, wide margins between producer and consumer prices, unintended welfare transfers away from producers and towards consumers, and often high costs to the budget in staffing and supporting the local marketing apparatus.

Widespread liberalisation and deregulation were seen in these markets in many developing countries in the 1980s and 1990s – and not least as a result of the research undertaken by Krueger and others - as the high costs and inefficiencies of the previously intervened systems were acknowledged and corrected, often under pressure from the international donors[17]. The results of reform to date have been generally positive. However in some cases such as in Eastern and Southern Africa, reform has been subject to frequent policy reversals and has been only partial, with continued significant intervention by the state in trade and prices, and through the operation of strategic grain reserves.

One of the more successful cases has been that of South Africa itself. With that country's highly developed financial system, and a large-scale private sector, the government has been able to withdraw itself almost completely from marketing activity: a withdrawal that other less developed countries have found difficult to achieve. In other cases the inherent difficulties of regulating the monopolistic tendencies that can be associated with large private traders; the difficulties in weak financial systems of finding ways to extend credit to small holder farmers once the official marketing systems are dismantled; and ongoing difficulties in creating the

[16] This sub-section acknowledges a substantial debt to earlier Oxford Policy Management (OPM) work on Making Markets work for the Poor. See, for example, OPM, *Making Markets Work for the Poor: A Framework Paper,* mimeo November 2000

[17] This was one important element of the so-called Washington Consensus of which more in Chapter XXX.

supporting institutions of private trading (e.g. storage, insurance etc), remain as reasons why interventions by government may be justified.

4. Markets in Money and Securities

Equally important to the workings of advanced economies and many poorer ones are the set of markets that trade financial instruments rather than physical commodities. Such markets operate with many of the same characteristics – and some operate within the same institutions – as the commodity markets. However, their workings are complicated by the extensive range of intermediary activities that today are used to transform the initial supplies and demands into financial commodities and services as explained below. The financial markets are normally sub-divided according to the degree of *maturity* of the instruments that are traded nearly all of which are IOUs of one sort or another. Maturity here refers to the length of time before the loan/IOU is due for repayment by the borrower. So:

- The Money Market is the market in *short term* claims (less than one year) such as bills of exchange, Treasury-bills, short term deposits in a bank, over-night-inter-bank loans (i.e. one bank lending its surplus funds to a second bank). This market draws some of its funds from retail sources (notably household deposits) but is typically a wholesale market involving large value transactions between banks and other financial institutions rather than individuals or firms. The money markets include the trades between two or more national currencies – so what are normally termed the Foreign Exchange Markets are also a part of the money market.
- The Capital Market is the market for longer term loans and other financial instruments (more than one-year). The capital market involves the participation of companies and governments (who issue bonds and other securities); stock exchanges that trade them; insurance companies, unit trust (mutual funds) and pension funds that purchase the instruments; and dealers, brokers, and depositories that handle some of the practical aspects of the trading.

From the point of view of our later discussions (see Chapter XXX), it is important to be aware of the increasingly high level of internationalisation (globalisation) of the money and capital markets and also their increasingly high level of sophistication and complexity. The major financial crisis of 2007-2010 has all too vividly revealed the practical dangers inherent in some of the ways in which these global markets operate.

The increased *globalisation* means today that the geographical distance between a person who saves money and the person or organisation that uses that saving for an investment may be huge. The increased *sophistication* means that the number of intermediary transactions through which the savings flows to its final destination is often mind bogglingly large. . For example, a loan may be in initiated in the South Korea for the benefit of a Korean business, supplied by funds originating with savers in Frankfurt, and held eventually as an asset in a British pension fund. Furthermore the funds may have effected a maturity transformation in the process of moving from Germany to Korea – the German saving his funds for a maturity of, say, 3 months but the Korean business borrowing those funds for a period of, say 2 years These major separations between savers and investors in both time and space create potentially huge problems of *information asymmetries* that can and do contribute to periodic international financial difficulties and even crises. The theory that explains informational imperfections in markets is a topic addressed in Chapter 13. The

discussion on the causes and consequences of financial crises is in Chapter XXXX of Part 4..

The practical problems of information failures in key markets are very well illustrated by the role of so-called sub-prime mortgages problem in the 2007-2009 global financial crisis. In brief these were mortgages granted initially by US banks to borrowers who were relatively poorly supplied either with good security against their loans or with income prospects or with either. However, the banks collectively felt that their own risks of such lending could be greatly diminished if loans were packaged together and then sold as securities to other financial institutions: the process of so-called "securitisation". Unfortunately, this process of supposed risk-reduction was endorsed by many rating agencies such as Standard and Poors and Moody's who, for reasons that now seem difficult to fathom, gave high ratings to many of these new securities. This made it feasible for many other banks and other financial institutions – including many in foreign countries – to acquire some of these securities for their own balance sheets. But of course once the original loans began to fail –as was the case in 2007 – then the securities themselves needed to be significantly down-valued by whoever by then was holding them. The result was that large numbers of banks internationally – and not just the banks who had made the initial (mistaken) loans faced large losses – large enough in many cases to cause the insolvency of the banks concerned.

The world of the past thirty years has seen huge changes in the way in which the money and capital markets are organised and operated and many more will doubtless follow the financial melt-down of 2007-2009. Many of these changes have by-passed the lower income countries with the result that they share less than equally in the benefits (and the extra risks) of the market developments that we have seen. Certainly the lower income countries did not receive direct collateral damage from the 2007-09 crisis although some of the indirect effects were extremely damaging (e.g. reduced capital flows and higher borrowing costs). Prior to 2007, the growth rates associated with some parts of the financial markets were also extraordinarily rapid and certainly far more rapid than underlying global economic growth. In particular, the Bank for International Settlements estimated that financial derivative products (as discussed below) had grown by 40% per annum compound since 1990. Ten years of growth at this rate means a market that is 30 times bigger at the end of the ten years than at the beginning!

Three points in particular are emphasised here about the major features and changes in financial markets since about 1980: trends that have been interrupted but probably not permanently by the global financial crisis.

Diversification Internationally.
In the richer Western and Eastern economies, savers used to hold their savings predominantly in the form of *domestic* commercial bank and savings bank deposits albeit with some additional holdings of life insurance policies and pension fund assets. The majority of these funds were then invested by the various financial institutions in local/national assets of one type or another. This is still the case in many lower income countries in Africa and Asia.

Since the 1980s however, the majority of Western banks and some capital market institutions have extended their own investment and lending strategies to embrace a very large increase in the amounts they provide to overseas users of the funds (absolute amounts and share of total portfolios). This has been made easier by the removal of capital controls in many destination countries (especially in the 1980s and 1990s), and then by the re-appearance as credible borrowers of large countries such

as China, India, Russia and Indonesia. The movement of funds from the domestic to the international markets has been further fostered by the marketing by the International Finance Corporation (IFC) of a wide range of special regional and national funds (e.g. an India Direct Fund, a Hungary Fund and various South African funds) and by its own and the specialist funds that are made available by the Western investment management firms. More recently the so-called "sovereign funds" of certain emerging market economies have begun to put huge sums of money into capital market investments around the globe. The largest eight of these all have funds invested of at least $200 billion (in order of their estimated size are the funds of the United Arab Emirates, China, Saudi Arabia, Norway, Singapore, Russia, Kuwait, and Hong Kong.

The results of these various trends together meant that by the mid 1990s, some $100 billion (net) per annum of portfolio investment funds were moving into the markets of some 10-15 significant middle income developing countries such as Korea, China and Thailand. The East Asian financial crises of 1996-97 temporarily slowed these flows, as did the 2007-09 crisis but they are now rising once more (see also Chapter 13).

Intermediation, Sophistication and Commoditisation

While it was once the case that the ultimate users of funds (companies in particular) were closely connected to the persons supplying these finds, this is increasingly less true. Most financial transactions today involve a complex network of intermediary organisations such as insurance companies, pension funds, unit trust (mutual funds) etc. that package the IOUs of the ultimate borrowers in attractive but increasingly complex ways. They do this partly for reasons of tax advantages, but partly also to remove from the lender the need to undertake complex financial management tasks such as portfolio diversifications that are designed to lessen risk. Instead the intermediaries present a menu of relatively easily understood packages involving different degrees of risk and reward that small and large savers alike can relatively easily assimilate.

This move to greater intermediation and sophistication has only been possible because of the revealed willingness of very large numbers of ordinary household savers and borrowers in many Western economies, to hold their savings, and borrow money using increasingly complex and riskier instruments. Thirty years ago simple "vanilla" packages of savings bank and building society deposits dealt adequately with most savings needs while simple mortgages (on houses) dealt with most mass market borrowing needs. Today, an increasing share of household savings is held in intermediated and risk-based products where the return to be achieved – although prospectively higher – is much more uncertain. The sub-prime mortgage crisis of 2007-2009 is merely the latest manifestation of the dangers associated with this increased sophistication of the global financial markets.

The higher levels of intermediation and sophistication have arisen in parallel with another tendency that is also illustrated by the recent sub-prime crisis namely that of converting formerly simple financial products into "commodities" that can be more easily packaged ("securitized") and sold. The best example of this is mortgages especially in the USA.

A basic mortgage is a loan from a bank to a borrower secured against an asset such as a house or an office building. But the mortgages of different borrowers are different in terms of the risk profiles of the borrowers, the neighbourhood of the house, the dates of maturity etc. For more than 30 years the US banks have had a way of raising money to finance these other than from their mainstream deposits

which in the US case often meant from a well defined local area. In particular since 1970 the US banks have been able to raise such funds from the pension funds, insurance companies and other intermediaries that have increasingly come to control much of American savings. These intermediary institutions needed securities to buy and would not have been interested in a disparate list of heterogeneous mortgages. The answer found by in 1970 involved the issue by a US government agency of a security called a Ginnie Mae. This was really an ownership interest in a pool of mortgages. Banks thereafter were able to sell some of their individual mortgage claims and these purchases would be financed by selling the standardised Ginnie Mae securities to the financial intermediaries. Since the Ginnie Mae securities were standardised commodities, they were far more easily saleable and acceptable in the large financial intermediaries than were the individual heterogeneous mortgages.

Furthermore once this step was taken it became easy to "financially engineer" the mortgage. As Gregory Millman puts it *….."Financial engineers strip down mortgages into an array of risks, the way a butcher divides a carcass. An American pension fund may buy the principal payments, a Japanese life insurance company may buy the interest payments out to three years, the borrowers option to pay of the mortgage before it matures may be excised and sold to a German universal bank, and the interest payments from three to thirty years may be sold in turn to any number of other investors. "*Critically in this process, the commoditisation of the mortgage has extended interest in it well beyond the limits of the local area where the mortgage was obtained and initially financed. Now international markets are partly determing the basis and terms on which the mortgage can be obtained. As was noted earlier, the sub-prime mortgages that became popular in the years after 1999 were merely the latest variant of this new sophistication of financial products. Unfortunately, as the latest global crisis clearly illustrates, it was a step too far – the products were too clever for their own good! Helped by the powerful forces of information imperfections, they had the effect of enticing large numbers of supposedly sophisticated financial institutions to invest funds in an investment that hindsight tells us was doomed to fail!.

TO ADD a small piece on the securitisation of corporate risk based for example on Gillian Tett 2010

Chapter 12

Welfare Economics and the Roles for Government

"*… the fact that the world is more complicated than any model which we might construct does not absolve us of the need for testing our ideas out using simple and understandable models. If markets do not work efficiently under these idealized circumstances, how can we be confident that they would work efficiently under more complicated circumstances? Only by an act (and indeed a leap of) faith!……" Joseph Stiglitz, Whither Socialism, 1994.*

12.1 Introduction

Microeconomic techniques and approaches go back as far as Adam Smith's 1776 book but started to be formalised in more mathematical terms in the works of later "neo-classical" economists such as Alfred Marshall and Francis Edgeworth some one hundred or more years ago. Kenneth Arrow and Gerard Debreu bolted the component parts together to form a coherent "General Equilibrium" story as discussed below in the 1950s and the 1960s.

Anyone studying Economics 101 today quickly gains familiarity with the main microeconomic applications in the theory of (individual) consumption and (enterprise) production. These applications are reflected in many dozens of mainstream textbooks such as Hal Varian [2005] and Andreu Mas Colell and others [1995]. Many of these mainstream topics in microeconomics have also been given a more explicit focus on developing countries.[18] These approaches together enable us to develop rigorous propositions about the economic behaviour of individuals; narrow groups of individuals (such as a household or a family); farms, share-croppers and landlords in peasant societies, firms, coalitions of agents (e.g. individuals in trade unions or firms in cartels); and governments.

From a developing country perspective it is especially important to recognise the important insights that come from those economists who – starting in the late 1950s - were prepared to widen the range of microeconomic analysis to embrace important insights into subjects such as child rearing, divorce, racial prejudice, discrimination in employment, honesty etc. Gary Becker's pioneering work in these subjects was, he argued initially ignored or disliked by economists and some critics even suggested that this "stuff" was not really economics at all.[19] But today these much broader approaches are mainstream in economic analysis and teaching. [20]

One example can show the importance of these wider approaches to the study of development. A major early focus of Becker's research related to the impact of higher real wages in increasing the value of time and therefore the cost of home production such as childrearing. This enabled him to show that as women increase investment

18 Many specialised books provide examples of such development approaches. Examples include W. Keith Bryant and Cathleen D. Zick, The Economic Organisation of the Household, Cambridge University Press, 2006. This provides a very good analysis of the economic theory of fertility. Frank Ellis, Peasant Economics, Cambridge University Press, 1988 and reprinted in 2000. This provides a careful description of the neo-classical theory applied to peasant households. A broader coverage is in Pranhab Bardhan and Christopher Udry, Development Microeconomics, Oxford University Press, 1999.

19 Based partly on Becker's own autobiographical notes but quoted also in Levitt and Dubner (2009) pg 12.

20 see for example Becker [1973. 1974 and 1981].

in their own human capital and enter the labour force, their own opportunity cost (measured by reference to the wages they forego) of having additional children increases. Additionally, any increase in the rate of return to education raises the desire to provide children with formal and often costly education. Coupled together, the impact of these two effects is to lower fertility rates. The result is a reduction in rates of child birth and eventually reduced population growth. We return to this point in more detail in Part 5 but note here how readily it undermines some of the more populist remedies for over-population.

We will make considerable use of these broadened microeconomic approaches in the policy examples presented in Part 5 of this book. However, our main emphasis for the moment is the branch of microeconomic theory that formalises the Adam Smith propositions into a coherent general equilibrium framework widely referred to a "Welfare Economics".

Welfare economics brings together the production and consumption components that arise from individual behaviour in a systematic manner. It thereby provides insights about both the efficiency and the equity (fairness) of particular outcomes of resource allocation. It offers very strong conclusions about the (Pareto) optimality of resource allocations generated in a hypothetical world of perfect competition. However, our main interest in this for the present book is a practical and pragmatic one. We here study some of the basic principles of welfare economics mainly to show how interventions by public policy might improve outcomes and welfare when the strict conditions for perfect competition fail to be met – as is always the case in the "messy" real world with which this present book deals. Because welfare economics offers this facility to assess efficiency against a clear benchmark of perfect competition, it is a crucial tool in analysing and designing real world development policies (see the quotation from Joe Stiglitz that begins this Chapter).

We here introduce the ideas of welfare economics and general equilibrium by using a very simple two person, two commodity model with which many readers will already have some familiarity. This who have should feel free to jump ahead.

Let's Start with 'Efficiency'
The concept of 'efficiency' has three distinct meanings in economic analysis[21]. Furthermore, a general equilibrium that delivers the maximum benefit to a society (definition of maximum to follow) has all three of these types of efficiency being achieved simultaneously. The three are:

- Productive (or technical) efficiency – meaning that the maximum possible output of each good produced is achieved for any given use of inputs into that production
- Allocative efficiency in production – meaning that there is an efficient product mix given consumers' tastes and the economy's available productive resources.
- Efficiency in consumption meaning that consumers are able to allocate their total consumption to different types of goods and services in a manner that maximises their utility from consumption given their tastes and preferences.

[21] Although what follows is a relatively standard treatment of these topics, we have drawn particular assistance from the very clear and concise summary of these by Tim Besley. In Chapter 4 of the book entitled *Principled Agents, The Political Economy of Good Government*, Oxford University Press, 2007 (CHECK REFERENCE)

The basic algebraic formulation that enables us to define the optimum positions implied by these three conditions is as shown in Box 12.1 below.

Box 12.1: Social-Welfare Maximisation – the Problem Defined

For simplicity the economy is assumed to comprise two individuals (A and B); two representative products namely X and Y which together provide utility when consumed by the two individuals. The maximisation of the total utility of the consumers (or social welfare) is constrained by three factors namely (i) the total resources of labour and capital available in the economy (ii) the technology (production function) that is currently available to convert these inputs into produced outputs and (iii) the tastes of the two consumers. Defining total social welfare in the economy as 'W' and utility as 'U' we have the following system of equations.

Maximise Social Welfare……. $W = W(U^A, U^B)$.....[1]

Subject to all of the following

The Tastes of the Individuals $U^A = U^A(X^A, Y^A)$.....[2] and

$$U^B = U^B(X^B, Y^B)$$ ……..[3]

The Production Functions…… $X = X(K^X, L^X)$.....[4] and

$$Y = Y(K^Y, L^Y)$$.....[5]

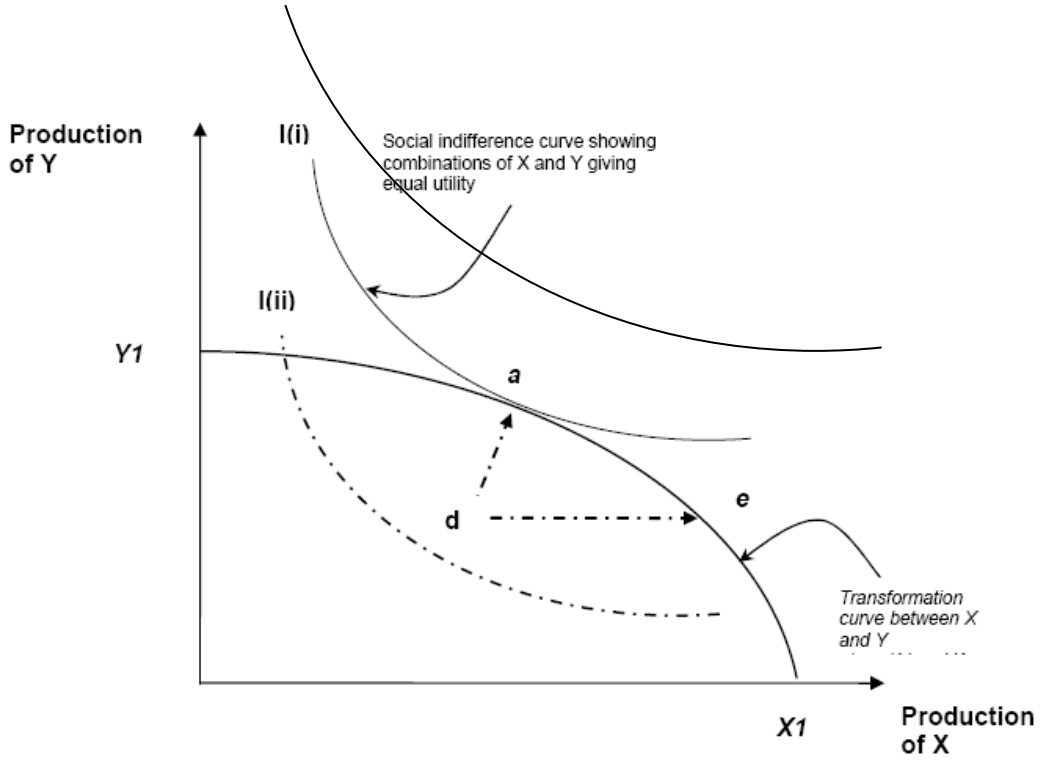
Available Productive Resources

$$K^X + K^Y = K$$.....[6] and

$$L^X + L^Y = L$$.....[7]

Productive (or technical) efficiency is achieved when the economy produces the highest possible combinations of products X and Y given the economy's total supplies of labour (L) and capital (K): i.e. it achieves the full employment of both resources. This might be a low level of total output if the economy is poor or a higher level it is rich. *But the principles are the same in both cases*. Graphically this first aspect of a general equilibrium is achieved where the economy attains *any* point situated on the transformation curve between X and Y which is the curve labelled *Y1-X1* in Figure 12.1 below. We can see, for example that a point such as point 'd' is clearly sub-optimal since it fails to make full use of the productive resources available and so results in a lower than possible level of production of both the two goods. Points 'a" and "e" by contrast do meet the conditions for this first aspect of an equilibrium.

Figure 12.1: Productive and Allocative Efficiency Illustrated



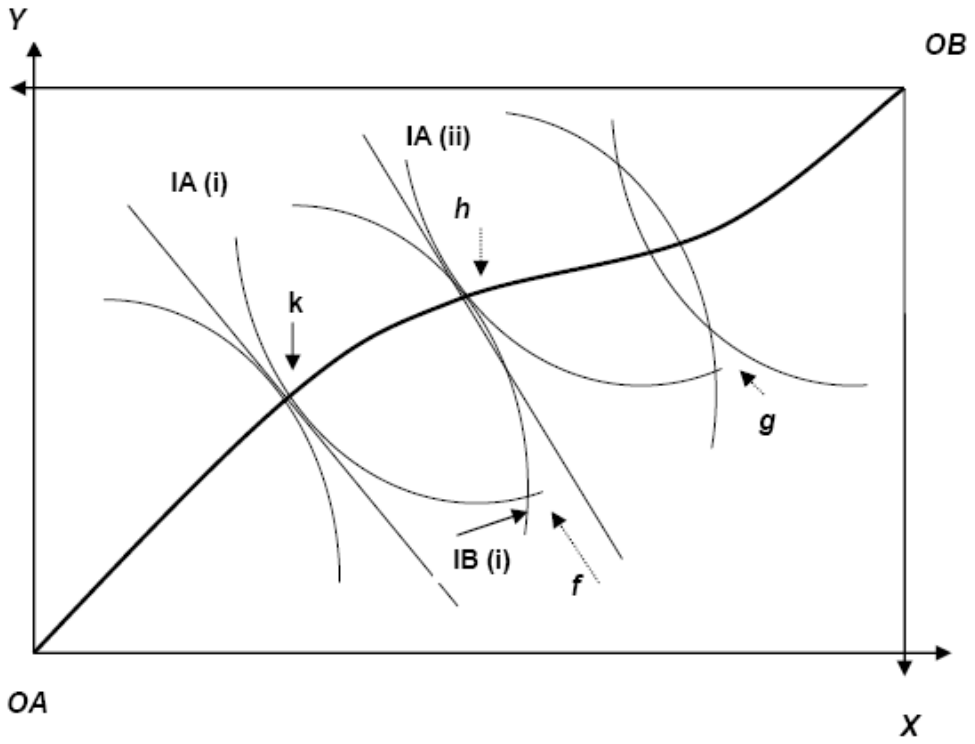
Clearly along the line *Y1,X1* there are many possible combinations of Good Y (vertical axis) and Good X (horizontal axis) that can be produced given the available supplies of labour and capital. (points 'a' and 'e' are merely two examples from many)

The second principle of allocative efficiency now comes into play as the concept that enables us to conceptually choose the "best" of these many combinations. More specifically, the second optimum is achieved at the point where "society" (the two individuals in this simple example) achieve the highest levels of consumption of the two goods given the various different levels of production that are possible (i.e. along the transformation curve) and the tastes of the two individuals. Their tastes are indicated graphically by the family of indifference curves between the two products that they collectively manifest. The best outcome achievable is that associated with the highest possible level of consumption of the two goods: this is shown by the indifference curve labelled **I(i)** that is just tangential to the transformation curve in the diagram (it is clearly superior in terms of the utility it provides compared to the second illustrative indifference curve labelled ***I(ii)***). So in Figure 12.1 this second optimum occurs at point 'a" which therefore satisfies both of the first two efficiency conditions for equilibrium. Note that point 'e' satisfies the first of the efficiency conditions but not the second.

Finally the third of the three efficiency conditions requires us to assess the utility levels achieved by the two individuals that make up this society. Here we are asking whether they are individually able to allocate their incomes in way that maximise their individual utilities given their incomes and the prices of the goods they buy. This final aspect of equilibrium is achieved when, in technical jargon the marginal rates of

substitution (in consumption) as between goods X and Y are the same for both individuals. This marginal rate of substitution (MRS) for *society as a whole* is indicated by the slope of the highest indifference curve at its point of tangency with the transformation curve in Figure 12.1. It can be also be shown graphically for each of the two individuals separately in Figure 12.2 which is commonly referred to as an Edgeworth Box.

Figure 12.2: How Total Production get Shared in Consumption



In this figure, individual A's position is shown on the axes running from OA to point Y and from OA to point X respectively. Individual B's position in shown on the (inverted) axes labelled OB, Y and OB, X respectively. The size of the box in the two dimensions (X on the horizontal axis and Y on the vertical axis) shows the *total* supply of the two goods that are available to be distributed as between the two individuals namely A and B each of whom have tastes that are illustrated by the shape of their own family of indifference curves. The total supply of both X and Y is derived from the equilibrium illustrated at point "a" in Figure 12.1: these two totals thereby satisfies both of the first two conditions for an equilibrium.

The "contract curve" which is the curve joining points OA and OB in Figure 12.2. shows all those combinations of consumption by persons A and B at which the marginal rate of substitution for the two goods is the same for both individuals. So our third condition for a full general equilibrium requires a position somewhere along this line. Any deviation from it – for example at points like "f" and "g" can be shown to be sub-optimal. To demonstrate this point note that at "f" for example, person A is clearly getting very low utility at the margin from extra consumption of good X whereas person B is still achieving high marginal utility from that same good. So the (consumption) efficient solution would be to trade some element of X away from person A, in return for more Y, with person B making the reverse trade. The logical extension of this line of reasoning – based on people trading away surpluses which

yield them low marginal levels of utility will always lead us to points on the contract curve where the slopes of the indifference curves of the two individuals are identical: their respective MRSs are the same.

To drive home the point, note also that a move from a point such as "f" to an equilibrium such as point "h" neither raises nor lowers the utility of person B who remains on exactly the same indifference curve as before the move (the one labelled IB(i)) . However, such a move clearly raises the utility of person A who by consuming more of Y and less of X is able to move to a higher indifference curve than before (i.e. to IB(ii) : this is the sense in which point "h" is more efficient from a consumption perspective than point "f". At least one of the two parties enjoys more utility even though the economy's total production of both X and Y remains the same.

12.2 Basic Principles of Welfare Economics

Helped by this simple two person and two product story (and the associated algebra and graphics) we can now move on to provide a brief intuitive explanation of the central *"positive"* conclusions deriving from mainstream welfare economics. This *positive* analysis leaves on one side (until Section 12.3 below) the ethical and *"normative"* aspects of the topic that relate to questions such as the fairness of otherwise of the income distributions that may be associated with any given allocation of resources. *The emphasis in other words is restricted to seeing when and how an economy will allocate its available resources efficiently in the three senses defined above.*

In what is recognised as one of the greatest intellectual contributions to economics in the C20th, Gerard Debreu and Kenneth Arrow both from the University of California succeeded in defining the formal (mathematical) conditions under which Adam Smith's invisible hand worked its magic and coordinates the myriad decisions of many millions of independent agents in relation to very large numbers of different products and services: in short, it generalises the propositions from the previous simple model.[22] What follows is based largely on their work and the subsequent critiques of its relevance.

The first fundamental theorem
Their first fundamental theorem of welfare economics is as follows. In a world of perfect competition; where prices are freely determined (i.e. no single producer is able to exert undue influence on the price of any commodity); and where there is a complete set of markets for all produced commodities as well as for labour, risk and future contingencies, a free market equilibrium will be *Pareto efficient*. In plain English *this means that the allocation of resources between different uses (good X versus good Y in the earlier simple example) as generated in such a world cannot be changed so as to make one individual better off without making someone else worse off.* This is the same idea as we illustrated with the three efficiency conditions in the simple two person model in Figure 12.2 above.

This important proposition is derived by confronting the separate decisions of (a) individual (selfish but rational) consumers about what they will consume taking account of the utility that they derive from consumption with (b) the parallel set of decisions by individual (selfish but rational) producers about what they will produce.

[22] The pioneering article is 1954 Kenneth Arrow and Gerard Debreu, "Existence of a Competitive Equilibrium for a Competitive Economy." *Econometrica* 22, no. 3: 265–290.

The consumer is motivated narrowly by the *utility* obtained from the consumption of various different goods and services (i.e. as in Equations [2] and [3] in Box 12.1). The producers' decisions are motivated by the *profit* to be made in production and so are strongly influenced by both the prices that can be charged and by the different costs of producing the various possible goods and services. These costs in turn depend on the resources available and the prevailing technologies as in Equations [4] to [7] in Box 12.1.

The first theorem of welfare economics demonstrates that the world of perfect competition (and complete markets) may not be fair (we come to that in a moment) but it will be efficient in terms of both allocative efficiency and consumption efficiency as discussed earlier: the *marginal utilities* of consumption enjoyed by all individuals will be equal to the prices they pay (for each commodity and service) across all the goods and services they consume. Of course a poor man or woman will consume less *in total* than a rich man/woman. But even poor persons will allocate their consumption efficiently over the various goods and services they actually consume. Together this means that once the competitive equilibrium is established, the total utility of any one individual or individuals generally, cannot be raised by a re-allocation that involved consuming more of, say, housing, and less of, say, food.
Similarly, it can be shown that in perfect competition, the *marginal social costs (MSC)* of producing each and every commodity and service will also be equated to the prices charged for these goods and services. This MSC is indicated for the two product case in Figure 12.1 by the slope of the tangent to the transformation curve (i.e. the social cost of producing one more unit of X is measured in terms of the amount of production of Y which would need to be sacrificed to achieve this). Hence once they are in the competitive equilibrium given by free markets, no producer can increase profit by re-allocating resources by producing, say, less X (possibly wheat) and reallocating resources to produce more Y (possibly rice).

It is this simultaneous achievement of optimality for both consumers (maximising utility) and producers (maximising profit) that provides the popular appeal of the perfectly competitive model. As described this general equilibrium story provides the formal representation of Adam Smith's idea of more than two centuries ago. *It is hugely appealing to schools of political thought that are sceptical about the need for governments to get heavily involved in trying to help economies to perform better or to improve social welfare.*

Two Big Caveats
But brilliant as the Arrow-Debreu intellectual insights undoubtedly are, their use to guide real world policy involves at least TWO steps too far. There is a world of difference between their artificial theoretical construct of a perfectly competitive economy and any modern day "market" economy whether it be in the rich industrial part of the global economy or in the poorer developing part.

The two serious question marks or conditions that prevent us from unreservedly embracing the model as a guide to the real world involve:

- A question about whether the distribution of income/welfare across individuals is "acceptable". In other words can the equity/distribution arguments against a particular allocation of resources indeed be ignored, or treated as a separable problem as the Pareto optimum assumes and
- A question as to whether the very demanding conditions required for a full perfectly competitive economy are indeed achieved in practice.

These are both big and complex question each with their own substantial bodies of literature. They are both critically important to the design of development policy. So if we want to engage seriously in discussions of POLICY (as we do in Parts IV and V of this book) it is important to fix certain basic propositions in relation to each of the two questions. This is the task of the remaining sections of this present Chapter and also Chapter 13.

12.3 Equity and Distribution

In addressing this first caveat to the general equilibrium story let us first represent the narrow neoclassical economists view of the problem and then graft on some of the alternative points of view including some from non-economic disciplines.

The narrow Neo-Classical approach and the second fundamental theorem

First, let us assume that the government of a certain country (or the society that elects it) is unhappy with the distribution of income that is associated with a particular Pareto optimum. In assessing how this situation might be corrected, it is useful to draw on the second basic theorem of welfare economics that also derives from the Arrow-Debreu approach. This shows how a Pareto-efficient allocation of resources can be achieved by using market mechanisms (as opposed to direct government controls). The theorem is that *if all agents have normal preferences, then there will always be a set of market prices such that each Pareto efficient allocation of resources is also a market equilibrium for* ***any given distribution of endowments.***

In plainer language this means that IF the government were, for example, to re-organise the allocation of resources to somehow make it fairer (e.g. by organising a land reform or imposing higher taxes on the rich) but then still allowed all prices to be set freely, then a new Pareto equilibrium would be found for the new assignment of land and other resources. Of course the structure of prices, consumption and production would be different in this new equilibrium. Previously landless workers would now have greater purchasing power and would certainly use some of this to raise their consumption of those goods and services important to them. This in turn would signal the need for greater production at the margin of such goods and services, some corresponding decline in luxury goods productions and a realignment of their relative prices.

But notice that *the fairer society has not needed any government administered intervention in prices. P*rices in both the old and the new equilibria are set purely by market forces. The fairer society has emerged from the *redistribution of resources* such as land that underpin the purchasing power of poorer groups. See also Box 12.2

Box 12.2: Should Reforming Governments Control Prices?

The attentive reader will notice that we are already starting to get together some ammunition for a useful debate on policy choices for government. If, for example, the government is concerned with the low incomes and poor social condition of certain groups in the population, then a commonly seen knee-jerk reaction might be to *control the prices* of the goods such as foodstuffs that are consumed in relatively large quantities by those groups. This was a common policy in the 1960s and 1970s and still ahs many adherents in low income countries. But the two basic principles of welfare economics so far considered argue strongly against such a course of action. Indeed, *efficiency arguments* would normally advise governments against addressing this problem by interfering directly in the pricing of goods – e.g. putting price controls on food to cite one popular form of intervention. Such interventions would definitely disturb an otherwise efficient allocation of the economy's productive resources and so *reduce* aggregate welfare. In particular it would risk a decline in the *production* and *availability* of food products that dominate the budgets of the poor. So even if the available production were more fairly distributed than before, there would be losses in the amounts available in total.

It would be more efficient to organise some redistribution of resources to poorer persons and thereafter allow each consumer and producer to decide, at the margin, how to adjust consumption/production to the associated redistribution of purchasing power.

The second fundamental theorem indicates that it is conceptually possible to keep separate (a) issues of distributional fairness and (b) issues of price setting and the efficient allocation of resources. *Greater fairness in our example has proceeded hand-in-hand with the retention of efficiency in the allocation of scarce resources.* In other words, the market has done the work once the redistribution of resources has been put in place*.* In terms of the diagrammatic exposition shown in Figure 12.2, what has happened here is a move along the contract curve from one richer person (let us assume that person to be person B) who previously owned most of the land to a poorer person assumed to be person A.

Taking this analysis one stage further, we can also note that the reforming government does not need to transfer physical endowments such as land directly. It can instead transfer *the purchasing power* to such endowments by taxing one group of consumers (for example, the representative richer person "B") on the basis of his or her endowment and then handing the funds to a second group of poorer consumers (as represented by person "A"). We can refer to this as the tax and redistribute approach. .Box 12.3 below discusses one of the key practical problems associated with such an approach.

Box 12.3: How Best to raise the Tax Revenue

Ideally any tax introduced to cover the cost of the redistribution of income to poorer persons should be levied in relation to an endowment that (a) can be measured and (b) does not easily cause a change in behaviour on the part of the taxed person. Varian in his textbook *Microeconomic Analysis* uses the example of a tax on IQ with higher IQ persons being taxed for the benefit of lower IQ persons (other similar non-distorting taxes would be those levied on eye colour or on the tax-payer's place of birth). The beauty of such approaches is that since no taxed person can change their own IQ or place of birth there is no efficiency loss associated with this type of lump-sum tax – although some incentive to fail IQ test would might result.

More generally, Atkinson and Stiglitz (1980) and others show that lump sum taxes that are levied on characteristics exogenous to the individual tax-payer can indeed bring about desired redistributions of income without efficiency loss.

Unfortunately taxing IQ or eye colour is not what redistributive reform is normally about. Governments in general maintain a belief that different types of individuals should be taxed differently: the word "fairness" would normally condition such beliefs. Real world taxes as a consequence, unlike the tax on IQ, would probably fall on variables such as income, wealth, exports, imports or volumes of expenditure on certain goods. In all these cases a change in behaviour, and so in the efficient allocation of resources, would result. This would soon distort the economy's patterns of consumption and production relative to the Pareto efficient outcome.

In short lump sum taxes are a nice idea conceptually – but they are extraordinarily difficult to design and implement in practice. Any realistic system of taxation is likely to cause some inefficiency in production and also in the mix of different products. So it forces the policy-maker to deal with a trade-off as between efficiency and equity/fairness.

But note that in this approach of *tax and redistribute* there is no need for a "nanny state" to tell each benefiting group of consumers how to spend their extra disposable income: whether on food, shelter, clothing or something else. This could be done if for example, the redistribution involved handing our food vouchers to poorer people – but it does not need to be done like that. Nor does the state need to interfere fundamentally with the decision about what and how much to produce. Freedom of individual choice can co-exist with a redistributive approach.

The message to this point is not that redistributive policy is easy. But where it is needed it is often seriously inefficient to pursue it by administratively controlling particular prices for society generally or to legislate to deliver *directly* particular goods to particular needy groups. It may be better to look for ways to redistribute basic resources either directly via such policies as land reform or indirectly via non-distortionary taxes. Since real-world taxes are nearly all distorting in one way another, an efficient tax policy will be one that minimises those distortions[23]. That final point is a topic for greater attention in Part 5.

