Research Report

Comparative Study of Regulatory Framework in Infrastructure Sector: Lessons for India

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"*The government must now prepare to relinquish its exclusive role in decision making in the infrastructure and allow much of these decisions to be made by the free play of market forces*" – India Infrastructure Report (2002)

Executive Summary

1. Introduction

The thrust of economic reforms has been to allow for more competition in the market. The underlying rationale is that competitive markets ensure efficiency resulting in best possible choice of quality, lowest prices and adequate supplies to consumers. This outcome emerges because of the following three conditions:

- *Competition*: there are a large number of producers supplying same product, or close substitutes, and no single producer dominates the market place
- *Full information*: all consumers are fully informed about the options market offers them
- *Low switching costs*: the costs a consumer faces in switching from one option to another is not high enough to deter this switch

Anyhow, the real world contains a number of instances where markets do not satisfy any one or more of these conditions, and in such situations, competitive markets may not exist or yield desirable outcomes. This includes situations where:

- Market players adopt unfair means to restrict competition and hurt other players and consumers
- Markets fail due to externalities, imperfect or asymmetric information, and economies of scale and scope
- Government policies that paved the way for greater market-orientation in the first place, might itself have elements that distort functioning of markets

The first two factors require some form of intervention in the market process. The third factor requires fine-tuning of government policy and its implementation to facilitate working of markets.

There is now a growing realisation that the shift towards market-oriented economy does not mean [that the] 'invisible hand' will work to allocate resources efficiently and produce competitive outcomes, as potential benefits are often thwarted by market-distortionary practices[1]. Distortions to the market process arise, when, firms, while competing with one another, adopt restrictive or unfair practices (factor one above). This relates to fixing prices with rivals, setting price which is lower than cost in order to throw out competitors from the market, taking advantage of a monopoly position and charging unreasonable price, refusal to buy or supply, and the like. In view of this, Competition Law is enacted to check such behaviour of market players. It lays down legal principles and institutions that govern behaviour of firms in markets including restrictive trade practices, mergers, provisions to deal with abuse of dominance, cartels etc.

[1] Brusick, P. et al. (eds.) (2004) Competition, Competitiveness and Development: Lessons from Developing Countries, UNCTAD, Geneva

Where, however, competitive markets may not exist or yield desired results – generally because the conditions for a natural monopoly apply – a case is made for some form of intervention to control price and quality of products and services[2]. Therefore, in such situations, regulation emerges to simulate competitive outcomes.

The rationale for regulation differs for financial markets from that of utilities (e.g. electricity, telecommunications, water) and also for transportation. Regulation of utilities is mainly justified because of natural monopoly or locational monopoly for transportation (airports and seaport). In case of financial markets, regulation is required due to information asymmetry, whilst in the case of public passenger transport the rationale for regulation is to prevent destructive competition.

An important factor that calls for regulatory intervention in infrastructure sectors that are opened up for other players is 'access to essential facilities'. Another reason for regulatory intervention is that while the market can be expected to bring about equilibrium between "demand" and "supply", it will not be able to ensure a balance between "need" and "supply". From a social point of view, it is desirable that all consumers, regardless of their income status, have access to certain services, for example, electricity. This requires regulatory intervention to promote equitable outcomes.

What emerges is that appropriate competition principles and rules (competition law and sector regulatory laws) need to be framed and implemented, and supporting institutional infrastructure put in place to ensure a market-oriented economy to deliver goods and services.

Many developing economies have adopted competition laws as a follow up to their market oriented economic reforms. Additionally, most of these countries have adopted regulatory laws in several sectors as they were opened up for private players. This upsurge in interest in competition and regulatory laws in developing economies reflects substantial changes that have been taking place in their political and economic environment.

Be that as it may, mere adoption of competition law and regulatory laws is necessary but not a sufficient condition for it to be a part of market reform agenda. Implementation is equally important. Developing countries pose unique challenges for competition and regulatory law enforcement. Their low level of economic development, which is often accompanied by institutional design problems and complex government regulation and bureaucracy, creates real-world challenges that have to be recognised before successful implementation of competition and regulatory regimes[3]. Instead, developing country governments have established or are establishing regulatory agencies for utilities, inspired mostly by industrial countries model rather than their typical domestic context. Arguably, however, the performance of new regulatory state remains under-researched, especially in the context of developing countries[4].

For the Indian economy to achieve and sustain an annual growth rate of 10 per cent, the creation of quality infrastructure is critically important. It is estimated that India needs more than a ***trillion***

[2] Anant, TCA and S. Sundar, "Interface Between Regulation and Competition Law", in Pradeep S. Mehta (ed) (2005), Towards a Functional Competition Policy for India, CUTS and Academic Foundation, New Delhi

[3] Gal, Michal S., The Ecology of Antitrust: Preconditions for Competition Law Enforcement in Developing Countries in P. Brusick et al. (eds.) (2004) Competition, Competitiveness and Development: Lessons from Developing Countries.

[4] David Parker and Colin Kirkpatrick, Researching economic regulation in developing countries: developing a methodology for critical analysis, Paper No. 34, December 2002

dollars investment in infrastructure. At a conference organised by the Planning Commission on 7th November 2006, the Prime Minister spoke about a figure of $320bn required by 2012 in order that India could compete effectively with China. Subsequently the figure was revised upwards to $450bn. It is clear that this order of investment cannot come from the public sector alone. The private sector, too, will have to be persuaded to invest.

However, in order for private sector investment to come in on a meaningful scale, two pre-conditions have to be met. One, markets for infrastructure services must be created, so that the current public sector monopolies are dismantled (although not to be replaced by private sector ones). And, two, those markets must be regulated properly so that non-market risks are either eliminated, or at least minimized through a predictable legal environment. This requires that monopolies and guarantees be discarded in favor of market solutions. The choice for governments is between market and non-market environments for provision of services.

