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RESEARCHING ECONOMIC REGULATION IN DEVELOPING COUNTRIES: DEVELOPING A METHODOLOGY FOR CRITICAL ANALYSIS

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RESEARCHING ECONOMIC REGULATION IN DEVELOPING COUNTRIES: DEVELOPING A METHODOLOGY FOR CRITICAL ANALYSIS

Abstract

Effective and efficient regulation by government is important for economic development. Effective and efficient regulation promotes economic development, while vexatious regulation can cripple it. Many of the problems of developing countries are blamed on ineffective and inefficient government regulation.

At the same time, however, understanding of the appropriate institutions and processes of the regulatory state in the context of developing countries remains underdeveloped. Studies to date tend to be of a case study nature and generalising the findings is restricted by the lack of a coherent theoretical framework.

This paper attempts to develop a methodology for researching regulation in developing countries, drawing from the economics of regulation literature. The proposed methodology is deductive with empirical work used to refine and advance theory so as to develop over time a rigorous approach to researching regulation in developing economies. While there is a recognised need to ground research in the particular needs of each developing country, the paper demonstrates that the economics of regulation literature provides a useful departure point to develop such an analysis.

INTRODUCTION

In the 1990s 121 developing countries introduced private investment in infrastructure schemes in the public utilities (Gray, 2001, p.2). Traditionally the public utilities - electricity, gas, water services, telecommunications and transport - have been associated with economies of scale and scope in production that rule out competition in the market. For much of the last century state ownership of public utilities was the preferred option in most countries, including developing ones. Private-sector monopolies are not attractive given the possible threat of abuse of market power. More recently, however, in the face of evidence of 'state failure', the emphasis in public policy has switched from direct state ownership to private ownership but with state regulation.

State regulation is the means by which the state attempts to affect private sector behaviour (Cabinet Office, 2000). Economic regulation by government is associated with righting ‘market failures’, including ameliorating the perceived adverse consequences of private enterprise including its income and wealth distribution effects. An additional argument lies in the role of the state as a facilitator of economic growth. From the 1960s to the 1980s it was fashionable to promote industrialisation through import substitution, in which the state played a primary role as a regulator of both domestic and external trade and as a direct investor in industry and agriculture. However, following the apparent successes of privatisation and market liberalisation programmes in developed economies, including Europe and North America, and evidence of government failure in developing ones (World Bank, 1995), since the late 1980s international donor aid agencies have promoted market liberalisation and privatisation policies. This change is associated with a wider shift from the model of a positive or interventionist state to a regulatory one (Majone, 1994, 1997). The regulatory state model implies leaving production to the private sector where markets work and using government regulation only where market failure clearly exists (World Bank, 2001, p.1).

Arguably, however, the performance of the new regulatory state remains under-researched, especially in the context of developing countries with their own peculiar economic and social problems. Where research has occurred it has exposed a number of regulatory failures (Noll, 1999). A NERA study in 1998, based on a questionnaire covering 12 infrastructure industries across six developing Asian economies, found much variation in practices and a considerable short-fall from regulatory best practice, as understood in the UK and US (Stern and Holder, 1999). Cook (1999), based on case studies of utility sector reforms in developing countries, concludes that creating effective regulation and a competitive environment is at best a difficult and slow process. Brownbridge and Kirkpatrick (2000) identify difficulties in applying developed country models of regulation to developing economies in banking and finance. While Campbell-White and Bhatia (1998, p.5), in the context of Africa, conclude that: ‘Regulation is being examined as part of individual sector initiatives, but these efforts are uncoordinated, and implementation is being left to follow privatization instead of being put in place concurrently’.

In recent recognition that not all is well, the World Bank (2001, p.v) has stressed the importance of ‘improving regulatory regimes and building institutions and capacity effectively to supervise the private sector’ and the Asian Development Bank (2000, p.18) has emphasised the need for improved regulation. But this leaves open the question as to what precise forms of regulation are appropriate in the context of a developing country. It is not self-evident that the lessons of operating regulation in developed economies are directly transferable to the less developed world (World Bank, 2000, p.54). Moreover, it is not at all clear that developing countries can be lumped together and analysed as a common unit, in particular, institutional capability can be expected to vary from one country to another.

In this paper we explore a number of propositions from the literature on the economics of regulation. The objective is to develop a methodology for undertaking research into regulatory issues in developing economies. The paper is exploratory and largely conceptual, although illustrated with examples from developing countries. To make our task manageable we have chosen to concentrate mainly on economic regulation as it applies to the regulation of public utilities, sometimes referred to as the 'natural monopolies'. Our reasoning and conclusions are intended, however, to have wider applicability to other areas of state regulation. The remainder of the paper is organised as follows. It begins with a review of relevant aspects of the theory of economic regulation of natural monopoly. We then assess the theory in terms of the economic development needs and institutions of developing countries. The paper then presents a methodology for researching economic regulation in developing countries, drawing on the earlier discussion.

PROPOSITIONS FROM THE THEORY OF ECONOMIC REGULATION

The theory of economic regulation developed from the nineteenth century and the literature is now vast (for recent reviews e.g. Laffont and Tirole, 1993, 2000; Levy and Spiller, 1994; Newbery, 1999). The case for economic regulation of public utility markets is premised on the existence of significant market failure resulting from economies of scale and scope in production, that lead to higher unit costs if more than one firm competes in the market. Another possible source of market failure is information asymmetries in market transacting. Markets are able to maximise social welfare where consumers and producers are perfectly (or at least well) informed when making choices in the market place. Where one party to a transaction has more information than the other about the quantity or quality of the outputs to be transacted, a condition known as 'asymmetric information', then this party could act 'opportunistically', exploiting its superior knowledge to gain utility at the expense of the other party.