[23] The analysis of how best to deal with the trade-offs as between the tax-induced inefficiencies and the objectives of improved equity is part of the agenda of the so-called "optimum taxation literature.

A Political Philosopher's approach

John Rawls was arguably the most influential political philosopher of the C20th. He also had considerable influence on the thinking of economic theorists. In his acclaimed seminal book of 1971*, A Theory of Justice*, he lays out principles that reject some of the basic precepts of utilitarianism that underpin the individual behaviours relied upon by Arrow and Debreu (among many others). In brief, Rawls criticises utilitarianism because it allows the rights and well being of some people to be sacrificed for the greater benefit of others as long as *total* happiness is increased.

In building an alternative approach, Rawls established clear moral tenets for how the "correct" distribution of resources as employed in solving for the Pareto allocative optimum of Arrow Debreu might be established. Specifically Rawls argues that a "just" social arrangement is one upon which we could all agree IF we did not know in advance what our own position in society (or share of the overall distribution of both natural assets and abilities and so, by implication, our share of the overall national income) might be. From behind this *veil of ignorance*, as Rawls puts it we can discern the form of a truly just society, since our own judgement would not be clouded by knowledge of our own personal circumstances.

Notice immediately how the thought experiment used by Rawls to derive this "just society" undermines the proposition that such a society is capable of being delivered by *real world* governments. Governments in the real world are made up of real people with different degrees of competence and public conscience. It would indeed be wonderful but it is never possible in practice for real world governments (politicians and civil servants) to act in ignorance of knowledge of their own personal circumstances. The veil of ignorance is simply not available to them. Indeed in recent years many economists have argued that governments are often self-serving: a view that we analyse in greater depth in Chapter 14.

Rawl's own ideas for translating the theory into a practical set of rules hinge on two Principles of Justice with the first of these enjoying unambiguous ascendancy over the second. These are:

Principle 1: Each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others. ("basic liberty" includes things like freedom of speech, assembly, conscience, thought, the right to hold private property and freedom from arbitrary arrest). The individual basic liberties may be traded off against each other in order to obtain the best overall package of rights.

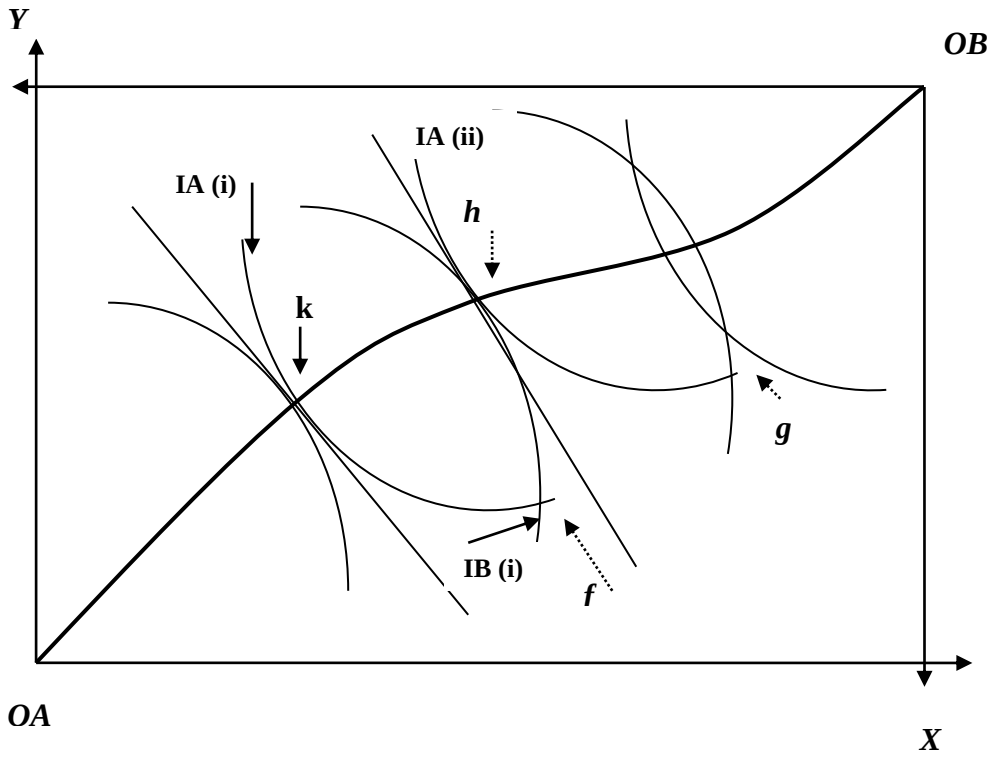
Principle 2: Social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage and (b) attached to positions and offices that are open to all. In brief this allows the surgeon or airline pilot to earn more than the humble clerk in order to induce sufficient people to train for these more demanding positions – a situation that benefits the poorer members of society when they need a surgeon or a pilot to fly them on vacation. The side condition that all members of society can equally aspire to such positions distances his approach from that of utilitarianism.

Rawl's ideas would implicitly argue for active redistributive policies in most modern societies since most such societies including those in the developing world do not yet comply with the needs of the "just society" or with the two main principles that can help to define it. But his ideas do not necessarily contradict the essential liberalism of the first fundamental principle of welfare economics. Once the fair distribution of

resources is established, the freedoms associated with the Rawlsian approach would argue for free markets to determine prices and the allocation of resources.

In terms of the diagrammatic analysis of Figure 12.2 above – reproduced below to aid easy reference, Rawls logic would argue for policy-generated shift from points of inefficiency such as point "f" in that diagram to the contract curve but with one large caveat.

Figure 12.2: How Total Production get Shared in Consumption



Assuming still that person B is richer than person A then the move from "f" to point "h" (engineered now not by a free trade but by the levying of a redistributive tax) would both improve economic efficiency and also improve the position of the poorer person by moving him/her on to a higher indifference curve. Such a move is therefore both "efficient" in economists' terms and "just" in Rawl's terms: the rich person is no worse off in terms of utility but the poor person has a clear gain.

However, a move from point "f" to a point such a "k" although it enhances efficiency would violate one of Rawl's principles by shifting utility to the richer person namely person B. So at this point the guidance from the political philosopher and the economist would diverge. Indeed in most uses of genuinely redistributive taxation, it would be difficult to achieve a change in the situation that could comply both with the Rawlsian tenets and also with the principles of economic efficiency. *In other words, real-world policy would need to manage a trade-off between the two.* The reader is invited to consider how the decision might come out in Rawlsian terms for other possible moves from points such as point "f" that affected A and B differentially.

This type of logic that embraces both narrowly defined ideas of economic efficiency and various ideas about redistribution also open up similarly important questions for a narrowly socialist view of economic policy. Above all would movements from inefficient positions such as point "f" could ever be desirable from a socialist

perspective if they were to move the already relatively richer person on to a higher indifference curve? We do not provide a definitive answer here. But we do invite the reader to note that solutions that invoke principles of greater fairness or equity in society can sometimes be at odds with economic efficiency.

A Counter-View

John Rawls' principle intellectual adversary in the years immediately after the publication of *The Theory of Justice* was his younger Harvard University colleague, Robert Nozick who published his own major book *Anarchy, State and Utopia* in 1974. This was written largely as a criticism of the ideas of Rawls. Nozick is often labelled a "libertarian". He provides arguments that defend the inherent "justness" of any distribution of goods (between different individuals) as long at that distribution was brought about by free exchanges between consenting adults and from a starting position that was itself tolerably "just". In short he has difficulties with the Rawlsian idea of any forced redistribution of resources in order to achieve any prescribed albeit "just" (according to Rawls) pattern of resources. More accurately Nowick argued that

…. *"Any distribution, irrespective of the pattern it may or may not have, is "just" provided it had the appropriate history, provided it did in fact come about in accordance with the rules of acquisition, transfer and rectification*"[24]. If it meets this condition then the distribution of resources cannot be termed "unjust" even if it does manifest significant inequalities.

This basic principle leads him to argue strenuously against a central distributor (e.g. a government that collects taxes and then re-distributes the proceeds in order to explicitly change the pre-tax distribution of resources). Indeed an important part of his proposition is that such forced redistributions can themselves be unjust. Taking a proportion of one person's earnings for the benefit of another person is akin to forced labour and is itself unjust. Part of his case is that there is no inherent system that defines a person or group of persons that have the right to "control all resources" and determine how these should be shared out. On the contrary he argues that in the real world, the distributions that do occur derive, and indeed should derive from many de-centralised decisions and exchanges between individuals who are entitled to bestow their holdings as they wish. His own concession to centralised redistribution is to possibly correct for obvious *past injustices* but this is a far cry from the interventionist prescriptions deriving from Rawls.

Nowick unlike Rawls in effect sees the first basic principle of welfare economics as the only one that truly matters. Independent individuals and firms working within the framework of free competitive markets will achieve not only an efficient allocation of resources but also a distribution of resources and incomes that can be justified by philosophical and moral argument. Not surprisingly these ideas have been seized on enthusiastically by the American political right. They provide the intellectual underpinning for the primacy of the rights of the individual and need for merely a minimal state- enough to protect against violence and theft and to enforce contracts (see Chapter 14) but with a small role only in providing welfare and other help to the poor and disadvantaged.

There is no obvious way in which the merits of these opposing positions can be resolved definitively – and certainly not by mere economists. Their status in our argument is merely to show that there is a significant philosophical literature that can help to underpin judgements *that ultimately must be made on political grounds*.

[24] Quoted from R.John Kilcullen, *Robert Nozick: Against Distributive Justice*, POL 264, Modern Political Theory, Macquarie University, 1966

However, there are two points of significance that are worth emphasising before we return to the economic logic. First, Rawls is in broad agreement with Nowick in accepting the merits of the first fundamental principle of welfare economics and the reasons why it can be detached from principles of distributive justice. Second, the redistributive principles advocated by Rawls leave unexplained the basic conundrum of how the "just" distribution can be defined let alone achieved successfully given that no government in the world can truly hide behind the "veil of ignorance" that Rawls's logic requires. Politicians throughout history have argued that the redistributions that they have proposed are somehow "fair". Robert Mugabe said this of his expropriation of white settlers farms in Zimbabwe in the 1990s and Joseph Stalin said this of his brutal collectivisation of land in the Ukraine in the 1930s. Economic arguments such as those adduced above cannot on their own reject such claims. We have a way yet to go before we can say much about real world distributive policies.

12.4: The Conditions for Perfect Competition

We now turn to the second of the caveats to the general equilibrium model as listed earlier. In an economy in which only the *distributional/equity* considerations challenge the validity of the perfectly competitive allocation of resources, the economist's solution would be relatively simple at least in theory. In such an economy the government would merely maintain the legal and other institutions needed to defend the property rights needed for a market economy, and levy non-distorting lump sum taxes and pay out lump sum subsidies to ameliorate concerns about inequality. This narrow view of the role of government comes quite close to some of the reformist ideas about developing countries that have emerged in the past twenty years, including the more extreme versions of the Washington Consensus. Here are some other relevant quotations from Adam Smith.

"it is the highest impertinence and presumption in kings and ministers to pretend to watch over the economy of private people, and to restrain their expense. They are themselves always, and without any exception, the greatest spendthrifts in the society. Let them look well after their own expense, and they may safely trust private people with theirs" and *…"little else is required to carry a state to the highest degree of opulence but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things"*

Unfortunately such strong *laisser-faire* ideas are called into question by the wholly unrealistic nature of the conditions needed for perfect competition to actually operate in real world situations. As Deepak Lal [1983] among others have pointed out, the various assumptions required for this are extremely stringent. They fall into two main categories which have a long history in the literature namely:

A. those needed for perfect competition in a narrow sense and
B. those needed to ensure the presence of universal and complete systems of markets.

A third set of conditions relate to the more recent strands in the literature due especially to Joseph Stiglitz [25] and others and concern

C. the critical role of information and information asymmetries

[25] A useful summary of a great deal of the relevant ideas in this area can be found in Joseph E. Stiglitz, *Whither Socialism*, Wicksell Lectures 1990, published by MIT, 1994

The first set of issues is considered in some depth in the rest of this Chapter. The second and third sets take us more fully into the major problematic areas facing developing countries and are considered separately in Chapter 13.

Failures of Perfect competition: One - Externalities

Perfect competition itself requires several very demanding conditions. THREE of the most important from the viewpoint of practical policy formulation are discussed in the paragraphs that follow. The first is that there must be a complete *Absence of Externalities*. This is a topic of ubiquitous importance to almost all aspects of the development debate. Hence we treat it at some length and provide a variety of examples to illustrate the general point.

The externality caveat in simple language this means that there must be no interdependencies at all in production or consumption: both the utility functions of individual consumers and the production functions of individual producers are un-related Everyone is truly an island who can go about pursuing self interest with no regard to the decisions of others.

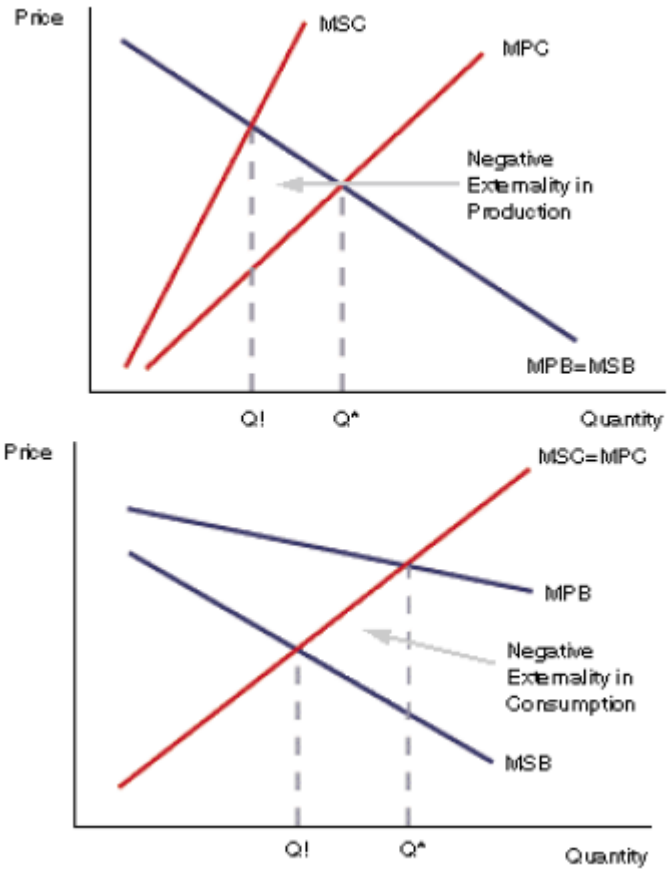
On the consumption side, it is assumed that each persons' consumption and utility are wholly independent of everyone else's. Individual consumers obtain no utility (positive or negative) from the consumption choices of others. So emulation effects (keeping up with the Jones' or herding behaviour) in consumption are explicitly ruled out. More importantly external effects in production are also ruled out. Thus noisy airports that generate negative utility for local residents (via sleep deprivation and health problems) and carbon-intensive production that via global warming threatens the future livelihoods of people thousands of miles (e.g. via a greater flooding risk in Bangladesh and the sub-mersion of Pacific atolls) are not factored in by the mainstream propositions of welfare economics. Nor is the over-grazing of pastoral land by one farmer to the ultimate detriment of his neighbours' cattle: a concept referred to generically as the "tragedy of the commons" Nor, on the more positive side are the broader social benefits of a better educated or healthier population. It is immediately clear that these omissions undermine seriously the relevance of such theory for guiding real world policy.

In recent times as we have become much more aware than previously of environmental dangers both to our national economics and to the global situation – through climate change – most public attention has been focused on various *negative* externalities and the role of government in mitigating these. The long term damage caused by deforestation or over-grazing call for actions to be taken at the *national* level. Environmental concerns such as those associated with global warming increasingly call for many of these actions to be addressed also at a *global* level. A standard diagrammatic depiction of negative production externalities and negative externalities in consumption is in Figure 12.3 below.

It is noted that when the externalities are caused by *production* (e.g. a mining programme that damages traditional farm land and natural habitats), the marginal *social* costs (MSC) of the activity exceed the marginal *private* costs (MPB). Since free markets would not interfere with the private calculus, the market solution in this case would result in excessive production (of mineral products because they are under-priced) relative to the outcome that could be achieved if social considerations were also to be factored in. By contrast when the external effects derive from the act of consumption: for example households in a poor country over consuming firewood from a local forest, then conceptually the problem is one in which the marginal private benefits (MPB) in consumption to the individuals are too high relative to the marginal

social benefits (MSB). But the result is the same – the externality in both cases results in their being *too much* consumption (and production) of the items in question.

Figure 12.3: Illustration of Negative Externalities



But in any debate about economic development, the *positive* externalities also play an extremely significant part and represent an equally important caveat to our earlier simple ideas about the effectiveness of free markets. Particularly problematic are the *positive* externalities that are widely acknowledged to be associated with factors such as (a) more and better education and health for more people and (b) the accumulation and greater diffusion of modern technologies. In both these cases, the individuals who have some *individual* incentive to spend money to acquire the education, health or the technology are likely to under-consume.

These cases can be illustrated merely by reversing the positions of the MSC and MPC curves (in the top part of Figure12.3) and the MPB and MSB curves in the bottom part of that figure. Readers are invited to confirm that the diagram would then show an equilibrium as determined by market forces in which actual consumption (e.g. of health and education services) was socially sub-optimal. Let us consider this further.

Education

Take the example of education. Any individual or his family when deciding on the amounts of education to "purchase" will need to balance the private costs of this education against the likely benefits in terms of future earnings and the quality of life. In a typical low-income agrarian country in Africa or South Asia even the individual

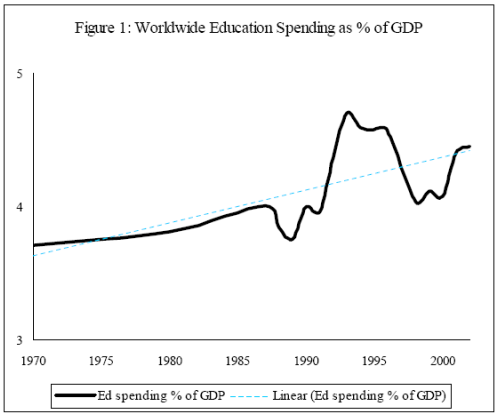
(private) costs involved will be quite complex. They will involve not only the monetary fees that may be charged by schools and colleges but also the opportunity costs to, for example, the family farm of the student's absence for an extended period. This by itself will often result in a large degree of under-consumption of education relative to the amounts from which any individual student may have the ability to benefit. Social mores – e.g. about the differentiated attitudes to female versus male education – will intensify this under-consumption effect for, for example female students. So note that policies of "free" primary education as implemented relatively recently in some poor countries such as Kenya and Tanzania will not reduce the *full* costs that guide decisions to zero.

But in additional, in economies with serious shortages of skills, the education of one extra individual can potentially provide large benefits to society more generally. It can do this via ripple effects as the educated student transmits the lesson learned both to members of his/her immediate family and also to society more generally as he/she acquires the ability to enter ever-more skill –intensive occupations. Box 12.4 below provides further examples of relevance in developing economies).The market failure here arises because the individual's calculus about how much education to "purchase" (recognising the opportunity cost as well as any school fees) will rarely take account of these broader social benefits. In other words, *the socially optimum amount of education will be significantly lower than the individual optimum.*

Box 12.4: Externalities and the Social Returns to Education

The ideas of external effects in education fit well with the original Theodore Schultz (1963) and Gary Becker (1964) formalisation of ideas about human capital that were first presented in the early 1960s. In brief individuals will (privately) demand education up to the point where the marginal gain from an extra unit (e.g. year of schooling) exceeds the marginal costs in terms of both financial costs and income foregone during the period of education. The marginal benefits arise mainly from the gains in productivity which in turn lead to the possibility for earning significantly higher incomes. As we see in the discussion of the Lucas model referred to in Part 2 of the book and discussed more fully in Box 12.5 below the benefits may accrue partly to the individual and partly to the society more broadly: i.e. they are partly social benefits. However, in addition education yields a wide range of other social benefits that have been extensively researched. Based on a review by Wolfe and Zuvekas in a book edited by McMahon and others (1997)[26] these include the following:

- Child's health – is positively related to the education levels achieved by parents
- Fertility – is negatively affected by the education levels of parents
- Crime – is negatively related to educational attainments
- Technological change – the diffusion of R and D is positively related to schooling levels
- Life expectancy – is positively related to education status
- Job search efficiency – is positively related to education status
- Social cohesion – is generally better in better educated communities



These ideas – suggesting a significant market failure have been very influential in persuading many governments including in poorer countries to increase the funds they commit to education at all three levels: primary, secondary and tertiary. Jimenez and Patrinos (2008)[27] indicate the global trends in this respect as in the Figure reproduced here. The potentially large magnitude of the broad-based and other social benefits from education gives credence to the idea that the private calculus on its own will give rise to significant under-consumption of education relative to the social optimum. Although the empirical verification of this embraces a large literature in its own, there is much evidence for developing countries that confirms that social rates of return often do exceed the private rates of return.

The methodologies involved in the calculation of the social return are summarised in Psacharopoulos(1993) and (1985).[28] Typically the fiscal outlays to provide free and subsidised education are *deducted* in presenting results for the social rates of return. But even so the world-wide averages reported in Psacharopoulos(1993) are 18.4%, 13.1% and 10.9% for primary, secondary and tertiary education respectively. In the poorer regions of Sub-Saharan Africa and Asia (non-OECD countries) the corresponding rates of return are 20-24%; 13-18%: and 11-12% for the three levels of education but much lower in the OECD (14%, 10% and 9% respectively). These results confirm the general proposition that has

[26] McMahon, W. W., Carnoy, M., Wolfe, B., Zuvekas, S., Greenwood, D., Sullivan, D. H., Smeeding, T. M. and Eisner, R. (1997) Recent advances in measuring the social and individual benefits of education, University of Illinois, Pergamon

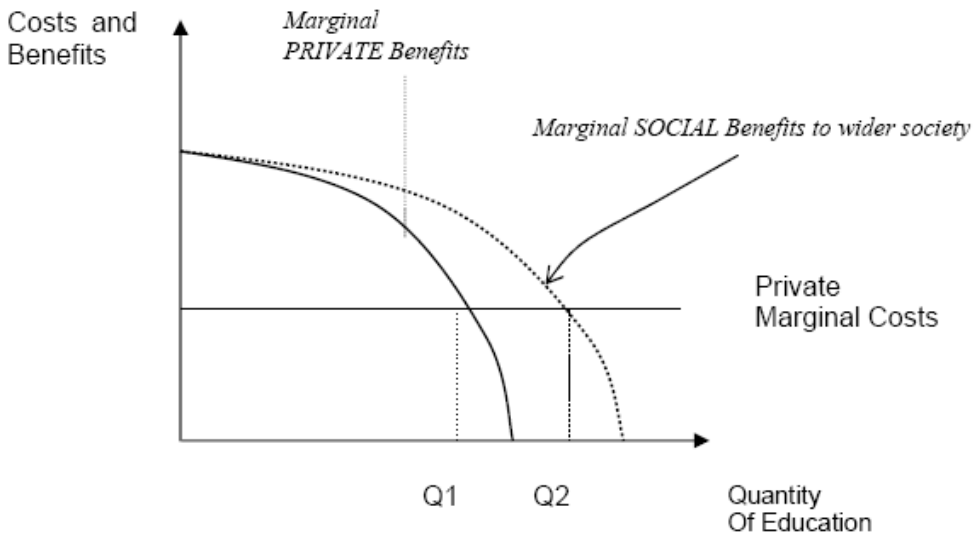
[27] Emmanuel Jimenez and Harry Anthony Patrinos, *Can Cost-Benefit Analysis Guide Education Policy in Developing Countries?* Policy Research Working Paper, No. 4568, Washington DC, March 2008

[28] Psacharopoulos, George. 1994. "Returns to Investment in Education: A Global Update." *World Development*, 22(9): 1325-1343.
Psacharopoulos, George and Maureen Woodhall. 1985. *Education for Development: An Analysis of Investment Choices*. New York: Oxford University Press.

guided policy for some years that the social rates of return are highest in primary education but that these returns decline with income levels.

Figure 12.4 illustrates the point conceptually for the case of an elastic supply of educational services. Readers are invited to examine the case of an inelastic (upward sloping supply curve) by inverting the MSB and MPB curves in the bottom segment of Figure 12.3 above. It can be seen that the society represented in Figure 12.4 can clearly benefit from some sort of intervention to adjust the privately determined volume of education (Q1) to the higher level of Q2. The narrow private decision would results in an Education level of Q1 for the individual (or group of individuals) making the private decision. But society as a whole would clearly be better served if somehow more of these individuals could be persuaded to chose more education (i.e. chose to stay at school for longer). This would move the level of education to a social optimum of Q2.

Figure 12.4: A Positive Externality in Education, Health, Roads



Health

In health too the private decision about how much to spend can easily will result in serious under-consumption. A clear example is vaccination services against tuberculosis: if these are *not* used sufficiently widely then the result will be disease infecting many more than the individual child whose parent need to decide about his or her vaccination. The diagrammatic representation of this point can again make use of Figure 12.4 above. In the case of a vaccination against cholera or TB, the *private* benefits relate narrowly to the health of the individual who is choosing to have the vaccination. But in this case, the contagious nature of the illnesses means that the failure of that person to get vaccinated would increase the likelihood of their neighbours and friends contracting an avoidable disease. Hence the social benefits of any individual being vaccinated greatly exceed those of the single individual.

Rural Roads

A third developing country example might be rural road programmes. In the case of a rural road, there are direct private benefits from building the road. But to the extent that this opens up remote communities previously cut off from major towns and from

sources of commercial activity then various additional benefits can be expected. These might include: a lower cost of marketing agricultural produce; the greater attractiveness of the rural communities to new forms of investment; the greater practicability of providing education for the children in those remote communities and so on. In this case the social optimum of investment would be at Q2 miles (now reading the Figure 12.4 quantities as miles of rural road) rather than the Q1 that would arise from a narrowly based private decision.

Externalities in a Dynamic Growth Context

The examples of externalities so far listed here relate to *partial equilibrium* cases that show reasons why particular market-determined outcomes may fail to be socially optimal. But we can easily extend these ideas into the more dynamic models of the growth process itself. In Chapter 8 of Part 2 we provided several examples of so-called endogenous growth effects whereby increasing returns to a particular factor of production such as labour can be a source of divergent growth tendencies as between countries: returns to capital, both physical and human are likely to be higher where capital is already abundant. In Box 12.5 below we develop the case for human capital in a dynamic growth context. This example confirms that In a nation where skill levels are already deep and well established, people in that nation will have strong incentives to invest in their own skills and stay put. But in poorer countries where the skill base is thin, the incentive of the individual to invest in human skills is also low. As is also the case with assembly lines in well-run factories (the skill of any one worker complementing and enhancing the productivity of other workers), this reality is likely to generate virtuous and vicious cycles. A country is rich because it started out rich, a country is poor because it started out poor.

Other examples of dynamic external economies can be found be returning to Chapter 8 in Part 2. But an inherently dynamic problem is that relating to the market failures associated with climate change – or more precisely with global warming. This complex set of issues is reviewed in the brief quote from the UK Stern Report of 2007 in Box 12.6

Box 12.5: Why Skill Acquisition is Self-Reinforcing

Robert Lucas in papers in 1988 and 1990 extended earlier insights about externalities in growth from Paul Romer as discussed in Part 2 by stressing the role of externalities associated with Human Capital.

To understand Lucas' key idea, ask yourself why economics graduates from Harvard, the LSE, MIT or your own university or college (if not one of those listed) may prefer to work in Wall Street or in the City of London – where economics graduates are plentiful – rather than in, say, Mongolia where they are in very short supply! The Harvard/LSE/MIT economists on Wall Street or in the City earn their high incomes in part because of the manner in which their own efforts are augmented by those of fellow well-educated economists.

This happens because individuals benefit from interacting with each other and exploring complementarities. Exchange of ideas and interaction with other professionals in the same field of endeavour can enhance the individual capabilities (and outputs) of each of them. If this effect is strong enough to overwhelm the normal diminishing returns to skills as skills get more abundant, then skilled labour will not necessarily be more valuable where it is scarcer: e.g. in Mongolia. Indeed working as a great expert in a location where few understand even the basic concepts of economics can be a daunting and ineffective experience. Inversely, the returns to skills for the individual will go up with the existing skill average in the society.

If the best economists are *assembled* together, they are likely to have better ideas and will get a higher payoff from their skills. If, instead, they are partnered with poorly trained and ineffective colleagues, they will have a lower reward for any effort that they might individually provide. This creates an incentive for the best workers to stay together and a disincentive for good economists (for example) to take up one of the very few jobs for economists in Mongolia.

Note that this is exactly the opposite of the results that are predicted by the law of diminishing returns. With diminishing returns, skills substitute for each other, so they become more valuable where they are scarcer – in Mongolia and not on Wall Street or in the City! Hence, under diminishing returns, while some labour might tend to migrate from poor countries to rich countries, skilled labour would tend to stay in poor countries. By contrast when externalities are present, human skills have increasing returns and so skilled workers tend to migrate and cluster around other skilled workers. People who get educated in a society with little knowledge do not benefit as much as those in a knowledge-abundant society. The few Mongolian nationals trained in economics are more likely to seek work on Wall Street than are the Harvard/MIT graduates to move to Mongolia.

This story illustrates how the private returns to the skills of the individual may be inextricably bound up with the existing skills in the society. A recent example of this is described by Thomas Friedman in his recent provocative book entitled *The World is Flat* (2005). He describes that in the days before the Indian economic reforms of the early 1990s (see the Figure in Chapter 4 that indicates the consequences of these reforms for India's growth), it was common for well-trained Indian IT and other specialists to queue for days to obtain visas to work in the USA. But the new attitudes and economic opportunities in India in the past 15 years have created the new IT-based and other modern industries that are now attracting thousands of those highly trained person back into the Indian market to seek work alongside a significantly larger proportion of the new Indian graduates.[29]

[29] Robert Lucas argued that the across-household externalities could explain why we often see migration of skilled labour at maximal allowable rates and beyond from poor countries to wealthy ones. But equally his analysis can help us make sense of the changing attitudes to international migration that are now very evident in the return-migration of India and some

This story also makes it clear that the market itself will not necessarily create growth. Moving from the vicious cycle to the virtuous cycle may well require a conscious government intervention. For example, the public sector could get the economy out of the trap of low returns to capital by subsidizing investment in physical and human capital. In economies with sizeable income disparities, such an effort might be specially directed to poorer people or to segregated groups. The Indian reversal of skilled migration referred to above required both a large pool of already well-trained Indians (many of whom migrated to the USA or to Western Europe during the years

Box 12.6: Externalities and other Market Failures in Climate Change Economics *(extract from Stern Review: The Economics of Climate Change, 2007)*

"In common with many other environmental problems, human-induced climate change is at its most basic level an externality. Those who produce greenhouse-gas emissions are bringing about climate change, thereby imposing costs on the world and on future generations, but they do not face directly, neither via markets nor in other ways, the full consequences of the costs of their actions.

Much economic activity involves the emission of greenhouse gases (GHGs). As GHGs accumulate in the atmosphere, temperatures increase, and the climatic changes that result impose costs (and some benefits) on society. However, the full costs of GHG emissions, in terms of climate change, are not immediately – indeed they are unlikely ever to be – borne by the emitter, so they face little or no economic incentive to reduce emissions. Similarly, emitters do not have to compensate those who lose out because of climate change. In this sense, human-induced climate change is an externality, one that is not 'corrected' through any institution or market, unless policy intervenes.

The climate is a public good: those who fail to pay for it cannot be excluded from enjoying its benefits and one person's enjoyment of the climate does not diminish the capacity of others to enjoy it too (NOTE: public goods are introduced and explained explicitly later in this Chapter). Markets do not automatically provide the right type and quantity of public goods, because in the absence of public policy there are limited or no returns to private investors for doing so: in this case, markets for relevant goods and services (energy, land use, innovation, etc) do not reflect the consequences of different consumption and investment choices for the climate. Thus, climate change is an example of market failure involving externalities and public goods. Given the magnitude and nature of this problem it has profound implications for economic growth and development. ***All in all, it must be regarded as market failure on the greatest scale the world has seen.***"

Solutions to Externalities

The presence of either negative or positive externalities clearly seems to call for some "non-market" solution in the interest of a social and development outcome that

other more developed economies such as Ireland. Lucas, R., 1988. "On the mechanics of economic development". *Journal of Monetary Economics* 22, 3-42.

is optimal. There is a deep economics literature on the best solutions in each case. Here is just a sample or the main proposition from that literature.

- A taxation solution. In the case of a negative externality, a tax can be imposed on the producer of the externality (or the consumer if the externality derives from consumption). Such a tax can have the effect of aligning the total costs (including tax) faced by the polluters with the true marginal social costs of their activities (as depicted in Figure 12.3 above).

- A quantity control system. Also in the case of a negative externality, a direct administrative control approach might be used that either limits the emission of pollution or the production that generates this emissions. This can move the quantity of the outputs produced to the lower levels that are more consistent with the social rather than the private optimum (see Figure 12.3). This is the approach favoured by the Kyoto Agreement on climate change and sought also in the more recent Copenhagen discussions of 2010.

- A property rights solution as proposed initially by Ronald Coase (1960). This approach allocates a full set of property rights both to those creating any negative externality and those affected by it. These property rights create the necessary conditions for trading the externality – a process that can serve to move the equilibrium closer to the social optimum point. The relatively recent European carbon trading system is a good example of this approach – it seeks above all to raise the global price of carbon and so discourage excessive amounts of the carbon emissions that are associated with global warming.

- A subsidy system. In the case of positive externalities such as those in education and health, the most obvious way to encourage higher consumption and production levels is to offer subsidies (possibly to the user of the service) in order to lower the costs to them (this acts on the MPC curve in the lower part of Figure 12.3). This is the approach of low income countries in Africa that now provide free primary education to all.

- An enforcement system. Also in the case of positive externalities, there are various administrative actions that might be employed to move consumption to levels higher than those that would emerge from a pure market solution. Examples are the imposition of a minimum leaving age for leaving school, and compulsory vaccination of all children of certain ages against particular illnesses or diseases.

In the context of low income and low capacity developing countries, we can readily see that most of these solutions entail problems in implementation which would be less difficult to resolve in richer economies. In particular, any solution involving subsidy payments confront the harsh reality of tight budget constraints which will often limit the government's ability to resolve externality problems fully even assuming that the problem is well diagnosed. But for essentially similar reasons, administrative solutions (e.g. to make illegal some actions leading to deforestation, may also face major problems in implementation. It is for example quite common to see well conceived environmental protection agencies in developing countries failing to fully deliver on their mandates because of inadequate human and other capacities. This is but one example of the institutional weaknesses in such countries that partly distinguish tem from richer societies (see Chapter 14 for further examples)

In general:

- *the theoretical arguments tell us that the presence of externalities (positive or negative) will undermine the conclusions of the Pareto efficiency arguments, but*
- *they also signal ways in which government intervention might be used efficiently to steer outcomes back towards the Pareto efficient optimum.*

Importantly this second point gives guidance not only about the direction in which government action should adjust the situation as chosen by private decisions but also the method that might best be used for this purpose. An example is in Box 12.7.

Box 12.7: Two Ways to Reduce Pollution from Cars

Since there are unquestionably high levels of pollution from cars, it is clear from our earlier discussion that the unregulated use of cars will result in a sub-optimal outcome. Car owners will be creating excessive amounts of pollution while the population at large will be involuntarily consuming far more pollutants than is either good for them or desired. Consequently the social optimum (numbers of miles driven) will be below the privately chosen optimum.

One standard solution to this over-use of cars as widely adopted in the USA and the EU (but not yet in many lower income countries) is to establish increasingly tight environmental standards for the manufacture and especially the emission controls on all cars. This raises the costs of all cars as increasingly sophisticated equipment has to be manufactured into them. It also increases the consumer's running costs as both maintenance and fuel (e.g, unleaded versus regular gasoline) costs are increased.

An alternative that is arguably more efficient is to directly tax the actual level of emissions from each individual car (via annual inspections that estimate emission levels based on mileage and engine size). The advantage of this second approach is first that high-use cars (e.g. those used for long daily commutes in busy cities) will pay very much higher emission taxes than will the infrequently used car in quieter rural areas or in areas better served by public transport. Second, because car owners have some scope for controlling the emission taxes they pay by driving less, at the margin many will chose to do exactly that. In other words the emission tax relates more directly to the incentives that individuals face.

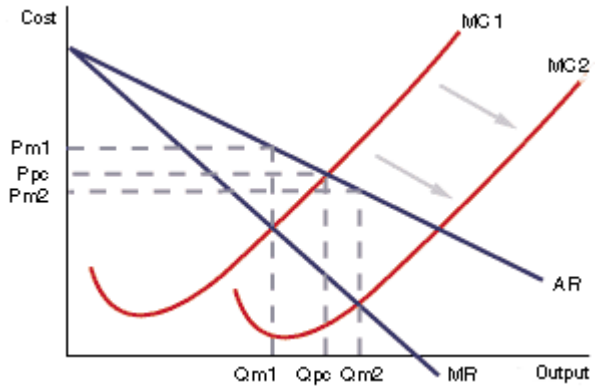
Let's be clear that neither type of government intervention can steer the economy to the full Pareto optimum allocation that would be associated with a situation of zero externalities (emissions in this particular case). However, the emission tax approach seems likely to be more cost efficient than the first. This is (a) because it is likely to involve a smaller reduction in the utility of car consumption for the lower mileage drivers and (b) because it creates a strong incentive at the margin for all car users to restrict the miles they drive.