This study focuses on the latter aspect by describing and discussing international experience with infrastructure regulation. It assumes as its operating premise that the regulatory framework must be transparent, consistent, effective and independent of government.

The economies selected for the study include Australia, Brazil, Canada, Philippines, South Africa, Sri Lanka, and UK. Please see Table 1 for the key economic profiles of the projected countries.

Table 1. Key Economic Profiles of Project Countries

	GDP (PPP) (USD billion)[5]	Per-capita income (USD) (at PPP)[6]	Contribution of Sectors to GDP[7]		
			Agriculture	Industry	Services
Australia	700,672	33,300	3%	26%	71%
Brazil	794,098	8,800	10%	38%	52%
Canada	1,115,192	35,600	2.3%	29.2%	68.5%
South Africa	240,152	12,161	3%	31%	66%
Sri Lanka	23,479	4,700	17%	26%	57%
United Kingdom	2,192,553	35,051	1%	26%	73%
India	785,468	3,800	19%	28%	54%
Philippines	98,306	5,314	14%	33%	53%

The criteria were: performance, varying size; different stages of development; socio-economic-political context; governance structure; types of regulatory frameworks in utility sectors; and representation of different regions of the world.

The sectors studied in depth are energy, telecom and water utilities

2. Methodology

The study relied on data/information procured through secondary sources. A comprehensive questionnaire was prepared to procure relevant information from select project countries, while

[5] World Development Report 2007, The World Bank

[6] http://en.wikipedia.org/wiki/List_of_countries_by_GDP_%28PPP%29_per_capita (estimates are as of 2005)

[7] Supra Note. 5

some additional and crucial information was gathered through primary sources. For this purpose, the questionnaire was sent out to consumer organisations, regulatory agencies and partner organisations covered under the study and many of them provided useful information. The study also benefited from personal interactions with several policymakers, regulators, and researchers in project countries. In India, some of the regulators and their senior staff provided useful insights. Additionally, papers generated by the Planning Commission and research institutions were also consulted.

3. Objectives

The study was undertaken with the following objectives:

- Analyse the regulatory framework in select countries with regard to institutional and governance aspects, such as regulatory objectives, mandate, independence, interface with other agencies/authorities, enforceability, decision making process, capacity, appellant provisions, accountability, selection and staffing.

- Compare the regulatory framework in the selected countries and identify lessons for India.

The analysis is based on review of structural, institutional and process related aspects of regulatory framework in the project countries with a view to cull out pertinent learning's to improve the regulatory framework of India. The outcome comprises of several valuable insights, which hopefully will add value to the current discourse on utility regulation in India.

4. Key Learnings

The key learnings have been placed under five heads:

- policy processes and coherence;
- types of regulation;
- overlap with competition authority;
- accountability and autonomy; and
- stakeholders' participation.

4.1 Policy Process and Coherence

i) *Background:* It is found that the decade of 1990s witnessed substantial adjustment and experimentation within the regulatory structures and approaches in the project countries. Like in India, in most project countries, there is considerable variation in regulatory approaches and structures. No explicit explanation and/or reasoning were found for this. This suggests that regulatory approaches have to be responsive to country and sector-specific socio-political realities, which vary across time periods. The regulatory frameworks were required to be flexible and governments in the project countries reviewed them at appropriate intervals in order to maintain effectiveness and the dynamism to face new challenges as they emerged over time. Countries like Canada and UK have a long history of independent economic regulation, in spite of which they review their regulatory policies and structures on a continuous basis. Thus given the context, the

initiative by the Planning Commission of India to propose a new regulatory framework for infrastructure sector is in tune with international best practices.

ii) *Consistency and cohesiveness:* The governments in many of the project countries have realised the need to achieve greater integration, consistency and cohesiveness in the regulatory frameworks to reflect the evolution of markets. Enactment of the UK Utilities Act, 2000 was one such effort that brought in various utility regulatory agencies under one umbrella and as a result, some common approaches were adopted across the sectors. In Brazil and Sri Lanka, regulatory approaches and structures across sectors were reported consistent and cohesive though the same was accomplished through a conscious approach rather than an overarching legislation. It appears that definitive and comprehensive overarching regulatory principles are being adopted across many of the project countries with a view to accomplishing consistency and cohesiveness in the regulatory framework without having to adopt a legislation, which can be a fractious and time-consuming process. Australia and Canada have also been striving to accomplish greater consistency and cohesiveness.

iii) *Federal countries:* Another important issue is of harmonization of regulatory approaches across sectors, and provinces (in federal countries like Australia and Canada, and applicable to India). In Australia, competition policy principles have been adopted in utility regulation and are being implemented throughout the country after following a rigorous process of consultation with the provincial and territorial governments. In Canada, efforts are on to harmonise the regulatory approaches across the provinces and territories as a measure to accomplish the objective of a common national energy market.

iv) *Help in GATS negotiations:* India should look at these dimensions (Australia and Canada with very similar constitutional structures) more closely and adopt farsighted policies keeping long-term objectives in mind. Indeed, the Electricity Act 2003 was a move in the right direction that facilitated consistency in the regulatory approaches across our provinces. The Governments in Canada and Australia believe that the measures adopted by them will also help them for negotiations under the General Agreement on Trade in Services (GATS) and derive maximum benefits as and when the opportunity arises.