Since the 1960s, however, the economics of regulation literature has also focussed on circumstances where we might expect to find 'regulatory failure', that is to say circumstances where the regulation of markets might reduce rather than increase economic welfare. The seminal study in this literature is that by Averch and Johnson who, in 1962 presented a model of how regulation of a firm's rate of return could lead to incentives to over-invest. Following publication of Averch and Johnson's paper, studies highlighted other potential inefficiencies that could be introduced by rate of return regulation, notably distorted service quality and higher operating costs (e.g. Bailey, 1973).

Today the economics of regulation literature includes the following propositions (for further on these propositions see e.g. Kahn, 1988; Sidak and Spulber, 1997; Baldwin and Cave, 1999; ed. P.L. Joskow, 2000; Viscusi, Vernon and Harrington Jr., 2000).

?? *The institutional context is critical to the processes and outcomes of any regulatory regime.* As Granovetter (1985) recognised in his study of 'embeddedness', behaviour and institutions are constrained by social relations. This is true of any regulatory regime, which will be embodied in the specific institutional context of a country as reflected in its formal and informal rules of economic transacting and social behaviour. As Picciotto (1999, p.3) comments: 'In all societies formal rules enacted by the state influence social behaviour only indirectly, filtered through layers of formal and informal social institutions, and normative patterns and practices'. In turn these institutional effects are credited with having important effects on the trajectory of economic development (Lal, 1999, ch.3). In consequence, the World Bank has been criticised for adopting an 'under-socialised approach' to policy reform (Torp and Rekve, 1998, p.80).

Regulation in economies involves the setting of particular rules regarding market structure and business conduct and these rules both arise out of and influence the future shape of economic institutions. Levy and Spiller (1994) focus on regulatory arrangements to sustain private investment and how these vary with the institutional endowment in different countries. Also, 'new institutional economics' has had an impact on the economics of regulation especially through transaction cost theory. Transaction cost economics is concerned with the costs that enter into market transacting and that are associated with policing opportunistic behaviour in markets (Williamson, 1985; Allen, 1991). Economic development is seen not as simply a matter of amassing economic resources in the form of physical and human capital but a matter of 'institution building' so as to reduce information imperfections, maximise economic incentives and reduce transaction costs. Included in this institution building are the laws and political and social rules and conventions that are the basis for successful market production and exchange. Another important consideration is 'culture' or the way of doing things in society, which forms in North's analysis one of the 'informal' constraints on human interaction (North, 1990, 1991). Particularly relevant modes of conduct in the context of the regulatory state would seem to include probity in public administration, independence of the courts, low corruption and cronyism, and traditions of civic responsibility.

?? *Regulation is associated with information asymmetries*. The regulator and the regulated can be expected to have different levels of information about such matters as costs, revenues and demand. The regulated company holds the information that the regulator needs to regulate optimally and the regulator must establish rules and incentive mechanisms to force or coax this information from the company. Given that it is highly unlikely that the regulator will receive all of the information required to regulate optimally to maximise social welfare, the results of regulation, in terms of outputs and prices, remain 'second best' to those of a competitive market. Shapiro and Willig (1990) argue that state ownership provides more information to regulators than private ownership, so contracting should be less problematic when the state both owns and regulates. However, state ownership is associated with inadequate incentives to gather and use information to maximise welfare (Hayek, 1945). In other words, there tends to be a trade off between state ownership reducing the information asymmetries and hence the transaction costs of regulation and the relative incentives under state control and market transacting for agents to maximise social welfare (Grossman and Hart, 1986; Sappington and Stiglitz, 1987; Shapiro and Willig, 1990: Yarrow, 1999). This leads to 'credibility' and 'commitment' considerations: specifically, *credibility* on the part of investors that the regulatory rules will bring about the intended outcome; and *commitment* of government to the regulatory rules, so that post-privatisation or post-concession award the regulator does not act opportunistically to reduce the prices and profits of the private regulated businesses. Regulatory credibility will be enhanced if the regulator faces high costs of deviating from a commitment.

?? *Investment in a regulated environment is subject to a threat of hold up leading to under-investment*. Because the regulatory contract, whether formal or informal, is incomplete, it is vulnerable to post-contract opportunism. Public utilities are capital-intensive and therefore post-contract one or other party may have an incentive to adopt opportunistic behaviour to improve its own wellbeing. Utility networks involve sunk investments that are specific to the venture, so that once a network is created the balance of bargaining advantage at the time of a contract renegotiation may shift from the private-sector investor to the regulator (on behalf of the government) with implications for pricing and investment (Spiller, 1996; and for a recent review of the hold up literature, Schmitz, 2001). In principle prices could be reduced to short-term marginal costs. Where the investor fears this outcome, referred to as 'hold up', front-end loading of returns, take or pay contracts with governments and sovereign guarantees from the state or international agencies may be required by the private sector. In turn such guarantees reduce the net economic benefits of attracting private capital by reducing managerial incentives to control costs.

The precise result of opportunistic behaviour depends crucially, however, on the relative bargaining power of the regulated and the regulator. Alternatively, the regulator and hence the government could be subject to 'hold up', where post-contract private investors demand a tariff or other contract adjustment in their favour and the regulator has no alternative supplier to turn to.