ADD Box XXXX: Patent Protection and Genetically-engineered Seeds.

Failures of Perfect Competition: Two – Increasing Returns and Monopolistic Tendencies

The second main failure of the perfectly competitive assumptions of Arrow and Debreu relates to the underlying assumption that all productive activities operate under conditions of either constant or increasing cost (diminishing returns). If instead *some forms of production benefit from ongoing economies of scale (i.e. average costs continue to decline as the scale of production increases), then the optimality of the free market allocation of resources can no longer be established.*
The typical case of imperfect competition and the problems deriving from that is illustrated in Figure 12.5 below.

Figure 12.5: Monopoly with and without Significant Economies of Scale



In the case of a monopoly that operates with small or modest economies of scale in production (the case of the higher marginal cost curve namely MC1 in Figure 12.5), the disadvantages compared to the state of perfect competition that the general equilibrium model assumes are easily illustrated. The monopolist would find the profit maximising equilibrium where his marginal costs and revenues are equalised at output level Qm1 and would be able to charge a price of Pm1. By contrast the situation of perfect competition would result in a *higher* output level namely Qpc sold at a *lower* price namely Ppc. So in this case there is an undoubted loss of consumer surplus caused by the monopoly namely the triangle under the demand curve (AR) at price Ppc and between output levels Qm1 and Qpc. *This loss represents the standard justification for seeking to control monopolies and other types of imperfect competition.*

However, the situation is more complex IF the monopolist by virtue of the size of production (in for example an industry such as electricity power generation or petrochemicals) is able to benefit from lower average costs than would be the perfect competitors who would all be individually smaller. This case illustrated by MC2 in Figure 12.5 shows that the equilibrium output now could be Qm2 (i.e. higher then in perfect competition) with a profit maximising price of Pm2 (lower than in perfect competition. So now there is a dilemma for policy. There is still a loss of consumer surplus caused by the presence of imperfect competition. However, any attempt to remove loss this by breaking up the monopolist and reverting to perfect competition would cause a loss of output and also higher prices to the consumers of the product!

Economies of Scale and the Poorer/Smaller Economies

This is not merely an academic point. The reality in most developing countries is one in which many industries and services are produced necessarily under varying degrees of monopoly control or imperfect competition short of monopoly. There are two main reasons for this.

- developing countries clearly possess many of the declining cost industries such as electrical power generation, steel production (in some cases) and banking which are characterised by significant *potential* economies of scale in any country. Some of these such as power supply are sometimes referred to as "natural" monopolies.

- the majority of the world's poor countries are very small in terms of their total purchasing power (typically this represents less than 5% of the GDP of a country such as the UK). This means that for many industries (textiles, certain food processing industries, engineering plants involving mass production technologies) in which competition with many producers is possible in a developed rich economy, there is a far weaker *efficiency* case for competition involving multiple producers in the typical smaller poorer economies[30]:. The reason is that the total feasible outputs of such industries in poorer economies is more likely to be *lower than the output levels associated with the lowest point on the average cost curve.*

To see the nature of the policy problem posed by these two factors let is consider a case where the average total cost (ATC) of an industry is falling continuously over the whole output range. Readers can think of this either (i) as the case of a declining-cost industry (natural monopoly) where ATC would be falling continuously over all output levels even for rich country producers (e.g. large integrated petro chemical plants)[31] or (ii) as the case of other industries where ATC falls over the output range which is *realistically possible* in a lower income developing country (i.e. in this case we truncate the later and rising segment of the ATC curve). This case is illustrated graphically in Figure 12.6 below. The fixed costs (F) in this industry are very high. The ATC is defined as follows:

$$ATC = (F/Q) + c \text{.....} 12.6$$

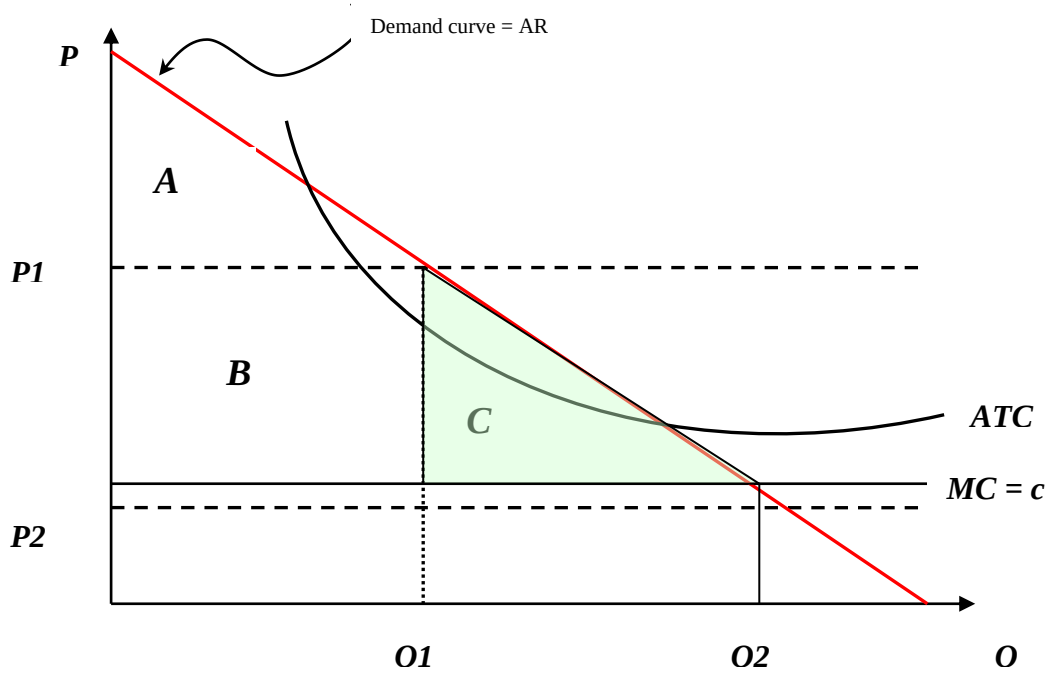
Where c= marginal cost (c)

The marginal cost is assumed constant at all possible output levels but ATC falls continuously because of Equation [12.6] with a tendency to converge on "c" as shown in Figure 12.6.

[30] clearly this discussion need to exclude larger developing countries such as India, China and Brazil.

[31] Such decreasing cost (increasing return) industries are exampled by utilities such as electricity and water, and by other capital-intensive industries such as petrochemicals, shipbuilding and steel. The managers of such industries will typically try to avoid the competitive outcome by (i) pricing with a profit mark-up on their average costs and (ii) by trying to grow bigger to take full advantage of the cost savings that result by moving further down the cost curve. Their first response is seriously destructive of the idea of an efficient outcome as regards resource allocation. The second point establishes an in-built tendency for the monopolization of such industries.

Figure 12.6: The case of Declining Cost Industries



Remember that the equality between the *marginal* costs of production (MC= c) and the product price (P) is the key condition for optimality on the production side in the general equilibrium calculus. But in decreasing cost (increasing returns) industries as illustrated in Figure 12.6, the *marginal cost* of production will always lie below the *average cost curve*.

Note that if this producer sets the price of his product so as to fully cover ATC and also make a profit (e,g. he sets a price such as p1) then he would contravene the p = MC condition needed for the Pareto optimum as defined earlier. His prices would also be higher (at P1) and his output lower (at Q1) than in the competitive equilibrium (i.e. where P = c and Q = Q2). This is as a direct result of the increasing returns and continuously declining cost curve (ATC). The absolute size of the efficiency loss associated with this contravention of the perfectly competitive assumption is indicated by the dead-weight loss as measured by the triangular area "C". This is the part of the pricing of the product that contributes neither to consumer surplus (the amount of utility accruing to consumers in excess of the price paid) as indicated by the area "A" or to excess producer profits as indicated by the area "B". There is an overall societal loss namely "C" relative to the competitive equilibrium.[32]

[32] We here assume that the same cost curves for the perfect competitor as for the monopolist. Hence we abstract from the dilemma referred to earlier. It is somewhat paradoxical that the representatives of big industries are invariably strong advocates of competitive markets – a situation that if it were ever fully achieved would subject their companies and their shareholders to substantial losses – the disappearance of area "B" in Figure 12.6. This

The problem facing public policy in the developing country can be posed as follows. If the firm or industry in question could be persuaded to set a price equal to marginal cost (p = c) then area "A" would expand giving the consumer greater consumer surplus; area "B" would contract as excess producer profits were eliminated; and the deadweight efficiency loss indicated by area "C" would also shrink to zero. But the fundamental problem with this lower price outcome is also clear from Figure 12.5*. Because this outcome would definitely subject the firm/industry to losses* it is not a viable or sustainable solution in a free market economy

Policy Solutions
How in such a case can the efficient outcome be achieved and this second type of market failure avoided? This also calls for specific types of government intervention. There are two main approaches.

- Price Controls and Subsidy. The government could encourage the decreasing cost (increasing return) industries to charge prices equal to their marginal costs by subsidising them for the difference between their average and their marginal costs as illustrated in Figure 12.6 .[33] Formally the cost of the subsidy would be (ATC – p)Q. But note the problem with this solution. It is the same as the problem already encountered in relation to re-distributional policies and to some of the possible solutions to externalities. *Only if the government can find a non-distorting tax to finance the cost of the subsidy will its action in this regard achieve an efficient new allocation*. Failing that the subsidy is likely to introduce a new distortion For example if the government chooses to help the electricity industry (an increasing returns industry) and finances this support by levying an indirect tax on a second industry say brewing (where price (P) = marginal cost in any initial equilibrium), then it will raise the price to the consumer of that "other product" and so disturb the initial equilibrium relationship on the consumption side (i.e. P = marginal utility in consumption). In short by curing the divergence between P and MC in the electricity industry, the government will create a new divergence from the Pareto equilibrium in the "other industry".

- Nationalize the Industry. The preferred solution to this problem in many developing countries has been to keep the key utilities such as electricity and telephones under state ownership; control the prices of their services and then *recognise the associated losses of the enterprises as a charge on the government budget.* To varying degrees the discipline of recognising losses explicitly has fallen into obeisance. This means – as in the case of China and many African countries for example – that the huge losses of many state-owned enterprises have remained *off-budget* as an implicit liability of the state rather than one which is explicitly accounted for. While it is easy to see why the governments of low-income countries would adopt this approach, it is

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paradox can only really be explained by observing that the free working of a competitive system would allow the successful increasing return industries to *monopolise* their respective markets – an outcome that would clearly be adverse for the prices paid by consumers. of the economy. It would be good for profits but not for competition and the consumer.

[33] Initially in the increasing returns industry P>both MC and MU. In all other industries P=MC=MU. After the levying of a new indirect tax and its use to pay a subsidy to the increasing return industry, the situation there shows P=MC=MU (and MC + subsidy = AC). In the other industry, P>both MC and MU

important to recognise the serious inefficiencies that are thereby created given the difficulties of finding non-distorting taxes, or indeed *any* ways to fully finance and cover these losses. (see also Box 12.8 below) This is an unambiguous point that derives directly from the logic of the welfare-theoretic analysis that we have been using.

These two solutions would be valid theoretically and are frequently encountered in practice in both developed and developing countries. But note our proposition ***that monopolistic tendencies will invariably be more pronounced in the smaller poorer countries*** – even in industries where declining average costs are not inevitable. Box 12.4 elaborates this point by examining some basic facts about state industries in both Bangladesh and in China[34].

[34] Sources include William P.Mako and Chunlin Zhang, *Management of China's State-Owned Enterprises portfolio: Lessons from International Experience*, World Bank Discussion Paper, Beijing, September 3rd 2003. Tanweer Akram, The Dismal Performance of Non-financial State-Owned Corporations in Bangladesh, mimeo accessed via the internet, January 28th 2003.

Box 12.8: Public Enterprises and Deficits: China and Bangladesh

It is difficult for the governments of low-income countries to raise sufficient tax revenues to cover the cost for basic services such as education, health, roads and police. But in many cases, these problems have been made immeasurably worse by government decisions to subsidise the losses of the increasing–return as well as the other publicly owned industries. The losses of the state-owned industries (SOEs) are a part of the overall public sector deficit and so need to be financed either by raising borrowed funds or by printing money.

China: These losses can be very large. In China for example, by the early 1990s the deficits of that country's very large set of state-owned industries were the equivalent of 6-8 percent of GDP. At that level they were more than twice the official figure for the government deficit as formally declared and budgeted. (McKinnon(1993). At that time there were more some 300,000 SOEs operating in China and they accounted for massive employment in excess of 75 million persons: curtailing the financial losses would have meant significant falls in employment. In spite of substantial reforms thereafter, by end 2001 there were still over 170,000 SOEs in operation in China. Significantly, only 9,453 of these (5% only of the total) were reckoned to be larger businesses that might conceivably have had their state control justified by reference to declining cost (ATC) arguments as in our main text. The vast majority of SOEs by number were in small food processing, engineering, commerce and transport activities with typical firm employment of less than 200 persons. (Mako and Zhang [2003]). More than 50% of all the enterprises remained loss-making by end-2001. However, by that stage the strong performance of a number of large profitable SOEs were sufficient to compensate for the losses of the others.

Bangladesh: Similarly in Bangladesh the early years of independence from Pakistan after 1971 saw more than 90% of industrial fixed assets coming under state ownership. As well as taking over many abandoned Pakistani firms, the new state also nationalised a large number of firms owned by indigenous Bengalis in jute, other manufacturing, import trading, banking and finance, and inland water transport. One of the early stated objectives of such a huge intrusion of government ownership into the productive process was to provide additional revenues in the form of profits to the government budget. Unfortunately such an ambition has rarely been realised in practice: indeed the declining cost arguments would lead us to expect losses rather than profits. By the end of the 1990s, the total losses of the SOEs amounted to over Taka 6.5 billion ($140 million – the equivalent of 0.3% of GDP). (Akram [2003]). However, once the financing needs of new investment were taken account of the enterprises collectively showed a financing gap (including significant arrears of payments due to both government and banks of more than twice that amount. As in the case of China, only a relatively small percentage of the Bangladeshi SOEs were large industries where the declining cost arguments might have constituted a strong case for public ownership or control. But they came to account for well over 20% of all public sector employment. Akram also notes that the operating surplus of the combined SOEs was almost 8 percent lower than the prevailing cost of funds in the Bangladesh banking sector (1997/98): this is a measure of the subsidy that collectively they were then receiving.

Public versus Private Ownership: A Digression

It is evident from the examples of Bangladesh and China that state ownership of productive industry has been entertained in these (and many other low income countries) for reasons that rely only partly on the theoretically strong economic reasons based on declining average costs as presented above. In China's case as in the USSR 30 years earlier, the Marxist philosophical arguments obviously dominated the decisions under Mao-Tse-Tung's leadership in the 1950s. In Bangladesh and typically also in many other low-income countries including many in Africa, numerous propositions are put forward to justify state-ownership. These justifications include

the idea that the mere fact of public ownership can somehow accelerate national development, help to encourage local entrepreneurship, stimulate higher levels of employment, create much needed infrastructure that might otherwise not be available, supply goods that are more affordable by poor persons etc. Most of these objectives are highly laudable but for the most part direct state ownership has been a very poor instrument to achieve them: much weaker than was expected by the architects of these countries policies at the beginning.

Economic theory offers a number of generic explanations to explain the disappointments in Bangladesh, Tanzania, Ghana and many other developing countries that initially espoused widespread public ownership. Here are just a few.

The agency model

The first is based on a so-called "principal-agent" model. The general public as the "owners" of the state industries are the *principals* in this case. However, the government and various designated state organisations that are typically charged with the management and operation of the companies are the *agents* working on behalf of the owners. However, it is a truly major and difficult task (in any country) to set up mechanisms whereby the multiple *principals* can monitor effectively and otherwise exert effective vigilance, including imposing sanctions in the case of poor performance, over the actions of the *agents*. The managers of the SOEs in low-income and low capacity countries are typically answerable formally only to one or more *state* organisations that also appoint the most senior staff. The owners-principals (i.e. the general public) are largely remote from this process and most commonly have to accept the quality of the performance of the SOEs that emerges without much real chance of affecting it.[35] In the worse cases both the managers and those deputed to monitor them are appointed for political reasons. As a result they are highly likely to lack the skills and experience that the management and monitoring of complex firms calls for. Certainly in these cases, the voice of the principal-owner will have little or no chance of being heard.

The fiction that the general public are really the owners and principals of state-owned enterprises was laid embarrassingly bare by the experiences in countries of the Former Soviet Union (FSU) and especially Russia and Ukraine during the mid-1990s In that period these countries underwent huge privatisation programmes as one core element of their transformation into market economies. As soon as the effective governance from Moscow of the Soviet SOEs began to decline, the *effective* control of more than 20,000 medium and large SOEs moved into the hands of the incumbent managers. As the privatisation process to redefine ownership worked itself out – often in a remarkably short period of time - months rather than years - the formal ownership of huge enterprises and many small ones came into the hands of a limited group of powerful businessmen and newly formed banks. The general public who notionally "owned" all these enterprises during the Soviet years got to participate in the benefits of privatisation by being given vouchers that could be exchanged for shares in at least one enterprise during its privatisation. In practice these vouchers were individually poorly understood and worth little. So many voucher-owners were happy to sell them for a few dollars or allegedly in many cases, small bottles of cheap vodka to the powerful oligarchs and other large players who eventually came to own

[35] Arguably this is not a great deal different from the position of a small shareholder in a large private corporation such as Ford or British Airways. But in these cases the shareholders do have some mechanisms for voicing opinions and can in cases of strong dissatisfaction dispose of their shares.

the bulk of Russian and Ukrainian industry – often at prices that were a mere fraction of the industries true worth[36].

Multiple objectives

But even where the inherent principal: agent problem can be reasonably well addressed, state ownership of productive industry can still suffer because of the many different and often conflicting objectives that the SOE managers are required to pursue. These objectives may typically include employment generation (or preservation), sales at below-cost prices to poorer households or to loss-making enterprises, production locations that favour backward regions with limited infrastructural support, and pricing levels generally that may be non-viable. The defining of these multiple objectives is of course a logical consequence of the, often varied but non-rigorous arguments that are used to establish public ownership in the first place. The SOE, the public would say has somehow to be ***different*** from the hard-nosed private business that it replaces: softer, more socially conscious, less worried about bottom line profitability, less quick and aggressive in retrenching redundant staff etc. But these general sentiments and the objectives for the SOEs that they help to define can in some cases leave the operational managers of the firms in a near hopeless situation. This is because most of the social objectives just listed seem certain to reduce the profitability of any firm that is subjected to them and in many cases to turn the possibility of profit into the strong likelihood of long term losses. These losses in turn would then undermine the ability of the firm(s) to raise capital to expand or to up-grade using new technologies. So the result can easily be serious under-capitalisation, sub-standard operational performance and ongoing financing demands on state funds which may be in short supply.

A double *wammy* occurs where the SOEs of any country are governed in a manner that wholly fails to deal with the principal-agent problem (e.g. there is a very limited definition and enforcement of the responsibilities and accountabilities of enterprise managements) but at the same time the government imposes a heavy burden of costly social and other non-commercial objectives. Such a double coincidence of difficulties is quite common in developing economies although many have made great strides to mitigate the seriousness of the problems in recent years. The over simplistic political arguments about the relative merits of private versus state ownership of the means of production often fail to do analytical justice to the real analytical substance of this argument.

There will be more to say on this in Part 4 of the book. Here we conclude the discussion by noting that the presence of a market failure associated with increasing returns industries does not *of itself* provide a justification for direct government control of such industries. It certainly cannot ensure that public ownership *per se* will guarantee the resolution of the market failure in a satisfactory manner. Indeed, the excessive use of public ownership in the absence of workable systems of governance can create a wide variety of negative consequences harmful to development. Finally, as evidenced by our brief cameos on China and Bangladesh, much of the public ownership of industry and services that we see today in poor countries clearly is *not* justifiable merely by reference to the second of the three market failures.

[36] A good overview of this process can be found in abook by one of the advisers to the Russian authorities in the 1990s. Anders Aslund, *How Russia Became a Market Economy*, The Brookings Institution, Washington DC, 1995.

Failures of Perfect Competition: Three – The Problem of Public Goods

The third major market failure encountered in the real and especially in the developing world is the widespread presence in all real-world economies of so-called "public goods"[37]. These are the many goods and services from which we derive utility but for which we do not or cannot easily pay for directly. Examples include the defence services that prevent foreign invasion, the police forces that restrict the volumes of criminal activity, the road building and maintenance that make it possible to drive our cars, the parks and similar public areas that we use for recreation, the regulations that ensures safer water and appliances, and the controls that make it less likely that our banks will lose our savings or make too many bad loans.

Lighthouses are another example and were used as such in a major contribution to the topic in 1974 by Ronald Coase.[38] Coase argued as he had done in relation to externalities that there were viable market solutions to the supply of lighthouses and that the market failure of this public good (and *a fortiori* other similar public goods) was far less persuasive than economists had previously asserted: specifically the port fees in adjacent ports provided a highly practical way to charge for the costs of any lighthouses serving the waters close to that port

Public goods all have one thing in common – they convey undoubted benefits to their users but typically involve charges to any individual that are zero or far lower than the costs of their provision. The producer in other words is unable to capture an income commensurate with the benefit and so is likely to under-provide the service. We looked at a number of examples in the growth context in Part 2 of the book.

For this reason, public goods can be thought of as a particular type of *externality*. However, they differ from the externalities considered earlier because they cannot so easily be related to *individual* decisions about how much of them to produce and consume. Once a public good or service such as a police force is established all members of the population can "consume" the services thereby provided and it is extremely difficult to assess the degree of individual usage closely enough to levy individual charges. This characteristic is referred to by economists as "non-excludability - for once a piece of economists jargon that is pretty much self-explanatory. But public goods also have the characteristic of non-rivalness (in consumption). This is a less obvious terms which essentially means that the marginal cost of adding an extra *user* is zero: for example, one more person for the country's armed forces to defend does not of itself reduce any other person's "consumption" of that service.[39] Finally public goods provision is fundamentally hampered by the "free-rider" problem. If for example an organization began to provide a road sweeping programme for a local area, it would face a fundamental problem of extracting payment. Even if it succeeded in persuading a few socially minded individuals to pay for the service, the incentives for most people would be to merely enjoy the benefits of the cleaner streets and not pay. In short the producing organization creates a

[37] The theoretical literature on this topic was first formulated systematically in Paul Samuelson (1954). However, the basic idea was discussed by David Hume as long ago as 1730 in *Treatise on Human Nature*.

[38] Ronald Coase, *The Lighthouse in Economics*, Journal of Law and Economics, 17 No. 2 October 1974

[39] Goods that meet both of these two defining characteristics fully are sometimes referred to a "pure public goods". Those that really meet only one of the two are referred to as "impure public goods". Amongst these those that are non-rivalrous but can exclude certain potential users are referred to as "club goods" for fairly obvious reasons

social benefit (an externality) for which it is unlikely to be able to capture commensurate levels of revenue.
The difficulty of costing, pricing and then selling public goods in the manner in which other goods are sold is broadly linked to the size of the community that is being served. If that benefiting community is the whole country (as in the case of national defence) then it is almost impossible to get each individual to ***truthfully*** declare how much they value, for example, the services of the defence forces. But if such valuations cannot be obtained, then *individual* charging for the service is also impossible and the payment for it has to be arranged via collective taxation or other public revenues. The alternative is a lot of lying and the "free-riding" of non-payers on those who make truthful declarations.

Before we review the policy solutions that may be able to mitigate this third type of market failure, it is useful to note that the theoretical concept of public goods is not so easily or timelessly translated into a definitive list of public goods for policy purposes. For example, "public goods" for which there is a clear definition of beneficiaries can fairly easily be organised in a manner that provides for appropriate charges to be levied. Examples might be a service such as that of a local fire-brigade, or Coase's lighthouses which operate in a relatively small local community with the benefits reasonably easily assigned to individuals (e.g. putting out a fire at an individuals home could in principle be charged wholly or partly to that individual). In such cases, individual charging is conceptually possible even though it may be politically difficult to introduce. In Coase's lighthouse example of course a purely private solution was also possible. Also, as technological change moves forward, technological solutions may make a charging, or other market solution, more feasible for more goods. It is now much easier, for example for cameras linked to computers to monitor the individual usage of a congested public road or bridge and levy charges accordingly.

Policy Solutions
In brief, ***four*** types of approach are possible to solve the public goods problem.

- Quasi market solutions where groups of potential beneficiaries of a public good both manage to get together and then collectively agree to share the costs of producing the public good: e.g. as in a housing association or in a parents association action to fund a new school gymnasium. This can work only in relatively small local communities because the search and collective actions needed to achieve the collective solution may entail potentially very high transaction costs. A variant of this is what is termed a "dominant assurance contract" under which a group of persons in a community agree to jointly fund a project (e.g. the parent's association funding a new school gymnasium on condition that a sufficient percentage of all parents agree to contribute). Such a contract goes some way to relieving the free rider problem.

- A subsidy system whereby the government picks up some part of the costs of organising the *private* provision of a public good or service. The subsidy has the effect of moving the private benefits of the private production of the good closer to the full social benefits that it generates. However, in cases where the problems of non-excludability and free-riding are very acute, the costs of this solution are unlikely to be significantly lower than the next possible approach.

- Full public provision off the good by the national or local government – the standard approach for national defence, justice systems, policing and most aspects of regulation. This approach in turn can be subdivided as between

a) an *autocratic approach* in which a small elite largely determines the size of the public goods provision that will be financed through the general tax system. Many developing countries fall into this category with military governments or other autocratic forms of control. In addition some low income countries may be subject to some external influences on the structure of their public expenditures. A particular example is in the case where donors are responsible for financing significant proportions of Poverty Reduction Programmes[40]. In these cases the external pressures are likely to encourage reduced public goods provision in areas such as defence and increases in key social areas such as water provision, health and education. However, the local autocratic elites might still retain considerable influence over the balance of public expenditures.

b) a more democratic approach where representatives are elected for extended periods such as 4- 5 years. In these cases the periodic elections will provide a *general steer* about the levels of public provision in broad areas such as defence and health. But the political process will normally have limited ability to *fine tune* the detail of public provision at the level of individual programmes. Ongoing citizen influence over the levels and quality of public provision may be better in those cases where service delivery is delegated effectively to lower tiers of government (e.g. local regional authorities and municipalities) because of the more active monitoring of service providers that is then possible. This has been true for example of some aspects of infrastructure delivery in South Africa. However, decentralisation of itself does not necessarily guarantee improved outcomes.[41]

- A voting approach based on specific voting (or referenda) in which individual consumers are asked explicitly about their levels of potential demand (utility) for particular individual public services (e.g. a new road or an improved water supply). Varian in his textbook points out that IF all individuals display preferences that are *single-peaked* (i.e. their utility rises as service provision/expenditure increases to a peak and thereafter falls) then the actual levels of expenditure chosen by the voters will be the *median level*. In other words at the chosen level of provision half the voters will be asking for greater expenditures and the other half will be asking for less. This may be democratic but it is unlikely to be efficient since it says nothing at all about how much extra (or less) the individual voters want relative to the chosen level of provision.[42]

[40] Explicit Poverty Reduction Programmes and supporting framework papers known and Poverty Reduction Strategy Papers (PRSPs) are now mandatory for the 41 low income and highly indebted countries that are beneficiaries of the IMF/World Bank debt reduction programme (the HIPC programme) introduced in 1996 (see Chapter XXX)

[41] See for example, World Bank, *World Development Report*, 2004 pp 6).

[42] a further problem with the voting approach is that the preferences that voters are asked to reveal will be hypothetical. They will not be asked to stand behind whatever they vote for with actual expenditures of their own money. This means that at least some voters will misrepresent their true preferences in order to manipulate the outcome of the vote – there is no penalty for doing so.

Box 12.9: Merit Goods

Public goods have specific technical features that justify an explicit role for government intervention. They need to be differentiated from "Merit Goods" that economists also list as a reason for government intervention in the economy.

Merit goods are goods (and services) that society adjudges should be provided for all individuals irrespective of their ability to pay or of their personal preferences that encourage them (or not) to consume them. Compulsory primary education and regular breast cancer screening for women are two examples. The public policy case for merit goods actually derives from two other "pure" market failures namely (i) an externality and (ii) an informational failure. To see this consider the case of primary education.

The *externality* argument for state-provided education was discussed earlier and arises because education can benefit not only the individual who receives it but also the society in which that individual lives (see Box 12.4 for some of the reasons). The *informational* argument arises because the efficient consumption of education requires each individual to understand the benefits of education (i.e. that it can lead to a much higher level of lifetime earnings). However, such an understanding is not inherent in an individual when born – it needs to be acquired through the actual consumption of at least a basic level of education. So a judgement is made that the decision is likely to be better if made by an informed agent rather than the individual him or herself.

Hence some state provision of education is justified theoretically as is state provision of various health screening programmes such as mammographs. In the absence of the state taking the initiative the economic reasoning suggests that these services would be under-consumed relative to the optimum amounts. However, this logic clearly presents problems to the more libertarian way of looking at things.

It is in the nature of the collective consumption associated with public goods that many consumers will achieve a level of provision that deviates from that which would arise on the basis of pure individual choice were this to be practically possible. Some argue that the definition of "good government" would include the idea of a government able to provide the optimum amount of public goods – i.e. the amount that would simulate the solution that would emerge from the general equilibrium calculus as described earlier. However, since there is no obvious way to define this optimum, this is largely an academic point!

12.5 Conclusions to Date

In this chapter we have presented the narrow economic arguments that for many generations have been advanced to support the idea of free and unfettered markets. Thanks to the work of Arrow and Debreu more than fifty years ago this part of economic theory is widely recognised as one of the most elegant and general in the economist's lexicon. But we have also shown that for some long-established reasons the theoretical case for free markets is weakened by a variety of important exceptions. Economists like to group many of these exceptions together under the label of *market failures*. Market failures such as externalities (positive as well as negative) and imperfect competition require *even the most liberal of economists* to concede the case for some government intervention with markets. Unfortunately this caveat often fails to transmit itself to the political level (a) at all or (b) correctly.

Let us explain what we mean by this last proposition.

Politicians of the far right are prone to forget about market failures when they advocate free and unfettered markets – they remember the many good things that markets can do that government patently cannot. But they forget to mention, or conveniently overlook the limitations. A very specific case in point relates to the type of commentary from the right about the 2007-2009 global financial crisis. Much of the right-wing commentary is about who is to blame and how to restore "normality" to the financial markets – much less about the inherent failures that will always recur in such markets. When the more right-oriented commentators do recognise some specific market failures they look for corrective interventions that will be light touch and will cause as little disruption to the maximising decisions of individuals or businesses as possible.

By contrast, politicians with more socialistic tendencies have a bad habit – especially in developing countries – of over selling market failures. In particular, they often use the theoretical fact of market failure to suggest that governments need to intervene on a broad and comprehensive basis – to essentially displace markets and do all the difficult work themselves. As we explained in Chapter 11, the high development theories of the 1950s and 1960s relied a great deal on such a way of proceeding to provide developing country governments with a great deal of legitimacy to intervene in many aspects of development.

Readers of this book are encouraged to discount both of these more extreme views about markets – both views are imposters that are poorly grounded in economic science and that really do not help much to establish how policy might be operated in practice in poorer economies.

We have a bit more leg work yet to do (in Chapters 13 and 14) before we get to that. But this present chapter has provided at least two reasons why both of the two polarised positions need to be treated with the utmost caution. First, the analysis has shown that it is only in some limited cases that allocations of resources that are optimal in the sense of efficiency are also the correct allocations from a distributional (or fairness) point of view. Note in this context the clash of conclusions as between John Rawls and Robert Nowick. Second, we have provided a few real world examples of how complex are both the market failures themselves and the associated interventionist policies that are needed to address these market failures. It is not easy for governments to deal adequately with externalities whether they relate to global warming or to a large mineral company polluting rivers or harming natural habitats. There are also competing methods of interventions that are far from being equivalent. It is also very difficult for the governments of resource–limited poor countries to take on effectively the tasks that markets are somehow failing to do.

In the next Chapter we seek to deepen our understanding of these policy dilemmas even further – and to add further to the list of possible market failures. We do this by introducing more explicitly the dimension of ***time*** and by assessing the ***over-time*** problems that are faced by markets (and those who would intervene in them). As the reader who perseveres will see, this will bring us a bit more closely into contact with the longer term planning problems that all developing countries face.

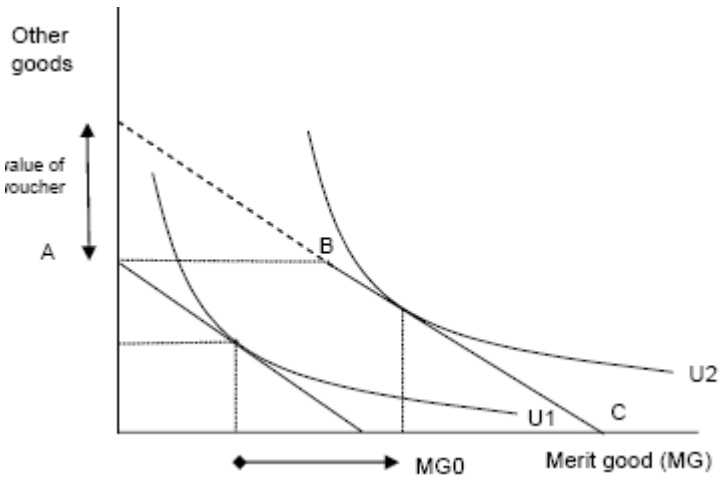
Annex to Chapter 12: An Example of Public Policies for Education and Health

(based on a paper by Tim Ensor Oxford Policy Management (permission to use needs to be obtained)

In this Annex we provide just one example of the difficulties for public policy in responding to a market failure associated with an externality. Specifically, we compare the effect of a cash subsidy with a voucher and a price subsidy. These are alternative ways of encouraging households to consume more of a merit good (education or health for example) than they would choose to consume in the absence of any intervention, Readers will remember from the text is that the difficulty with merit goods is that consumers may under-consume and so establish a gap between the private and the social utility that derives from their consumption. This example illustrates how different public policy prescriptions can be assessed against the utility maximising logic of the neoclassical approach.

It is assumed that individuals can choose a combination of a merit good (education, health etc) and all other goods. A voucher to spend on more education or health services has the effect of shifting the budget constraint to the right as shown in Figure A1 below. This effect is exactly the same as the effect that would be generated by handing the households cash (to spend freely) except that the new budget line has a different shape. Specifically, since the vouchers can only be spent on the merit good, the consumption of *other* goods cannot be increased beyond the maximum that can be purchased under the pre-voucher situation. Hence the new budget constraint becomes the line indicated by ABC in Figure A1: it is not the normal linear shape.

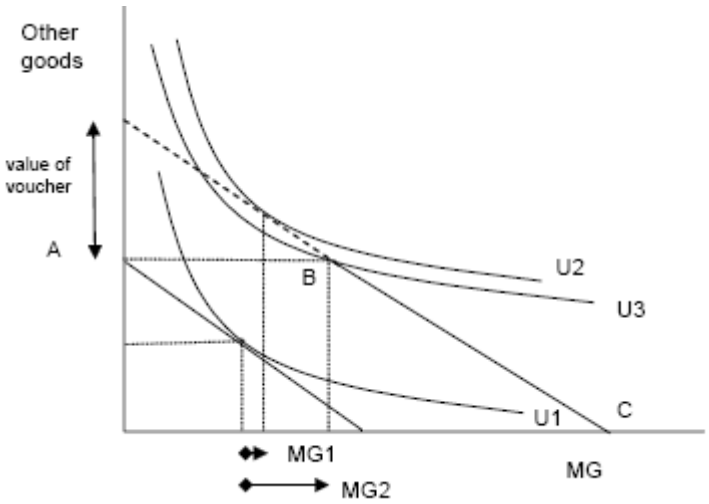
Figure A1: Effect Of A Voucher Where Merit Goods Convey High Private Utility



If consumers attach a high level of utility to the merit goods (indicated by the degree of convexity of their indifference curves) the shift in the budget constraint leads to an "unconstrained" increase to a higher level of optimised utility along the higher indifference curve that is labelled U2. It is unconstrained in the sense that it does not

involve consumers spending more than the amount "A" on the other goods. This results in a substantial increase in the consumption of the merit good as indicated by the distance MG0 in the Figure above as well as a slight increase in consumption of other goods.