4.2 **Types of regulation**

i) Light-handed approach: In project countries where the sector is mature enough, the so-called 'light-handed' approach of regulation is gaining popularity in competitive segments of the utilities. In several instances, the industry tends to regulate itself and under watch from the regulator, who steps in only when the industry fails to observe a set of ethical norms. In short, it boils down to the industry seeking to protect its reputation by following ethical codes voluntarily. This has been reportedly working effectively in Australia, Canada, and UK where the regulators leave space for competition and healthy market practices to prevail wherever possible.

ii) *Competitive v non-competitive segments:* However, this approach requires an appropriate organisational structure, where separate staff deal with matters pertaining to 'competitive' and 'non-competitive' segments. This is because distinct approaches and specialised regulatory staff are required for the two segments. After setting the policy, the government adopts an arms-length approach in order to empower the regulator with the much-needed autonomy. There is thus no backseat driving by the government wherein the regulator takes 'guidance' from the government.

iii) *Competitive neutrality:* It appears that as long as regulation is effective, the ownership structure of service providers does not matter. This suggests that in developing countries, the public sector could play a significant role in facilitating universal access and enhancing competition in the market. But care should be taken that the public sector is not given preferential treatment, and that competitive neutrality principles are followed.

iv) *Single v multisector*: The debate on a single *v* multi-sector regulator is yet to be settled. But the trend seems to be in favour of mega regulators for sectors that are cognate. Thus, in the UK and South Africa, the setting up of mega regulators for energy and communications is becoming the trend. Consolidation among regulatory agencies has just been completed in many countries. However one size does not fit all. So factors such as geographical area, governance structure, etc, need to be considered as well. One view is that it would be better to relate regulatory structures with performance and context. However, India will have to find its own home grown solutions, considering the political economy.

4.3 Harmonisation of jurisdiction between Regulatory Authorities and Competition Authority

A possible overlap between the jurisdiction of a sectoral regulator and the competition authority is a contentious issue and a variety of approaches have been adopted across the project countries. Nevertheless, there is a clear trend across the project countries to have concurrent jurisdiction over competition issues in the regulated sector. It is therefore recommended that the provisions in the law with regard to role of both the agencies should be spelt out in an unambiguous manner so that no scope is left for discretion and disputes. In any event, the two authorities have to learn to work together towards a common purpose and making informed representations to, and consulting, each other should be encouraged through appropriate legislation.

4.4 Accountability and Autonomy

i) *Independence varies:* the extent of independence allowed to regulatory agencies varies across the project countries. Thus even when considerable freedom is allowed, provisions which are adverse to independence of regulatory agencies still exist in the form of saving clauses, as in Canada and Australia. It is also observed that degree of independence varied considerably within a country, and also across the sectors. The executive arm of government tends to retain the power of issuing directives in pursuance of policy appointment and removal of regulators including the supercession of a regulator. (Supercession is a euphemism for removal of the regulatory apparatus). In the rich countries, even if provisions exist for ministerial interference, the same is used parsimoniously.

ii) *Accountability to legislature:* Across the project countries, holding regulatory agencies accountable to legislature was preferred as the most common approach. Legislature being representative of the people should have powers to ask clarifications to a regulator, as and when required. It is recommended that role of civil society groups should also be explored in making regulatory agencies more accountable from both the regulatory and social perspectives.

iii) *Appellate tribunals:* In addition to the above preferences, setting up a Technical Appellate Tribunal to review the decisions of a regulator is also increasingly being considered. In most cases, the role of judiciary is confined to decide on questions of law and procedure.

4.5 **Stakeholders' Participation**

The potential of consumer organisations and specialised civil society organisations needs to be recognised and harnessed optimally to make the regulatory regimes more effective, accountable and robust. In UK, the potential role of consumer advocates has been recognized in legislation itself and financial support is provided to them. This gives immense strength to them to fulfil their obligation of protecting consumers' interest and add to the overall regulatory efficiency and effectiveness. The Australian government too provides for funds for consumer advocacy in the electricity sector and the South African government in the telecommunication sector. Regulators must learn to work with consumer groups to enhance their efficacy.

The Report

I. Evolution of Sectoral Regulation

Developing countries are in general characterised with low per capita income and consumer welfare levels. Economic development policies in these countries have the objective of reducing poverty and improving the well being of masses. Therefore, in developing countries regulation is likely to be not simply concerned with the pursuit of economic efficiency but be responsive to wider social welfare goals.

In view of these factors, traditionally, the State has played a primary role in provision of infrastructure services in developing countries. Moreover, private sector was perceived as not having the wherewithal to invest in such long gestation activities. Accordingly, governments pursued their economic philosophy to accelerate development by establishing and encouraging state-owned enterprises (SOEs) to provide infrastructural services. The expectation was that combination of political control and accountability, and administrative *diktat* could best meet regulatory goals.

However, the performance with regard to provision of infrastructure services has been quite poor in most developing countries including the project countries. Large fractions of populations continue to be deprived of access to these services. Technical performance has been low, with generally poor levels of productivity. Availability and pricing of infrastructure services has been highly politicised. Most SOEs incurred deficits and became an additional burden on the state. The poor performance of these infrastructure sectors became a drag on economic growth.

This led to a policy shift involving restructuring/privatisation of SOEs and encouragement to private participation. It has been realised that the manner in which governments intervened in providing these infrastructure services proved to be ineffective. Moreover, the apparent successes of privatisation and market liberalisation programmes in developed economies prompted a shift in public policy from direct state ownership to private ownership with state regulation.

Technological advances also created opportunities by making possible the entry of other operators even in industries that were traditionally regarded as natural monopolies. For instance, in the electricity sector, new technology has enabled competitive generation and distribution industries to develop, even where the network remains a monopoly. Similarly, in telecommunications, new technologies are challenging predominance of a single national network and are opening up the market to competition. In view of these reasons, it was realised that private participation could play a significant role and more resources could be expected to flow. This called for putting in place effective regulatory institutions to provide credible commitments, that:

- investors will not be held up once their investments are made;
- consumers would be protected from excessive prices and poor-quality service; and
- other goals for the sector (such as universal service) would be achieved.