?? *Regulatory regimes are prone to capture*. 'Regulatory capture' involves the regulatory process becoming biased in favour of particular interest groups and notably the regulated companies. Regulators can be assumed to care about the levels of both consumer and producer surplus because both impact on social welfare – benefits to consumers are reflected in consumer surplus but producer surplus is necessary to stimulate innovation (Kirzner, 1997). A regulator that is neutral between consumer utility and profit would place an equal weighting on consumer and producer surplus. One that favours consumers would weight consumer surplus more highly. Regulatory capture is associated with a weighting favouring producer over consumer surplus. In the extreme case, the regulatory capture literature concludes that regulation *always* leads to socially sub-optimal outcomes because of 'inefficient bargaining between interest groups over potential utility rents' (Laffont, 1999; Newbery, 1999, p.134). In the Chicago tradition of regulatory capture (Stigler, 1971; Peltzman, 1976), regulators are presumed to favour producer interests because of the concentration of regulatory benefits and diffusion of regulatory costs, which enhances the power of lobbying groups as rent seekers (Reagan, 1987). What is clear is that the capability of firms to influence public policy is an important source of comparative advantage (Shaffer, 1995).

Regulation is also subject to 'political capture'; indeed political capture may well be a much greater risk than capture by producer groups outside of the political system. Where political capture occurs, the regulatory goals are distorted to pursue political ends. This is most likely to arise where the regulation is directly under the control of government ministers; hence the case for some kind of arm's length or 'independent' regulatory agency. Under political capture, regulation becomes a tool of self-interest within government or the ruling elite (Stiglitz, 1998).

Balanced against the risks of regulatory and political capture, however, is the possibility that regulators might develop a culture of arrogant independence, bordering on vexatious regulation. This creates some uncertainty about the desirable degree of regulatory independence. In principle three broad forms of regulation can be identified: (a) the regulatory authority is *integrated* into the normal government machinery, notably where it is a section of the ministry and controlled by the minister; (b) the *semi-independent agency*, which has some independence from the ministry but where decisions can still be over-ruled by a superior government authority; and (c) the *independent agency*, where there is no right of appeal to a superior government (political) authority, though there usually will be a right of appeal to the courts to ensure fairness and rationality in the decision-making process (in a number of jurisdictions known as an appeal on 'due process') (Smith, 1997; Von Der Fehr, 2000, p.49). The independent agency is normally favoured by western advisors, who draw from the experience of regulation in the UK and US. However, regulatory independence and an impartial judicial review of due process may not be credible in some institutional structures; an issue developed further below.

?? *A regulatory system should be both effective and efficient*. Effective regulation achieves the social welfare goals set down by the government for the regulator at the time the regulatory office was established, and as subsequently amended after appropriate consultation. This can be achieved by regulation affecting (a) the structure of markets and (b) conduct in markets through appropriate incentives and penalties. Efficient regulation achieves the social welfare goals at minimum economic cost.

The economic costs of regulation take two broad forms: (1) the costs of directly administering the regulatory system, which are internalised within government and reflected in the budget appropriations of the regulatory body or bodies; and (2) the compliance costs of regulation, which are external to the regulatory agency and fall on consumers and producers in terms of the economic costs of conforming with the regulations and of avoiding and evading them. Both the administrative and compliance costs of regulation may rise over time, especially if economic regulation becomes an industry in its own right. It has been suggested that regulators could empire build: 'The self-interest of regulators will, in general, make them tend to exaggerate benefits, under-estimate costs and over-estimate the demand for action on their part' (Blundell and Robinson, 2000, p.11).

?? *Competition is superior to state regulation and should be preferred.* Economic regulation attempts to 'mimic' the social welfare results of competition, but it can do so only in a 'second best' way because competitive markets generate superior knowledge of consumer demands and producer supply costs (Sidak and Spulber, 1997, pp.522-26). Indeed, government regulation can introduce important economic distortions into market economies: 'regulation… is far from being a full substitute for competition, it can create systematic distortions, it generally faces a trade-off between promoting one type of efficiency at the expense of another, and it is likely to generate significant costs, in terms of both direct implementation and exacerbation of inefficiency' (Hay and Morris, 1991, pp.636-7). For such reasons, in the economics of regulation literature there is a strong preference for competition over state regulation and, where there is not a natural monopoly, for adopting regulation only until competition arrives.

This review of propositions from the economics of regulation literature incorporates observations on the importance of the institutional setting, regulatory rules and the regulatory process. While the search for practical solutions may lead countries to adopt regulatory policies that do not necessarily accord with the theory (Crew and Kleindorfer, 1996, p.215), the theme of this paper is that the theory is useful starting point for analysing practice in developing economies. The propositions are now explored specifically within the context of developing countries, to see how well they may map across, before a methodology for analysing economic regulation in developing countries is proposed.

REGULATION IN DEVELOPING COUNTRIES: APPLYING THE ECONOMICS OF REGULATION

It should be noted at the outset that there is no separate economics of regulation literature designed for studying regulation in lower income economies. Hence, one obvious rationale for using the economics of regulation literature from the developed world is a lack of an alternative theory or conceptual framework. However, as will be demonstrated below, this is not a case of attempting to wear an ill-fitting shoe. The economics of regulation literature does have applicability in developing economies, if used with care. The paper is premised on the belief that mapping the economics of regulation literature across to developing countries is a question of degree rather than of kind or of detail rather than fundamentals.