Figure A2: Effect of The Voucher When The Merit Good Conveys Low Private Utility



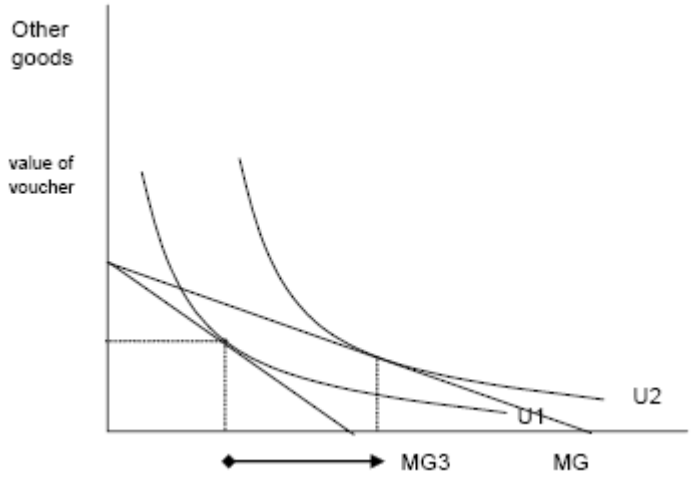
But what happens if consumers attach low utility to the merit good. In this case. a cash transfer leads to an unconstrained move to the higher indifference curve labelled as "U2" in Figure A2 but to only a relatively small rise in the demand for the merit good (M1). This increase is indicated by the distance MG1 in Figure 2. Note that this increase is smaller than the value of the voucher

Consequently, this would not be allowable under the rules of the voucher system since the consumer is now spending more than the amount "A" on the other goods. So the actual new equilibrium will be the constrained equilibrium associated with the new indifference curve labelled "U3" in the diagram above, The constraint imposed by the rules of the voucher system ensures that consumers spend a larger amount (MG2) on the merit goods, This is more than they would have chosen to spend had they been handed cash rather than vouchers. In this equilibrium private utility is lower than it would have been under the cash based system (U3 rather than U2). But IF the objective is to close the gap between the private and the social valuations of education and health, then the voucher system clearly does a better job than the cash based system that would leave the consumer on U2. So social utility may be higher under the voucher system even though private utility is not.

Finally what would happen if the stimulus to higher education and health spending was administered by subsidizing the price of these merit goods?

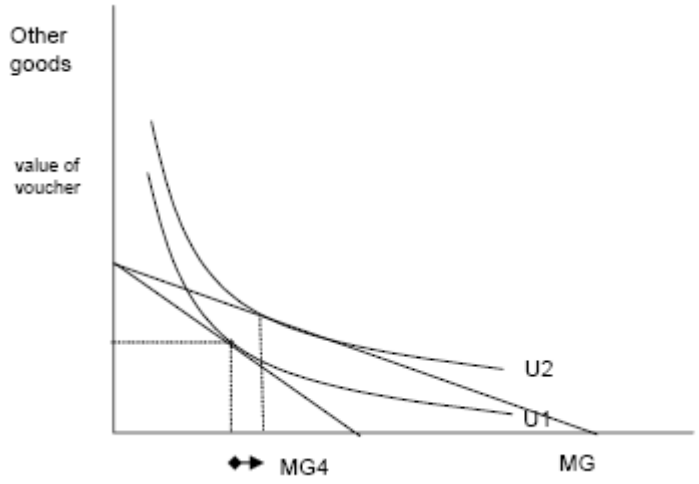
Figure A3 indicates the effect of a price subsidy that is large enough to match the effect of the voucher system when the merit good is highly valued. Demand for the merit good increases substantially as shown in Figure 3: by the distance MG3. In these circumstances the effect of the voucher, cash transfer and supply subsidy is similar. In short a large enough *price subsidy* can in this case replicate the effects of the other two approaches.

Figure A.3: Effect Of Price Subsidy When Merit Good Conveys High Private Utility



However, this is not true in the more likely case where the private utility attached to the merit goods is rather low. Figure A4 shows the effect of the price subsidy when the merit good is under-valued. In this case the increase in the demand for the merit good is only very small in spite of a large subsidy : the distance MG 4 in the diagram. The effect on demand is now much smaller than the effect of the voucher system even though the price subsidy is still large. This is because consumers are not constrained to spend the increase in their real income in any particular way.

Figure A4: Effect of Price Subsidy When Merit Good Conveys Limited Private Utility



This is a simplified analysis. It does not take any account of possible second round effects on prices resulting from the increase in demand for the merit good. Neither does it incorporate the effect of the consumer costs, such as transport and waiting, of

consuming the merit good. But it does show that different interventions with varying degree of cost to the government budget, will impact the underlying problem with different degrees of effectiveness. The micro economic analysis and a market-based approach is helpful to policy-making even though the market failure is clearly present.

Chapter 13: the future, uncertainty and incomplete information

"Economists have largely proceeded as though uncertainty was an unusual condition and therefore the usual condition, certainty, could warrant the elegant mathematical modelling that characterises formal economics. But uncertainty is not an unusual condition; it has been the underlying condition responsible for the evolving structure of human organisations throughout history and pre-history" Douglass C. North (2005)

13.1 Introduction

The previous chapter has presented the set of arguments that for two centuries have provided the standard economic justification for an active government role in the economy. Many of the propositions that emerge from this standard approach do so relatively unambiguously. They also point fairly decisively to the areas of government interference in market mechanisms that seem justified; and even to the specific types of policies that are best attuned to resolving particular types of market failure. We have already seen that some of the familiar "knee jerk" reactions of policy-makers to particular problems may be incorrect when judged against the standard economic criteria (e.g. the still common instinct to control prices as a part of a poverty alleviation programme).

However, the analysis so far presented certainly does not represent anything as clear-cut as a blue-print that precisely defines "correct" government policies. In some of the more difficult areas such as that relating to income redistribution, the guidelines such as they are remain highly contested even within the economics profession. *So let's regard the collective wisdom that we have so far tried to synthesise as a useful starting point for guiding policies in developing countries – but no more than that.*

The reader should note also that even the *uncontested* elements of the propositions so far presented certainly do NOT provide an economic justification either for large-scale government involvement in *production* OR for the very pervasive *social welfare systems* seen in some countries and widely advocated for poorer countries. If we wish to find the economic justification for these more substantial elements of government interference with markets we need to do more work

In this present chapter we start to go deeper by considering additional features of all economies but particularly less developed countries that render the task of policy formulation more difficult than suggested so far. We can introduce these features by making the first obvious point that "development" involves an explicit *time dimension*. "Development" If it is about anything, it is all about the changes in an economy's income, productive power, structure, and its political and social characteristics *over a sustained period of time*. The efficiency with which an economy uses its resources in the *present* – the subject of much of the previous chapter – is not irrelevant to the prospects for the economy's transformation and development in the longer term. But it is not the essence or the only determinant of that transformation.

Economists have a very substantial armoury of analytical tools that help to understand some aspects of the problem of *inter-temporal* decision making. These

will be familiar to many readers but Box 13.1 below rehearses just a few of the key points.

A second obvious point about many of the critical decisions of individual micro agents (including governments) is that such decisions are made very often under conditions of *uncertainty* or at least *incomplete information*. In part – but only in part – this is because those decisions involve judgements about the future which is always inherently uncertain in many dimensions – climate, prices, politics, individual employment and health prospects, family circumstances and needs – the list is a very long one indeed!

At the point when these two dimensions of real world decision-making combine (time and uncertainty) the precise calculus favoured by economics rather tends to break down. In conditions of complete certainly and complete information, it is a small step to incorporate the time dimension alone into the Arrow Debreu calculus. Diagrammatically, we can present the problem in the manner indicated in the figure included in Box 13.1 . This illustrates the preferences of an individual (or a society) for consumption in the present versus consumption at some point in the future. The diagram also shows the options in terms of the potential volumes of present versus future consumption available**.** The slope of the budget line that shows the locus of all possible combinations of consumption is equal to a price – often referred to as the rate of interest. Note that this *price* merely become just another on the long list of prices considered by the broader model.

Box 13.1: Elements of Inter-Temporal Analysis

In a two period model the choice facing a consumer is often presented as in the Figure below. Any given income (as indicated by the height of lines such as F_1P_1 can be used either to consume in the present or at some future date. The slope of the consumer's indifference curves will indicate his or her relative preference for consumption now rather than in the future. The slope of the tangents to these indifference curves at any point shows the marginal rate of substitution (MRS) between the present and future consumption. Along any indifference curve this MRS increases (In favour of more future consumption) the higher is the level of present consumption.

The maximisation problem is a variant of that shown in the previous chapter and is typically stated to be:

$$MaxU = U(Cp, Cf)$$

Subject to $Y = Cp + Cf$

Where *Y* is the budget constraint which could be wholly related to income or could also contain other terms related for example to capacity to borrow.

Alternatively, if a person or a company is looking ahead to invest a certain sum of money then that decision will require an assessment of the prospective return in each future period (i.e. Rt) and a decision about how to assess the utility in the present (the present value) of those returns given that a period of waiting is required before they are realised. This problem in discrete time is typically stated as:

$$PV = \sum_t R_t /(!+i)^t$$

where R is the return on the investment in each of "t" time periods and "*i*" is a rate of discount that reflects the cost of waiting. If the PV so calculated exceeds the funds that are available for investment then the investment is worthwhile given the discount rate that is used. However, this discount rate need not be equal to the prevailing interest rate available on the funds. First, individuals differ – a young person facing rising life-time income is more likely to prefer present consumption (use a higher discount rate) than an older person. It is also suggested that many persons myopically understate their needs in future and so attach too low a weight to future incomes. Finally, since we shall see this several times in later chapter the same forward-looking decision seen in continuous time can be stated as:

$$PV = \int_0^t FV(t) e^{-1+i} dt$$

Further, in a world of complete certainty and perfect information consumers can make fully rationale and well informed decisions as between present and future consumption. They will know precisely how much future consumption will be available to them if they forego some consumption today to invest either in financial assets or possibly in heir own human capital via a longer period spent in education. They will be able to assess the possible utility gains generated by shifting consumption over time. They will know too the timing of their retirement and the need for a pension and will have similar full information about their future medical status and when they will require (saved) funds to address possible future ill health. Further if there are some periods during the person's life span when some borrowing is

required in order to boost present consumption relative to income, then the same full-information will enable lenders to provide those loans in full certainty of repayment. *There would in other words be perfect capital markets*

The world we are here describing would of course be a great one to inhabit. ***But it does not exist in reality*** – it is a utopian construct that we can use only in much the same way as we use perfect competition – as a benchmark against which to assess various manifestations of reality. Indeed as Douglass North frequently reminds us human history is substantially about *the sustained efforts of the human race to reduce the uncertainties thrown at us by everyday life*. But let us stay in utopia just a moment longer –enjoy it - and consider the arrangements that we could do without were it ever to exist. These include the following:

i. We would not need any state pension system for persons able to work since such persons (the majority) would be able to provide precisely for their own pension through voluntary life-time savings

ii. We would not need to provide free or subsidised education for those fit and well enough to work since all such persons would be able to borrow freely in perfect capital markets and repay the loans once their education had helped them into reasonably well paid jobs. Further the incomplete information about the benefits of education that underpin the "merit good" case for state involvement would no longer be a problem since perfect information in this dimension is also present in utopia.

iii. We would not need an insurance industry – for accidents, ill-health etc. - since the risks and uncertainties of life that encourage us to buy insurance in the real world would be ruled out by assumption. Any adverse events in our lives would be known in advance and with certainty and so could be dealt with individually again by relying on the perfect capital markets.

The utopian world of full certainty and perfect information would still have some need for the state provision of pensions and other welfare benefits. But these would be needed only by a minority who suffer *lifetime* poverty because of some inherent disadvantage such as illness or disability: i.e. initial endowments of income generating capacity that cannot be put right during the life of the individual by education, medical treatments etc.

Now let us take away the assumptions that define utopia, and reflect again on the three examples of state pensions, state-supported education, and insurance as listed above. We see immediately that the need for these support services returns unambiguously. Equally we can see that the case for having these in any economy – often a large element in the provision of all services by the state, and a large proportion of all state expenditure – is clearly a function of the uncertainty and the imperfect information of our messy reality. Similarly the future returns namely "R" and "FV" as used in the standard inter-temporal formulations in Box 13.1 must now be seen as involving large elements of uncertainty in almost all cases. So the investment decision stated there can no longer be made with such high and apparently simple precision.

Having made these basic points we now continue the discussion by considering in more depth, the *three* basic reasons why we need to reject a model of perfect competition and the policy prescriptions that follow narrowly from such as model.

- In Section 13.2 we explain in more depth why such a model relies on the presence of a *universal and complete systems of markets*. Since these are never found in real world economies, the model is deficient.

- In Section 13.3. we provide a parallel explanation of how the model also relies on a system of *perfect information* and also how *information asymmetries* can further seriously undermine the relevance of the Arrow Debreu propositions.

This story line is completed in Chapter 14 where we discuss the propositions advanced most systematically by Douglass North that effective markets all rely also on a complex set of *economic and social "institutions*". In the absence of an effective explanation of how such institutions emerge, function and evolve over time, the economist's general equilibrium model provides at best a seriously *incomplete* statement about the legitimate role of governments in the process of economic development.

13.2 The Need for Universal Markets.

This is the second main aspect of the critique of the perfectly competitive model as listed by Deepak Lal[43] among others as reported in the previous chapter. This aspect relates above all to the difficulties that all economic agents face in finding "markets" that help them reach decisions on things that will happen in the future. *Missing markets are an endemic feature of all market economies and the missing future markets are the foundation of additional legitimate arguments for government policy interventions.* The main examples as discussed in the next few paragraphs relate:

(a) to physical investment decisions (including decisions about lending or borrowing money to fund such investments)
(b) to life-changing decisions such as whether or not to undertake further education and training and
(c) to decisions about insurance against possible future mishaps either to ones self or to equipment or other goods that help to shape ones livelihood (e.g. machinery, crops etc).

Standard *contemporaneous* markets such as those for food, clothing, books and labour are relatively easy to understand and these markets all "exist" at least in some sense that we will qualify below. But when a producer *invests* in a new production facility or a consumer invests in a new home, the benefits of those investments depend unavoidably on *future* developments of which they will have little certain knowledge at the time of the investment. The markets for the future purchase and sale of commodities largely do not exist and this is a major problem for the calculus that we have been using to this point.

Coordination failures
For example the profitability of a new production facility to make *gizmos* (think of this as the latest electronic "must have" such as the iPhone and its emerging competitors) will depend not only on the future demand for the output of *gizmos* but also on the volumes of *gizmos* that other producers are intending to make. If the aggregate of today's investment decision by all gizmo producers is such that total output in future will be many time higher than it is today, then gizmo prices in future will be relatively

[43] Deepak Lal, *The Poverty of Development Economics*, Institute of Economic Affairs, 1983, 2nd edition MIT Press, 2000.

low and so too will the profits in making them. Huge expansions of capacity could easily cause all producers to lose money from their investments[44].

A sound decision by any single producer of gizmos ideally needs to be informed by a *futures market* in which at least the prices of gizmos in future periods t+1, t+2, t+3 etc are all known before the investment decision in period t has to be finalised. As any competing producer announced plans to increase output in, say period t+2 that announcement would reduce the futures prices of gizmos in that particular year. The first producers could use that price information to re-think their own investment decision accordingly. But of course no producer in a real world market economy would be willing to play the game in that way. On the contrary, the individual incentive of each producer is to keep their investment and production plans confidential in order to try to steal a possible advantage over their competitors. Hence *coordination failures* (e.g. too much production in aggregate relative to aggregate gizmos demand) are endemically likely. The absence of the futures market is what lies behind this further market failure.

In low-income counties where vulnerable producers need to assess possible investment into new crops or new ways of producing existing crops, this huge void of information about the future is a truly serious deterrent to potentially worthwhile investments. Why have crop yields remained so much lower in Africa than in other regions such as Africa when the seed and other technologies to achieve higher yields are clearly available? Part of the explanation is that the decision of any one African farmer to use his/her land for a potentially higher yielding variety is taken against the uncertainties of the future (unknown) returns from that new variety versus the low (but known) yields on the varieties with which he/she is already familiar.

Futures markets for a restricted range of commodities such as coffee, wheat etc. and for financial instruments such as foreign currencies certainly do exist in most economies. There was some discussion about some of these in the Annex to Chapter 11. Huge volumes of transactions measured in trillions of dollars are run through such markets in many richer Western economies such as the USA and the UK. Low income countries can and do make some use of such futures markets for the commodities such as cocoa, tea and copper in which they mainly trade as well as of currency futures. *But the key point here is that most of the futures markets that would be needed to meet the strict conditions of the Arrow-Debreu propositions are missing in all economies.*

44 Readers are reminder that this coordination failure that applies to one single product or to a narrow group of products is quite different in its likelihood from a similar coordination failure that might apply to all products. The latter is far less unlikely – for the reasons that are spelled out in Chapter 1.

Certainly a small farmer in Africa who is contemplating the growing of a new variety of wheat would have no way to forward-sell his likely output in order to eliminate at least the price uncertainties that he otherwise faces. Box 13.2 illustrates some of the practical insurance measures that are available to small farmer in low-income countries.

Box 13.2: Crop and Weather Insurance in Agriculture

Even if a small famer were able to forward-sell his crop and so limit his price risks, a range of other uncertainties would still confront him. Not the least of these is the weather conditions that he will face. However, in an increasing number of low income countries these risks can now by insured against via various types of crop (and weather) insurance.

Golait and Pradhan (2008) note that crop insurance is common in the USA where a mix of subsidised and purely private risk-bearing arrangements are in place. In South Africa weather insurance was started as early as 1929 when a group of farmers started an initially subsidised pool scheme against risks such as hail storms and later multi-peril risk. But the schemes have now operated for some years without subsidy from the government. Thus they illustrate that private individuals can offer crop insurance that is beneficial to farmers and also that crop insurance can still exist even in the absence of subsidies.

They note also that in India .." the Government took initiatives as early as 1965 by introducing a 'Crop Insurance Bill' … However, it was only in early seventies that some schemes were initiated. Specifically, a publicly administered insurance program, - the Pilot Crop Insurance Scheme (PCIS) was introduced in 1979. and an All-Risk Comprehensive Crop Insurance Scheme (CCIS) for major Crops was implemented for 15 years starting from 1985 to 1999. The latter scheme had a positive impact on agricultural production in respect of crops insured and was a popular program particularly in areas where the risk factors in agriculture was relatively higher. Subsequently, the National Agricultural Insurance Scheme (NAIS) 1999-2000 was introduced and more recently the Farm Income Insurance Scheme (FIIS 2003-04) was introduced. Every scheme has been flawed in some way or the other and the positive and stabilizing influences have often come at a large cost.

Weather insurance is of great relevance to small farmers because they are more vulnerable for the risk of failure or erratic monsoon. In the case of India India, Golait and Pradhan note that hundreds of small holders are stated to be showing interests in buying insurance policies that protect them against extreme changes in weather patterns. It is also of significance that one of the top five global insurers has agreed to reinsure this rainfall insurance. This they argue augurs well for the further extension of weather insurance around the world.

To see why futures markets are so unlikely and so limited in their scope, let us elaborate the simple points made above in two ways. First, how far into the future must futures markets extend in order to fully meet the conditions required for a Pareto efficient allocation of (investment) resources? The answer is that they must extend *infinitely* far into the future! Why? Because the value (profitability) of any investment made today will depend on how many other similar investments are made between now and, say, 10 years into the future. But the value of an investment made in, say, year 9 will depend on how many similar investments are made between years 9 and years 19. The value of an investment made in, say, year 18 will depend on how many similar investments are made between year 18 and year 28 and so on *ad infinitum*. In short a complete set of futures markets and prices from now until

infinity is strictly needed for any producer to accurately assess the advantages to him of a new investment today! This is quite clearly an impossible condition.

Even the best-resourced mega corporations in today's global economy get nowhere near to having the required information. *Small peasant farmers in low-income countries have virtually nothing to guide their investment decisions other than past experience.*

Second, let us refine what we mean by a typical "commodity". Arrow and Debreu needed to have commodities that were homogenous in order to prove their propositions mathematically. But since real world commodities and labour are not in fact homogenous, they used the neat trick of saying that commodities of different qualities are treated as *different* commodities. Similarly a product manufactured or sold on one date and in one location can be thought of as a different commodity from the "same" product manufactured on a different date and in a different location. In mathematical terms there is always a quality, a time and a location subscript associated with each commodity[45]. So, for example, plumbers with more advanced technical qualifications or greater physical strength will be thought of as operating in a different market from other plumbers. A Toyota Camry delivered in December 2005 will be thought of as being sold in a different market from one delivered in August 2007. This makes the mathematics that the Arrow-Debreu approach requires more tractable but in doing so substantially undermines the real world relevance of their conclusions.

Stiglitz (1994) explains the point as follows. Either the finer and finer disaggregating of a commodity (by quality, date, location etc) would mean that all the multifarious markets could not possibly exist in reality. Or, if this huge number of markets were able to exist, it would be impossible to imagine that they could all be *perfectly competitive*. (i.e. the problems of monopolisation and decreasing costs would be there to undermine the Pareto optimum). Indeed the numbers of trades in each market would become so small as to make many of them very imperfectly competitive (i.e. a small number of buyers or sellers would be able disproportionately to influence the price).

So the inescapable and important conclusion to this point is that real world economies are not characterised by the presence of a full set of markets. This has the practical implication that many important economic decisions are made without the benefits (to the individual) being either calculable or assured. A lot of important economic decision-making affecting development in fact involves a "shot in the dark".

Exogenous Shocks and Insurance

The problem gets even worse when we factor in extraneous events that can impact the profitability of future investments (so far we have considered mainly coordination failures). Consider now that a fire might seriously diminish the value of the new investment in "n" years time; as might a new technology (that fully replaces gizmos as the most important "must have") or, in the case of an agricultural investment an invasive pestilence or locust swarm that destroys the crop. None of these extraneous events can be predicted with certainty but all are *possible* and so are significant to the investment decision. The standard economic solution to them is to buy an insurance policy against the various eventualities listed (and many others that we have not listed).

[45] And by extension, there would be other subscripts to deal with other dimensions of difference that may be relevant.

This is fine in theory but not so easy in reality. If there are just a small number of bad things that can undermine your investment an insurance policy may be available and the cost may be affordable. Most industrial producers for example would be able to buy insurance against fire damage to their factory or an accident to one of their vehicles. But few would be able to buy insurance against the discovery of a new competitive technology, the resignation of a key manager, the *long-term* increase in the price of a key raw material and many other such things. Once we recognise that there are myriad things that can go wrong, the conclusion once again is that some of the necessary markets (this time for insurance products) will be missing.

In low-income agricultural economies, the problems of missing risk/markets are likely to be substantially more acute. This is partly because many of the most serious risks are correlated across different farmers in the same region. The drought or locust plague is unlikely to hit just a small minority of farmers (so that the lucky ones can compensate those whose crops are destroyed). It is more likely to hit all or most of the farmers in an area at the same time. The pooling of risks that are characteristic of many crop insurance schemes already in place (see Box 13.2 above) will only work when only a sub-set of the insured (farmers) face a problem in a particular year. Equally insurance companies will be less willing and financially able to write policies to protect against any threats that can affect all the insured at the same time.

13.3. The critical role of Information and Information Asymmetries

The problem of missing markets as discussed above can be thought about as a problem of *missing information.* If the various future markets from the present to the infinite future really did exist, then there would be a complete set of future prices for gizmos that would make it much easier to decide whether or not to invest in gizmos today. Notice that the individual producer of gizmos does not necessarily need full information about the future *production plans* of each and every one of his competitors but only about *the prices* that will result from those plans. The potential new competitors for the i-Phone, for example need to assess how the prices of such products are likely to evolve given their own and their competitors likely planned expansions. Prices in other words convey much of the relevant information needed for a sound investment decision. But such a full set of information about future prices almost never exists. Hence real world investment decisions including in low-income countries need to be made in substantial ignorance of relevant facts: there is an informational failure of major proportions.

The early development economists of the 1950s and 1960s made much of this market failure and Box 13.3 below describes the most famous of the specific ideas to emerge from this – the so-called “big push” proposition.

Box 13.3. Coordination Failures, Planning and the Big Push

An important set of policy prescriptions for developing countries grew out of a famous wartime paper by Paul Rosenstein-Rodan [1943] that was actually concerned with the ways to reconstruct Eastern European countries after the War. The widespread failures of such prescriptions through the 1980s relate more to the practicalities of administering them faithfully (especially in the weak public administrations) of most low-income countries) than to any fundamental flaw in the theoretical logic.

The basic argument is that in economies with small markets (i.e. almost all developing economies), it may be hard for any individual utility or manufacturing investment to be justified on a commercial basis especially if those investments are in sectors characterised by increasing returns. However, if government policy could orchestrate a simultaneous investment and expansion in several of these industries – a "big push", then the collective result would be an increased market size that would increasingly provide the demand to justify commercially some at least of the investments.

Most models of this genre rely on there being a low level equilibrium (trap) that the commercial realities will make it difficult to break out from (for examples of these traps (see Box 8.1 in Chapter 8 of Part 2). Government direct investment or subsidies to industrial investment are justified, not by any rarified philosophical arguments in favour of state control, but by the pragmatic reality of the need to escape the low-level equilibrium. A more modern variant is that due to Murphy, Shleifer and Vishny [1989] in which a series of private investments can together (but not individually) justify the building of infrastructure (roads, rail services, training services) from which all such investments can benefit. Government intervention here is justified both to build the infrastructure ahead of demand but also to help manage the coordination failures as between the private investors that would otherwise prevent these investments going ahead to (partly) justify the new infrastructure (Bardhan and Udry [1999].

Incomplete and Asymmetric Information

Joe Stiglitz [1994] has referred to the market failures that we have described in Chapter 12 above as the "older market failures". In all cases, economists have long had an understanding of their difficult and negative consequences for the efficient operation of a market economy: even as far back as Adam Smith himself in the case of those market failures relating to imperfect competition. In all cases – externalities, imperfect competition, public goods - there has been a literature on the appropriate public policy remedies that governments can adopt to correct the market failure.

However, since the early 1980s, economist have become increasingly more aware of another class of what Stiglitz refers to as "new market failures". These failures are associated in particular with his own and his associates' research on the effects of *imperfect and costly information* on the efficient functioning of markets. Joseph Stiglitz together with Michael Spence and George Akerlof received the 2001 Nobel Prize in Economics for their new insight in these areas. We emphasise them here because they are absolutely critical to an understanding of many of the debates about practical policy for low income developing countries. Three results stand out as absolutely critical to our understanding of development:

such informational failures are *pervasive* – affecting almost all markets and resulting in equilibrium states where supply and demand are not necessarily equated

these failures clearly call for corrective government actions but those actions are inherently more difficult to specify in precise terms than are the government responses to the older market failures[46]
they can be extraordinarily important in the real world as the 2007-2009 credit crisis in global financial markets illustrates most vividly. In this episode the collapse of the sub-prime mortgage market in the USA (see the Annex to Chapter 12) triggered a global financial meltdown in which the previous assumptions (information) that had guided banks and other market participants became almost worthless. In particular, as banks stopped lending to each other though the wholesale inter-bank markets and individual depositors threatened wholesale runs on even well established banks, huge levels of government intervention were called for to offset the effects of the informational failures.

Here are several examples to illustrate how uneven amounts of information available to different participants in markets (a situation widely referred to as one of. "asymmetric information") can distort the workings of those markets.

Labour markets. The demand for labour at each possible wage will depend on labour quality. The many individuals offering themselves for employment in a given labour market, know their own skills and capacity for hard work, but have no easy way to signal whether their own offer to work will raise or lower the *average* quality of the labour supply on offer. If that average quality of the labour supply were to fall at any given wage, as several sub-standard workers joined the job queue, then this would lower the profitability of the firm(s) employing them. In this example, *the change in labour quality in effect imposes a negative externality on the firms.* If firms have some view of a *minimum acceptable* efficiency wage then the market equilibrium can be one in which labour supply exceeds demand (i.e. there is unemployment) (Shapiro and Stiglitz [1984]).[47]

Product markets. The seller of a commodity such as a car or a house has more complete knowledge of the quality of the product being sold than do prospective buyers. If the price offered by buyers in the market is based on the *average* quality supplied, then some sellers of better-than-average quality cars or houses may withhold their product from the markets. This being the case, the market over time will (i) contract as only products of average or below-average quality are offered for sale and (ii) the average price will decline along with the average quality traded. This is the famous "lemons" problem developed by Akerlof in the context of the market for second-hand cars. (Akerlof [1970]).

Agricultural Commodity Markets. Farmers in most countries have good reasons for wanting to sell some of their crop in a futures market thereby eliminating the risks associated with a fall in price prior to harvest. However, the dominance of such markets by a small number of well-informed (and typically large) trading firms means that the individual farmer is at a significant informational disadvantage and may often

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46 Stiglitz [1994] notes …" The practical information required to implement the corrective taxation is well beyond that available at the present time, and the costs of administering such corrective taxation might well exceed the benefits when the markets' distortion is small" (pg 43)

47 Similarly a person has skills that are better known to his/her existing employer than to any potential new employer. Hence a job offer from the new employer is likely to succeed only if it provides a higher salary than the existing (informed) employer adjudges to be justified given the skills of the person. In other words the salary premium is not guaranteed to be justified on the basis of objective performance.

need to accept a sub-standard price. But if he/she knows this to be the case, any individual farmer will have a lower incentive to participate in such markets and this will reduce the efficiency associated with such participation. In particular, some farmers will instead accept the risk of a price fall rather than the lower prices associated with eliminating that risk. (Stiglitz [1994 p 25]).

Credit markets. A potential borrower from a bank will know a great deal more about the quality of their business proposal and their ability to repay a loan than will the bank that is approached for a loan. Serious borrowers with sound investment projects will have clear limits on the interest charges that can be paid consistently with their projects remaining profitable. Other borrowers, including reckless ones with highly risky projects, will show less resistance to high interest charges. Since banks cannot easily distinguish between the two categories of borrowers, they need to avoid excessively high interest rates that may exclude too many good quality borrowers and weight the banks' total lending too much to the more risky ones. This being the case, the interest rate set may be too low to balance the supply and demand for loans. This rate will can result in what is known as "equilbrium credit rationing" – a situation where the bank could make more loans by raising its interest rates but only by accepting greater risks of non repayment. See Stiglitz and Weiss

Securities markets. Companies issuing shares will be far better informed about the prospects of their company, and so the future share price, than are those considering the purchase of the shares. A company may for example, issue a larger volume of shares when it knows (a) that the market is currently over-pricing its shares or (b) that alternative sources of funding from, for example, a bank loan are being denied to it. The (poorly informed) would-be purchasers of shares need to take some account of the possibility that either (a) or (b) or some other negative reason is the real motivation for the new share issue. They can only do this by offering a lower price for the shares that thereby makes the cost of the share issue significantly more expensive for the issuing company. This effect will at the margin result in less use of equity issues and share financing than would occur in a world of perfect information.

We see in all these examples that the scale and efficiency of market activity can be and will be undermined whenever informational imperfections are present.

*The informational problems result in markets doing their job far less well than would be the case when we assume perfect and costless information (as much of economic theory traditionally has done and still does). This result does not throw away Adam Smith's very important insight that markets are able to coordinate things that governments would find it very difficult to handle (remember the proposition that ..."*it is not from the benevolence of the butcher, the brewer and the baker that we expect our dinner, but from their regard for their own self-interest…."). *But what its does do is reduce the range of things where we can advocate with confidence that "the market can solve the problem". Because informational failures are so pervasive, because they affect almost all markets, and because they are not easily mitigated by simple public policy interventions, they are an almost ever-present caveat in problem-solving that would otherwise favour liberal market solutions.*

The 2007-2009 Credit Crisis as a Dramatic Example

In 1989 originally in an article in *The National Interest* and later in a much publicised book Francis Fukuyuma[48] proclaimed the "end of history" and the new unchallenged (in his view) pre-eminence of systems of economic management based on liberal democracy. Specifically he argued that*…"liberal democracy may constitute the "end*

[48] Francis Fukuyuma, *The End of History and the Last Man*, Penguin Books, London, 1992

point" of mankind's ideological evolution" and the "final form of human government," and as such constituted the "end of history." That is while earlier forms of government were characterised by grave defects, and irrationalities that led to their eventual collapse, liberal democracy was arguably free from such fundamental internal contradictions." This view of the late 1980s did not go unchallenged but it did coincide with a period of political change in the world that came to represent an apparently broad liberal consensus. This was espoused in various degrees not only by older and newer OECD member countries but also by countries emerging from full central planning systems (the FSU and Eastern Europe, China, Vietnam) as well as by many lower income countries in Africa and Asia. The Washington Consensus that is explained and discussed more fully in Part 4 of this book was merely one extremely influential manifestation of this tendency.

Fukuyuma's notion of the End of History was itself "knocked for six" in a highly dramatic manner by the events seen around the world especially in the second part of 2008.The global financial crisis of that period has terminated conclusively the comfortable consensus which his analysis suggested had ruled supreme in the previous two decades: some would even claim that the events of 2007-2009 have provided us with the ultimate manifestation of the failure of markets.

Even in committed market economies such as the USA and the UK the dividing line as between the role of the market and that of the state was rapidly redefined in a few weeks late in 2008. In particular, it proved impossible for governments in the USA, Britain, Ireland, Iceland and elsewhere to resolve the huge problems associated with their respective crises without resorting to the nationalisation of some of their largest and previously powerful banks. So for example, in major Western countries there was the implicit or explicit nationalisation of some huge banks including the Royal Bank of Scotland and HBOS/Lloyds in the UK; Citi-Group in the USA, Anglo Irish in Ireland and the Hypo Group in Austria and Germany. Even Alan Greenspan, the former head of the US Federal Reserve System and for decades regarded as the high priest of the system of laisser-faire capitalism, said in February 2008 that… "*Nationalization could be the least bad option left for policymakers".* Certainly this two year period is of huge importance to economists – and to the main themes of Part 3 - since it has redefined our notions of what are the appropriate and correct policies and what are the limits to which governments should intervene with markets.

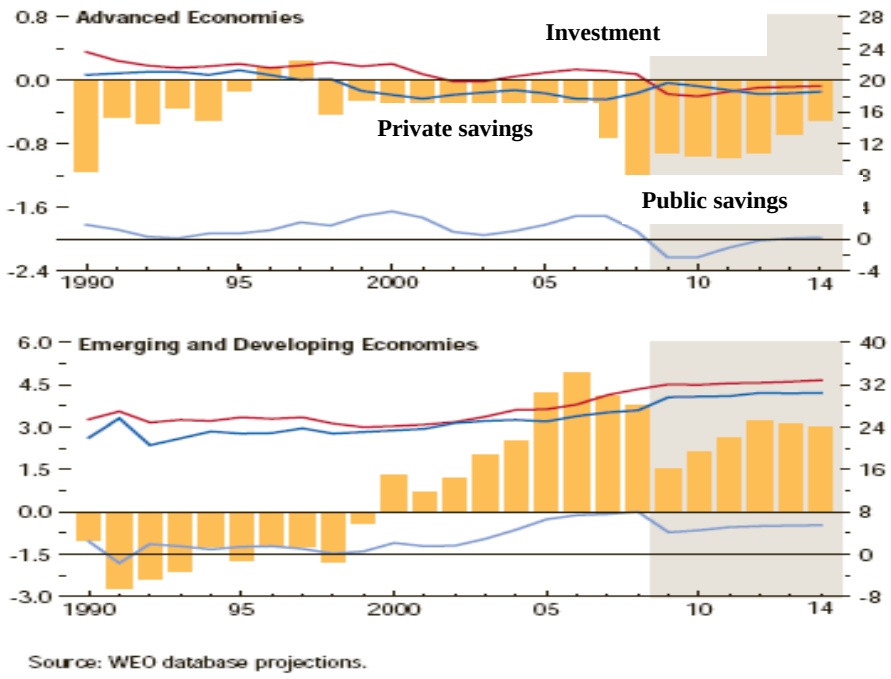
In countries in Africa, Asia and Latin America who had lived through 20 or more years of pressure to be *more* liberal, the crisis provided some countervailing evidence in favour of more activist and interventionist approaches: most of these countries had in any case always retained a degree of scepticism about free markets. So what exactly happened to cause this unprecedented market failure, the huge financial crisis of 2007-2009, and the radical reconsideration of "correct" policy by leading policy-makers and academic economists around the globe? To what extent were the failures explicable in terms of the underlying components of market failures that we have reviewed in this present Chapter? The answer is that information failures of various types were an ubiquitous factor in many aspects of the crisis. In the presence of the perfect information in the utopia with which we began this chapter, there would have been no crisis. The topic of macroeconomic and financial crisis is developed in greater detail in Part 4. Here we merely rehearse some key features of the 2007-2009 crisis in order to further drive home the important theoretical propositions presented in this chapter.

In brief the crisis had its fundamental causes in the huge volumes of liquidity available in the global financial markets in the years leading up to 2007. This liquidity surplus had emerged in particular from the relatively loose monetary policies of most

Western economies combined with the huge global savings surpluses that had become increasingly available from emerging market economies such as China to further replenish global liquidity. A vivid graphical representation of this emerging change in global savings balances as taken from the IMF's *World Economic Outlook* of April 2009 is reproduced in Figure 13.1 below.

The numbers shown in this graphic are percentages of total world GDP and include the IMF's own projections up until 2014. It shows the current balance of payments surpluses and deficits (the bars in the diagram against the right hand scale) as well as investment and savings levels (i) in the advanced economies such as the US and the EC and (ii) in the emerging and developing world such as China and Korea (left hand scale). CHECK.

Figure 13.1 Global Current Accounts, Investment and Savings (% of global GDP) 1990 – 2014



Source: WEO database projections.