There are a number of decisions to be made regarding the structure of regulatory framework including single sector versus multi-sector regulatory agency, designation and powers of regulatory authorities, appointment procedures, financial autonomy, staffing, fora to arbitrate controversies,

administrative procedures, and role of antitrust authority in competition issues in regulated industries.

Privatisation of formerly state owned utility industries have been one of the most striking economical and political developments over the last decade and more. It laid down the way in which the state redefined its role in many areas of economic activity. In UK, the government withdrew their direct participation to a more detached role.

However, privatisation could not alone end the state involvement and regulate the dominant players and because of the speed of privatisation business were privatised as monopolies or dominant players. Thus, in order to have control over such a market structure and to make sure that the privatised monopolies do not misuse their dominant power, industry specific regulators were introduced. The regulators were independent and they operated at arms length from the government and were empowered by law to exercise influence and control over the monopolies or dominant players.

In UK, in the past, network utilities such as telecommunications, gas, water, electricity etc, were normally run and owned by the state. The idea of having a private company controlling the country's water supply was seldom visualised. However, in the 1980s, opinions started to change, that private ownership could provide enough incentive for good management and this led to the introduction of privatisation in the water utility sector.

Privatisation was initiated by the failure of the state owned utility industries characterised by a lack of competition, low investment and political interference. It was initiated with the belief that businesses would do better in a competitive and controlled environment, turning them from loss making into a profit-making sector.

In South Africa, the emphasis has been on restructuring of the state sector and making it more efficient, rather than to privatise. The approach to some extent can be compared with that followed in France where the state remains majority stakeholder even when private participation was secured. In both cases private investors were minor stakeholders. While French preferred domestic private investors, in South Africa foreign investors entered the foray.

The utility sectors of the South African economy, including electricity, transport, and telecommunications, have been restructured. *Telkom,* the dominant state owned incumbent in telecommunication sold its 30 percent shares to a US company. *Eskom*, the public sector giant in electricity sector as well was corporatized and restructured. The Airports Company sold 49 percent of its stake of which a part was transferred to the Black Empowerment Programme. In any case the government retained the majority stake and these corporations continue to deliver services to majority of the people in South Africa.

Independent regulatory institutions have been set up in some of the sectors and their focus has been on making the incumbent more efficient, through competition also amongst regulatory objectives. This indicates the South African approach to restructuring and privatisation.

The restructuring drive was initiated prior to setting up the regulatory institutions. Several sector specific regulatory institutions were set up while being given a varied degree of mandate and

autonomy. Initially, the approaches towards setting up of regulatory institutions were not coherent across the sector. This aspect was soon realised and acted upon. The current efforts are to bring in consistency and coherence in the regulatory framework and avoid proliferation of regulatory agencies. South Africa is moving on a fast learning curve, something that has not been observed in many developing countries.

During last two decades the Canadian Government to a large extent reclaimed the policy-making powers that the independent regulators used to enjoy. This shift was triggered and encouraged by several reasons including, federal-provincial disputes; disagreement between private and public sector, and a general move towards market-based policies and deregulation replacing direct intervention and protection of national champions.

However, the degree of independence these agencies were used to in the past, have now been curtailed. As of now, primary functions of the regulatory agencies include monitoring framework of consultation and compliance with procedures. Stakeholders are invited to participate in consultation on proposed changes in regulation. A few consumer groups are active in the utility regulatory processes however no mechanism has been put in place to support and nurture such activism.

Canada's federal governance structure is in many ways comparable with that of India. It has national regulators for energy, telecom, and transport sectors. Energy sector is also regulated at the provincial level and as in the case of the electricity regulatory apparatus in India; the National Energy Regulator only looks into inter-provincial and international transactions. Telecom and transport services, except highways, are responsibility of respective regulatory agencies set up at the national level. Water distribution is entirely a provincial matter and in most cases the responsibility has been further delegated to the municipal authorities. Differentiation over jurisdiction flow out of the Constitution of Canada. Regulatory approaches and institutional structure varies across the provinces/territories.

Reforms in the Brazilian infrastructure sector were part of the overall macro-economic reform agenda introduced during early nineties in response to a severe financial crisis. The 'Law of Concessions' of 1995 laid out the reform agenda in the Brazilian telecommunication and electricity sectors and curtailed the restrictions over potential participation of private sector (domestic and foreign) in the sectors.

One peculiar feature of Brazilian regulatory regimes is that despite functional autonomy provided to them they are linked with the line ministries for administrative requirements. This creates an impression that the concerned line-ministry continues to have a check on the independence that the regulatory agencies are supposed to have. The regulatory agencies are accountable to the related ministry. For instance, the Brazilian electricity regulator has a 'contract' with the line ministry to perform certain regulatory functions hence remains accountable to the ministry. The agencies are required to report to the line ministry, Congress, and the Federal Court of Accounts every semester and submit an annual activity report.

Sri Lanka's experience with sectoral regulatory agencies suggests that mere setting up institutions could be of little help unless these institutions are allowed to function by the political establishment. Though the institutional and legal structures have been created in Sri Lanka to promote competition

and regulation in some of the sectors, however distortionary state intervention and bureaucratic micro-management continue to hamper their effective functioning.

The approaches followed in Sri Lanka i.e. setting up of specialised regulatory agencies do not appear to be consistent. The telecom regulator was not given sufficient independence: the Secretary to the Ministry is the ex officio Chairman of the Commission and the Minister has the power to remove the Director-General of the telecom regulatory agency at any point of time. It is not a surprise that the telecom industry continues to view the Ministry as the real regulator.