The approach adopted here is to analyse the needs of developing countries using the above propositions from the regulation literature, so as to build a methodology for studying regulation in these economies.

Institutional context

Institutions act both as facilitators of economic development and as constraints, which can be divided into 'technical' and 'political'. Technical constraints include managerial deficiencies, lack of administrative and regulatory capacity, and weak capital markets. Political constraints include opposition from organised labour and the state apparatus, and fear of altering the balance of economic, ethnic and political power. Both sets of constraints may combine to provide an effective barrier to the speedy adoption and good performance of regulatory structures, even when the benefits for economic development are well understood (Parker, 1999a). As DFID (2000, pp.23-25) comments:

> ‘Effective governments are needed to build the legal, institutional and regulatory framework without which market reforms can go badly wrong, at great cost – particularly to the poor. Whilst excessive or cumbersome regulatory barriers stifle incentives and discourage investment, effective regulation remains essential – for instance to promote financial sector stability, to protect consumers, to safeguard the environment, and to protect human rights, including core labour standards’.

Unfortunately, governmental effectiveness varies widely across the developing countries and excessive and cumbersome regulatory barriers are commonplace. While a number of countries have experimented for their public utilities with new forms of regulation based on examples from the UK and USA, encouraged by Western consultants, in a number of cases the results appear to have been disappointing, at least so far. For example, in Malawi the electricity industry regulator remains closely connected to the state electricity industry, compromising any notion of real regulatory independence and encouraging capture. Water sector reforms in a number of countries have been associated with second best outcomes and inefficiencies brought on by the institutional context within which reform has been attempted, especially a failure of the government machinery (Dinar, 2000). In India regulatory structures are associated with acute failures in institution building and with a bureaucratic approach that curtails enterprise and entrepreneurialism (Lanyi, 2000; *Financial Times*, 2001). South Africa’s proliferation of regulatory bodies is associated with a lack of clarity about roles and responsibilities and with the adoption of policy-making roles independent of government (Schwella, 2002, p.3). By contrast, under Malaysia’s telecommunications regulatory regime, the Minister rather than the Malaysian Communications and Multimedia Commission continues to make all of the key regulatory decisions (Lee, 2002, p.10). Meanwhile, experiences in the transitional economies are also educational. Studies have shown that there has been much variability in the independence of the new regulators established (Cave and Stern, 1998). For instance, in Hungary, in 1996, the government found ways within the Electricity Law of reducing a tariff increase recommended by the regulator, the Hungarian Energy Office.

The substitution of state economic regulation for direct state ownership in developing economies is intended to remove the conflict of interest that exists where ownership, management and regulation of a firm are within one jurisdiction. But as Stelzer (1988, p.78) recognises: ‘Regulation is a business in which people make a difference’. The implementation of regulation is a human and not simply a technical function, so the quality of the regulators is important and regulatory expertise in developing countries is normally in scarce supply. The credibility of any kind of 'independent regulation', modelled on the UK or US regulatory structures, may be weak and even where it does exist, deciding on the appropriate degree of discretion to be given to regulators is likely to be particularly problematic in the absence of experience of delegating decision-making powers to quasi-governmental agencies.

Information asymmetries

Information asymmetries and therefore the scope for 'opportunistic' behaviour by either the regulator or the regulated can be expected to be higher in developing than developed economies because of a lack of regulatory expertise and the need for regulatory capacity building. In particular, regulation is not the same thing as *management* of public utilities and this may not always be well understood. In any case, the division can be obscure at the margin leading to conflict between the regulator and the regulated; for example, pricing and investment are important management matters but they are also centrally regulatory issues.

As an illustration, in Argentina there was a failure to determine the regulatory system ahead of a major restructuring of the telecommunications industry and the privatisation of the country's main operator, ENTel. The regulatory agency was created only after the sell-off. In the following months there was serious disagreement between the agency and company, especially over the agency's powers to set new tariffs. Customer service complaints increased and investment was adversely affected by the general uncertainty created by the regulatory environment (UNCTAD, 1995, pp.136-7; Cook, 1999). In Buenos Aires Metropolitan Region a 30 year water concession to a private-sector company led to a number of service improvements. But the industry regulator, ETOSS, complained about inadequate information supplied by the company; while the company, Aguas Argentinas, criticised the regulation for being too intrusive. In Guinea the private water operator, SEEG, earned more than twice the agreed amount with government from its water concession, but the state holding company and regulatory body, SONEG, failed to discover this until a World Bank audit (Bayliss, 2001, p.14). This suggests on-going regulatory weaknesses stemming from information asymmetry. In the Chilean electricity sector economic performance improvements were linked to regulatory improvements rather than privatisation *per se* (Cook, 1999). In 1995 Puerto Rico contracted the management of its water authority to the French multinational, Vivendi. An official report in 1999 condemned numerous failures, including deficiencies in supply, customer service and maintenance and repair, and noted that financial reports from the company to the regulator were either late or not submitted (Bayliss, 2002, p.9).

Hold up

Often concessions are used in developing countries for public utility investments and are prone to hold up. Typically the concession agreement will involve investment in long-life assets. The longer the concession period, the less feasible it will be for any party at the outset to anticipate and build into the concession contract all future events that might impact on costs and revenues (Grossman and Hart, 1996). The risks include design/construction risk, operating cost risk, revenue risk, financing risks (including exchange rate movements e.g. when debt is dollar denominated) and environmental risks (Kerf *et al*., 1998; Pongsiri, 2001).