The reader is asked to note in particular how significantly the external current account *surpluses* of the emerging and developing countries rose relative to global GDP in the period 2001 through 2007. The counterpart of this was high levels of *private* savings in these same economies as a whole. Its near-mirror image was the declining current account positions of the advanced economies. *(detailed notes on the macroeconomic arithmetic that underlies these statements are provided in Part 4. Readers who need to consult this at this point should turn briefly to pg.XXXX.)*

It can be seen that the US and the other richer economies moved increasingly into deficit positions on external account: their very limited savings levels were small relative even to the modest investment levels that they were then able to achieve. In simple language the richer countries became increasing reliant on huge volumes of capital account (savings) transfers from the high-saving emerging economies

especially in China and other parts of East Asia. These capital transfers in turn boosted the liquidity available to the money and financial markets of the recipient countries and kept their interest rates low and their economies buoyant.

With the benefit of hindsight this pattern of financial flows could not possibly have continued indefinitely. While it continued, it made the advanced economies increasingly indebted, and the emerging market lenders increasingly highly exposed to investments in weakening economies. Something had to give. At some point the flows of funds referred to would have had to slow down and reverse. In the event, the trigger for this reversal turned out to be the events in the rich country *domestic* financial markets. This in turn was caused by the *uses* to which banks and other financial institutions put the huge amounts of liquidity available to them after about 2002. In brief, one major usage from the early years of the new millennium was a massive increase in lending for housing mortgage finance. At first this lending went to financially strong borrowers but as time went by the loans went to more and more marginal and financially weak borrowers. The latter stages of this expansion of mortgage lending involved the so-called subprime and near prime mortgage lending to a variety of relatively dubious borrowers.

But why did this huge rise in lending continue when it was apparent to many informed commentators many years before 2007 that an unsustainable bubble was being built up: increased mortgage lending leading to rising house prices, leading to increased demand for more housing finance (including mortgages on second and third homes including "buy to let" deals for many borrowers), leading to increasingly unsustainable levels of house prices and to unsupportable levels of personal debt in the richer countries ? The first part of the answer can be presented in terms of *incentives and incomplete information* – two of the key themes developed in this chapter. No one knew for sure when the housing bubble would burst – even if they believed that it would - or at which level of house prices. While this "ignorance " persisted, all major players in the market (banks, mortgagees, house owners) had no incentive whatsoever to call a halt by paying off debt, cutting back on new loans or generally reversing out of asset positions involving a high exposure to housing assets and the associated mortgage debt. Imagine a manager in a profitable UK or US bank trying to make the case in 2006 to senior management that it would be better to scale back new lending (and so surrender market share and profits to competitors) since some collapse in prices was round the corner. No – his or her incentives were much more in the direction of enjoying the boom while it lasted while keeping fingers crossed that the collapse – if and when it came – would not be too painful.

However, a *second* strand to the crisis explanation is equally important. [49]This involved the spread of the erroneous financial decision-taking of the mortgage lenders themselves into other types of assets that quickly affected not only the originators of mortgages but also universal banks – many in other national jurisdictions. Specifically, the apparently successful growth in non-prime mortgage loans built up the confidence of the originating banks in their ability to measure default risk. But since that default risk was recognised to be non-trivial, many lenders were also more than happy to pass on their risks to other institutions by packaging

49 The argument from this point on owes much to a very perceptive article on the crisis by Lucjan T. Orlowski, Stages of the Ongoing Global Financial Crisis: Is There a Wandering Asset Bubble? Institut für Wirtschaftsforschung Halle. IWH-Discussion Papers, No. 11, September 2008.

their mortgages in various asset-backed securities (ABSs)[50] and then-on-selling these to a wide variety of other financial institutions many of whom had no *direct* exposure to mortgage loans as such.

The *information failure* at the point of these secondary lenders (those who purchased the ABSs) arose from their inherent lack of knowledge about the financial status of the initial mortgagees and their trust – based on limited real knowledge - of the risks inherent in the new asset backed securities and those banks who were issuing these. In many cases this trust was reinforced by the much-criticised willingness of major credit rating agencies such as Standard and Poors to assign a high rating to the said securities. This pattern of behaviour also provides a perfect example of asymmetric information. To the extent that the mortgage originators knew the true financial status of their mortgagees they had far more information about the safety of the ABSs than did the institutions who purchased these. Since the originators had clear incentives to rid themselves of the worst of their borrowers, they were therefore highly likely eventually to undermine the market in asset-backed securities by supplying it with securities of averagely poor quality. This is indeed what happened *eventually* - it took some time before the true information about asset-quality emerged. In the meantime the boom in house prices was translated into a parallel boom in these secondary securities. The analogy with the lemons market and the incentives of second hand car salesman to supply the market with cars of averagely poor quality, as demonstrated by George Akerloff, is very clear!

The third strand in the explanation arose at the point when the errors of lending referred to above started to become evident in mid-2007[51]. At this point many of the banks and other financial institutions that had either lent directly for mortgages or who had purchased large amounts of mortgages indirectly via asset-backed securities, realised that they had in fact incurred losses. Specifically, the valuations of the assets in their balance-sheet were now less than they had hitherto thought. A full realisation of these losses in the banks' accounting meant in some cases that the institutions were in fact insolvent in balance-sheet terms (i.e. their assets were less than liabilities meaning that bank capital had fallen to below zero). But more significant than actual bank failures (that were limited in the early stages of the crisis) was the realisation in the markets that some major players such as Bear Stearns in the USA were indeed in deep financial trouble. This created a massive *liquidity problem* for some institutions as other financial institutions who had previously been more than happy to lend to them withdrew funds. For example, in March 2008 Bear Stearns suffered withdrawals of $17 billion in just two days: one hedge fund alone withdrew £5 billion in cash. (Orlowski pg. 16).

At this point in the crisis the forces of asymmetric information (AI) became truly rampant. Specifically, by March 2008 it was evident that many banks were in financial difficulty. But absent the published and reliable balance-sheet data showing how much assets needed to be marked down in any given bank, there was NO reliable information about ***which*** bank might be the next Bear Stearns. Each bank knew themselves if they were indeed a "problem" bank but there was no way that the huge numbers of persons investing in those banks could share in that knowledge. In

50 The technical jargon here quickly become unhelpfully complex but the standard labels attached to such securities include "residential mortgage-backed securities" (RMBSs) and collateralized debt obligations (CDOs).

51 The collapse is often dated on August 17th 2007 when two hedge funds owned by Bear Sterns failed: both had vast exposure to mortgage-backed securities. At the same time, three European investment funds were unable to price assets linked to subprime mortgages due to the sudden collapse of illiquidity in these markets. (see Orlowski pg 15.

these circumstances – certainly in the wholesale inter-bank markets – the best strategy for a supplier of funds was to assume that any bank might be a problem and so withhold any new lending and trying to recover past loans from ***all*** banks. Asymmetric information was the force above all others that made this period one in which everyone was scrambling to build liquidity and to back-away from the high maturity loans than had seemed so profitable only months earlier. Unfortunately, this strategy pursued by a larger number of market players had the effect for more than one year in essentially closing down wholesale lending as between banks and on a global scale. Further, since the regulatory authorities such as the US Federal Reserve, the European Central Bank and the Bank of England had only slightly more knowledge about the true health of individual banks than the average market player there was no obvious policy intervention they could use to release this log-jam.

This final strand in this most dramatic example of market failure came when retail banks such as Northern Rock in the UK - a fast growing bank in the years to 2008 – became a victim of the collapse of wholesale funding. Rather than relying narrowly on savings deposits from the UK public for its resources this banks had achieved above average growth because it had made extensive use of wholesale funds from other banks to fund its lending. But with the availability of such funds now being recalled in large amounts – from March 2008 – Northern Rock was unable to balance its positions. This quickly became public knowledge and precipitated the first run on a UK bank for more than 100 years. The large crowds queuing outside the many branches of Northern Rock became the most visible manifestation of the crisis but most of the real action was, as described above, taking place in many tens of thousands of altered decisions in the offices of many thousands of banks and other financial institutions. In relation to this last strand of the story there was a viable policy response. The UK, Irish, German, US and other authorities quickly stopped the bank run extending to other retails banks. They did this by increasing the state guarantees that protected depositors' funds in banks. In some cases, such as Ireland a 100% backing of these deposits was provided by the government. In effect the risks associated with depositing in a bank was shifted from the banks to the government

13.4 Informational failures and Central Planning

This Chapter and Chapter 12 have together provided an explanation and critique of Adam Smith's famous suggestion that the invisible hand of free markets can enable an economy to coordinate huge numbers of individual economic decisions and most efficiently allocate its scarce resources. *Since resources are most chronically scarce in the world's poorest countries, this suggestion would seem to have obvious appeal in those countries.* Many of the underlying propositions will certainly prove useful in guiding our later deliberations about appropriate policies in selected areas of the development debate (Part 4).

The critique of Arrow and Debreu - in the dimensions of both allocative efficiency and distributional equity – might be interpreted as being a definitive "thumbs down" to the idea that market forces can somehow guide the development process. Such an interpretation might even lead some people to the policy conclusion that governments are justified theoretically in intervening in almost every nook and cranny of economic life and decision-making. Indeed this was largely the conclusion that many early policy-makers such as Nehru and Nkrumah and their economic advisers arrived at in the first post-colonial days of the late 1950s and 1960s.

As we saw in Chapter 11 when we reviewed Paul Krugman's critique of what he terms "high development theory" the early professional development economists such as Albert Hirshman and Rosenstein-Rodan also found it quite easy to advocate a powerful case for government activism as a way of breaking out of the low level equilibrium traps associated with increasing returns." At the time fully centralised planning on the model of the Soviet Union was regarded with some favour by large parts of the economics profession[52]. But interpretations of the older and also the newer market failures with which we are now more familiar (thanks to events like the global financial crisis and the economic analysis of climate change) *do not lead us inexorably towards full socialist planning as the solution for developing countries.*

52 In 1936 Oskar Lange famously demonstrated the idea that a socialist planned system could potentially achieve the same type of Pareto equilibrium demonstrated for a capitalist system by Arrow and Debreu. This would however require any central planning board to sequentially adjust prices as shortages and surpluses emerged so as to gradually converge on the equilibrium. His theorem suggests that a socialist state could achieve one of the principal economic benefits of capitalism namely a rational price system. However, the theory ignores the practical point that most planned economies and particularly the USSR have shown a strong tendency to want to control prices rather than let these be adjusted regularly to balance supplies and demands. See Lange, *On the Economic Theory of Socialism*, 1936

Box 13.4 Information Fails in both Market and Planned Economies

In a 2004 book entitled "The Truth About Markets", John Kay discusses two of the most fatal planning errors of the C20th. The first was Mao Zedong's, Great Leap Forward and the establishment of commune-based farming in China in 1957. This massive reorganisation resulted in a disastrous collapse of agricultural crop yields and then to the farming-related deaths of some 30-40 million Chinese by the early 1960s. Mao Zedong had no way to calculate the full consequences – intended and unintended – of the massive social engineering that he put in place. The second big error was Nikita Khrushchev's decision also in the late 1950s to convert large tracts of arable land in present day Ukraine to maize production (from the more suitable crop of wheat which was also long established and well understood by Ukrainian farmers) to try to replicate the high yields of this crop achieved on the American prairies. Again the result was a huge agricultural and more generalised economic setback for the USSR. Like Mao Zedong and Khrushchev before him, Julius Nyerere in Tanzania in 1965 had no reliable basis of information drawn from the supposed beneficiaries of his decision to establish collective "Ujamaa Villages" to replace some of the more traditional farming communities in his country. So this decision too had many unintended and undesirable consequences.

Kay goes out of his way to stress that planning failures such as these are not confined to socialist economies. Indeed the problems can apply with similar force to large corporate or governmental bodies in western capitalist societies. Why is that?

The common thread is the need for the centralised manager(s) to obtain large amounts of critical information *indirectly* from de-centralised parts of the system that may have incentives to misrepresent or re-package some of that information. In the larger economies such as China, India and Russia, the planning decisions involve huge numbers of firms and consumers whose needs and capabilities ideally need to be matched. This has to be managed across vast geographical distances which constitute another major constraint on the effective dissemination of reliable information to the ultimate and centralised decision-maker.

Large global capitalist firms grapple in a similar way with informational problems. But size and distance are not the only causes of informational failure. In all large systems – corporate or statists - the collective intelligence of the system is in constant danger of being undermined by the combination of informational failures and the concentration of excessive power at the centre. Anyone who has worked in a large company, a large Ministry or a large public agency knows how easily the many good ideas at the lower levels of the organisation can get side-lined because they do not fit well with the prevailing pet ideas of the CEO, the Minister or the President of the agency: self censorship is normally enough to stop these ideas from getting anywhere close to the top boss. This also helps to explain why fashions can change so readily in big organisations: new boss new idea! For example, when Robert McNamara was President of the World Bank in the 1970s and early 1980s, rural development was a major theme and it was quite difficult internally to develop programmes to address poverty *per se*. But with the later Presidency of James Wolfensohn from 1996, it became difficult for any World Bank staff member to avoid working on "poverty" as a central theme. Rural development as such got at least temporarily downgraded.

There are various reasons for that but many of these come down to the same information failures that has been the main subject of this present Chapter. The fully centralised planning model of the Soviet Union was discredited by its macroeconomic and growth failures that became fully evident in the 1980s – see the graphic in Part 1 (Figure XXXX) that shows the timing of this. Certainly both the economic and the political fault-lines of the Soviet system emerged into clearer public view in the 1980s well before the actual break-up of the Soviet Union. But behind the economic failures

lay a fundamental point about the problems of coordination that we have discussed in this present Chapter.

In the Soviet system (and to a lesser degree in other centrally planned systems) there was an all-important need for the centralised planners in Moscow to obtain large amounts of critical *information* from de-centralised parts of the system: e.g. from thousands of enterprise managers in the near-by Russian Republics but also in the remote Republics such as in Siberia and in other far flung regions of the empire such as in Armenia, Georgia and Tajikistan. Over time these managers acquired a variety of very powerful incentives to misrepresent some at least of the information provided. For example, it was better to report that a target to produce a certain number of beds or tables had been met fully even if timber shortages meant that all beds and tables were a few centimetres smaller than they were supposed to be: there was little or no consumer feedback to mitigate against these outcomes involving sub-standard quality. In brief, the Soviet planning system could only ever be as good as the information on which it was based – if the incentives to provide misleading information were present (and if they eventually became endemic since the penalties for missing targets were invariably unpleasant at best and fatal at worse) then the planning system itself would be weak. Box 13.4 above provides further discussion about the informational problems of planning systems in both socialist states, developing countries and in mixed market economies.

13.5 Final Words on Market Failures

We have seen in these two chapter that the conditions required by the mathematical theorists of the 1950s and 1960s, notably Arrow and Debreu, to robustly prove the Smithian proposition **cannot** hold in real world economies whether rich or poor. But even if they did, it has long been understood by economists that the efficient allocation of scarce resources would not necessarily be consistent with equity or fairness in the distribution of incomes and levels of welfare across different individuals.

A realistic summary of what we have learned thus far is that the modern theoretical critique of the invisible hand (that embraces Stiglitz and associates in particular as well as John Rawls) tells us to be appropriately sceptical about the proposition that market forces are an infallible guide to how resources should get used and development should take place. But this does not mean, contrary to the widespread beliefs of early development economists, that we should reject the basic proposition that successful economic development is always and everywhere driven by the energies and imagination of myriad individuals pursuing their own selfish interests (like Adam Smith's butcher and baker). Reliance on unbridled free markets is definitely not a development policy option but neither is the wholesale rejection of the multifarious development benefits that well-functioning markets can bring. The middle road is one that requires the very difficult super-imposition of a governmental role to eliminate at least the more serious failings of markets. Our analysis tells us why unbridled free markets are very unlikely to do the job on their own.

Effective markets often call for judicious and also sustained interventions by government who therefore have an important partnering role in supporting the efforts of the myriad private individuals and companies who always make most of the key decisions in all countries – rich or poor. One helpful distinction that is starting to emerge in institutional economics (see next chapter) is that between "market-supporting" and "market-regulating" institutions. In addition, the more calamitous of

market failures such as those associated with climate change and those experienced in the credit crisis of 2007-2009 can call for massive interventions by governments that temporarily at least will compromise previously held ideas about the power of the markets. Overall, If governments understand the reasons why markets fail and tailor their own policy interventions accordingly in part to correct such failures, then the theory suggests that the outcomes achievable by private initiatives alone can be significantly enhanced.

Of course the complexity of the market failures and the bluntness of the tax and other policy weapons available to governments mean that there can never be a perfect policy package to mitigate all the market failures that afflict any real world economy. Sometime the mitigating policies can emerge only after the problems created by market failure have become painfully evident (an example is the absence of any obvious governmental policy to immediately address the close-down of wholesale lending markets in 2008). Some such as the informational failures associated with coordination and risk are particularly difficult to mitigate. But there can be relatively good and relatively bad government policy packages. The theory elaborated in this and the previous chapter provides significant pointers to how "good policies" and "bad policies" might be distinguished.

It also reminds us of a very important point that is critically important for policy-making in developing economies. This is that some of the theoretically sounder policy responses may require substantial budgetary outlays that may be difficult to raise in practice in low-income, low tax capacity countries. This helps to explain why so many policy-makers in so many low-income countries have pragmatically chosen more, rather than less distorting policies to solve particular problems (e.g. an import duty to protect a vital national industry instead of a fiscal subsidy payment, or a price control on basic foods instead of cash payments to help poorer families). This point notwithstanding, the theory of perfect competition in complete and competitive markets plays the role in this endeavour of the benchmark against which the "messiness" of the real world can be assessed.

The critical factor in using the benchmark to assess policy is a clear understanding of the manner in which the failures of the perfectly competitive model, lead to different types of divergences from the optimal outcomes. This understanding in turn can offer some clues as to the manner in which government policy should respond. The analysis of this and the previous chapter suggests a hierarchy of responses which are captured in summary in Figure 13.2 below..

We are on less firm ground when we consider the redistributive arguments for government interventions in the free workings of the market economy. The pure neo-classical position is that any redistributive intervention that is attempted should avoid wherever possible tax and subsidy arrangements that can distort prices and the efficient allocation of resources. This is fine in theory but very difficult to execute in practice given the limited range of non-distorting taxes and other policies that are available to governments especially in lower income economies. But again it does provide useful raw material to help us understand the difference between a relatively efficient and a relatively inefficient distributional policy. This too is reflected in the summary in Figure 13.2.

The very clear message from Robert Nowick is that we should not even try to use government policy to change a pre-existing distribution of resources and incomes – indeed the very act of doing so would introduce a new injustice that is hard to defend. John Rawls by contrast provides a cogent theory about why we should so intervene and with what principles of justice as our guide. But his prescription is largely

theoretical and helps relatively little in understanding how in practice redistributive justice might be achieved given that governments who are made up of human and often self-serving individuals must decide and execute who should get more and who should get less. Political economy considerations enter the argument here much more fully than in relation to other aspects of the debate. The patient reader will get some guidance on these additional considerations in Part 5.

Finally, and at the risk of some over-simplification, the different types of failure and matching responses can be represented graphically in the simple *aid to memory* presented in Figure 13.2 below. The reader needs to understand that this summary simplifies the complex arguments presented above quite considerably. Equally the examples of policy interventions that are presented are just that – mere examples. It is a useful exercise for any reader to try to list additional examples of appropriate policy that stem from the theoretical discussions of this and the previous Chapter.

We are not quite done with the explanation of the very long litany of reasons why markets by themselves can rarely provide the full solution to the numerous economic problems of low income countries. The final part of the jigsaw relates to the institutional gaps and other weaknesses that characterise these economies and that can further undermines the "normal" workings of market forces. This last component of the microeconomic story about development is the subject of the next Chapter. This last component focuses in particular on the institution of government itself – the instrument through which any interventionist actions and policies need to be enacted and upon which the success of the interventions depend. *It is because the institutional capacities of government are often relatively weak that the ambitions for what government can achieve in practice may need to be scaled back when the logic as presented this far is applied in a developing country context.*

Figure 13.2: A Simplified Summary of Markey Failures and Solutions

(NEXT PAGES)

Situation / Problem	**Appropriate Government Intervention (as suggested by theory)**
Ideal Situation (but Utopian)	
The OPTIMAL resource allocation as in the Arrow-Debreu model is already achieved. Its condition are FULLY met. There are NO market failures	Maintain law and order, commercial institutions and other basic conditions of a functioning society in order to support the working of free markets. This will include the defence of private property and the sanctity of contracts.
ADD Distributional Failure	
Income and Welfare are DISTRIBUTED "unfairly" even though the resource allocation based on that distribution is optimal	Adopt re-distributional policies in favour of the disadvantaged (e.g. land reform and redistributive taxation). Use taxes that are as non-distorting as possible to avoid undue disturbance to the optimal resource allocation. Policies should also avoid direct controls on prices that would also disturb resource allocation unnecessarily. But be aware also of Robert Nowick-type objections
ADD Resource Allocation Market Failures of the Older Type (as in Ch 12)	
1. There are negative Externalities leading to excessive consumption or excessive production of some products and services that do harm to others.	Adopt taxes and subsidies (as non distorting as possible) designed to discourage use or production of the products in question (e.g. tobacco taxes and taxes on emissions), and the adoption of less damaging alternatives (e.g. renewable energy supplies) AND/OR Legislate direct controls (e.g. emission standards for ALL cars and bans (e.g. no smoking in public places) to be used only as a second best
2. There are positive Externalities leading to insufficient consumption and/or production relative to the social benefits of some products and services.	Direct government provision of the services in question (e.g. health and education) or user subsidies to stimulate more use – both within the limits of budget affordability

….Continued

3a. There are Increasing Returns in some industries and these are giving rise to a tendency for the monopolisation of those industries. Thus they reduce output (relative to the optima) and cause higher prices.	Administrative regulation (e.g. price controls) on the monopoly producers OR budget subsidies to ensure that output is moved closer to optimal levels. NOTE the burden on the budget of the latter. Nationalisation and state control is an option but this does not eliminate the budget problem and may also cause additional problems.
3b Increasing Returns. There are some possibilities to reap POSITIVE Returns from strategic investments in some new infrastructure and other sectors – not exploited by private sector due to its inability to capture the full returns.	Judicious government support (e.g. direct investment in some cases and tax breaks in others) to help stimulate the complementary investments that can stimulate and raise the profitability of private investments. Investments in key infrastructure such as roads and telecommunications and in basic R&D are obvious examples. NOTE again the budget implications of this.

ADD Resource Allocation Market Failures of the Newer Type (as in this Chapter)

1. Incomplete Futures Markets are leading to great uncertainty about some (most?) investment decisions	Maintain stable policies and a stable economic environment to reduce the uncertainty re. the future as much as possible. Avoid unstable government policies becoming a source of additional uncertainty. AND Provision of targeted information by government – e.g. on weather conditions, future price levels etc to help investors make the best possible (if still imperfect) judgements about the future circumstances that will condition the success of today's decisions. NOTE - Direct government investment is rarely a solution here. Government has no special skill in predicting the future and in overcoming this market failure.
2. Absence of many insurance markets is resulting in sub-optimal decisions in some markets e.g. insufficient private investment in newer "better" but riskier crops	Direct provision (or subsidised provision) of insurance services in some cases. This can be *implicit* (e.g. government accepting *ex post facto* some of the costs of an earthquake, flood or banking failure) or *explicit* where government formally guarantees or directly offers insurance services (e.g. crop insurance, weather insurance or a contributory state pension). .

….Continued

3. Asymmetric Information is causing sub-equilibrium outcomes in some specific markets such as those for credit, labour and automobiles.	Legislate for and mandate the use in some cases of institutions that can enhance information and so lead to market outcomes closer to equilibrium. Examples would include the establishment of credit bureaus that could help banks to make sounder judgements about reliable borrowers; the certification of training standards to make the skills of particular workers more evident and verifiable by would-be employers, and test certificates for second-hand cars to provide some minimal information about their quality.
4. Asymmetric information is creating systemically "wrong" decisions in a range of connected financial markets.	Operate monetary policy in a manner that explicitly seeks to discourage the said behaviours (e.g. excessive bidding up of prices in key asset markets such as those for housing). Operate a parallel financial regulatory regime that as far as possible can achieve early identification and possible correction of the said tendencies. AND – possibly provide explicit insurance (e.g. deposit insurance on household bank deposits) to safeguard the more vulnerable from the possible downside effects of these tendencies making efforts to avoid a design that merely intensifies reckless financial behaviour.

Chapter 14: Institutions: their central role in development policy and performance

"…. we will argue that institutions, very broadly construed, are the fundamental cause of economic growth and development differences across countries and that it is possible to develop a coherent framework for understanding why and how institutions differ across countries, and how they change. We will also argue that our state of knowledge does not yet enable us to make specific statements about how institutions can be improved (in order to promote further economic growth. Darren Acemoglu and James Robinson, 2008..

14.1 Introduction

Both parts of the quotation above are important. The state of modern economics enables us to make important propositions about how and why "institutions" differ by country and how these differences impact the pace of development. At the same time it remains difficult to be fully clear about what is needed to "improve" institutions going forward - although many people and organisations try.

In this chapter we explore WHY institutions are important to the explanation of development differences. We argue too that the absence or inadequacies of critical institutions is indeed a big part of the ongoing puzzle of under-development. Jumping ahead - it is today broadly accepted that missing or inadequate institutions do indeed constitute a key part of the explanation for why some countries develop better and faster than others. This being the case then two further questions arise. First, WHAT are the forces that led to the establishment and evolution of the critical institutions of today's richer societies? Second, HOW might the remaining gaps and institutional inadequacies of today's poorer countries be addressed in the future? Above all is there a further role for government policy in relation to that agenda or must we just wait for some natural process of social evolution to gradually create the better institutions? This in turn leads us to a discussion of the scope and limitation of governments themselves – and their donor agency supporters - in addressing institutional weaknesses.

This additional ingredient in our discussion will tell us that it is not enough merely to identify a particular development problem using a *narrow economic approach* – perhaps one of the market failures from Chapters 12 and 13 – and then look for solutions to that problem to be delivered by government and (possibly) donor intervention. Above all it will tell us that merely passing a new law or signing a new international convention (e.g. on child labour or climate change) will rarely be sufficient. The *institutional approach* asks the additional question – do the organisations of government and donors have the *capability*, the realistic *instruments* and above all the *incentives* that will ensure that a sound solution to the problem is both identified and then implemented?

To the lay person it often seems mind-bogglingly simple. "the poor are staving – so feed them, the poor need better housing – so house them" But this is rarely the case. Even a simple intervention such as the delivery of food aid in a situation of famine, needs institutions such as reliable wholesale and retail distribution networks and minimal logistical arrangements such as passable roads and serviceable trucks. If factions in government are divided (perhaps because of ongoing civil conflict) and the key institutions needed for food distribution are missing then the result is likely to be a major diversion of at least a part of the food relief. The loss of significant parts of

the Band-Aid funded food relief for the Ethiopian famine of 1984/85 (partly to commercial sales and partly to the needs of rebel armies) is a classic example!

To complete this introduction, it is useful also to note the context from which institutional economics emerged some 30 years ago. It is normally associated with three main strands of economic literature which will appear from time to time in the discussions of this chapter. They are:

- Transaction Cost Economics. It was an early insight from Oliver Williamson – the 2009 Nobel laureate – that it is the presence of transaction costs that creates the need for *organisations* such as firms. As a consequence partly of the costs associated with transacting – broadly defined - the basic assumptions associated with efficient markets (e.g., anonymous and atomistic agents, perfect information, homogeneous goods, etc.) fail to hold. For these reasons it is often more advantageous to structure transactions not as individuals but within *firms.* And this is why firms exist and command much attention in their own right. The institution of the firm along with others exists because transacting is costly.

- Property Rights. It has been recognised for a very long time that property rights are at the core of the institutional requirements of a functioning economy. The enforcement of property rights for a broad cross section of society is a vital and necessary condition to ensure that significant numbers of individuals have the incentive to invest and take part in economic life. The mainstream property rights approach in economics typically assumes that individuals (on average) behave rationally and consequently strive to "get the most out of" their ownership rights: i.e. they have incentives to use their property for economic advantage. The *institution* of property rights plays the role of supporting that aspiration.

- The Theory of Contracts. This includes both (a) principal-agent theories, which concentrates among other things on the problems of asymmetric information among the contracting parties to a contract and the inherent difficulties – which again invoke transaction costs - of monitoring the other party, and equally important (b) the institutional arrangements that result in self-enforcing or implicit contracts. These more informal arrangements recognise explicitly the limits on the use of legal enforcement due to the high information and transaction costs that may be involved in establishing and enforcing these.

14.2 What do we mean by Institutions?

A useful starting point in dealing with the definitions involved in institutional economics is as follows. In any country, the economic system relies upon the majority of the population recognising and complying with certain rules of behaviour. These rules formally legislated or based on custom and practice are what gives a society a degree of order and makes it possible for the majority of the population to live a settled life and transact business at reasonable cost. However, these rules are of *two* distinct types.

- First there are rules that exist as *formal arrangements* as embodied in a country's constitution, its laws (commercial, civil and criminal), the supporting statutes and the additional common laws – rules that are not entirely

formalised but have essentially the same standing as formal rules in a country's courts.

- Second, many significant rules of behaviour as accepted by most citizens will exist only as *informal (uncodified) arrangements*. Douglass North points out that these informal rules are pervasive in all societies, like formal rules they are man-made, and that they govern very many aspects of the daily economic interactions between people. The informal rules are likely to be culturally and historically shaped. As such they can manifest significant differences across countries, they can be shaped by prevailing economic circumstances and they can often run counter to what the formal rules of a country may indicate.

Here is just one simple example to explain the possible tension between the *formal* and the *informal* rules of a society. Several other examples to illustrate the same point are presented later in the chapter. Box 14.1 offers a few simple comments on the importance of informal rules.

Box 14.1: Informal Rules

The fact that informal rules are critically important is evidenced by the ability of primitive societies without any formal rules to develop dense social networks that can exist for long periods with high degrees of social stability. In some generic sense the participants in such societies have strong *incentives* (e.g. avoidance of conflict and mutual self-destruction) to observe the un-codified rules of behaviour. A large anthropological literature spells this out in greater detail for particular societies. The degree of mutual trust in such societies can render unnecessary a large number of the formal rules and regulations that moderate social behaviour in more advanced economies. Economists can quite easily relate to these arrangements by seeing them as ways of saving (transaction) costs relative to arrangements that are more formally set up and implemented: e.g. you will save money by arranging your divorce settlement by a process of mutual consent rather than by resorting to the decisions of expensive lawyers and judges!

A Digression on Child Labour and Gender Discrimination

Today's rules in modern Britain, France, Germany and elsewhere – both formal and informal – expect that children under the age of sixteen will attend full-time schooling. Parents who routinely keep their young children away from school are subject to varying degrees of social opprobrium and eventually to official sanction. But compare this with the situation of C17th Century Britain. As reported by Daniel Defoe the author of Robinson Crusoe and Moll Flanders, it was thought to be *admirable* that in the vicinity of Halifax, Yorkshire scarcely anybody above the age of 4 was *ever idle* (emphasis added). It was almost fully accepted that the children of the poor were forced by economic conditions to work - many children worked 16 hour days under atrocious conditions and even by 1840 only about 1 child in five in London had any sort of schooling. The informal rules were clearly different then!

Formal rules in today's India, Indonesia or Tanzania would expect that children under the age of 14 years would attend school. But the reality is that many hundred of thousands of school-age children do not attend school regularly.[53] This may be shocking to a Western observer. But Is it surprising in poorer communities in these sorts of countries, that many thousands of children are required instead to work on family farms or in local factories or mines– full time or part time? Is it not likely that this type of behaviour is accepted by the neighbours and friends that the parents of these children are behaving reasonably and within the accepted informal rules of that society? Is there not a gulf in other

[53] Recent ILO estimates put the global figure of child workers aged 5 to 17 at 218 million

words between the informal rules of the West and of these poorer societies? The answer is undoubtedly yes if the friends and neighbours are themselves caught up in the same grinding poverty as the parents in question. Further what about the informal conventions in countries such as Afghanistan, Nepal and Sudan where large groups of people are in even greater economic despair. Do the prevailing social mores there entirely preclude the more extreme forms of child labour such as commercial sexual exploitation, bonded labour, hazardous child labour, and the recruitment and use of children for armed conflict or drug trafficking? The answer again is that insofar as such social mores exist at all in these conflict areas they probably do little to discourage such behaviour by desperate parents. The lone voices for better rules and improved legislation in these poverty-ridden environments of the C21st have their analogues in the ineffective lobbying and legislation against child exploitation of the early 1800s in Britain!

We can readily think of other examples where the informal accepted rules of a low-income society may diverge both from the formal laws of the same country and from those rules that are more familiar in richer countries. Readers are invited to do just that in relation to less developed economies of which they may have some knowledge. Here is just one more example to help you along.

Discrimination against, and especially violence against women is a second clear case where local informal rules of what is "acceptable" clearly vary widely and diverge also in many cases from what would be regarded as "acceptable" in advanced economies"[54]. The most well-known manifestation of a social practice that Western observers regard with horror relates to the "disappearance of literally millions of female babies or foetuses especially in Asia due it is supposed to practices such as to pre-natal sex selection, infanticide or neglect. Again the question arises as to whether the prevailing social mores in the societies where such abuses occur entirely reject or condone the practices? Evidence of the differential rates of reporting of female abuse cases in the home strongly suggests that there are certainly high degrees of acceptability of such practices at least in some poorer societies.

Incentives – Again!
The simple example of child labour throws up one very important hypothesis. This is that desirable as "better formal" rules may be, they will often find it hard to get too far ahead of the *incentives* that drive behaviour. *Incentives once again insist on having a presence in the analysis and North makes them a central part of his own analysis of institutions (North 1981[55]).* In the particular case of child labour, poor people in desperate economic situations will have a strong incentive to gain some economic advantage from their children whatever the formal rules of the country may state and the moralising of the West may say. Informal rules may be a stronger sanction on behaviour but these too will rarely run counter to the evident needs and established practices of communities that are framing those rules.

[54] The United Nations monitors a wide range of common abuses in some low-income countries including "physical, sexual and psychological violence occurring in the family and in the general community, including battering, dowry-related violence, rape, female genital mutilation and other traditional practices harmful to women, non-spousal violence and violence related to exploitation, sexual harassment and intimidation at work, in educational institutions and elsewhere, trafficking in women, forced prostitution, and violence perpetrated or condoned by the state.See United Nations General Assembly. 1993. 48/104: *Declaration on the Elimination of Violence Against Women* (A/RES/48/104). New York: United Nations.
[55] North, Douglass C. 1981. Structure and Change in Economic History. New York: Norton & Co.

Economists have done considerable research on this question in the past two decades with the hypotheses as defined above most commonly being framed in a more tractable manner (for empirical testing) as follows: Does the emergence of "good" institutions follow or lead economic development? In other words do we have to wait until we have greater prosperity before we get more acceptable rules of behaviour that offer more genuine rights and respect to (for example) young children and women. The theory of human capital tells us that getting more children to have more years of schooling (or losing less young women) would be a positive force for faster economic growth. So if we could somehow change the rules and institutions to achieve this then we would be likely to see those improved institutions driving development at a faster pace. But even our limited analysis thus far tells is that new *formal* rules alone may not succeed in overcoming the deep-seated incentives and getting more children to school.

In any case, the testing of such propositions obviously calls for some way to measure "good institutions and some way also to measure "development". We have learned at least one way to deal with the second definition in Part 1. Later in this chapter we will look at ways to represent measure of good institutions and then assess the hypothesis further. See Section 14.5 below.

More on the definitions
But first we need to do one more bit more work to cement the definitions.

Douglass North the father of Institutional Economics insists that the study of institutions and institutional change involves a crucial critical separation as between:

(i) the *institutions* of a society and

(ii) that society's *organizations*.

The *institutions* are the rules of the game - some of which are formal but others, as we have seen are definitely informal. Further examples of *informal* institutions include things such as norms of social behaviour, self enforced codes of conduct (e.g. by self-regulating bodies such as sporting associations, groups of accountants and realtors and even insurance companies in some countries). By contrast, the *organizations* of a society are the players and include (a) economic organisations (e.g. firms, banks, trade unions, credit and other cooperatives) (b) political organisations (e.g. political parties, the parliament(s), regulatory agencies to control banks, utilities etc. and (c) social organizations such as religious bodies, clubs, friendly societies etc. The interaction between (i) and (ii) shapes the overall institutional structure and change of a country.

The reader at this point is asked to notice that a large part of mainstream economics relates to the detailed activities of only a sub-set of the economic *organisations* as listed above such as firms and banks. Typically, the political and social players appear, if at all, as shadowy and only lightly-specified actors in the drama. "Institutions" and especially informal institutions in North's sense of the term scarcely get a look in.

Most economists working on the problems of any particular developing economy will have some knowledge of the *organisations* of the country in question – and will be working directly with a few of them: a government ministry, local community bodies, some NGOs, a few donors etc. But unless those economists are deeply embedded in the work of these organisation it will be difficult for them to fathom out exactly how they work and interact with one another and who is truly pulling the strings and

making key decisions. This is particularly true of the visiting economists from abroad including those from donor organisations such as the World Bank, the IMF and bilateral donors such as DFID and SIDA. Economists working at a distance – perhaps in academia – have an even bigger problem. For them the organisational underpinnings of the economic analysis that they conduct will very commonly be "broad-brush" at best! Box 14.1 makes a few simple statements about the organisations of one country – Tanzania – with which the authors of this book have some familiarity. The reader is asked to note how quickly the complexity of exactly how things *actually* work becomes apparent.