Sri Lanka is an example that demonstrates that line ministries tend to retain as much authority they can, though it is the government who sets up the regulators for whatsoever reasons. This strengthened the arguments that without having a firm political will even a good legislation and institutional framework would be of little help. The key message emerging out of the Sri Lankan experience is that no institutional arrangement can perform effectively unless the government is actually willing to delegate.

In India, infrastructure reforms started in 1991-92, with policy initiatives permitting private participation, initially in power and telecom and subsequently in ports, roads and civil aviation. For well-established theoretical reasons, these are sectors where there are strong arguments for the existence of monopolies and/or large oligopolies in such sectors, rather than small competitors (for example, due to economies of scale). Therefore, no one would have expected these industries to get fragmented with the setting in of privatisation and decontrol. Nevertheless, with public and private monopolies in the market, infrastructure regulations assumed paramount importance, not only to protect consumers from harmful monopolistic practices but also to ensure that producers get a level playing field and a stable policy environment.

Contrary to well-established practices, regulatory reforms were not part of the original agenda for sectoral reforms in India. Only when the first wave of privatisation and liberalisation failed to arouse sufficient private interest did it dawn on policy makers that independent sectoral regulation was essential to build confidence among private investors to assure them that their interests were protected.

For example, Enron, which set up a power plant in India, negotiated a power purchasing agreement with the Government that guaranteed outrageously high rates. There are allegations that side payments were made in the deal. The allegations of side payments are not authenticated, but one may wonder if charging such a high rate may not amount to ripping off consumers. Obviously, the deal created a lot of controversy and a spat between Enron and the Government, vitiating the entire business environment, particularly in the power sector, making private investors shy of stepping into it. Such a situation could probably have been avoided, had there been an effective regulator.

With this realisation, independent regulatory bodies have been set up in the power, telecom and port sectors. Similarly, regulators have been established for sectors like capital market and insurance, while the Reserve Bank of India has been regulating the banking sector since long.[8]

[8] Discussion Paper (2004), "Capacity Building on Infrastructure Regulatory Issues", 2nd Edition (Revised), CUTS CCIER

II. AUTHORITY AND AUTONOMY OF REGULATORS

2.1 Creating Regulatory Agencies

There are two distinct legal approaches that countries generally appear to follow for creating regulatory agencies. An enabling legislation is the most common, but executive orders have also been used in some instances (e.g. the National Telecommunications Commission of Philippines in 1979, later notified through legislation in 1995).

The legislative route is preferred because it confers legitimacy. It also allows the government to make its intentions known, provides a framework for operating procedure and dispute settlement, and ensures that there is a clear and transparent point of reference for the regulators as well as the regulated. Executive orders however can make regulators vulnerable to executive whims while amending legislation, which as it requires following due process, provides for several checks and balances.

The other approach followed is contractual obligation i.e. 'regulation by contract'. Only once has a regulatory agency been created as a result of a contractual obligation - the Metropolitan Waterworks and Sewerage System Regulatory Office of Philippines (MWSSRO) was created out of a concession contract between government and private concessionaires. The latter is the only example of its kind across project countries. In cases of 'regulation by contract' the regulatory agency usually has limited scope since the contract provides for mutual obligations and deliverables for all concerned.

In the 1990s, dozens of regulatory agencies, both in developing and industrial economies, were set up across project countries and many of the existing ones were restructured. Some of these countries reviewed their regulatory approaches and framework and made necessary adjustments.

Despite independent economic regulation being practiced in Canada for over 50 years, a major restructuring was undertaken during early 1990s. A new legislation was enacted in 1993 to redefine the regulatory framework in the communication and broadcasting sectors.

In UK, the erstwhile gas and electricity regulators were merged to create a single regulatory agency. In a similar move in 2003, the then Office of Telecommunication was transformed into a broad-based Office of Communications.

In Australia, the Australian Competition and Consumer Commission, (ACCC), is an integrated federal competition and regulatory agency, in 2005 set up an exclusive agency: National Electricity Regulator within itself for regulating the energy sector.

The telecom regulator in Philippines that was setup in 1979 through an executive order was upgraded to a legislated agency in 1995. In 1996, Brazil set up its first independent regulatory agency in the electricity sector. It was in the same year that the Sri Lankan Telecom Regulatory Agency was established in Sri Lanka. Thus there are different sort of approaches that can be followed.

In India, regulatory agencies in telecom and electricity sectors were created through the legislative route. However, the provisions with regard to regulatory mandate, objectives, independence, etc, vary significantly in case of both the agencies. The electricity regulator is given far more

independence in comparison to its counterpart in the telecom sector. The latter is involved in consulting stakeholders on several matters and the outcome is, in certain specified cases, submitted to the line ministry. However, no explanation was reported for following such diverse approach in the two regulatory laws. This reflects that in the absence of a definitive regulatory policy and framework at macro level, often, convenience and preferences of the officials sitting in the line ministry decide the regulatory structure in the sector.

It would therefore seem that in the quest of a robust regulatory framework and approaches, both the industrialised and developing economies are passing through a process of transition, and are at various stages. But the dynamic process of fine-tuning/adjustment continues. On the face of it, these examples do not appear relevant to each other but that is bound to be the case during a transition phase. The important issue is the search for a robust regulatory framework all these countries.