The longer the time period the more likely it is that contract disagreements will arise between the concession holder and the regulator or government. In Jamaica a 25-year concession to operate the telecommunications sector, entered into with Cable and Wireless in 1988, provided for an agreed rate of return on equity. The concession is widely considered to have disappointed, with prices failing to fall and labour productivity growth remaining weak (Lodge and Stirton, 2002). It has now been replaced with a more liberalised telecommunications regime, but only after a difficult and lengthy process of renegotiation. In India the much publicised Dabhol Power Company dispute provides a pertinent lesson for international investors on the risks of hold up. The project, based in Maharashtra state, was initially considered to be a model for future IPPs in India and elsewhere. Arranged in the late 1980s and refinanced at a cost of US$1.4bn in 1999, a new government in Maharashtra reviewed the contract and considered that it unfairly favoured the private investor over the people of Maharashtra. The result has been non-payment for power by the state electricity board and heated legal wrangling (*Project Finance International*, July 2000, p.11). In South Africa the privatised water company at Dolphin Coast sought to renegotiate its contract after experiencing disappointing financial results. In April 2001 the company, Siza, refused to make a scheduled lease payment to the municipality. The municipality could have retaliated under the terms of the concession agreement by calling in a performance bond, but there was no obvious alternative supplier. Water prices were negotiated upwards by 15% to restore Siza's profitability.

Expanding public services to populations previously un- or under-supplied can be expected to be a major objective of developing economies. However, to attract private investment requires a regulatory environment that minimises investor risk, while at the same time protecting local consumers and taxpayers from rent seeking behaviour by private owners. This is not an easy balance and raises a number of issues relating to the relationship between economic regulation, social welfare and regulatory risk (Parker, 1999b). Gupta and Sravat (1998) provide an overview of the Dabhol and other private power projects in India and demonstrate that both opportunities and risks attach to private power projects. The lack of necessary regulatory reforms to introduce cost-based tariffs and to end non-payment for power, alongside incidents of contract reneging by the state, has led a number of international power companies to leave India, including EdF, Cogentrix and International Power. Also, the East Asian financial crisis of 1997 underlines that private investment is not a straightforward panacea for state failure to invest adequately. The use of IPPs in the Philippines during the 1990s led to a power glut with an estimated 59% over-capacity in generation by 2001 (*Project Finance International*, October 2001, p.53). In Indonesia, following unfavourable exchange rate movements, the government required the renegotiation of IPP contracts.

Regulatory and political capture

Public choice theory suggests that politicians and bureaucrats are self-seeking (Niskanen, 1971; Mitchell, 1988) and this has been a powerful argument for privatisation of state-owned utilities; but it is these very same politicians and civil servants who are expected to establish and maintain a credible regulatory structure after privatisation. By concentrating economic power in regulatory offices the risk of regulatory and political capture may be increased, especially in societies with a culture of cronyism and clientelism (Guasch and Hahn, 1999, p.137). Cronyism and clientelism, alongside patrimonialism and corruption, interweave creating a serious problem for public administration in developing countries (Theobold, 1990; also see the studies in ed. Williams and Theobald, 2000) and therefore for regulatory credibility and commitment. In a developing country context, the risk of regulatory capture is reinforced by family loyalties, clan systems and other cultural norms favouring relationship contracting, such as the role of *guanxi* in transacting in Chinese societies (Duckett, 2001). Moreover, privatisation can concentrate power in a local political-business elite, compromising any chance of effective state regulation (see the papers in ed. Saha and Parker, 2002). Rohdewohld (1993) details how Nigeria's privatisation programme from the mid-1980s was driven by the need to satisfy regional and ethnic interests. Patronage has been identified as a major problem in the privatisations that have taken place in many parts of Africa (Tangri, 1999; Tangri and Mwenda, 2001; Craig, 2000, 2001).

It is to be expected that in developing countries, as in developed ones (Brenner, 1980; Gale and Buchholz, 1987; Blau and Harris, 1992; Shaffer, 1995; Kerf and Smith, 1996), businesses and other interest groups will attempt to use public policy strategically so as to influence the content of regulation in their favour. In developing countries foreign companies may have considerable economic and political power to pursue rent seeking goals, including negotiating exemptions from regulations by threatening to withhold investment. A study of the privatisation of the telecommunications and transport sectors in Latin America concluded that there was a real risk of regulatory capture because if multinational companies threatened withdrawal governments had no obvious alternative supplier. The study also identified cases of political meddling in regulation and of incumbent private-sector firms actively lobbying government to prevent the development of competition (Ramamurti, 1996, pp.30-33). Bitrán *et al*. (1999), reviewing the privatisation of Chile's public utilities, rate highly the likelihood in Chile of both regulatory and political capture.

Effectiveness and efficiency

In developing countries regulation is likely to be not simply concerned with the pursuit of economic efficiency but with wider social welfare goals to promote economic sustainability and poverty reduction. This is significant because it suggests that regulation in developing economies may face a greater dichotomy than exists in developed countries between promoting economic and social goals. Until this is flushed out and properly articulated it is difficult to make proper sense of notions of regulatory effectiveness and regulatory efficiency in developing countries (Smith, 2000). What is deemed regulatory ineffectiveness in one context, for instance a failure to remove cross-subsidies that favour the poor, may not be in another context, where poverty reduction is a primary goal of public policy. The impact of changing regulations that raise prices to industry for, say, power supplies, may have different consequences in a developing country dependent on foot-loose multinational companies than would be the case in those companies' home economies.