Box 14.2: Organisational Complexity and Issues in Tanzania

Tanzania is a Republic that gained independence from the UK in 1961. It is now a multi-party democracy with 17 registered political parties but still one dominant party and long-time ruling party namely Chama Cha Demokrasia na Maendeleo (Party of Democracy and Development) or CCM. There are 26 administrative regions with some administrative powers: 21 of these are on the mainland but 5 are on the islands of Zanzibar or Pemba There are also 114 local councils operating in 99 districts, 22 are urban and 92 are rural. At the local level there is also a bewildering array of community organisations most of which have some influence in the delivery of local services and/or in conflict resolution. They include local courts, ritual specialist, traditional authorities (Tanzania's population comprises more than 120 different ethnic sub-divisions and a smaller number of tribes), many church/faith groups, many other local NGOs, certain vigilante organisations and some community or ethnic trust funds.

In-depth studies of governance and accountability have revealed certain aspects of how this system works. For example, the Executive, operating through the President and a small sub-set of Ministers is highly dominant in the national policy-making process. Parliament has clearly defined powers of scrutiny and these are duly exercised in line with legislation. However, the CCM party is so strong in practice that its own structures – not Parliament - represent the most effective form of democratic restraint over the Executive. But the power of CCM is also mitigated by the fact that leading party members tend also to be subject to the influence of the church or mosque or that of the family or clan. Overall, the most effective checks on the power of CCM and MPs are argued to be traditions rather than formal rules .

Presidential patronage is exercised in relation to some political and even parliamentary appointments but with some degree of restraint in this area too coming from the Parliament and traditional forces. At the local level too most official see it as their function to serve the people. However, there is some evidence that patrimonialism also has some limited presence as part of *the* logic of local administration. Certainly, there is a plurality of cultures of accountability. For example, in ethnographic surveys talk of "entitlement and transparency" exists alongside practices of corruption and nepotism. There seems to be rigid adherence to rules in some areas alongside the flagrant bending or breaking of rules in other areas. But precisely what is happening at various levels – especially of local government is obfuscated by relatively poor flows of information and the objective assessment of results.

Objective assessments have scored Tanzania relatively well vis a vis similar countries in Africa and improvements in its governance have clearly occurred over time. However, there remain many aspects of governance in the country which do not work as they are supposed to. Further some areas of relative weakness, such as the police and justice systems, are of major importance to the development of society as a whole and of special significance in protecting the entitlements of the poor and vulnerable.

14.3 Institutions, Organisations and Development

Having clarified a few key definitions, the next step is to examine the links between institutional development on the one hand and economic development (as discussed in early parts of this book) on the other. *Why in other words does all this institutional stuff matter?*

It is a big questions and a big subject in terms of the literature that has already accumulated in the past two decades since Williamson, North and others began to provide the analytics needed. In this section we offer the answer to this question by first providing a brief note on six high-level reasons why the institutional stuff does indeed matter. Then in the next section we probe a bit more deeply by examining some important examples that can be found in the recent literature on this subject.

Why do Institutions Matter? The Answer In Brief:

The listing that follows in no sense is intended to provide a comprehensive answer to the question. But by focusing on key elements of the answer it does provide some good reasons why the student of economic development should take the topic very seriously and hopefully be encouraged to probe more deeply into particular matters.

The overriding point is that institutions represent a huge complicating factor for many of the theoretical propositions about development economics that we have so far propounded in this book: both the more macro propositions of Part 2 and the more micro propositions of Part 3. In 1997 when asked the question "*How will the new institutionalism affect or change standard conventional economics?* Ronald Coase famously answered *" Well, it won't so much change conventional economics as reshape it and replace it. In my mind, the New Institutional Economics is economics. It's what economics ought to be. Existing economics is a theoretical system which floats in the air and which bears little relation to what actually happens in the real world".*

In order to see a bit more clearly what Coase had in mind, here are just a few aspects of the greater real world complexity that the explicit consideration of institutions presents us with:

- First, and most important much of the theory in the mainstream economics literature has been developed without any explicit acknowledgement of even the existence of *the specific institutions and organisations* that are critical to shaping economic behaviour (at this stage the reader may like to return briefly to Part 2 to confirm how rarely we referred there to specific institutions and organisations other than firms or households). At the very least this gives us reason to pause when we examine the results of some major growth theories of the type we reviewed in Part 2.

- Second, the *historical and cultural* origins of the institutional rules will mean that the actual behaviours of individuals, enterprises and governments are likely to differ across countries even when countries have apparent similarities. So a solid theory that predicts behaviour and outcomes quite well in one country context may fail badly in another. We really do need to beware of relying on too much generalisation across countries, and different historical periods, unless we first control for institutional difference. For example, there is a clear loss of economic output as a result of the pervasive gender

discrimination that we very briefly discussed above. Societies whose institutions allow such discrimination will not do as well - all other things equal - as societies whose institutions result in much less discrimination.

- Third, the strongly historical origins of many informal rules and institutions will introduce a strong *path-dependency* into economic and other changes that may occur. In other words, the policy and other choices of today's present are constrained in reality by decisions made and organisations put in place by actions made in the past. The differing colonial experiences of different countries as discussed below helps to clarify this crucial point. Once we make an allowance for this reality we are forced also to recognise that there may be a great deal of inertia in the process of economic change and that correcting earlier mistakes can be a long and slow process.

- Fourth, the previous point also means that we cannot assume that *that there can be any neat and tidy theory of inevitable progress (of an economy) over time*. For example the propositions about convergence tendencies that we explored in Part 2 could well be short-circuited by institutional differences between two or more "converging" countries. Ongoing organisational and institutional changes can be static (in terms of development prospects) or even retrogressive since their change responds to the pre-existing opportunities and pay-offs made possible by existing institutional situation. So for example, if that incentive structure favours jobs in the civil service (in India pre-1990) or in the opium poppy fields (Afghanistan today) or indeed in piracy (some coastal parts of Somalia today), then organisations are likely to invest in skills and new knowledge to make them better civil-servants, poppy growers or even pirates. It matters little that some outside experts may advise greater engagement with manufacturing wheat, rice or fishing activities in order to speed economic growth. If there is nothing in the perceived institutional incentive structure to encourage change in those "more desirable" directions then it is unlikely to happen.

- Fifth, lower-income countries that are less developed (in some sense) may well have a relatively higher weight of complex *informal* rules such as those linked to tribal or other kinship affiliations. These in turn may cause the responses to particular situations and policies to be significantly different from those that may be observed in the more developed Western economies. For example, incentives may be conditioned rather more by the needs of a particular *social group* and rather less by the maximisation of *individual* benefit (e.g. people may share food in poorer village communities in Africa in ways that would not happen within an urban community in the same or richer country with their more individualistic social attitudes). This complexity is likely to be particularly the case in countries having large numbers of different ethnic and linguistic groups: as is the case with countries such as Iraq and many countries of Sub-Saharan Africa that were created artificially by some external power. In short, the institutional differences between countries ought to command much more of our attention than is normal in the discourse of economists:: a common complaint by sociologist and other social scientists about economics.

- Finally, since "the Government" in all its manifestations (central, local, regional etc) is a central part of the institutional and organisational structure of any country, the institutional approach forces attention to be directed to government behaviour as a key element in its own right. *This differs from the approach in mainstream neoclassical economics in which the government is*

often treated is a stand-back and wholly objective arbiter between the real players in the economy namely firms, and individuals. This alternative institutional approach allows for potential struggles between competing factions – all angling to either "be", or to gain influence over, "the government" - that plays out within a setting of political institutions and processes rather than through markets.

But do all these critical comments mean that we somehow need to reject the rich insights that come from mainstream neoclassical economics (e.g. chapters 12 and 13 above) once we try to be more cognisant of the institutions that shape development outcomes? No not at all.

It is important to emphasise that institutional economics as manifested in the past two decades can readily be thought of as an extension of the neo-classical approaches that were elaborated in the previous two chapters. This differentiates it from earlier "historical" approaches which were extremely rich in narrative detail but very thin in terms of analytical frameworks. We have already seen above the strong emphasis that that institutional economics places on the role of incentives. This immediately rings bells with all mainstream economists. In addition, as North himself notes…. "*in contrast to the many earlier attempts to overturn or replace neoclassical theory, the new institutional economics builds on, modifies and extends neoclassical theory to permit it to come to grips and deal with an entire range of issues heretofore beyond its ken. What it retains and builds on is the fundamental assumption of scarcity and hence competition – the basis of the choice theoretic approach that underlies microeconomics"* and *.." it employs price theory as an essential part of the analysis of institutions; and sees changes in relative prices as a major force inducing change in institutions.* (1995 pg 17.)[56].[57]

14.4 Selected Examples

One of the difficulties that a student may face in addressing this body of economic analysis is that it is already quite voluminous and it also lacks the "neat mathematical syntheses" of key ideas that are associated with much of what has preceded it in this book. But those who feel deprived for this reason might take note of H.L.Mencken's famous dictum --- *"There is always an easy solution to every human problem — neat, plausible and wrong.*." Douglass North certainly cannot be accused of falling back on simple and neat syntheses. His many books and articles on the subject, for example, are lengthy, based on detailed historical narratives and only rarely have recourse to mathematical explanations. The 2-3 page synthesis is rarely to be found! So learning about the subject of institutional economics involves taking the basic framework as already briefly expounded above and then gradually building examples that exploit that framework.[58] This is the spirit in which the current section in presented. The

[56] There are other manifestations of the same point. One is the central role played in many explanations of why institutions exist (are needed) by transactions costs with the work of Oliver Williamson being particularly relevant in this regard. See for example, Williamson, O.E., 1979, "Transaction-Cost Economics: The Governance of Contractual Relations", *Journal of Law and Economics*, 22, 233-261. A second is the key attention played in much of institutional economics to property rights as an absolutely central "institution" of an economy. Here the property rights approach based on earlier work by Coase (1960) and Demsetz (1967) is particularly relevant.

58 Acemoglu et al (2008) put a similar point when they note…" The broad definition of institutions is both an advantage and a curse. It is an advantage because it enables us to get started with theoretical and empirical investigations of the role of institutions without getting

examples chosen give strong support to the basic importance of institutional economics but there are numerous other examples in the literature that could also be studied. The enthusiastic reader is encouraged therefore to use our examples merely as the starting point.

We start with a very simple example that merely illustrates how key economic institutions can and do emerge, and then move to more complex historical cases.

Example 1. Money as an institution

As was noted earlier a common argument of the institutional economics literature is that the main institutions of an economy originate in the need to *reduce transaction costs*. In a utopian world of zero transaction costs, institutions as such would be far less necessary. This first example is a simple one based on this general point. It discusses one of the core institutions of an economic system namely "money".

Once individuals in a society begin to trade their own products or services for those of others there will quickly emerge a discrepancy in timing between purchases and sales. In other words not all transactions will take the form of contemporaneous exchanges on one person's goods for another's. Time will intercede thereby reducing the possibilities of pure barter and instead will make necessary some "medium of exchange" – the extension of debits and credits. Society can stagger on without this institutional innovation but only by accepting very high costs of doing its business. The innovation when it occurs will allow current goods to be exchanged much more easily for future claims to payment. However, we can note that In a world of complete certainty (as discussed more fully in Chapter 13 above) and zero transaction costs, it is not necessary to invent a specialised medium of exchange. A seller X could hand over his goods at time "t" knowing that the buyer Y would provide a matching *quid pro quo* at some future time period t+n. The assumption of perfect certainty would eliminate any fear that X might otherwise have about a default by Y. Similarly Y could generate resources by selling her own products to some other persons. In this world of certainty and zero default risk, any generalised medium of exchange would suffice to allow these and other trades to proceed: even a verbal agreement to pay would enable transactions to proceed. In this artificial world, trade itself involves no costs and there is no obvious role for the institution of money as we now know it.[59]

So we see that the incentive that societies have to "invent" money depends on the condition that the real world (i) involves significant transaction costs and (ii) is characterised by a degree of uncertainty about the future. The institution of money addresses both of these problems.

Uncertainty about the future, and the risks that this causes, plays an important part in the institutional development of "money" as indeed it does with many economic institutions. This is because now any party to any transaction needs to have some knowledge of the other parties before they will be willing to supply goods to them. This is not a major problem in a small tight community where the transaction cost of gathering such information will be modest. But it is a major hurdle in a large and complex society and with lengthy chains of transactions connecting the various

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bogged down by taxonomies. It is a curse because unless we can follow it up with a better understanding of the role of specific institutions (emphasis added) , we have learned only little.pg 3.

[59] Significantly a large number of economic models use a single time period and the assumption of full certainty. So these models implicitly exclude the institution of money. This is a first illustration of our earlier general point that much of mainstream economics is "institution-free"

parties. In such societies (the majority of those we see in the real world) the transaction costs involved being large will establish a potent reason to develop some form of medium that will allow the exchanges to take place. In addition, the high degree of separation of transacting parties in the modern globalised world (in both geographical space and time) will establish high levels of uncertainty and risk that also need to be addressed. Initially certain physical commodities of some intrinsic value – animals or cowry shells may serve. But eventually the non-standardisation of these media and the additional risks associated with some of them (i.e. the death of a cow) will force the identification of a medium of exchange and payment which has some standard value (e.g. a gold coin of a prescribed weight).

Example 2 Patterns of Colonial Development

One of the best known recent applications of institutional economics to development is that due to Daron Acemoglu, Simon Johnson and James Robinson as published originally in the *American Economic Review* in 2001.[60] This work builds on the basic idea that the responses of individuals and organisations to the incentive systems and to the opportunities offered by their respective societies depend also on the way in which *they interpret that situation and respond to the information* that is provided to them. The authors studied different types of European colonial settlement in various regions of the world from the C15th onwards. Their work distinguished between (i) colonial "settler" communities and (ii) colonial "extractive" communities.

In settler colonies, Europeans established well-populated settlements as in the United States, New Zealand and in parts of Australia They supported these with new (for those areas) institutions designed to ensure property rights, enforce the rule of law, and to generally support investment and growth. Because the colonial activity was associated with relatively large numbers of settlers, the emphasis from an early stage was on the enforcement of property rights for a *broad cross section* of the society, especially smallholders, merchants, and entrepreneurs. By contrast, in the extractive colonies where, for various reasons there was far less European in-migration, the institutional emphasis was rather on solidifying colonial control (from abroad) and supporting narrower forms of economic development based mainly on the extraction of natural resources. This was the case especially of the Spanish and Portuguese colonies in Latin America and of large parts of sub-Saharan Africa[61]. So in these cases the institutions that were created introduced far less protection for private property *in general* (although the property of the narrow colonialising elite invariably was well protected), and nor did they provide much in the way of checks and balances against government power: the societies were constructed from the outset to be relatively repressive of broader public interests. In these cases, because the vast majority of the (indigenous) population enjoyed few basic rights, they also faced significant barriers preventing their participation in many activities that might have spurred broader development.

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[60] Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* December 91(5): 1369–1401. See also Acemoglu, Johnson, and Robinson (2002, and 2002a)

[61] Geographical considerations are often brought in to account for these two different styles of colonial management. In particular, it is argued that the extractive colonies were likely in conditions where climate, pests, diseases, and so on made conditions more difficult for European living. Acemoglu and Robinson found that malaria and yellow fever were particularly good discriminators from this point of view (and therefore helpful in econometric analysis of the problem). This was because these two diseases were fatal to Europeans who had no immunity, thus having a major effect on settlement patterns, but they had much more limited effects on natives who, over centuries, had developed various types of immunities.

How if at all can we relate these institutional origins of the countries in question to their prospects for longer term growth and development. One answer from Acemoglu (2007) is that while narrowly based investment by a small elite can generate economic growth for limited periods, as in Spanish Latin America in the 1800s, it does little for sustained growth over longer periods: for this you need the population at large to be involved. He contends that the USA and Australia did rather better than many other colonial settlements in that regard since their early institutions were compatible with investment in multifarious activities and *by a significant proportion of the total population* – millions of people in total. This proposition does not seem to rule out the possible marginalisation of minority groups of the population such as the Aborigine populations in Australia or the indigenous Indian populations in the USA. It stands because the key variable in the argument is the *proportion* of the population facing an institutional structure consistent with investment and profitable economic activity.

The attentive reader will notice that the explanation thus far does not account for differences in institutions across countries because it does not explain fully why some colonies were settled *intensively* by Europeans while others were not. To address this point the authors make use of the ingenious idea that this differentiation was very strongly influenced by the different risks of mortality that Europeans faced in the various colonies; and especially differences arising from the prevalence or otherwise of malaria and yellow fever. They therefore use the presence of these diseases – and the death rates associated with them - as a source of exogenous variation in institutions. Their data do indeed show that there were major differences in the institutional development of the high-mortality and low-mortality colonies: so these rates are a good "instrument variable" in econometric experiments for identifying institutional differences across countries. Some selected econometric results from this work are presented in Box 14.3 below. A fuller explanation of the technical point is provided in Section 14.5.

Box 14.3: Settler and non-Settler Colonies.

BOX MATERIALTO BE ADDED

Acemoglu et. al. acknowledge that there may be other socio-economic influences (instrument variables) that can also account for the different patterns of colonial development. A leading contender that now figures in much of the institutional economics literature relates to *factor endowments* – a familiar idea from our analysis of growth theories in Part 2. Specifically in a 2002 paper, the same authors examine how relatively densely different regions were settled *before* colonization: i.e. what sort of labour endowment did the new settlers encounter when they arrived. They show that in lands where they found more densely settled areas, the Europeans were more likely to introduce extractive institutions because it was highly profitable (and relatively easy) for them to subdue and then exploit the large indigenous populations. This could be done, for example by having them work on plantations and in mines, or by maintaining the existing agricultural systems and then collecting taxes and tributes.

Example 3, Factor Endowments as an Explanation of Institutions

Explanations based partly on factor endowments have also been emphasised in several other papers. For example, Engerman and Sokoloff (1997, 2002) [62]have emphasized the interactions among institutions, factor endowments, and inequality. They build on a similar distinction as between South and North America as that used by Acemoglu et al. But they add also that institutional differences were linked to differences in the methods of primary production. So, for example in Central and South America, where indigenous labour was relatively abundant (and was made more abundant via slavery), production was geared to exploit *extensive* economies of scale—particularly on large plantations for sugar and tobacco, and in gold and silver mining—and to draw on abundant supplies of labour. By contrast, the relative abundance of land (versus labour) in North America and more limited labour supplies in many regions of early settlement (in spite of slavery) favoured production of wheat and other commodities that could be grown on relatively small-scale family farms—hence dispersing ownership and economic power much more broadly. These early institutional choices were further perpetuated by policies in such areas as immigration, schooling, and the formation of financial and corporate enterprises. In all these cases of "secondary" activities, widespread and low cost access was encouraged in North America. By contrast in the more elitist institutional systems that were established initially by the European settlers in Central and South America, secondary activities also tended to be more restricted and costly to access.

In a much more recent paper James Fenske has developed the factor endowments explanations by looking in particular at the relative abundance of land in the African context and asking whether this can play the differentiating role in explaining institutional differences across countries. His work builds on earlier models by, in particular, Lagerlöf, N. P. (2009). [63]

TO BE ADDED

Example 4. Formal and Informal Property Rights in Developing Countries

Hernando de Soto in a famous book entitled *The Mystery of Capital* first published in 2000 developed a set of propositions about the institution of property rights that has immediate relevance to modern day developing countries and an extraordinarily broad scope. The work of Acemoglu et al on the different patterns or colonial development illustrates the importance of the basic proposition mentioned earlier namely that - *the enforcement of property rights for a broad cross section of society is a vital necessary condition to ensure that significant number of individuals have the incentive to invest and take part in economic life.*" Acemoglu et al show that true property rights were restricted mainly to the elites in the so-called "extractive" communities but were much more broadly spread across the populations at large in the so-called "settler" communities. De Soto extends this type of distinction as between what we might call "partial" and "full" property rights to the vast majority of today's developing economies.

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[62] Engerman, Stanley L., and Kenneth L. Sokoloff, 1997, "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States," in *How Latin America Fell Behind*, ed. By Stephen Haber (Stanford, California: Stanford University Press), pp. 260–304. and Engerman, Stanley L., and Kenneth L. Sokoloff, 1997 2002, "Factor Endowments, Inequality, and Paths of Development among New World Economies," *NBER Working Paper* No. 9259

[63] See, Lagerlöf (2009) "Slavery and other property rights". *Review of Economic Studies*, 76(1):319{342.

His basic idea is as follows. In the historical development of richer economies such as in Europe and the USA there was always a stage at which the nature of the development that was occurring was such as to disrupt the previously maintained *status quo* as regards the ownership and control of property such as land but also property in the sense of the legal ability to engage in certain manufacturing and other activities. We see the same disjuncture in most of today's poorer economies in Latin America, Africa and Asia. *But puzzlingly, de Soto notes, we seem unable to learn the lessons of institutional history about the huge gains that can come from rapidly incorporating the informal economic arrangements into the already established formal ones.*

Let's start with the history and then come back to today's developing societies. .

In the USA, de Soto's major example is the gradual displacement of the English property law which settlers from the early C17th had tried to apply initially. Over time this inherited body of law proved impossible to apply in the radically different circumstances of the early USA. For example…..*"a superabundance of land in British North America presented the first settlers with opportunities unimaginable in the Europe they had left. Arriving on a continent where much land was naturally clear, they rushed to apportion their new sources of wealth"* (pg 115. and …*"as a result, scrupulous regard to detail was easily overlooked. Inexactness in allotment and recording was tolerated and little attention was given to the orderly plans which it had been expected [by colonial authorities] were to be followed."*[pg 115]. The result was that the formal (English) laws gradually got sidelined and the local courts gradually turned to local town laws and customs to create a new body of law that would stabilise land dealings. But this process of establishing a new property rights equilibrium was neither smooth nor rapid. Powerful members of the elite in the mid C18th USA such as George Washington complained about…. *"bandittI…skimming and disposing of the cream of the country at the expense of the many"* (pg 10) and .." *For the next hundred years, such squatters battled for legal rights to their land and miners warred over their claims because ownership laws differed from town to town and camp to camp"* Enforcing property rights created such a *quagmire of social unrest and antagonism* that an early Chief Justice in 1820 doubted whether lawyers in the US would ever be able to settle them.

If we jump ahead to the present day, the USA is now widely regarded as the epitome of a stable private property-owning society in which land and other forms of property receive very effective protection from the formal legal system and in a manner which enables the vast majority of the resident population to draw some benefit and so have an "*incentive to invest and take part in economic life".* But this emergence of today's equilibrium from the quagmire of the 1820s did not take place easily or quickly. According the narrative presented by de Soto it took more than one hundred years into the late C19th for the US government to integrate into one system the informal property rules created by millions of immigrants and squatters.

In European countries such as Britain, the situation was somewhat different but still manifested a similarly long and turbulent period of struggle over property rights. This also occurred as one economic system – in this case the land-owning agrarian system of the pre-Industrial revolution – gave way to a new urban capitalist and increasingly industrial society. De Soto associates the emergence of high levels of extra-legality in Europe with the mass migration from rural to urban locations especially in the C17th and C18th as potential incomes in urban areas rose relative to those in the traditional rural locations and activities. This migration process was always problematic and remained so for many years greatly restricted by formal laws. As de Soto notes …*"No sooner did the migration to the cities begin than the existing*

political institutions fell behind a rapidly changing reality." and as with the problems of land in the USA. ….*"the rigidity of mercantilist law and custom prevented migrants from realising their full economic potential* " (pg 98).

As in today's developing economies, many European migrants of that period – moving from country to towns - did not find the jobs they hoped for. They found it difficult because of legal restrictions to obtain permission to set up or expand small businesses. "Many were forced to settle precariously on the outskirts of Europe's cities, in 'suburbs', the extralegal settlements of the day, awaiting admission to a guild of a job in a legal business." (pg 97). These suburbs themselves became new zones of economic activity insulated to a degree from the prevailing laws and regulations that restricted similar activities in major cities. The repression of extralegal economic activity was "*plentiful, harsh and, in France, deadly"* (pg 100.) Eli Heckscher has noted that within one decade in the C18th the French executed more than 16,000 smugglers and clandestine manufacturers for the illegal manufacture or import of printed calicoes. (quoted in de Soto pg 100).

Eventually the massive tide of rural to urban migration and extralegal competition forced formal businesses in most European countries to sub-contract part of their production to suburban workshops. The guilds that had previously monopolised many productive activities in Europe and the governments of some European countries were forced to give up some ground in the face of the growing numbers of illegal businesses and the dynamism and improving quality that they represented. The countries that adapted relatively quickly made a relatively peaceful transition to a more integrated market economy in which people at large enjoyed similar formal property rights.

So for example in pragmatic England, *.." As soon as the state realized that a working extralegal sector was socially, politically and economically preferable to a growing number of migrants, authorities began withdrawing support from the guilds. The result in England was that fewer and fewer people applied for admission to the guilds, thereby setting the stage for the state drastically to alter the way in which business was conducted*.(pg 104). Note, in this quotation, the central influence of competition in propelling the institutional change. By contrast, in European countries where the repression of extralegality persisted for longer, not only was economic growth and development held back by the restricted property rights of large segments of the population, but it led also to the mass outward migration of many of the more able to seek their livelihoods in other countries. The persecution of the French Huguenot textile producers, and the resettlement of many of these in Britain and Holland is a main and important example. (pg 106)

De Soto uses these and other historical examples as the lens through which he looks at the current situation in the majority of low and middle-income developing countries. In particular he sees the mass rural to urban migration seen in almost all low and middle income developing countries since the 1960s as having clear parallels with the earlier similar migrations in Europe. In presenting his key hypotheses, he first elicits certain facts some of which are reasonably well known but others of which are both new and highly significant. These include:

- The savings of the poor in these countries is "immense" (his term). In Haiti – the poorest country in the Western hemisphere – the total assets of the poor are more than 150 times greater than all the foreign investment received since independence from France in 1804. In Egypt, the wealth of the poor is 55 times as much as all the accumulated foreign direct investment ever

recorded including the building of the Suez Canal and the Aswan Dam (remember his book was written in 2000).

- The cities of these poorer countries are "teeming with entrepreneurs" "*The inhabitants of these countries possess talent, enthusiasm and an astonishing ability to wring a profit out of practically nothing. They can grasp and use modern technology. Otherwise , American businesses would not be struggling to control the unauthorised use of their patents and the US government to keep modern weapons technologies out of the hands of Third World countries*" (pg 5).

- But an *increasing* part of the settlement and the economic activities carried out in these developing societies is extra-legal and not formally recognised. Indeed, in all the countries that his own research investigated *"it is very nearly as difficult to stay legal as it is to become legal"* (pg 23). The result is that the property that constitutes the *immense* wealth of the poor is limited in terms of its ability to support greater investment and faster growth. For example, in Haiti (before the devastating 2010 earthquake) 68 percent of city dwellers and 97 percent of rural dwellers lived in housing to which no one had a formal legal title. In Egypt, the corresponding figures are 92% and 83% or were at the time of de Soto's book. In the Philippines the value of untitled real estate was $133 billion or 4 time the size of the, then capitalisation of the local Stock Exchange. Extrapolating from some hard data for a small sample of countries, de Soto estimates that in the developing world as a whole, no less than 85% of urban land parcels and 53% of rural land parcels are held illegally and in ways that cannot be used to create further capital. (pg 32), and above all[64],

- The transaction costs in both time (for example, to achieve full compliance) and money (license fees plus bribes) for an honest person to obtain full formal legal status for a house or a business is huge. For example in Peru it took de Soto's own research team 289 days (6 hours per day) and $1,231 (31 times the monthly minimum wage to register a garment workshop that would employ just one worker! Similar problems apply in many other developing economies and are now very well documented in the World Banks *Doing Business Reports*. See also Box 14.4 below.

[64] And amazingly he claims that the total value of all the real estate held, but not legally owned, by the poor is more than 90 times all the foreign aid to all Third World countries over the three decades to the year 2000 when the book was written.

Box 14.4 World Bank "Doing Business Indicators"

Since 2004 the World Bank group has assembled indicators that refer more directly to the problems that any company large or small may have in doing business in a particular country. Their indicators allow on ongoing examination for any country of the problems identified by de Soto. Specifically, the World Bank's annual Doing Business report now provides in-depth discussion about the main constraints that affect the operations of businesses for a large number of countries.

The most recent Doing Business country rankings for 2009 list 181 countries each of which is ranked against ten different aspects of the conduct of its business as well as having an overall rank. The individual country studies are readily available from the World Bank web site (www.doingbusiness.org). This information can easily be assembled for any country and provide some basis for examining the types of issues discussed in depth by de Soto as well as issues of governance more generally. Consistently with his hypotheses the bottom 30 countries in the 2009 rankings are all relatively low income countries in either Africa or Latin America.

The main components and some of the research papers from which the ideas have emerged are shown below.

Starting a Business Dealing with Construction Permits	The Regulation of Entry, by Djankov and others, *Quarterly Journal of Economics*, Feb 2002.
Employing Workers Registering Property	The Regulation of Labor, by Botero and others, *Quarterly Journal of Economics*, June 2004.
Getting Credit	Private Credit in 129 Countries , by Djankov, McLiesh and Shleifer, *Journal of Financial Economics*, May 2007.
Protecting Investors	The Law and Economics of Self-Dealing , by Djankov and others, *Journal of Financial Economics*, June 2008.
Paying Taxes	The Effect of Corporate Taxes on Investment and Entrepreneurship , by Djankov and others, forthcoming.
Trading Across Borders	Trading on Time , by Djankov and others, *Review of Economics and Statistics*, Nov 2008.
Enforcing Contracts	Courts , by Simeon Djankov and others, *Quarterly Journal of Economics*, May 2003.
Closing a Business	Debt Enforcement Around the World , by Djankov and others, *Journal of Political Economy*, Dec 2008.

De Soto is rather weaker at spelling out the policy solutions to this situation of ubiquitous extra-legality problem than he is at presenting the underlying diagnosis of the problem. Indeed the last pages of his book – and his summary paper in *Finance and Development* - are mainly a plea for the problems and opportunities he documents to be much better recognised by policy-makers. If he is correct then a huge unexploited pool of capital is largely being wasted in the developing world

because the *formal property rights* needed to exploit it more fully and use it as the basis for significant new investment in the economy, are missing and very difficult to obtain. If low and middle-income countries could make the same transition as did say Europe (i.e. from narrow property rights and monopolised access to broad based and formal property rights for all) but DO IT MUCH MORE QUICKLY, then huge gains in income and prosperity would seem to be possible.

Much effort has been made in recent years via land surveys, cadastral registries, improved laws etc to speed up the process of making more persons and small businesses "legal". But there is the same official ambivalence seen in today's poor countries as was encountered in the USA and Europe in centuries past (see the earlier comment by George Washington). Specifically, there are still major policy actions every year that have the consequence, if not the intent, of intensifying illegality by putting more restrictions on squatter communities and new small businesses etc. rather than less. Some of these policy actions are taken for good reasons such as the need to enhance standards of health and sanitation in slum areas but some have weak underlying motivations such as the protection of entrenched economic interests – or even to make the streets look smarter for big events such as the World Football Cup in South Africa in 2010 and the Commonwealth Games in Mumbai – also in 2010..

We cannot and do not need to resolve this matter here. We can merely note that the *quagmire of social unrest and antagonism* over property matters that characterised the C17th and C18th in the USA and longer periods in Western Europe were not institutionally resolved through any great act or by any single government intervention. Rather the quagmires of uncertain property ownership – inimical to development - were eventually removed via processes that lasted in some cases for more than a century.

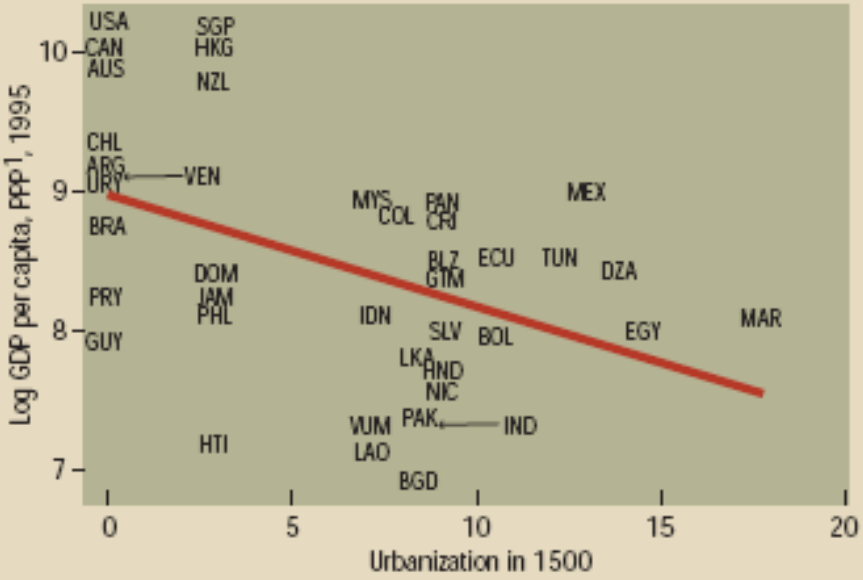
Example 5. Reversals of Fortune and the role of Geography.
It is a very simple exercise in casual empiricism to read a world map and notice that a very large number of the world's poorest countries as defined in Part 1 of this book are located near the equator and are prone to periodic severe weather conditions (hurricanes, floods, droughts etc) and many unpleasant tropical diseases. It is a tempting step – but also a big one - to go from that observation to a conclusion that the poor climate (or geographical location) is the ***cause*** of the low income status of these countries.

An exercise in institutional economics that assesses this situation appeared in another paper by Acemoglu and the same co-authors listed earlier.[65] It uses essentially the same methodology as their work on colonial settlement. In brief, many tropical countries were relatively rich prior to the arrival of the European settlers. Examples cited include the Mughals in India, the Aztecs and the Incas in America that were among the richest civilizations in the C16th before the arrival of much Eurpean influence. By using various proxy measure of "prosperity" over an extended period from 1500 (the standard GDP measure was not available for a long enough historical period to play its normal role in such analysis), they clearly demonstrate a remarkable reversal of fortunes. In particular, those colonial territories that benefitted from the "settler" type of colonialism as defined above (e.g. USA, Australia, and New

[65] Daron Acemoglu, Simon Johnson, and James A. Robinson, 2002, "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution," *Quarterly Journal of Economics*, Vol. CXVII (November), pp. 1231–94. A summary of the main findings is in Daron Acemoglu, "Root Causes A historical approach to assessing the role of institutions in economic development" in *Finance and Development*, June 2003.

Zealand) are now very much richer than the erstwhile more prosperous territories of the C16th. The authors find this to be a general proposition across the countries that their study encompassed. Figure 14.1 which uses "urbanisation" as the proxy measure of prosperity provides the detail of this result.

Figure 14.1: Changes in Prosperity: 1500 to 1995 (source: reproduced from Finance and Development – June 2003)



Source: Author.

Note: ARG = Argentina, AUS = Australia, BGD = Bangladesh, BLZ = Belize, BOL = Bolivia, BRA = Brazil, CAN = Canada , CHL = Chile, COL = Colombia, CRI = Costa Rica, DOM = Dominican Republic, DZA = Albania, ECU = Ecuador, EGY = Egypt, GTM = Guatemala, GUY = Guyana, JAM = Jamaica, HKG = Hong Kong SAR, HND = Honduras, HTI = Haiti, IDN = Indonesia, IND = India, LAO = Lao People's Democratic Republic, LKA = Sri Lanka, MAR = Morocco, MEX = Mexico, MYS = Malaysia, NIC = Nicaragua, NZL = New Zealand, PAK = Pakistan, PAN = Panama, PER = Peru, PHL = Philippines, PRY = Paraguay, SGP = Singapore, SLV = El Salvador, TUN = Tunisia , URY = Uruguay, USA = United States, VEN = Venezuela, VNM = Vietnam

[1]Purchasing power parity.

In many countries as was noted earlier, European colonisation played a big part in developing the institutions with which today's developing countries find themselves still living (at least in part). European colonialism made Europeans the most politically powerful group, with the capability to influence institutions far more than any indigenous group was then able to do. Those institutions have proved to be far more supportive of ongoing economic development in those countries where that European power was used to establish reasonably broad-based access to property rights (albeit with the long delays in achieving a settled system as documented by de Soto) and to some degree of generalised influence over autocratic power. The argument that geography is the key determinant of development differences across countries rather loses out at least on the basis of this one paper. Many of the most successful and richest economies of the C16th were located in climatic areas that we would new regard as relatively unfavourable. However, that relative success did not

survive the amendment of institutional capacities at different rates that followed European settlement in the following centuries.