Table 2: Regulatory Institutional Framework in Project Countries

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Telecommunications	Australian Communications and Media Authority (ACMA) in 2005	Brazilian Telecommunication Agency ANATEL, established in 1997	Canadian Radio – Television and Telecommunications Commission in 1968	Independent Communication Authority of South Africa (ICASA) in 2000 (formed after merger of broadcasting and telecom regulators)	National Telecommunications Commission (NTC) in 1979	Office of Communications (Ofcom), in 2003	Telecom Regulatory Authority of India (TRAI) in 1997 (reconstituted in 2000) (given the additional charge of broadcasting and cable services)	Telecommunications Regulatory Commission of Sri Lanka in 1996
Energy (Electricity)	Australian Competition and Consumer Commission (ACCC) within, the Energy Regulator of Australia (ERA) has been set up in 2005	Brazilian Electricity Regulatory Agency: ANEEL established in 1996	National Energy Board in 1959	National Energy Regulators of South Africa (NERSA) in 2005	Energy Regulatory Commission (ERC) in 2001	Office of Gas and Electricity Markets (Ofgem) in 1999 (formed after merging Office of Gas Supply (Ofgas) and Office of Electricity Regulation (Offer)	Central Electricity Regulatory Commission in 1998 (at Federal Level) State Electricity Regulatory Commission (at Provincial Level)	The Public Utilities Commission of Sri Lanka in 2003 vested with regulatory authority over electricity, water and petroleum industries.
Water Supplies	Office of Water Regulator	Brazilian National Water Agency: ANA established in 2000	–	Department of Water Affairs and Forestry	Metropolitan Waterworks and Sewerage System Regulatory Office (MWSSRO) in 1997	Office of Water Services (Ofwat), in 1989	Ministry of Water Resources	The Public Utilities Commission of Sri Lanka

2.2 Governance Structure vis-à-vis Régulation

Generally, when a federal government is responsible for a particular sector, regulatory institutions are established only at the federal level. In case of concurrent jurisdictions, regulatory agencies are set up at federal as well as provincial levels.

Worldwide, federal governments generally regulate the telecom sector, while in most cases water distribution is a local subject. A variety of approaches are followed in the energy sector, though the trend is of a gradual shift towards following a uniform and coherent regulatory approach across the entire country in order to integrate regional energy markets as a measure aimed at energy-security and efficiency.

In the Australian energy sector, though provincial regulators continue to regulate distribution in their respective provinces, a broader framework has been set out to facilitate the creation of a National Energy Market (NEM). It has been provided that the NEM would gradually assume a greater role in some of the matters currently being handled by the provincial regulators. The stated objectives of energy reforms in Australia include development of a competitive national market through facilitating seamless integration across the provinces. This would replace the erstwhile state-focused approach with a comprehensive national perspective.

In 2005, the Australian telecom sector and the separate communication and broadcasting authorities were merged to create the Australian Communications & Media Authority (ACMA). The Agency was set up at the federal level and operates through several regional offices. ACMA's mandate includes *'managing Australia's inputs into setting of international standards for telecom'*. This is an example of the attempts at harmonization of domestic regulation with international requirements as mandated by GATS. This is going to become increasingly important in regulatory design. Since the interface between domestic regulation and international rules is likely to become crucial in the future, the governments and regulatory agencies must remain prepared to deal with increased integration of domestic regulation with global trading systems.

In India, cross-border trading in electricity and gas is all set to grow rapidly. In this context, evolution of appropriate mechanism to facilitate smooth integration of regulatory approaches is needed. Reaping the advantages from GATS will also require similar preparation.

Box 1: The External Advisory Committee on Smart Regulation in Canada

In a bid to improve effectiveness of the regulatory framework in the country, the Canadian Government in 2003 established the External Advisory Committee on Smart Regulation (EACSR) with the mandate to:

1. Develop a regulatory strategy designed for the 21st century, supporting Canada as a sovereign trading nation that offers a high quality of life for its citizens;
2. Identify sectors and areas requiring regulatory reform in order to give Canada a strategic advantage;
3. Review and provide an external perspective on specific issues identified by departments and stakeholders.

In September 2004, after extensive fact-finding and investigation, the Committee submitted its report to the Canadian Prime Minister titled '*Smart Regulation: A Regulatory Strategy for Canada'*.

Following are some of the recommendation the Committee had made:

- International Regulatory Co-operation: The federal government should include international regulatory co-operation as a distinct component of Canadian foreign policy. The government should adopt international approaches wherever possible and limit specific Canadian regulatory requirements to where they are needed to support an important national priority, Constitutional values or unique Canadian circumstances.
- Federal-Provincial-Territorial Regulatory Co-operation: The federal government should pay urgent attention to creating a more seamless regulatory environment in Canada. Through discussions, co-operation should be formalised amongst First Ministers. A new joint arrangement between federal, provincial and territorial governments should be established that focuses on key priorities.
- Federal Regulatory Co-operation: Better co-ordination among federal departments and agencies is essential. To provide more effective co-ordinated regulatory intervention, the government should establish the necessary mechanisms to support interdepartmental discussion and foster the development of government-wide regulatory positions. The creation of overarching strategic frameworks with clearly stated policy objectives would facilitate coherent and integrated regulatory action in advancing government priorities.
- Risk Management: The federal government should develop a government-wide approach to risk prioritisation, risk assessment, and risk communication.
- Instruments for Government Action: The federal government should develop a framework to guide the design and use of instruments. Legislative constraints on creating mixes of policy instruments and using performance-based regulations should be eliminated. In addition, the government should examine expanding the appropriate use of economic instruments.
- The Regulatory Process: The federal government should give priority to developing a new federal Regulatory Policy aimed at the development needs of Canada. It should also develop performance measurement and compliance and enforcement plans for new regulation. The government should devise approaches for more timely development of regulation. It should improve its consultation practices. An independent recourse mechanism needs to be put in place to provide an opportunity to stakeholders to challenge regulatory performance and decisions.
- Government Capacity: The federal government should develop measures to support a regulatory cultural change within government through comprehensive learning strategies for the regulatory community and the implementation of regulatory policy research and development agendas.