Also, when assessing the efficiency and effectiveness of regulation in developing countries allowance needs to be made for the role of state regulation as a facilitator of, as well as a possible obstacle to, economic development. Regulation can create a more certain environment for investment in developing countries and thereby produce more orderly economic development. Quartey (2001), focusing on SMEs in developing countries, sees a role for government because unfettered competition may not maximise social welfare where perfect markets do not exist. Quartey points out that both too much and too little regulation equally damage the development of SMEs, which account for around 22% of adult employment in developing countries. For example, regulation can protect property rights and trade liberalisation may actually damage investment in domestic SMEs by reducing profitability. At the same time, SMEs may lack the capacity that exists in large businesses to navigate the complexities of the regulatory system and influence its content to their advantage. Micro enterprises may dissipate economic resources in an attempt to evade regulations; while the high costs of registering a business in some developing countries, such as India, are well known. However, assessing the efficiency of regulation is complicated by the possibility that firms may not comply. White (1999: cited in Quartey) writing on Thailand concludes that SMEs hardly conform to legal requirements.

In developing countries a meaningful assessment of the effectiveness and efficiency of economic regulation needs to include the goals of poverty reduction and reducing social exclusion. For example, in South Africa policy is driven by the goal of empowering the black majority after decades of apartheid, leading to regulation to ensure universal and affordable access to essential services (Schwella, 2002, p.18). Empowerment and participation along with poverty reduction are now on the agenda of donor institutions, but their link to regulation is not clearly made. For example, the continuing existence of service obligations and cross-subsidies alongside market liberalisation policies are issues that need to be addressed. There is argument in the literature as to whether privatisation necessarily improves economic efficiency (Martin and Parker, 1998, ch.4; Torp and Rekve, 1998, p.78; Megginson and Netter, 2001; Cook and Uchida, 2001), but there can be little doubt that privatisation *alone* does not address the goals of macro-economic stability and distributional improvements in developing economies (World Bank, 2001, p.39). It is not necessarily the case that the poorest will loose out from privatisation (Estache, Gomez-Lobo and Leipziger, 2000; Birdsall and Nellis, 2002), but low-income consumers may not benefit unless their specific needs are addressed.

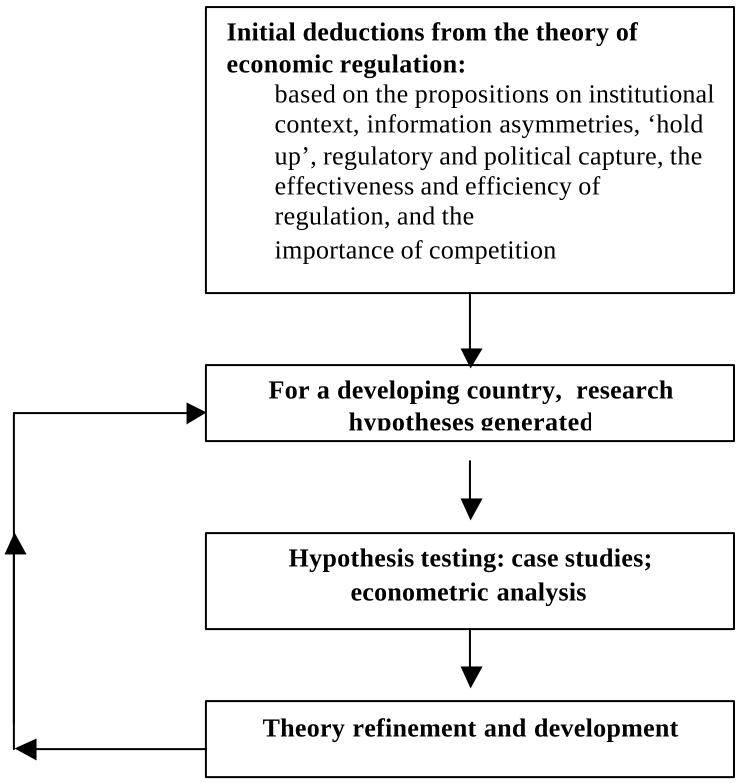
In particular, expanding services to the large numbers of the population who are currently inadequately supplied may be an important regulatory goal. In Kenya less than 2% of the rural population are connected to mains electricity (World Bank, 2001, p.11). In Rwanda there are merely 15000 telephone lines for 8 million people. In developing countries some two billion people lack access to adequate sanitation and electricity, one billion lack access to clean water, and a half of the world's population has never used a telephone (Gray, 2001, p.1). Therefore, arguably the effectiveness of economic regulation is, at least in part, appropriately assessed in developing countries by results in terms of an improvement in the scope and quality of services provided. This, in turn, implies the promotion of large-scale investment in system expansion. But, as Bayliss (2002, p.11) concludes for developing economies: 'The usual pattern with electricity and water privatisation is a rapid expansion in the level of billing and installation of meters [to capture non-payers]. Increasing connections is a lesser priority and investing in the network infrastructure is at the bottom of the list'. In the province of Tucumen in Argentina, a water concession necessitated sharp price increases that triggered a non-payment campaign by water users. Provincial elections and a financial crisis for the concessionaire led to difficult negotiations on a new tariff structure to help the poor and the case ended in international arbitration. In Zimbabwe, in 1999, the UK firm Biwater withdrew from a planned water project because it discovered that consumers would be too poor to pay the tariffs necessary to reach the company's profit target.