Much of the recent literature endorses the idea that geography works its effects through institutions and that, in itself it is not the dominant force in explaining development differences. A fascinating new angle on this has come recently from the work of Paul Collier on African countries. IN ….ADD

Example 6. Sub-optimal technologies in African Agriculture[66]

As we have already seen property rights and their enforcement (or lack of enforcement) are one of the key institutions of any economy. Robert Bates in various books and papers (1981, 1989, 2001) has analysed agricultural practices in African communities using a property rights perspective. African land use practices, which seem inappropriate and sub-optimal to the Western observer, become much more comprehensible if basic weaknesses in the property rights systems commonly seen in Africa are considered. This can help explain for example the persistently lower crop yields seen in much of African cultivation: a persistent source of frustration and puzzlement to external experts who comment on African agricultural performance. Bates explains that the observed practices of African farmers can be interpreted as a rational "play-safe" response to the economic incentives that the existing (and often weak) property right systems provide. This in turn can help to account for the persistent failures of some traditional societies on that continent to adopt more efficient practices and become more productive.

He explains first that agricultural production in a difficult tropical environment involves inherent risks that pastoralists and peasants have to overcome. In trying to do so the pre-existing institutions and the capital resources available to the farmers both play crucial roles. Growth of production occurs when individuals choose to withhold some resources from present consumption to build capital to enhance future levels of production. But in this process, *institutions* are crucial for dealing with the uncertainties and risks that underlie the delay in consumption (capital formation) and to which inter-temporal decision-making is subjected. Given the weak basis of many famer's defined property rights (which include some of the issues examined by de Soto in more general terms), it is more difficult than it might be to raise credit for working and investment capital (and to deal with unexpected crop failures). Because of this many farmers *rationally* choose those production strategies (i.e. types of cropping patterns, use of old versus newer seeds etc.) that reduce their risks and costs.

Bates' work on Africa can also help to illustrate the more general point about the cultural basis and uniqueness of informal rules and institutions. He notes of the Kikuyu peoples of the White Highlands in Kenya –…*" the critical institutions include the mbari, or kin-based units for the acquisition, development and holding of land; bride-wealth, by which cattle and livestock were exchanged for marriage partners; polygamy; and a system of age grade councils which led to the control of property and authority by those who were genealogically senior"* (pg 14). He goes on to explain how these features combined with an initial abundance of land were shocked

[66] This section depends very heavily upon Evelyn Dietsche, *The Political Economy of Policy Decisions: Why good technical reform designs don't always work*, Oxford Policy Institute, December 2003 (mimeo)

by the external forces of colonial settlement and so provoked feelings of grievance that eventually resulted in demands for political action.[67]

Example 7. The Slow Pace of Rural Reform
Mancur Olson's celebrated 1965 book, *The Logic of Collective Action,* adds to the insights about why rural populations may face different incentives from those commonly assumed in mainstream economics. Among other things his work helps to explains why the rural poor in developing countries may have relatively weak incentives to organise for *the national and systemic* reform of their countries and economies – even if they enjoy formal democrat rights e.g. to vote in national elections. This can be the case even when evidence from other countries (as disseminated perhaps by international aid agencies and eminent academics) indicates that very large development benefits can accrue from the broader national reforms. Instead the pre-existing institutional structure encourages the rural poor in particular to defend only *traditional local claims*. This in turn, argues Olsen inhibits their chances of significant modernisation and so cements for a much longer period of time their relative economic backwardness.

The superior alternatives available to such people might be thought to include the alternative of forming movements that could lobby actively for policies to improve their situation collectively: e.g. improved marketing arrangements for major crops. However, the prospects of this collective alternative being chosen is reduced by the simple fact that there are strong incentives to let other groups in the same country – many of whom may be disconnected from each other and maybe ethnically disparate - bear the costs of lobbying in the hope that they themselves will ultimately receive "for free" the benefits the others have fought to achieve. In other words there is a pervasive tendency to "free-ride" when it comes to many of the economic issues of national significance. By contrast, at the narrow local level which is often characterised by more homogenous kinship relationship, this perverse incentive to free-ride is less strong because of frequent iterative interactions between local people and the greater ease of assessing the reputations and reliability of near neighbours.

Olson concludes that the costs to organise the bigger systemic lobbies for change helps to account for the relative attractiveness of narrower appeals, for instance along ethnic lines. *This can often be at the expense of pursuing common interests more broadly that would leave everybody better off*. In extreme cases which are actually not that unusual in poorer societies, this strong preference for the local action over the more helpful national action, can be a source of tensions between, say, ethnic neighbours and may be a factor causing open civil conflict. Note, by way of contemporary example, the ongoing problems, even the impossibility of achieving any sense of unified national purpose among the many disparate tribal factions of today's Afghanistan! It has become common in recent years for development economist to recognise conflict as a major reason for delayed development in many countries. But even in the absence of *open* conflict the incentive effects to favour the local over the general can represent an important explanation of missed development opportunities.

14.5 Some Empirical Applications
As the examples above illustrate, the defining ideas about institutions that come from pioneering political economic historians such as Douglass North provide us with a huge amount of specific historical flesh to overlay across the simplified and pared-

[67] Robert H. Bates, *Beyond the Miracle of the Market*, Cambridge University Press, 1989

down models and examples used in much of mainstream economics.[68] But as those examples also suggest, the sheer complexity of the institutional detail can prove to be a major challenge to the normal scientific, and especially the quantitative methods used routinely in the subject. Many of the authors listed earlier have found ingenious ways to bring quantitative rigour to their work and with great success. But readers may note that in the various examples of the previous section there is little or no reference to any statistical measures of "good institutions". Acemoglu and most of the other leading authors of the subject have chosen to differentiate between "good" and less good institutions in a mainly *qualitative* manner. So, for example, the settler communities were "better" than the extractive communities because they created institutions that had certain characteristics that we assume to be "good". In particular they were (i) helpful to the economic interests of a broad subset of the population and (ii) able to maintain reasonable countervailing strength against autocratic and oppressive government.

However, an increasing body of literature has tried to do something which is frankly almost impossible to do properly – given the inherent complexity of the institutional realities of the real world - namely to *measure* the quality of a country's institutions, and then to use these measures to try to address a number of empirical questions about the importance of institutions in development. To be fair, most of this work has had a narrow scope and has used measures relating to a small number of indicators of the quality of a country's *public institutions*. So they are really indicators of good (public sector) *governance* rather than good institutions in more general terms. On the whole the better known indicators have *not* aspired to *measure* and score the quality of the broader institutional arrangements of a country – how people work together in households, communities, kinship and ethnic groups, trades unions, NGOs etc.

Particularly important in the research on public sector institutions has been the pioneering work of Daniel Kaufmann and various of his colleagues – much of this done initially at the World Bank.[69] Box 14.5 provides a quick summary of the measured variables that Kaufmann's team came up with and that, since 1996 have been routinely published for most countries by the Bank.[70]

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[68] As Paul Krugman recently put it *"economists have long used small-scale examples to shed light on big questions ever since Adam Smith saw the roots of economic progress in a pin factory, and they're right to do so."* How Did Economists get it so Wrong," New York Times , September 2nd 2009

[69] For example, see Kaufmann, Daniel, Aart Kraay, and Pablo Zoido-Lobatón, 1999a, "*Aggregating Governance Indicators*," World Bank Policy Research WorkingPaper No. 2195 (Washington: World Bank), and
Kaufmann, Daniel, Aart Kraay, and Pablo Zoido-Lobatón —, 1999b, "*Governance Matters*," World Bank Policy Research Working Paper No. 2196 (Washington: World Bank).

[70] Other similar measures of the quality of public institutions are available. They include the 'State Fragility Index' that compares the effectiveness and legitimacy of political and economic systems across the world . See www.systemicpeace.org/ . The Center for Systemic Peace is affiliated with the Center for Global Policy at George Mason University, USA.

Box 14.5 Measures of the Institutional Quality of Governance

Six composite Governance Indicators *are now regularly estimated and published by the World Bank. Together, they provide a quantification of the quality of a country's governance. These indicators are compiled on the basis of grouping several hundred individual variables measuring perceptions of governance drawn from 25 separate data sources and constructed by 18 different organizations into six governance dimensions:*

- **Voice and Accountability**: the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, association, and the press;
- **Political Stability and Absence of Violence**: the likelihood that the government will be destabilized by unconstitutional or violent means, including terrorism;
- **Government Effectiveness**: the quality of public services, the capacity of the civil service and its independence from political pressures; the quality of policy formulation;
- **Regulatory Quality**: the ability of the government to provide sound policies and regulations that enable and promote private sector development;
- **Rule of Law**: the extent to which agents have confidence in and abide by the rules of society, including the quality of property rights, the police, and the courts, as well as the risk of crime; and,
- **Control of Corruption**: the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as elite 'capture' of the state.

These six indicators have been made public by the World Bank for all years since 1996. The country data for these indicators can be accessed via the World Bank website (www.worldbank.org) and can be found by searching for the topic 'Governance Matters'. The detailed information lying behind each of these six indicators is presented in a variety of forms (including times series in chart or table format) and can be accessed through:

http://info.worldbank.org/governance/wgi/index.asp.

The most common questions that are asked using data such as these are:

- What is the link between the quality of a country's institutions and its economic performance in terms of (i) the level of its GDP per capita (ii) its growth rate and (iii) other aspects of performance?

- Do the data help us to understand whether good performance is *caused* by good institutions or whether the direction of causation is the other way round?

Answers based on in-depth econometric articles have been provided in number of papers in the past few years. We here refer in detail to one relatively recent paper that is a good example of the methodologies that are typically employed and the results that are obtained This is a paper by Maitland MacFarlan, Hali Edison, and Nicola Spatafora which appeared as Chapter 3 in the IMF's *World Economic Outlook*

of 2003. [71] Their research uses data for 94 countries of which 25 are advanced countries and the other 69 are in various stages of development. The data spans the period from 1960 to 1998. The paper first charts some simple correlations between levels of GDP per capita and both the aggregate and the components of the Kaufmann measure of institutional quality as summarised in Box 14.4 above. It then proceeds to look at formal regressions that seek to provide explanations of performance (both levels of GDP per capita and GDP growth[72]).

Correlation Results. The simple correlations are pretty conclusive. These show a clear relationship between, for example, GDP per capita and all the Kaufmann, and some other indicators of institutional quality. Table 14.1 below shows the simple table of correlation coefficients. The "aggregate governance measure" referred to is the aggregation of Kaufmann's six separate measures. It is noted that this is strongly correlated with both the *level* and the *rate of growth* of GDP per capita. Two other measures of institutional quality utilised by the authors – property rights and constraints on executive power – are also significantly highly correlated with both measures of economic performance: GDP and the growth of GDP. When the correlations are done separately for the various individual measures of the quality of institutions then broadly similar results are derived. As the authors themselves put it … "*On the whole,, high-income countries tend to have relatively strong institutions, whatever measure is used; conversely, institutions tend to be consistently weaker in low-income countries" (pg 98*

Table 14.1: Correlations of Performance against Institutions[73]

Variable	GDP per Capita[2]	Growth Rate[3]
GDP per capita[2]	1.00	
Growth rate[3]	0.65	1.00
Growth volatility[4]	–0.53	–0.36
Aggregate governance measure[5]	0.86	0.59
Property rights	0.76	0.54
Constraint on power of executive	0.72	0.45

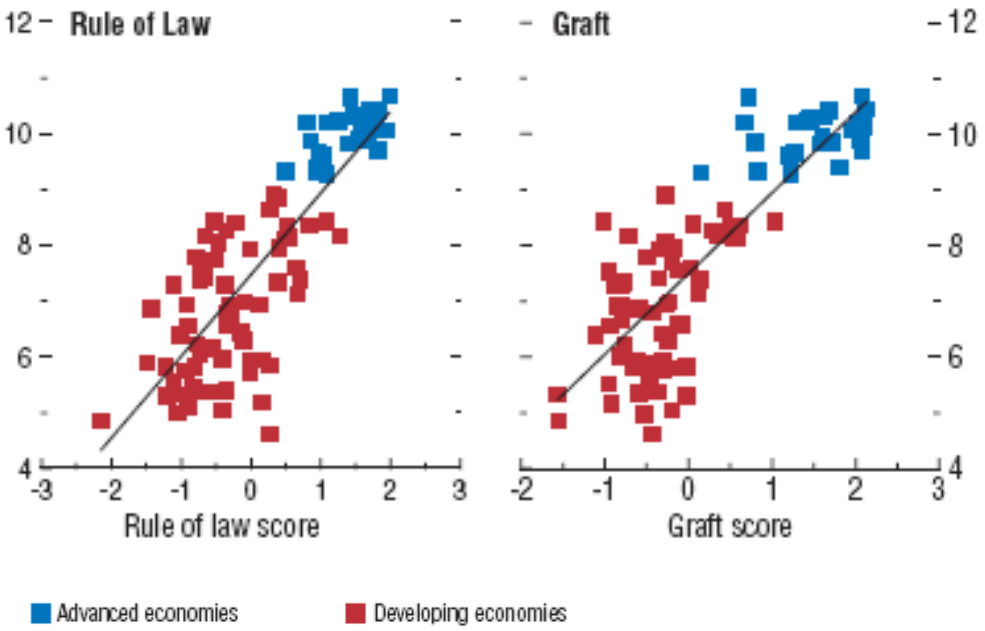
Figure 14.2 below provides a useful scatter diagram of a few of these results using just two of Kaufmann's aggregate governance indicators. This shows a strong but far from perfect association which is replicated in varying degrees across the other governance measures that are not shown here. Notice in particular that countries with similar lack-lustre scores in terms of corruption (here referred to as "graft") achieve very significantly different performances in terms of their GDP levels. Further, this seems to be as true in some advanced economies as in the developing countries. We will come back to the significance of this statistical fact at a later stage.

[71] A shorter summary version was published in *Finance and Development*, June 2003 under the authorship of Hali Edison,

[72] In fact the paper also looks at a third measure of performance namely the volatility of GDP growth. But we ignore that in this summary.

[73] 1. All correlations are significant at the 5 percent level
2. Real GDP per capita is in U.S. dollars in 1995.
3. This is the average annual growth rate of real GDP per capita for the period 1960–98.
4 This is the standard deviation of annual growth rate of real GDP per capita for 1960–98.

Figure 14.2 : GDP Levels *(in logs on the vertical axis)* and Institutions across countries



Regression Results: In the regression analysis in this and similar studies there are two main complicating factors that always have to be resolved. First, it is necessary to take account of those factors (variables) *in addition to* institutions that might affect the two performance variables (i.e. GDP levels and GDP growth rates - the dependent variables in the regressions). Second, since the main interest is to assess the impact of institutions on the performance of the different economies (and not the reverse causation) it is necessary to adopt techniques that can control for the potential endogenety of the institution variable (or variables). Failure to do this can lead to a biased estimate of the regression coefficient on the variable in which we are mainly interested (institutions in this case) because that estimator can be correlated with the error term in the regression (it will be "endogenous" in technical terms).

Maitland et.al. resolve the first of these problems by incorporating six exogenous ***policy*** variables each of which can credibly be argued to have an influence on GDP levels and GDP growth rates. These are:

- *Inflation*. This is to indicate the consistency or otherwise of monetary policy.
- *Exchange rate overvaluation.* This is to capture a possibly poor mix of macroeconomic policies and associated macroeconomic imbalances in the manner described more fully in Part 4 of this book.
- *Trade openness*. This is used to indicate the degree of goods market integration with the forces of international competition
- *Government size* – a crude proxy for "irresponsible" fiscal policy.

- *Financial development*. This is used to indicate the depth of the domestic financial market. It is measured in a fairly conventional ways as the ratio of private credit to GDP.

- *Capital account openness*. This is intended to indicate the degree of financial market integration with the global economy.

The second problem of potential "endogeneity" is resolved by also incorporating certain ***instrumental*** variables (akin to the mortality rates used in Acemoglu et al.). These instruments need to have some likely effect on the institutions variable but not directly on the endogenous variables of the main equation. MacFarlan et al. chose to make use of a mix of geographical and historical variables for this purpose[74]. They make it clear that some of these might be construed to be additional influences on the main performance variables (i.e. GDP levels and growth rates). But they use them in their own analysis primarily as instruments for the institutional variables in which they are mainly interested. See Box 14.7 for more information on instrumental variables.

The formal equations of their models are:

$$X_i = a + b[Institutions] + c[Policy] + d[Z] + u \ldots\ldots\ldots \quad (14.1)$$

$$Institutions = f[Z\} + e \ldots\ldots\ldots \quad (14.2)$$

where

Xi is the performance outcome of interest (i.e. on GDP levels and growth).

Institutions is a measure of institutional development;

Policy represents measures of the macroeconomic policies listed above;

Z is a set of exogenous control variables, including geographic variables capturing a country's basic endowments.

The parameters *b* and *c* capture the effects of institutions and macroeconomic policy on economic performance.

Box 14.6

BOX MATERIAL TO BE ADDED

The equations are estimated by a process of two stage least squares and the results are summarised in Table 14.2 below for the case where it is the level of GDP per

[74] Such as country locations indicated by its latitude and ethnographic diversity.

capita which is being explained. The statistically significant regression coefficients are the ones shown in **bold.** The results that emerge here have largely been replicated also in other papers[75]. They show that institutions if considered on their own (i.e. without including any of the policy variables) have a strong and statistically significant influence as an explanation of differences in levels of GDP across countries. Further when efforts are made also to control for policy differences across countries (by adding in at least some of the six policy variables) then the impact of institutions on prosperity remains high and statistically significant: the policy variables in this second set of regressions are not significant. Similar strong results are found for equations in which the growth rate of GDP is the dependent (performance) variable.

Table 14.2 Institutional and Policy Effects on Levels of GDP per capita

	Institutions Only			Policies and Institutions		
Aggregate governance measure[2]	**2.09**	. . .	. . .	**2.04**	. . .	. . .
Property rights[3]	. . .	**1.85**	. . .	. . .	**1.5**	. . .
Constraints on executive power[4]	. . .	. . .	**1.10**	. . .	. . .	**1.2**
Inflation[5]	. . .	. . .	. . .	0.65	0.34	0.91
Trade openness[6]	. . .	. . .	. . .	0.21	0.96	–0.023
Exchange rate overvaluation[7]	. . .	. . .	. . .	–0.0002	0.003	0.004
R^2	0.73	0.44	0.20	0.74	0.60	0.14
Number of observations	93	91	92	93	91	92

[1]The dependent variable is the logarithm of real GDP per capita in 1995 in U.S. dollars at market rates. The regressions are estimated using two-stage least squares with latitude and ethnolinguistic diversity as instruments.

It is very tempting – but also potentially misleading - to use results such as these to speculate about the potential gains to developing countries were they to achieve improved institutions. It is potentially misleading because as we shall see in a moment, it really is a monumentally difficult task to use policy levers to engineer "better" institutions. Nonetheless since we have some useful statistical results in front of us, let us follow the example of Maitland MacFarlan et al and examine some of the possible consequence of better institutions in poorer countries assuming that these could ever be achieved. This is done in Box 14.6 below.

14.6 Government and Donors as Policy-Changing Institutions

The second part of the Acemoglu et al. quotation with which this chapter begins warns us of the difficulties of using current economic knowledge to try to re-shape institutions in better ways. This section of the chapter attempts to explain these reservations by looking explicitly at "government" (in all its manifestations) *as an institution*. This approach differs radically from the standard neo-classical approach in which government is *assumed* to be a unified source of objective assessment and policy - unaffected by its own composition, attitudes, pressures, temptations, biases and internal divisions. This analysis has a critical bearing on the standard assumption – of donors, aid agencies and the public at large - that governments can invariably

[75] See for example, Easterly, William and Ross Levine, Tropics, Germs, and Crops: How Endowments Influence Economic Development," *Journal of Monetary Economics*, Vol. 50 (January), pp. 3–39. (2003) and
Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi, 2002, "Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development," *IMF Working Paper* 02/189, (Washington: International Monetary Fund). (2002).

wield the power to implement change once the technical case for change has been well developed.

The analysis should also be cross-referenced to our analysis of the work of John Rawls in Chapter 12 about the inherent problems of pursuing "just" solutions to problems. We noted there that…" *Governments in the real world are made up of real people with different degrees of competence and public conscience. It would indeed be wonderful but it is never possible in practice for real world governments (politicians and civil servants) to act in ignorance of knowledge of their own personal circumstances. Rawl's "veil of ignorance" is simply not available to them. "*

A Brief Digression back to Growth Models.
We can also make a link back to the growth models in Part 2. Specifically we derived in Chapter 8 the following statement for the growth path of a per capita output in an economy in which the government provision of public goods and the taxation to finance these was explicitly taken account of.

$$\gamma = s(1-\tau)A\left[\tau(1-\phi)\right]^{\frac{1-\beta}{\beta}} - \delta \qquad (14.3)$$

Comparing this with the simple AK model, we saw that the "efficiency term" or "A" is now influenced very explicitly by the size of government but through two different channels.

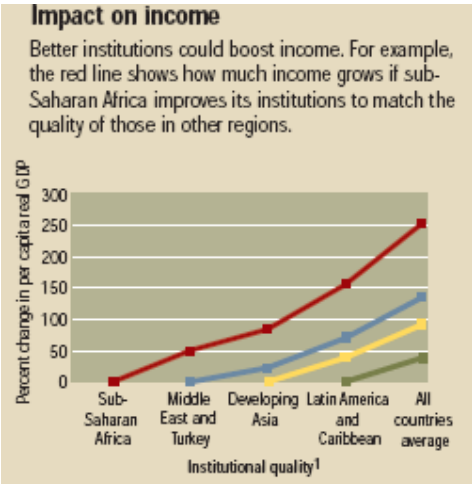
(i) First, a higher tax rate (as denoted by "τ") reduces the disposable income and hence the amounts of saving and investment for each level of output.

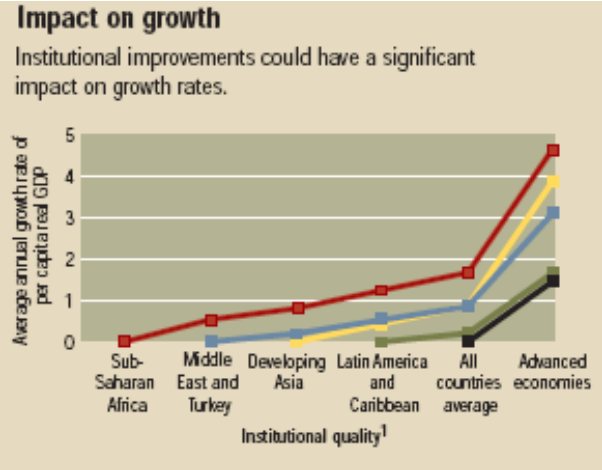
(ii) Second, a higher provision of public services (as indicated by the term in the square bracket) raises the productivity of each unit of private investment .

Equation 14.3 also shows that a rise in government profligacy or inefficiency, - measured by the term □□□□presented in the equation as in effect a disappearance of part of the tax revenues raised) - is equivalent to a *decline* in the private saving rate. Thus this reduces the rate of economic growth. It follows that government reforms that can reduce profligacy and so improve efficiency will also provide a low-cost route to improved growth,

Box 14.7: The Gains from Giving Rich Country Institutions to Poorer Countries *(Source: Hali Edison, Finance & Development, June 2003)*

Results from the MacFarlan et al study used in a later paper by Hali Edison are shown below. The first figure indicates the hypothetical impact on the levels of incomes in the regions listed assuming that they could somehow acquire the institutional quality and depth of various other regions of the world. "all countries" refers to the sample of developing countries from the study as a whole. The second figure makes the same comparisons but for rates of growth rather than income levels.





The results are dramatic. Edison notes that if, for example, Sub-Saharan Africa could somehow increase its institutional quality to the level already seen in Developing Asia, it would enjoy an approximately 80% increase in its per capita income seeing this rise to some $1400 from the existing level at the time of the study of $800. (see the red line plot). A move to the institutional quality seen on average in "all countries" would effect an increase for Sub-Saharan Africa of 250%. Similarly the second figure shows that those same two thought experiments could increase the annual average growth rate of Sub-Saharan Africa by about 0.9% and 1.7% respectively: the latter being a huge increase that could radically alter the economic situation of the region. If the Africa region could somehow attain institutions at the standard of the advanced economies then something like a 4.8% gain in annual growth would seem to be on the cards. Unfortunately these are indeed only thought experiments. The challenge as in the de Soto diagnosis is to work out exactly HOW one would make the huge institutional changes that are implied.

Why are different types of government so different in terms of their ability to play this benign role in growth and limit the negative profligacy aspects shown in the growth model? The reasons why governmental institutions may differ across countries are various. Differences may be present because of different formal methods of collective decision-making. Democratically-based societies clearly differ from autocratic societies (including those led by dictatorships), possibly because of their differing economic institutions (security of property rights, entry barriers, the set of contracts available and to which sub-set of businessmen). They may also differ because any given set of formal institutions are expected to, and do, function differently. For example, two formal democracies based on some version of the Westminster model may still function differently because the distribution of political power lies with different groups in each case and therefore the decisions about any given problem can be divergent. Equally, in one case the democratic order may be perceived to be

fully secure while in another it is perceived to be easily replaced by something else. This too can affect key economic decisions.

In order first to demonstrate the potential indeterminacy of government decision-making it is helpful to look next at a simple neo-classical model of government proposed by Robert Bates. We will quickly see how this political-economy view adds rapidly to the complexities we saw in the earlier growth models

The Bates Framework

Bates assumes just *two* policy objectives. These could be anything in which government normally get involved - but he focuses on (i) the provision of social services and (ii) the country's state of military preparedness. The two axes of Figure 14.3 below shows these two objectives of government policy. Any point between the axes represents some combination of the two policy outputs (it may be helpful for the reader to interpret this space as representing different amounts of budget funds committed to each of the two objectives). Bates also assumes that there are *three* decision-makers who have quite different policy preferences (perhaps associated with the different factions that supported their election. These are labelled A, B, and C.

Using the spatial framework of Figure 14.3, we can order the possible policy combinations in accord with the three sets of preferences. The "ideal" point for each appears as a point bearing the actor's identifying label – A, B or C. This point represents the actor's most preferred combination of social services and military preparedness. So for example, B is a social reformer who wants lots of expenditure on social services but not much on the military. C is a conservative who want to restrict expenditure on both. A sits in the middle of this argument. The further away is any *actual* combination of the two policies from an actor's ideal point, the lower the utility he or she will derive from the outcome. So for example the social reformer C will accept some small increases in military expenditure in return for larger gains in social spending. C the conservative will accept some increase in spending on one or other of the services as long as the other expenditure is cut. Points of equal loss (disappointment) appear as indifference curves in the diagram: these lie equidistant from the ideal points of each. The diagram shows only one of the family of indifference curves of each player. Points that are located *between* a given indifference curve and the ideal point of that same decision maker are preferred to any point on his/her indifference curve.

The triangle that is formed by joining up the three ideal points of the three policy-makers defines an area that shows all the "efficient" policies. Specifically, no change in any policy combination *within* the triangle, can make any single actor better off (i.e. move the policy choice closer to one actor's ideal point) without making another actor worse off. In this sense, the triangle defines the Pareto "efficient" set of policy combinations. Rational policy combinations – assuming that the three policy-makers are good representatives of their society - should therefore fall within this triangle. We can think of the area of the triangle as defining "good policy." Further, IF the three individual's were to be preferences-aggregated into some form of collective outcome by competitive markets, then the actual policy choices made would fall within the triangle, This is what is often assumed implicitly in mainstream economic analysis – the differing views of different players are combined in an amicable way – but unspecified manner - to deliver a "good" as well as stable policy outcome.

However, Bates shows that the introduction of even half-way realistic political realities quickly changes this rather benign result. Specifically, if we introduce *majority rule* (any 2 of the players can out-vote the third) and if position "X" indicates

the present policy mix (or status quo), then multiple political equilibria are possible. Now the coalitions of any two players will determine *different* equilbria depending on which 2 of the 3 players join that coalition.

For example points 1, 2 and 3 on the diagram all represent possible outcomes (combinations of the two policies) that are all efficient and that could result from a 2:1 vote in their favour. But we note too by assessing the distance of these points from the three indifference curves that each point would be the first choice outcome of a different policy-maker (for example A prefers outcome 2 to 1 which in turn is preferable to 3. But B would vote first for outcome 3, followed by 2 followed by 1). So when the voting starts it is by no means obvious which of the three outcomes is most likely to be chosen. Indeed as Bates points out, the collective policy choice between the three possible outcomes is indeterminate – the simple institutional device of majority voting will not enable the three policy makers to come to an agreed decision about where to move from the *status quo*.

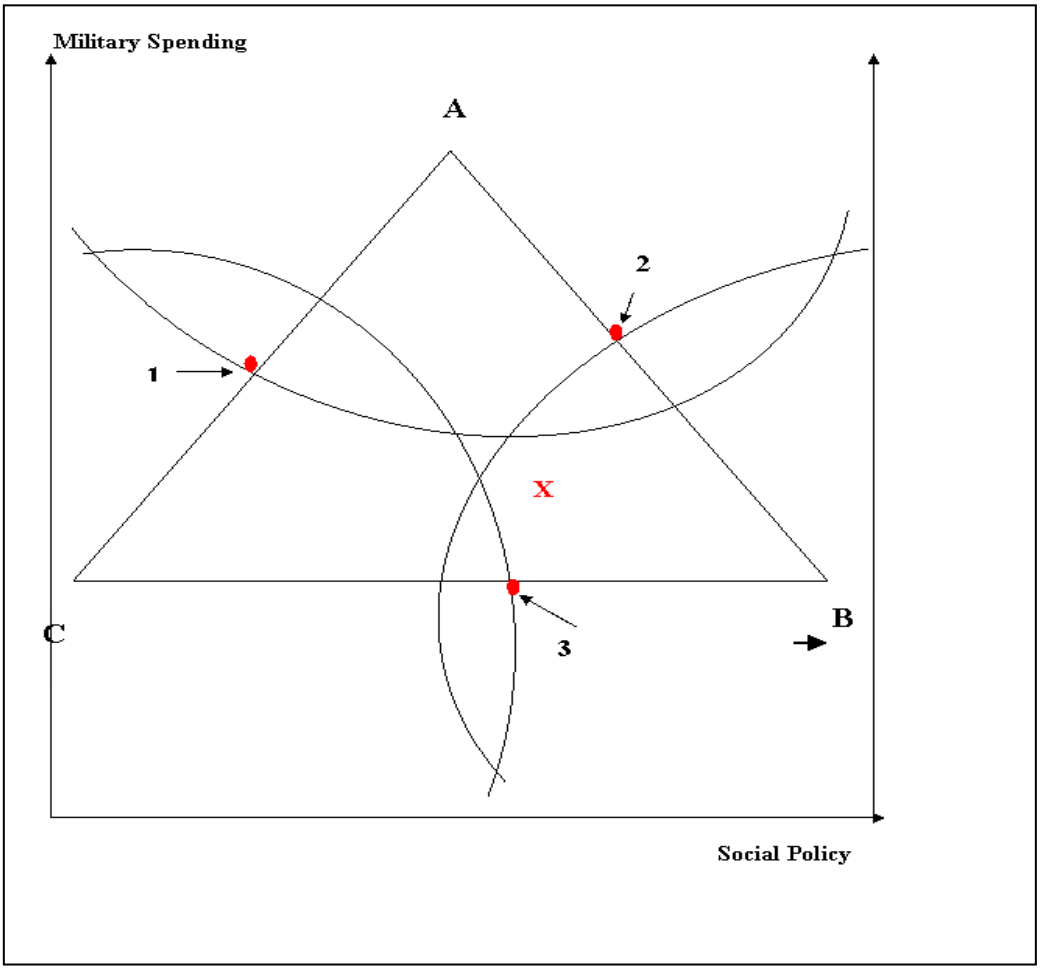
Further, since all the possible points located inside the three "petal" shapes that join the three indifference curves are all potential policy outcomes that would be favoured (or not too badly disfavoured) by all three policy-makers, there are an extremely large number of combinations between which they need in theory to decide. But with simple majority voting alone, our three decision-makers will fail to do so. Political outcomes will thus remain highly indeterminate and the policy environment unstable. Bates notes that this result holds even though each of the three policy-makers is fully rational. One outcome in this situation could of course be one of inertia – failing to agree on a change they all tacitly agree to do nothing! But this too seems unlikely since the *status quo* position "X" in which there is a quite a lot of social welfare expenditure but not much for the military, is clearly very unsatisfactory to both C and A.

Bates first proposition from this type of analysis is that real world political choices among economic policies require more structure (formal institutional arrangements) than this simple voting arrangement as just defined. Bates notes that the range of possible outcome might be reduced by a system whereby policy makers were asked, for example, first to make a choice between any 2 of the 3 outcomes indicated in Figure 14.3 (e.g. 2 versus 1 with 3 taken out of the equation) and then squared the winning policy off in a voting contest between the other possible outcome. The reader can check that this would result in determinacy but also in different outcomes depending on which of the pairs were chosen to enter this more restricted voting contest. This in turn could only happen if the parties concerned had some basis for also agreeing and accepting the hierarchy of choice associated with those restrictions. Sophisticated political actors can be expected to try to seek to alter the political structures to their advantage. Over time they are likely in practice to evolve arrangements such as the one exampled that do indeed result in determinate outcomes on any specific issue. Further once these somewhat deeper structures have been shown to work for a while, and on some issues, they may become institutionalised – to address more issues - in the sense that no party will readily endanger the political stability achieved by questioning the established custom and practice. Through this type of dynamic, political life can carry on but not necessarily in a manner that delivers the first choice outcomes of any of the protagonists.

Bates (1999) uses his own analysis of how these compromises in politics emerge and can then perpetuate themselves to explain the perpetuation of policies. He uses as his main example the policies towards the coffee industry in Columbia that were maintained for many decades by both right wing and left wing political parties. Specifically, he argues that once credible policies had led to significant investments

(in this case in coffee growing and processing) the investing parties become additional lobbies that were able to mobilise, in effect political capital to lobby against any reversal of policy. So even policy-makers who initially were unenthusiastic about the policies in question (prices, taxation and an exchange rate all favourable to coffee exports) became increasingly locked into support of those policies by the political capital that they newly created. In this way an initially unstable political quasi-equilibrium can become progressively more stable.

Figure 14.3: Policy-Choices when Policy-Makers are not Unified *(Source: Robert Bates, 1999)*



What does this say about technocratic policy advice?
This is an encouraging story in one sense but also rather discouraging in terms of the role that it suggests for technocratic solutions to economic problems. In the years since 1980 there has been a huge technical economics literature - including some that we have reviewed in the earlier chapters of Part 3 - that purports to define more clearly what are the "good policies" for development (we have much more to say about that in part 4). These might for example include more liberal pricing arrangements internally, more liberal trading policies externally, greater macroeconomic and prices stability, more independence for central banks etc. etc. Irrespective of the technical quality of this analysis and its results *how might these "better" policies get inserted into the political process?*

Bates answer in brief is that they will get actioned only if they can somehow infiltrate one or other of the structures of political decision-making that already enjoy some institutional acceptance in the country concerned. For example in the structured process of voting that we briefly explained above (the alternative to simple majority voting), the new and better technical policies would need to be inserted by the chief executive (or some other agenda-setter) into the sequence of decision-making at a point where they were most likely to prevail. Alternatively that agenda setter might engineer an arrangement of veto power such, for example as one where the ministry of finance or the central bank must sign off on any new proposal for it to become policy: in other words he empowers those agencies to somehow stand-in for the political process. But why on earth should he or she do this given that they too have to address the political realities and pressures from established political arrangements? The answer Bates contends is because he or she might find the championing of the new technocrat-determined policies to be politically rewarding. So, for example, if those factions who make, or break, the political prospects of the agenda-setter do indeed benefit from the new "good" policies such as price stability, more liberal prices, and greater openness to international markets, then the agenda-setter by structuring the policy process so as to privilege the position of technocrats, will also gain his own political advantage. Failing that he has precious little reason to support the new policies. As Bates himself concludes*: "Political accountability to a constituency that can penalize or reward the political leadership thus underlies both the willingness to delegate power to the technocrats and the effectiveness of economic polices."*

Some Selected Examples

The next few paragraphs put some additional substance on these conceptual arguments about the possible indeterminacy or fragility of government policy processes. The basic problem is that even if there is a very compelling analysis or evidence of dysfunctionality in an existing political system or the component policies of a particular country – e.g. present day Zimbabwe or Afghanistan- theories of the types advanced by Bates warn us that there is no obviously successful path by which interested parties might achieve improvement. This is because there will invariably be strong *de jure* or *de facto* political forces at work that have established and now sustain the existing situation – dysfunctional as it may be. Little purpose may be served by attacking the policies which are merely the manifestation of that system. Far better, some argue to look instead at trying to understand better and then the try to re-shape the forces that keep the bad institutions and policies in place. It goes without saying that this approach somewhat downgrades the role of the economist and upgrades the relative role of the political scientist!

Example 1: Latin America and the 1980s Debt Crisis.

After the Mexican debt default of 1981, most of the heavily indebted countries of Latin America found that the extensive international commercial banks borrowing that had sustained their economies thorough the late 1970s were no longer available. An extended and so-called "lost decade" of over-indebtedness, austerity and adjustment followed and is discussed more fully in Part 4. As noted by Acemoglu and Robinson (2008), during this period Latin American countries abandoned many aspects of the economic institutions that had been prevalent for lengthy periods – some since the 1930s and 1940s. In particular, most countries de-regulated their external trade regimes, cut external tariffs, privatized many state industries, and once again de-

regulated their financial systems.[76] How did this radical change political and economic policy change come about?