The Indian policy planners should facilitate extensive as well intensive research using a variety of stakeholders including both academia and civil society organizations to understand efficient and effective ways to accomplish increased efficiency and accountability in regulatory approaches and frameworks within and across national borders. This would act as a measure to remain prepared to respond to dynamic situations as national needs and the environment for regulations evolve.

2.3 **Regulatory Mandate**

The mandate given to a regulatory agency is the only true indicator of the government's willingness to delegate. This can vary from country to country. Therefore, a regulatory law must define the mandate of a regulatory agency in a clear and unambiguous manner. The mandate must be backed with delegation of commensurate powers in order to facilitate the achievement of policy objectives.

An analysis of the mandate given to regulatory bodies across project countries confirms that the nature and extent of mandate varies substantially across regions as well as sectors within a country. Other than social objectives aimed at vertical equity, the main objective should be the creation of

efficient and competitive markets. However, problems can arise when social objectives are interpreted in a manner that is too broad to be consistent with efficient markets. The reconciling of these contrasting objectives needs some basic consensus. Regulators should attempt to build this consensus. A purely cost-based approach may not always work and mostly, the game has to be played by ear.

In communications, for instance, independent regulatory bodies established in South Africa and India are given the mandate of tariff regulation, interconnection, quality of service (QoS) standards and USO obligations.

Variations are nevertheless observed in respect of whether regulator's role is advisory in nature or absolute. In case of licensing, both Indian and South African regulators perform an advisory role and line minister concerned takes the final decision. In South Africa, where a single regulator has been established for telecom and broadcasting services, the regulator, ICASA, is assigned different roles when it comes to licensing in telecom and broadcasting sectors. In telecom sector ICASA's role is advisory in nature, which is not so in the case of broadcasting sector. Dispute resolution is an area that puts the Indian telecom regulator, TRAI at disadvantageous position vis-à-vis regulatory bodies in other countries. As per law, TRAI is not entitled to handle disputes between stakeholders, which significantly limit its powers, as almost any issue can be presented as a 'dispute' between interested parties.

The Canadian National Energy Board, for example, is responsible for promoting the 'public interest', which goes beyond the 'consumer interest'. The Board has assumed a mandate for environmental protection as a component of the 'public interest' as also for safety. This is just one example of non-efficiency considerations becoming another dimension of regulation.

Facilitating transparency in decision-making processes and encouraging participation of stakeholders was reported as another common regulatory objective. But there are exceptions such as where the Philippines water regulator does not consult the public saying that the regulator was created as a condition of the contract signed between government authorities and private concessionaires.

Regulatory approaches towards U*niversal Service Obligations (USOs)* vary across all project countries. In some instances, regulatory agencies are mandated to enforce service obligations while in others the respective line ministry in the government performs the job.

Approaches in this regard are not uniform even within a country. The UK electricity and water regulators are not required to work towards universality of services while the telecom regulator is required to do so. In South Africa, a separate Universal Service Agency exists in telecom sector, which is operated by the government while the South African energy regulator is required to ensure affordable services to the people. Though the Sri Lankan multi-utility regulator (covers electricity and water) has not become operational as yet, the provisions of the Act do not require the regulator to work for universality of services. None of the Brazilian regulatory agencies are held responsible by law to ensure universality of services.

In India, the telecom ministry has created a separate fund to support universality of services. The telecom regulator's role is limited in this regard and confined to ensuring collection of cess/levy on value added services to raise resources for the Fund. The Indian electricity law provides for the

regulator to vanish the cross-subsidy regime within a certain time period. The government may extend subsidies to certain category of consumers out of the general budget and the regulator is required to monitor the process.

Thus given the fact that meeting the USOs has to be a major policy directive for any government including the Indian Government, it should be unambiguously spelt out in the regulatory mandate. It is desirable to incorporate the broader policy objectives, such as universal access to services, within the legislation.

Ensuring access to common infrastructure and critical facilities is a critical regulatory function for inducing competition and is most common in practice in the energy and telecom sectors. The regulatory agencies set up during recent years, are expected to perform that role across project countries.

In UK, regulatory agencies across sectors are obliged to provide for non-discriminatory access to common carriers. This is so in Philippines as well. In Sri Lanka, the telecom regulator is mandated to provide non-discriminated access to common carriers. But in Brazil none of the utility regulatory agencies are given such a mandate. The Indian Electricity Act 2003 mandates the regulators at federal as well as provincial levels to ensure open-access to transmission and distribution infrastructure. Similar provisions exist under the new Petroleum and Natural Gas Regulatory Board of India.

Box 2: Lessons from Ontario's and Alberta's Electricity Market Reforms

Ontario passed the Energy Competition Act in 1998 to restructure Ontario Hydro and to introduce competition in the province's electricity market. Ontario Power Generation Inc. (OPG), which has assumed all of the generation assets of the former vertically integrated Ontario Hydro, is a provincially owned corporation that generates three-quarters of the electricity in Ontario. Hydro One, also government owned, is a separate company that has assumed the transmission and distribution assets of the former Ontario Hydro. Hydro One provides non-discriminatory open access and transmits wholesale electric power to municipal utilities that in turn retail it to customers in their service areas. To avoid abuse of dominant position by OPG, the Market Power Mitigation Agreement (MPMA) under the Act required OPG to divest 4 000 MW of its generation assets (other than nuclear and hydroelectric) by 2006 and reduce its overall share of the market to 35 percent by 2012.

While the process of establishing competition took longer than expected, all customers in Ontario had the right to choose their supplier of electricity by May 2002. Prices during the spring were lower than regulated prices, but a combination of an unusually hot summer and delays in bringing nuclear generating capacity back on line led to prices, much higher than expectations. To reduce the impact of price hikes on consumers, the Ontario government capped retail prices for about half of the market at a price well below the cost of power and the entry cost of new plant. The wholesale market was left in place, with the government obligated to make up any difference between the wholesale cost of electricity and the frozen retail price. This resulted in a need for substantial government subsidies and a reluctance of investors to move into the Ontario market.