A METHODOLOGY FOR RESEARCHING REGULATION IN DEVELOPING ECONOMIES

The above discussion applying the economics of regulation literature to the specific example of developing countries does suggest that the main propositions from the literature map across and can be usefully applied when researching regulation in developing economies. This section of the paper builds on this discussion by detailing a methodology for studying regulation in developing countries. To date the study of regulation in these countries has been largely inductive, involving case studies of regulatory regimes and observations on regulatory performance. The proposed methodology is essentially deductive, working from the theory of economic regulation but remaining grounded in the experiences of the developing countries.

Developing countries are heterogeneous and therefore any methodology needs to combine rigour with sufficient flexibility to incorporate the differing situations facing developing economies. The methodology proposed here is rooted in a well-developed and respected theoretical literature, the economics of regulation, but uses the experiences of developing countries to refine and develop the theory, through an iterative process, so as to ensure that the result is relevant and thorough. The methodology is intended to be valuable both for *ex ante* and *ex post* regulatory analyses; that is to say when both researching proposed regulations in developing countries and when reviewing existing regulatory regimes (it can therefore form the basis of a 'regulatory impact assessment' in policy making). The approach is summarised in Figure 1. The arrows indicate feedback from empirical study (evidence/practice) to improve the model. The aim is the gradual development of a rigorous analysis of regulation directly applicable to the challenges and circumstances of a low income economy. The empirical study could include case studies but could also extend to econometric and other statistical work at industry, economy and cross-country levels. The theoretical model builds on the propositions on institutional context, information asymmetries, 'hold up', regulatory and political capture, the effectiveness and efficiency of regulation, and the importance of competition, as set out above. These establish the focus for analysing regulation, but under the proposed methodology the theory is then repeatedly refined and refreshed by on-going empirical analysis. By focusing on the theoretical propositions, the aim is to make both case study and econometric work more rigorous and meaningful in terms of lesson drawing (Rose, 1993).

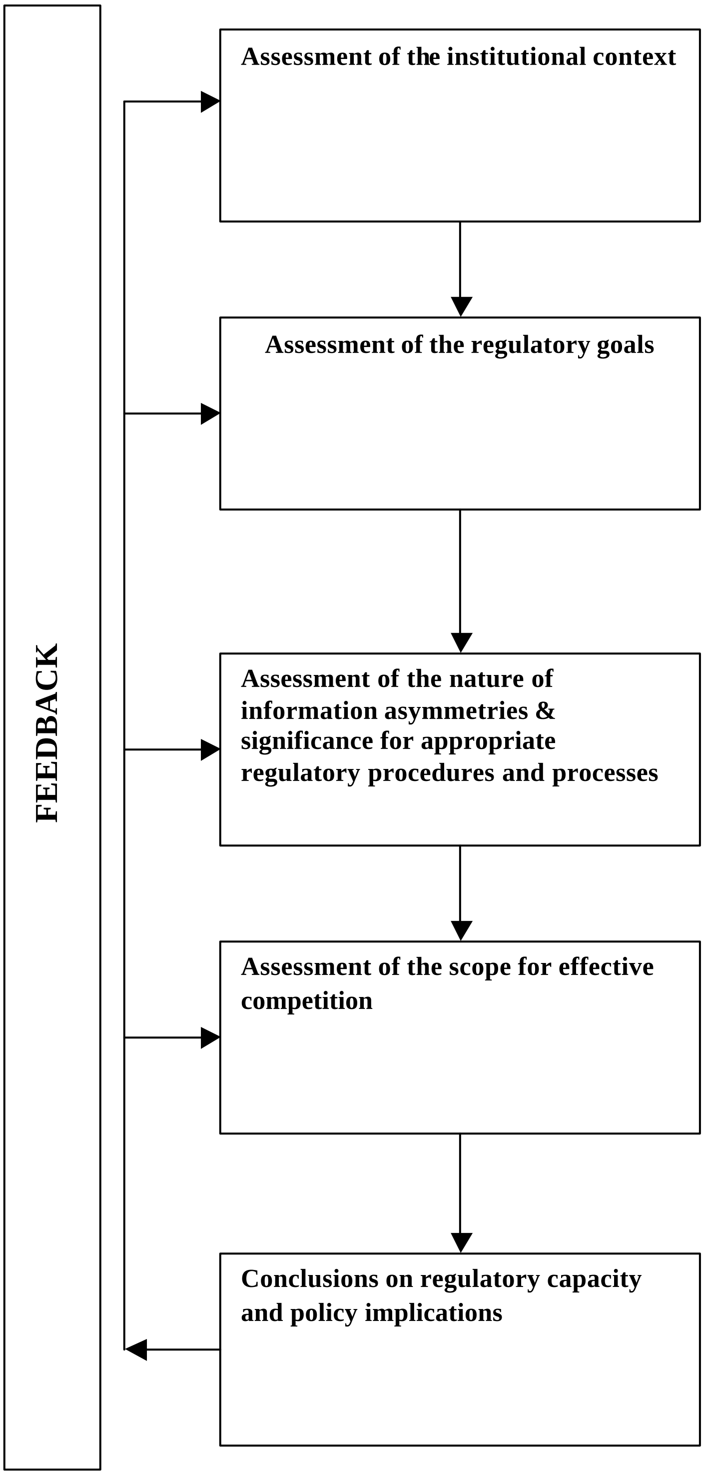
Figure 1: The Proposed Research Methodology in Outline



The proposed methodology at the hypothesis testing and theory refinement and development stages is developed further in Figure 2. The main propositions from the economics of regulation literature appear here but are now incorporated into defined stages of a research programme, in which particular attributes of each regulatory regime are assessed in terms of efficiency and effectiveness criteria. The research process goes through various stages involving an assessment of the regulatory goals, an assessment of the institutional context, an assessment of information asymmetries and their significance for regulatory procedures and processes, and an assessment of the scope for effective competition. This leads to conclusions on both regulatory capacity and policy. Again the feedback arrows are intended to show how empirical work is used to improve the research process, by refining and refreshing the theory at each stage.