The easy answer is that so much dramatic change was possible so relatively quickly and in so many Latin American countries because the severity of the crises at that time forced the re-alignment of previously entrenched positions and coalitions of power brokers. The agenda-setters of this time did face a tremendous pressure to accept reforms that were designed in significant measure by external agencies such as the World Bank and the IMF who were providing the emergency funding that all countries then needed. But mere recourse to the crisis argument is indeed too glib an answer. As we saw above, the political agenda-setters still need to consult their own political interests even if faced by some new pressures for change. Much of the political economy literature on these events as summarised by Acemoglu and Robinson notes how the political power-brokers were able to use the "neo-liberal" agenda to maintain their traditional support but did so using a different package of measures/incentives. So for example, the "enforced" measures of privatisation could be used by Alberto Fujimoroi (who became president of Peru in July 1990 after a period of intense civil strife involving the rebel movement *el Sendero Luminoso)* to create new forms of rent for his traditional supporters while at the same time helping them further by reducing competition in certain key sectors.

In Argentina, although the relatively easy surrender of the Peronist forces to the new-liberal reforms seems at first glance to have been surprising, this too can be explained in similar terms. Acemoglu and Robinson note that the Peronist party had traditionally engaged in redistribution of incomes and rents using a variety of instruments including the rationing of scarce foreign exchange and the distribution of rents via import and industrial licenses. The Washington – inspired policy reforms of the 1990s meant that these old instruments could no longer be used to buy favours. However, as in Peru the regime found ways to compensate its traditional supporters for some deregulation of their activities by awarding them benefits from the privatization process.

Overall, although there were changes in the feasible instruments through which the various regimes pursued clientelism, the political incentive environment, it has been suggested remained remarkably stable over time. Hence although there was the appearance of reform with liberal economic policies playing a greater role than in the past, there may in fact have been far less real change in the incentive systems that the prevailing political *status quo* supported, and hence in economic performance.

Example 2: Incrementalism in Aid Policy

Aid agencies like national governments make decisions based on a variety of different (and possibly) conflicting objectives with different decision-makers favouring a variety of different strategies. The potential indeterminancy of their decisions can be represented in a similar stylised manner to the social policy versus military preparedness of the Bates model discussed above. But faced with this problem these agencies will over time have evolved their own additional internal structures for decision-taking to ensure that they do in fact attain coherent decisions most of the time. However, Paul Collier and his colleagues at Oxford University have noted that these decision-making structures – designed to sustain the political equilibria within the agencies – can be counter-productive in reaching those decisions that could

[76] The reforms mirrored in some respects similar partial reforms attempted briefly by Argentina, Chile and Uruguay in the period 1971-76. They were a part of the so-called Washington Consensus measures seen in many countries after 1980.

really make the difference in solving the problems of development[77] (in Collier's example the problems in particularly of the world' poorest billion persons)[78]. He addresses this idea in particular to the proposition that too much aid can make it more difficult for low-income countries to break into the broader export markets upon which their long term growth may well depend. [79]

Let us assume that the best way for aid agencies to help the bottom billion people is indeed to engineer a country-by-country big push focused narrowly on removing bottlenecks to higher exports (replicating in a way what South Korea did as a country in the 1960s). Collier notes that such as approach – even if it was undoubtedly the correct technocratic one – would simply break too many rules of the aid agencies for it to be accepted by their internal decision-taking processes. The rules he refers to in this context are in particular, rules of "fair shares". Of these the most important is likely to be fair shares among internal agency interests. ……..…"*Every aid agency is divided into fiefdoms – rural development, education, health and so forth. Trying to get an aid agency to focus its resources on an export growth strategy runs foul of these interests, for if there is more money to be spent on the country, you can be absolutely sure that the rural development group will lobby for its share of the spending whether that is important for export growth or not, and the same is true of the education group, the health group, and all the others. In bureaucracies, spending means jobs, promotions, success; it is how, in practice staff measure themselves. So the present aid system is designed for incrementalism – a bit more budget here, a bit more budget there – and not for structural change. Yet we know that incrementalism is doomed because of diminishing returns to aid. Just doing more of the same is likely to yield a pretty modest payoff,"* (pg 122).

Anyone familiar with fashions in aid policy over an extended period such as the authors of this book will see echoes of this in the manner in which many of the new fashions quickly get their health, their education, their social development and their other manifestations driven by the established vested interests in the main agencies. This happened when "poverty" became the main rallying cry for aid communities in the early part of this millennium. It is happening again now that "climate change" has taken a more leading role in aid discussions.

Example 3: The Iron Law of Oligarchy and Regime Change

Acemoglu and Robinson, 2007 cite the hypothesis from sociology that states, in its more extreme form, that it is never possible to have real change in society, because when new groups mobilize or are created in the process of socioeconomic change, they simply replace pre-existing elites and groups and behave in qualitatively similar ways [80]. So the new African civil servants that replaced the British in Africa in the 1960s quickly took on many of the trappings and perquisites of their predecessors. Revolutionaries who overthrow colonial or aristocratic leaders (e.g. Mengistu replacing Haile Selaissie in Ethiopia and Patrice Lumumba replacing King Leopold in the Congo) often seem to replicate many of the worst behaviours of their

[77] This is our own formulation of the actual problem as posed by Collier – he uses a rather different was to explain the point.

[78] Their work on this and many other issues is conveniently summarised in Paul Collier, *The Bottom Billion. Why the Poorest Countries are Failing and What Can be Done About It*. Oxford University Press, 2007

[79] This argument in turn relies on the proposition that aid can have "Dutch-disease" type effects similar to those associated with the exploitation of large oil or gas reserves. This issue was highly topical in 2005 and largely because of a sharp attack on aid for these reasons by a former Chief Economist of the IMF namely Raghuram Rajan.

[80] Acemoglu, Daron and and James A. Robinson 2007a. "Persistence of Power, Elites and Institutions." *American Economic Review*.

predecessors. Much post-colonial regime-change in Africa has seen a similar pattern. The successions of military dictators in Ghana in the 1970s, the replacement after 27 years of one-party rule of Kenneth Kaunda by Frederick Chilupa in Zambia in 1991: in both cases broadly similar levels of corruption and mis-rule continued even after the changeovers.

Acemoglu and Robinson attempt to explain such patterns by analysing the case of a society that has a very predatory ruler or ruling clique that is willing to use repression and violence and bend all the formal rules to stay in power. How can citizens remove such a ruler? The answer is that it may be necessary to "fight fire with fire" and support a challenger who can be as unscrupulous as the incumbent regime. This they suggest could be the reason why it is so commonly the case that the successor regime is equally willing to use repression and generally "bend the formal rules" in order that they too can stay in power. This is a somewhat depressing conclusion for reformers – especially those from abroad who often look to a change of leadership as the forerunner of fundamental change. It suggests that even if new and better formal rules are notionally brought in by the new regime – perhaps as a condition for obtaining increased donor support – these new rules may in practice be ignored. Once again the real world may unfortunately be a bit more complex than we would like it to be with successful new leaders needing to be highly cognisant of the "requirements" to buy-off those interest groups that they need to keep them in power, willing to bend formal rules and above all willing to use repressive methods to silence at least some of those who oppose them.

14.7 Deducing "Good" Policies from Empirical Evidence

The discussion above has focused on the practical realities of policy-making and policy change given the differing factions and interest groups that together create or need to endorse those policies. We said little there about where ideas for the good policies actually come from or what the "correct" technical policies actually are. This is a big issue that is obvious very specific to whatever topics happen to be under consideration – we look at some examples in Part 5. Here we have the modest aim of noting some of the pitfalls in deducing the nature of the correct policies from empirical evidence.

With the explosion of available data for more countries, longer time periods and on more topics, econometric approaches to analysing all aspects of development are now the bread and butter of the academic researcher into problems of development. These are statistical methodologies. Their results are never deterministic but always stochastic. By this we mean that econometric relationships always involve an error term; and the fit of the data to any maintained hypothesis of the econometric experiment is never perfect. However, it is easy for the research economist to use his or her results to present results that appear to give a strong steer on policy choices (i.e. because the underlying regression coefficient is highly significant) but without noting the statistical possibility from his or her own results, that may represent a caveat to the policy conclusion.

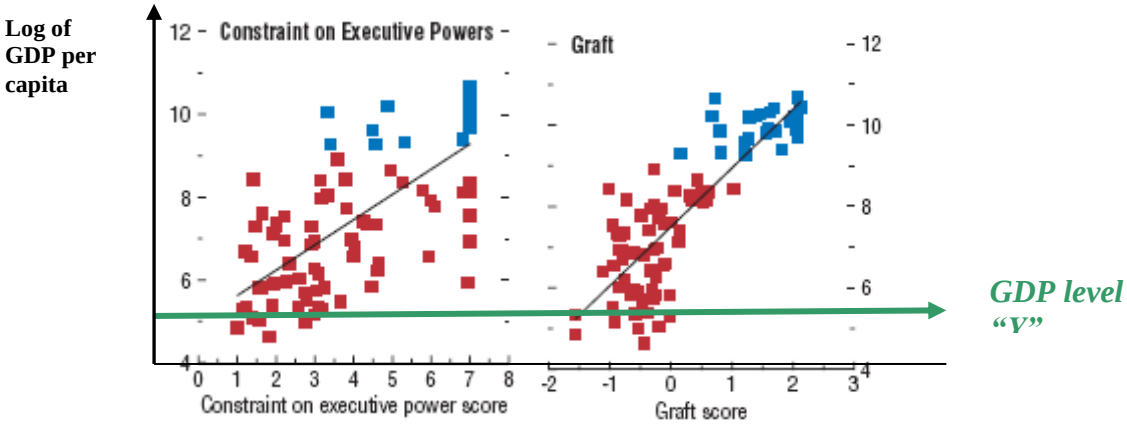
Here are just two examples of recent and relevant work on development that illustrate the dangers or wrong or misleading inferences. The examples merely scratch the surface of the problems involved in the legitimate use of econometric results for policy purposes. [81]

[81] A more extensive analysis of this problem is provided by Angus Deaton in *Instruments of Development: randomization in the Tropics, and the search for the elusive keys to economic development*, Keynes Lecture to the British Academy, London October 9th 2008.

Example 1: Corruption and Development

We saw above how econometric results such as those from McFarlan et.al. (2003) can suggest a significant statistical link from institutions of various types to levels and rates of growth of GDP. Two of the diagrams from their work are reproduced again as Figure 14.4 below. The "corruption" (graft) scatter is from the Kaufmann measures of governance and the scatter on "constraints on executive power" is from the "Polity IV" dataset. [82] The vertical axis measures the log of GDP per capita in the 94 countries used in the Maitland et al study.

Figure 14.4: Two of the Institutional Correlates with "Development"



We can easily see from both of these diagrams that there is very considerable variation in the quality of institutions (as measured by the two chosen indicators) for *any given level* of GDP per capita. For convenience we have marked up just one such level namely that indicated as "Y". On the graft measure the scores of different countries at that income level span the large range from minus 1.6 through plus 0.2. On the constraints measure the scores span the large range from 1 through 3.75.

But notwithstanding this large variation at given levels of income it is still statistically possible to find a positive relationship between income levels on the one hand and either of the two measures of institutional development on the other. *There **is** a positive statistical association between income and these measures of institutional development*. It might seem to follow that improving institutions in either or both of these dimensions would be a positive policy for development as measured by GDP per capita.

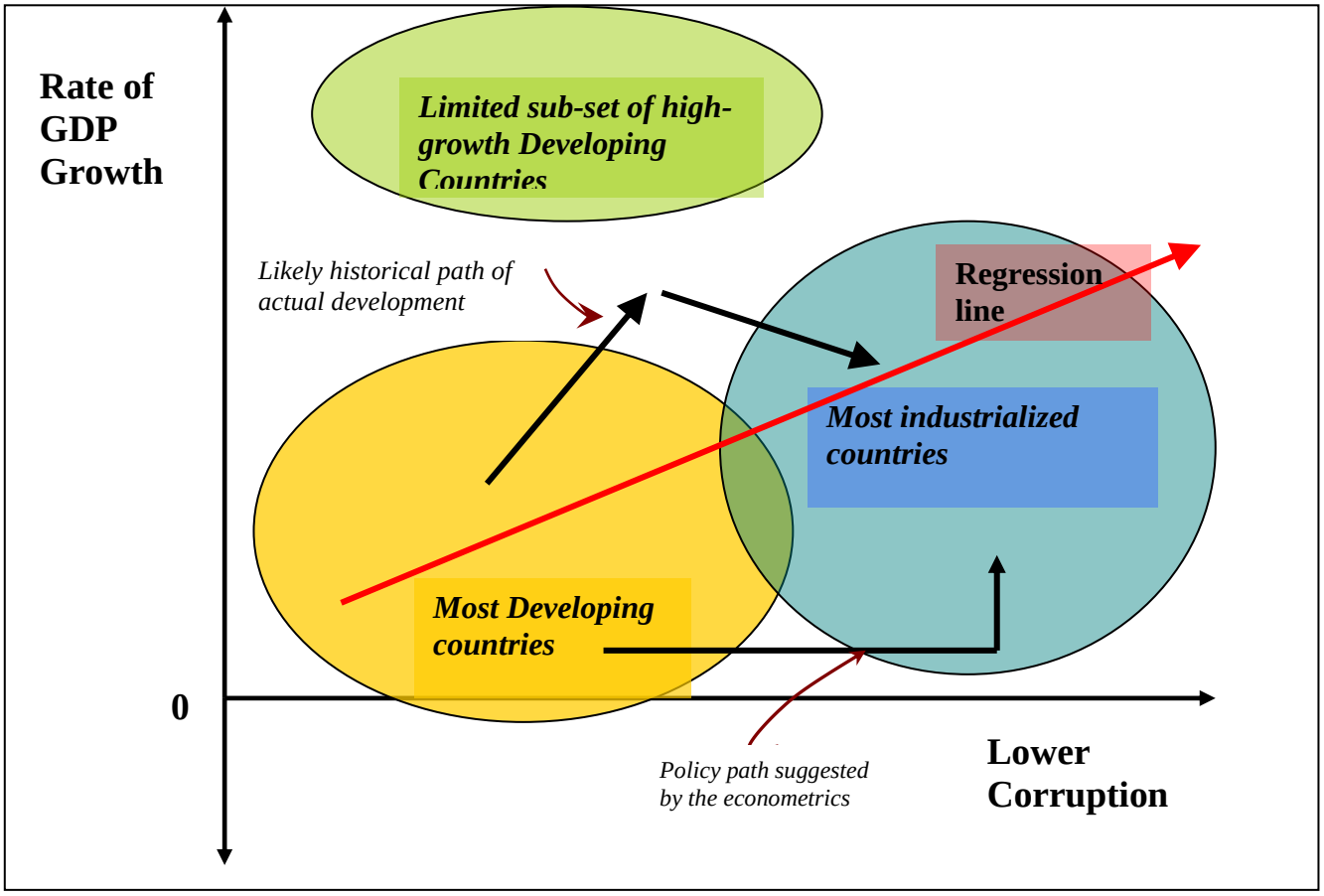
Unfortunately there are a number of different interpretations of this statistical results and these do not all lead to the conclusion that an engineered policy change (reduction) in graft or (increased) constraints on executive power would lead to higher levels so GDP. On such interpretation is suggested by Mushtaq Khan in a series of thoughtful papers on corruption and development[83]. His ideas can be summarised using his own diagram as reproduced in Figure 14.5 below. This

[82] See http://www.cidcm. umd.edu/inscr/polity.

[83] Khan, M.H. State Failure in Developing Countries and Strategies of Institutional Reform, in Tungodden, Bertil, Nick Stern and Ivar Kolstad (eds) Towards Pro-Poor Policies: Aid Institutions and Globalization Proceedings of World Bank's Annual Bank Conference on Development Economics, 2002. Oxford: Oxford University Press and World Bank,2004 and Khan, M.H, The New Political Economy of Corruption, in Fine, B., Lapavitsas, C. & Pincus, J. eds. Development Policy in the Twenty-First Century: Beyond the Post Washington Consensus. Routledge 2001 pp. 112-135.

reverses the axis of Figure 14.5 and so shows a corruption measure on the horizontal axis and a measure of development (in his case the growth of GDP) on the vertical axis.

Figure 14.5: Corruption and Economic Performance



The main arrowed line (in red) shows the type of relationship that the regression results for these type of data are most likely to suggest: a strong positive association between reduced corruption on the one hand and higher growth rates on the other. Although not explicit in such results, Khan suggests that the policy inference from such results would be those indicated by the right-angled arrowed line in his diagram. In other words the results would suggest that countries should first seek to reduce levels of corruption in their countries (a move to the right on the diagram) and then they would see benefits in terms of higher rates of growth.

But imagine instead that a few developing countries are managing to achieve high rates of growth by intervening actively in certain aspects of economic policy and that these policies are in some way helping them to achieve convergence with the industrialised countries in the manner of say South Korea in the 1970s and China in the past two decades. It is possible that the policy interventions practised give executive power to a limited sub-set of politicians and officials and that this opens the

way for a degree of corruption. This was certainly the case in the two East Asian countries just mentioned. However, as these countries seek to deepen their development successes and penetrate ever-more challenging markets, they may find it increasingly necessary to reduced the corrupt practices that they tolerated at an earlier stage. If this scenario is indeed the one that some countries at least have followed historically then the single regression pattern suggested by the data is incorrect. Instead there is a two phase move from the left to the right of the diagram indicated by the two disconnected arrows. In this case a policy based on the regression results alone would be incorrect and would deny lower income countries the benefits of the policy approaches adopted by the more successful developing countries. Khan goes further and says that the historical evidence gives strong support to his alternative hypothesis. This is on the grounds that ..*"it is not possible to find any example of a high-growth developing country that has achieved high growth by first acquiring advanced country governance or corruption characteristics."* (pg 205).

We can add merely that the two competing propositions (the mainstream regression interpretation and the Khan alterative) are only in the frame because of the wide scatter of the data points. Had these data points been much more closely concentrated along the line of the regression then it would have been less legitimate to defend the Khan point of view. But given the wide scatter of data points it is not possible to reject the competing hypothesis.

A Digression on the Development State[84]

With Mushtaq Khan's results in front of us it is useful to briefly relate his findings to the more general arguments about the so-called "developmental state". The extensive economic and political literature on the "developmental state" basically assumes that there are some combinations of economic policies and political structures that enable the state in some countries to become the effective driver of industrial policies in particular and economic development in general. The origins of this idea – if we discount the fully state controlled economies such as the Soviet Union - is widely attributed to the work of Chalmers Johnson and his explanations of Japan's very successful but late start on the path of rapid economic development[85].

Johnson pays attention in particular to *four* main elements of the Japanese economic success. These are (i) the political power attaching to a relatively small elite; (ii) the availability of top-rate management skills available to the state to select and promote growth industries; (iii) methods of policy interventions that can stimulate these industries but still retain a degree of connection with market realities; and (iv) an organisation such as MITI[86] that is able to carry through the implementation of selective industrial policies. Other authors have subsequently suggested a variety of elaborations of the basic Johnsons propositions. These have been inspired by the growing evidence about the successful newly industrialised countries of East Asia (the NICs) and their evidently superior records to those seen in other poorer economies, For example Ha-Joon Chang in his work on South Korea has given strong emphasis to market imperfections as a basic justification for the government activism.[87] But from that starting point he has shown how South Korea managed to

[84] This section is heavily reliant on an excellent overview of the topic by Ben Fine, "The Developmental State and the Political Economy of Development" in Jomo K.S and Ben Fine, *The New Development Economics after the Washington Consensus*, Zed Books, 2006
[85] See for example, Chalmers Johnson, *MITI and the Japanese Miracle*, Stanford University Press, Stanford, 1982.
[86] This is Japan's Ministry of International Trade and Industry
[87] Chang,Ha-Joon, *The Political Economy of Industrial Policy,* Macmillan, London, 1994.

coordinate investments both within and across sectors. This helped to generate economies of scope. In addition, by also restricting entry and other forms of competition in some sectors the government was able to stimulate economies of scale for the favoured firms. The late Sanjaya Lall has shown that productivity increases have often been a precondition of successful industrial policies.[88]These in turn depend on a basic stock of capabilities – above all human capital – but with considerable variation in the ability to find this and deploy it effectively in different sectors and countries.

In the early 1990s, the World Bank – financed mainly by the Japanese government – undertook and then published in 1993 a major study of the so–called East Asian miracle[89]. This was based on extensive in-depth research but reached conclusions that remain controversial and are certainly contested. One central conclusion was that state intervention had indeed been successful in the NICs but had worked best when the interventions were broadly "market-conforming". In other words free markets could have done the job achieved by the interventionist governments of East Asia but only IF they had been able to work more perfectly. Any reader who has persevered through Chapters 12 and 13 and this present chapter should not find this result too surprising. We have seen that markets can rarely be expected to work perfectly in the real world and that some policies to counteract these imperfections are perfectly acceptable even in the cannons of mainstream neoclassical economics. *The difficult problem is to find the correct policies and then implement them well.* The Asian tigers somehow managed to do this for reasons that are partly at least spelled out by the Bank's study.

The first conclusion from the World Bank study is that good policies are likely to have some elements that connect them –albeit loosely - with the way in which markets work or should work: e.g. they do not allow the economic inefficiency costs of abandoning market principles to become too high. So for example, prices – even when controlled – should still pay some heed to scarcity values. Nor should interventionist policies make too much use of distortions that provide a strong incentive for economic rent-seeking as against genuinely productive activities, or be biased too much against exporting.

A second conclusion that has a significant bearing on our earlier discussion is that the leaders of the nine higher performing economies of the region tended to be either authoritarian or paternalistic. However, they were also willing and able to grant a voice and genuine authority to technocratic elites as well as to key leaders of the private sector. They were not authoritarian and detached from economic and commercial realities as many dictators around the world are and have been.

A third main conclusion of the study was more controversial. This was that the success of the state in promoting the East Asian economies involved characteristics that could not easily be replicated elsewhere. So, the report argued that there is no magic formula that could somehow be applied successfully in other parts of the developing world. This, it is suggested by some radical commentators, was a result that disappointed the Japanese who had hoped to see the report more fully endorsing its own model of industrialisation and growth.

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[88] For example, Lall, Sanjaya and Shujiro Urata, Competiveness, FDI and Technological Activity in East Asia, Edward Elgar. Cheltenham, 2003.

[89] World Bank, *The East Asian Miracle: Economic Growth and Public Policy*, Oxford University Press, New York, 1993. The study looked at 23 East Asian Economies. These included 9 countries from what the Bank termed High performing Asian Economies, namely apan, Hong Kong, Korea, Singapore, Taiwan, China, Indonesia, Malaysia, Thailand.

The concept of the developmental state has rather faded in its practical importance for policy since the Asian financial crises of 1996-97. The nature of these crises helped to reveal some of the downside flaws in the interventionist approaches that until then had been regarded as working well: e.g. the systemic financial distress that was uncovered in a number of Korean chaebol and similar large companies in other economies. Remaining aficionados however do continue to insist that the concept remains important. Some at least of these see the crises of 1996/97 not so much as symptomatic of the failure of the development state concept but rather as proof that early abandonment of some of the interventions it involved – e.g. the control of international capital flows – was a thoroughly bad idea. Readers will be in a better position to assess such perspectives once the macroeconomic parts of our story are assembled in Part 4.

Example 2:Real Resource Endowments and Rates of Growth

TO BE ADDED

14.8 Measuring and Assessing the Quality of "Government Policies"

In this final substantive section we return to the issue of *measurement* of institutional quality. This time we want to look at some of the measures that have emerged in the past few years to help assess how well (or badly) different countries deliver the policies that might be thought to have some bearing on the pace of their economic development. The measures in question differ from the Kaufmann and similar measures as discussed in Section 14. 5 above. They referred to the general quality of a country's (public) governance. Here we delve more closely into specific types of economic policies such as fiscal, sectoral and social policies. This brief discussion of some of the methods that are used and some of the numerical results that emerge will help us as we move forward into the discussion of specific policies in Parts 4 and 5.

We focus here the quality of policy making in *low-income developing countries*.[90] Since the mid-1970s, the World Bank has used quantitative measure of policy to help it allocate its resources (loans and technical assistance) to those countries that are eligible for support from its soft-loan subsidiary organisation namely the International Development Association (IDA). There are currently 75 such countries. These measures were known about in a general sort of way and limited disclosure of results

[90] However, it is noted that the Centre for Global Development (CGD) based in Washington DC has for some years assigned scores to certain aspects of the policies of the advanced countries that have a bearing on the promotion of development. Specifically the CGD *Commitment to Development Index* has been produced annually since 2003. It ranks the 21 rich countries in the world on a range of indicators in seven policy areas. These are then that are combined into the overall Index. The seven policy areas are Aid, Trade, Investment, Migration, Environment, Security and Technology. The criterion in brief is to assess how development-friendly (or otherwise) are the advanced country policies in each of these areas. Details and numerical results can be found at . www.cgdev.org

began in 2000. The methods and results were subject to some criticisms and not least because they were used to make significant decisions about how much money went to particular countries. However, in 2006, and after much criticism of the previous lack of transparency, the Board of the Bank decided to make full details available. As a result of that decision from June 2006 the World Bank publicly disclosed for the first time the numerical scores of its 2005 Country Policy and Institutional Assessment (CPIA). The results of the 2006, 2007, and 2008 exercises were subsequently published in the succeeding years and this practice will continue. The data represent another valuable source of information for development researchers.

The approach in general is designed to help assess how well a country's policy and institutional framework supports growth and poverty reduction, and consequently offers a guide as to whether development assistance (from IDA and elsewhere) can be expected to be effective in that environment.

Significantly, in 2005, both the Asian Development Bank (ADB) and African Development Bank (AfDB) adopted the World Bank's criteria as a starting point for their own internal performance-based allocation processes for loans etc.. These regional development banks use similar criteria for their own assessments but their scores are done independently – by their own staff - and so will not be the same as those of the World Bank: although in practice there is a high degree of correlation.

Methodology

As regards methodology, the Country Policy and Institutional Assessment (CPIA) rates countries against a set of 16 criteria grouped in four clusters: (a) economic management; (b) structural policies; (c) policies for social inclusion and equity; and (d) public sector management and institutions. Each of these 16 criteria which are listed in Box 14.7 below are scored on the scale of "1" = low or poor performance to "6" = high or good performance. In that Box we have marked up topics that appear either in our macroeconomic discussions of Part 4 or in the structural topics in Part 5. As regards the overall country rating, each of the four clusters is given an equal 25 percent weight in the overall rating. Within each cluster, all criteria receive equal

Box 14.8: The CPIA Policy categories for 2008/09

A. Economic Management

1. Macroeconomic Management (Macro)
2. Fiscal Policy (Macro)
3. Debt Policy (Macro)

B. Structural Policies

4. Trade (Structural Topic))
5. Financial Sector (Structural Topic)
6. Business Regulatory Environment

C. Policies for Social Inclusion/Equity

7. Gender Equality
8. Equity of Public Resource Use
9. Building Human Resources (Structural Topic)
10. Social Protection and Labour
11. Policies and Institutions for Environmental Sustainability

Public Sector Management and Institutions

12. Property Rights and Rule-based Governance
13. Quality of Budgetary and Financial Management (Structural Topic)
14. Efficiency of Revenue Mobilization (Structural Topic)
15. Quality of Public Administration
16. Transparency, Accountability, and Corruption in the Public Sector

weight. The overall score is then obtained by calculating the average score for each cluster, and then by averaging the scores of the four clusters. For those readers who are interested in examining the specific criteria that underpin the scoring for each of the sixteen clusters these can be found in detail in a document produced by the Bank.[91] One example – that relating to Debt Policy (criteria A.3) is reproduced in Box 14.8 below to illustrate the general analytical and institutional content that is used.

The scores are based almost entirely on the expert assessments of the Bank's own staff who work on the countries concerned. This is a source of strength – the staff do know the countries well - but also weakness since staff member may also want to put a "the best possible face" on the performance of the countries they know and for which they need to muster resources[92] (note the earlier propositions from Paul Collier on incentives in aid agencies). The process whereby this is done involves two stages namely (i) the benchmarking phase, in which a small, representative, sample of countries is rated in an intensive Bank-wide process. This is designed to ensure consistency of approach across countries and regions and (ii) a second phase, in which the remaining countries are rated using the derived benchmark ratings as guideposts. There is some reference back of the preliminary scores to the authorities of the countries themselves but this process is not thought to make significant differences to the final reported scores.

Consistently with the general propositions about institutional change made earlier in this chapter, the scores for particular countries do not change greatly from one year to the next (at least for the period where the results have been reported). The Bank itself notes that ….*between 2007 and 2008, the change of the overall score for 68 out of the 75 IDA countries (91 percent) was between -0.1 and +0.1, with the scores of 44 countries (59 percent) unchanged relative to 2007. These results are similar to the pattern observed in recent years" .*[93]

[91] The 2008 criteria for example can be found in *Country Policy And Institutional Assessments 2008 Assessment Questionnaire*, Operations Policy And Country Services, World Bank, September 5, 2008
[92] One of your two authors observed this tendency at first hand when he was personally involved in the scoring process for several countries on which he worked for the Bank.
[93] www.worldbank.org

Box 14.9: The Debt Management Criteria as used in the CPIA

This criterion assesses whether the debt management strategy is conducive to minimize budgetary risks and ensure long-term debt sustainability. The criterion evaluates the extent to which both external and domestic debt are contracted with a view to achieving/maintaining debt sustainability, and the degree of co-ordination between debt management and other macroeconomic policies. Adequate and up-to-date information on debt stock and flows is an important component of debt management strategy. Timely, accurate statistics on the level and composition of debt, both domestic and external, is necessary as is capacity to analyze the volatility of debt servicing due to exchange rate and interest rate shocks. A dedicated debt management unit should be able to monitor new borrowing with a view to ensure debt sustainability, including headroom to leverage additional resources in the event of exogenous shocks. Effective inter-agency coordination on issues related to debt management and debt sustainability is also crucial. This criterion covers the adequacy of the debt recording systems, the timelines of the public debt data, and the effectiveness of the debt management unit. Regarding the treatment of the Multilateral Debt Relief Initiative (MDRI), it should be noted that MDRI should not be used as a rationale for proposing higher country scores, given that this is an external action which is related to country performance already incorporated (elsewhere) in the CPIA scores.

Results

The 2008 results for the 25 lowest scoring countries are shown in Table 14.2 below for (i) the aggregate scores for each of the four cluster of criteria and (ii) for the overall index. The countries are ordered according to the overall level of their policy performance. Note the heavy presence of countries from Sub-Saharan Africa.

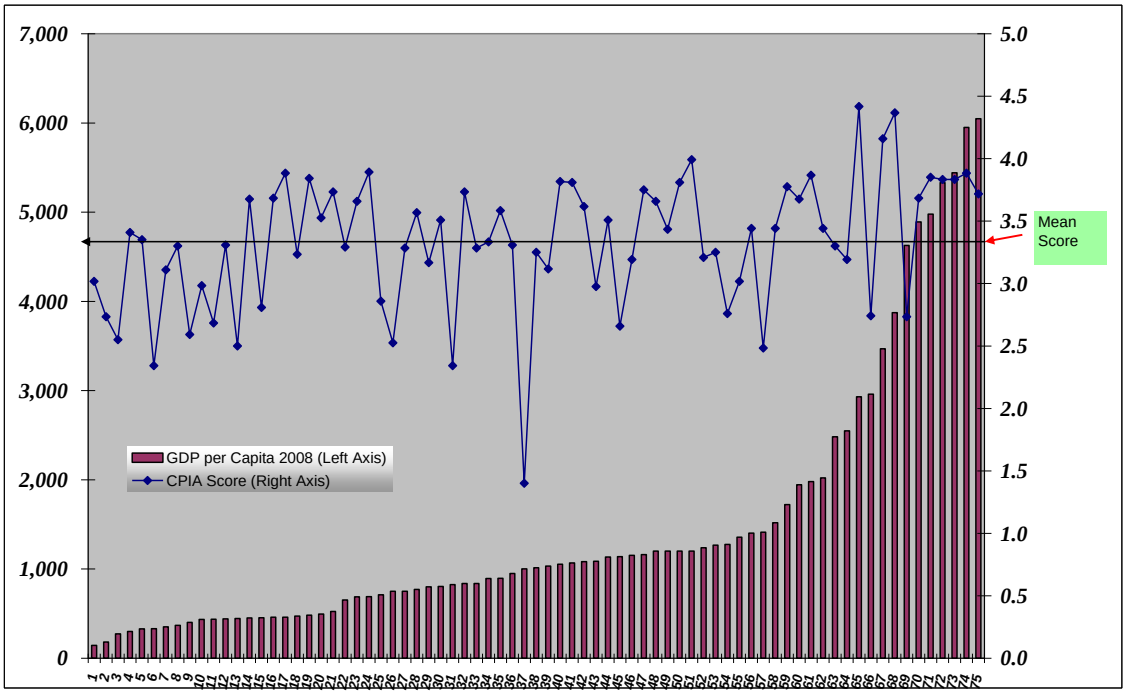
Table 14.4: CPIA Results by Cluster and Overall, 2008

Country	Economic Management	Structural Policies	Policies for Social Inclusion/Equity	Public Sector Management	**Overall Index**
TONGA	3.0	3.2	3.3	3.3	3.2
YEMEN, REP.	3.5	3.2	3.1	3.0	3.2
TAJIKISTAN	3.5	3.2	3.4	2.6	3.2
DJIBOUTI	3.0	3.7	3.0	2.8	3.1
SIERRA LEONE	3.7	3.2	2.9	2.7	3.1
BURUNDI	3.3	2.8	3.3	2.6	3.0
KIRIBATI	3.2	3.0	2.8	3.1	3.0
GUINEA	3.0	3.3	3.0	2.6	3.0
SAO TOME AND PRINCIPE	2.8	3.2	2.8	3.1	3.0
HAITI	3.2	3.2	2.7	2.4	2.9
TIMOR-LESTE	3.0	2.8	2.7	2.7	2.8
SOLOMON ISLANDS	2.8	3.0	2.6	2.6	2.8
CONGO, REP	2.8	2.8	2.7	2.6	2.7
ANGOLA	3.0	2.8	2.7	2.4	2.7
CONGO, DEM. REP.	3.2	2.7	2.9	2.2	2.7
TOGO	2.7	3.2	2.7	2.2	2.7
COTE D'IVOIRE	2.5	3.3	2.3	2.5	2.7

AFGHANISTAN	3.2	2.5	2.5	2.2	2.6
GUINEA-BISSAU	1.8	3.2	2.6	2.6	2.6
CHAD	2.7	2.8	2.4	2.2	2.5
CENTRAL AFR. REP.	2.8	2.7	2.2	2.3	2.5
SUDAN	2.7	2.7	2.3	2.3	2.5
COMOROS	2.0	2.7	2.5	2.2	2.3
ERITREA	2.2	1.5	3.0	2.7	2.3
ZIMBABWE	1.0	1.5	1.5	1.6	1.4

It is useful also to assess the manner in which the CPIA scores respond to increasing levels of income per capita within this group of mainly poorer countries. This is tested in Figure 14. 5 which ranks all the 75 countries by per capita GDP and then plots the CPIA scores for each of those countries. No strong rising pattern is evident from these data. However, it is significant that only 3 of the 15 lowest income countries achieve the average CPIA score of the sample of countries of 3.33. At the higher income scales only 4 of the 15 highest income countries fail to better that average. In between these extremes there is a very wide variation of CPIA scores even between countries of quite similar income levels.

Figure 14.6: CPIA Scores ranked by Income of Country in 2008



14.10 Final Words on Institutions

It is perhaps appropriate to leave our discussion about the role of institutions with the rather ambiguous message from Figure 14.6. It helps to remind us that clear-cut patterns linking institutions on the one had with development on the other are indeed elusive. A careful reading of the earlier parts of the chapter might have led the reader to expect such a result.

Economic analysis is currently at the stage where it clearly recognises a critical role for good institutions and organisations as a key set of influences on rates of economic growth and development. As we have seen there is much interesting research that provides us with compelling examples of this proposition. But the subject of economics is certainly *not* at the stage of being able to make very precise statistical statements about cause and effect. Further, if we remember the key proposition from Douglass North (that the institutions of any one country are shaped by the particular circumstances and history of that country) then it might even be argued that the search for generality across large numbers of countries will always remain elusive.

When we examine the manner in which policy-makers pursue their commonly-held ambitions to change institutions, as they see it, for the better, the difficulties involved seem equally daunting if not irresolvable. In part this is because the governance of key government and aid organisations is itself shaped by a complex web of divergent interests, conflicting incentives and then by bargaining strategies that may have in-determinate outcomes in any particular country case. Even if governments and donors can "get their act together" on a particular issue, they then encounter a complex set of civil organisations (look at the example of Tanzania in Box 14.2) that will also invariably bring to bear additional motives, incentives and possibly non-transparent agendas that may complicate the resolution of many problems. In this area of work above all others in the development field the economist needs the assistance of other social scientists and above all good political scientists. Indeed some at least of the mainstream economics writing on this topic in the recent past would just as appropriately be classified in one or more of the other social science disciplines

But having entered these somewhat sceptical comments it remains the case that "institutional economics" does have coherence and a clear link to the other issues raised in Part 3 of the book. That link is via its strong reliance on an economic approach to problems which emphasises above all incentives, competitive elements in the move toward new equilibria and transaction costs – broadly defined – as the key motivators of many institutional outcomes.

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