In more detail, research using this methodology would involve, first, an assessment of the regulatory goals and the weightings attaching to social goals as well as economic ones, leading to a relevant definition of regulatory effectiveness and efficiency for assessing the performance of regulation in a particular context. Second, an assessment of the institutional context within which the regulatory regime is embedded, including an assessment of (a) the political, economic and cultural values that either sustain or frustrate the intended regulation; (b) the scope for, or likelihood of, maintaining regulatory independence in the face of the forces for regulatory and political capture in a country; and (c) the extent of regulatory commitment, leading on to an assessment of regulatory credibility. Third, a review of the likelihood and extent of any information asymmetries, so as to develop an analysis of the consequences of asymmetry for the design of the most appropriate regulatory procedures and processes. Fourth, an assessment of the scope for competition, including the existence of a developed capital market and competition policy, so as to help define both the need for regulation and the relevant forms it should take. The fifth stage involves developing conclusions about the extent of regulatory capacity in a country and the policy implications, including the existing skills base and personnel and training needs. This stage would involve a consideration of mitigation and enhancing issues that could improve the outcomes. The result feeds back into the analysis with the aim of producing an improved outcome (in this sense this stage is particularly similar to a ‘regulatory impact assessment’, see Lee, 2002).

Figure 2: A Detailed Research Methodology



Specific issues to be addressed:

?? political, economic and cultural values
?? scope for regulatory independence
?? likelihood of regulatory and political capture
?? regulatory commitment and regulatory credibility
?? credibility of regulatory independence

?? definition and measurement of regulatory effectiveness and efficiency
?? role of economic goals e.g. economic development
?? role of social goals e.g. empowerment and poverty reduction
?? impact on the attraction of private capital

?? extent and role of information asymmetries
?? marginal cost pricing (LRIC), cross subsidies and USO obligations
?? significance for operation of price cap and rate of return regulation
?? threat of hold up and appropriate policy responses

?? extent of local commitment to promoting competition
?? size of market
?? extent of natural monopoly
?? private capital base
?? existence of effective competition policies and laws

?? extent of regulatory effectiveness
?? extent of regulatory efficiency
?? implications for existing regulatory skills base
?? implications for policy reform and regulatory capacity building

Although, as drawn, Figure 2 may imply a linear process of analysis, albeit with feedbacks at each stage, it is not intended that the process should necessarily be linear. In the case of a particular country there may be grounds for altering the ranking of the stages to reflect research needs. Feedback from empirical work may lead to greater theory refinement at particular stages than at other stages. However, what the proposed research methodology is intended to do is to produce a systematic analysis of regulation in developing economies grounded in tried and tested theory, perhaps leading back at some stage to a revised set of research hypotheses (Figure 1). The approach adopted ensures that research into regulation in developing countries has a coherent theoretical base, something often missing so far, and should therefore contribute to the better generation of knowledge on regulation and regulatory needs in the developing world.

CONCLUSIONS

The paper has reviewed the economics of regulation literature under six headings, namely institutional context, information asymmetries, 'hold up', regulatory and political capture, efficiency and effectiveness and competition. Although the economics of regulation literature comes mainly from the UK and USA, it has provided a useful departure point for developing a deductive methodology for the study of regulation in a developing country context and in the absence of an alternative, dedicated theory for development studies. At the same time, developing countries have their own peculiar economic, social and political problems that are distinct from those of most developed economies and sometimes from one another and this is recognised In the iterative process of theory refinement built into the proposed methodology.

What Dolowitz and Marsh (2000, p.17) call 'uninformed transfer', where a country borrows a policy from elsewhere but is ignorant of how it truly operates, can be expected to plague the implementation of economic regulation in developing countries, if there is an attempt to apply a common set of regulatory standards or assume a consistent set of behavioural responses to regulation across countries. For economic reforms to have their intended result of increasing economic and social welfare, there needs to be both a proper understanding of both the theoretical basis on which the reforms are predicated and of local capacity to implement reforms in the manner intended. The methodology incorporates both.

As Kanbur (2001, p.16) explains: 'If the world is complex, or if the evidence is uncertain, or if legitimate differences in perspective and framework explain differences in conclusions, analysis must take these on board. And the policy messaging that comes from such analysis must reflect the nature of those complexities.'[1]. The research methodology proposed in this paper is consistent with this view and recognises the complexity of economic regulation in the context of development needs. It begins from the economics of regulation literature because this forms a well-respected theoretical basis for analysing regulatory problems from an economic perspective. But at the same time, the methodology incorporates recognition of the need to inform and refine theory through the experiences of regulatory policy in developing countries. The result is intended to lead to more coherent and rigorous research on regulation in the context of developing economies and through this a symbiosis of theory and practice. In turn this should lead to improved regulatory capacity. It may even, in time, lead to the production of the dedicated theory of regulation for developing countries that is currently missing. This theory might be similar to the established economics of regulation, or something substantially different.

Notes

[1] Kanbur was Director for the World Bank's Development Report on Poverty until he resigned in May 2000.

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