Reforms, which aim to correct some of the past failures, are currently being discussed and put in place by the new government. Concerned about the impact on the province's finances, the new government has raised prices to cover costs. While preserving elements of competition by measures such as putting contracts for new generation capacity out to competitive bidding, the draft legislation proposed by the Ontario government

in June 2004 would terminate Ontario's previous plan to divest most of the province's power generation assets to private control. The proposals also include the regulation of prices for some consumers, the regulation of the output from certain power plants owned by Ontario Power Generation (OPG), an expansion of the role of the Ontario Energy Board (OEB) as the independent sector regulator, and the creation of a new agency, the Ontario Power Authority (OPA), with a broad mandate concerning supply and conservation measures.

In Alberta, most generation and transmission assets have historically been privately owned. In the mid-1990s Alberta deregulated its electric power industry, establishing open transmission access and a competitive power pool. An independent regulator, the Alberta Electric Utilities Board (AEUB), was created to regulate the development of the market. Transmission facilities are the property of investor-owned companies, and the Independent System Operator (ISO) provides non-discriminatory transmission access and is responsible for transmission system planning. Since January 1, 1996, all electricity has been sold into a power pool, and retail competition was introduced in January 2001, with consumers free to purchase their electricity from any licensed retailer.

The retail market in Alberta was opened at the height of the California electricity crisis, when Western North American electricity and natural gas prices were very high. Alberta, as part of an interconnected market, which includes California and the northwestern United States, experienced very high market prices. Most small consumers were purchasing electricity through their local distributors, who in turn were purchasing much of their needs at spot prices.

These distributors applied to the regulator to raise retail electricity prices so as to transfer higher costs to customers. To cope with the situation, the government placed a one-year temporary retail price cap on electricity for 2001. But, unlike Ontario, the government had set the price cap at a relatively high level, well above long-run marginal cost, in order to preserve a signal for new investment. Investment in new generating capacity has continued and wholesale prices in 2002 declined to pre-2000 prices, reflecting the new generation capacity that has since come on line.

In project countries, some regulatory agencies are responsible for standards and for ensuring compliance with regard to safety and environment aspects. Many safety aspects are related to service quality regulation. The regulatory laws require the energy regulators in the UK, Australia, Canada, and Sri Lanka to regulate safety aspects as well.

The water regulators in Australian and UK as well are given similar responsibilities. In India the electricity regulator is empowered to notify agencies/individuals to certify compliance with the safety norms as well as promote use of renewable energy.

Energy regulator practicing environmental regulation is also quite common. The water regulator of Brazil is also responsible for environment related matters. So is the case with the Philippines water regulators though the mandate given is rather peripheral. The Indian electricity regulator is mandated to coordinate with the pollution control board of the government to set standards and ensure compliance.

Although variations in the mandates need to be understood in the context of different socio-political environments, no reasoning was found for the diversity observed in the regulatory approaches across the sectors within a country.

Table 3: Mandate Assigned to Regulatory Agencies in Project Countries

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Telecommunications	• Licensing • QoS standards • USOs obligations • Public Education	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution	• Licensing (except for spectrum and submarine networks) • Tariff regulation • Non-Discriminatory Access • QoS standards • USOs obligations	• Licensing (advisory role in telecom) • Tariff regulation • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligation	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations	• Licensing (advisory) • Tariff regulation • Non-Discriminatory Access • Spectrum management (advisory) • QoS Standards • USO obligations	• Licensing (advisory role in telecom) • Tariff regulation in consultation with the Minister • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations
Energy (Electricity)	• Tariff determination for transmission • Non-Discriminatory Access for transmission • Dispute resolution • QoS standards • Safety Standards	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations • Safety Standards	• Licensing • Tariff regulation • Dispute resolution • QoS Standards • USOs obligation	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations	• Licensing • Tariff determination • Interconnection • Dispute resolution • QoS standards • Safety Standards	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS Standards • Safety Standards	• Licensing • Tariff regulation • Non-Discriminatory Access • Dispute resolution • QoS standards • Safety Standards

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Water Supplies	• Safety Standards	• Environmental Standards	–	–	• Licensing • Tariff determination subject to Boards approval • Non-Discriminatory Access • Dispute resolution • QoS standards • USOs obligations • Environmental Standards	• Licensing • Tariff determination • Non-Discriminatory Access • Dispute resolution • QoS standards • Safety Standards	• Environmental Standards	• Licensing • Tariff regulation • Non-Discriminatory Access • Dispute resolution • QoS standards

2.4 Regulatory Functions

Regulatory functions vary across project countries. Most energy regulators issue licenses to utilities but this is not so in the telecom sector in which governments issue licenses in most project countries. Good results can be obtained from very different mixes of regulatory instruments. For example, in the energy sector, the United Kingdom issues general regulations and standard licenses that resemble general regulations, but it also relies substantially on tailoring the license conditions to individual cases as a key regulatory instrument. The UK approach is less legalistic, and probably more transparent, and better suited to new regulators in developing countries. The set of appropriate policy instruments will change over time as the market changes, particularly as competition emerges.

In some instances related ministries continue to retain powers to intervene in matters such as tariff setting, which is considered a regulatory function. Such provisions were observed not only in developing but also in industrial economies such as in the Canadian energy and telecom regulatory agencies and the Sri Lankan telecom regulator. The Philippines water regulator also requires prior approval of tariff proposals from its Board, which has a representative of the ministry.

As far as resolution of disputes is concerned nearly all-regulatory agencies covered in this study are empowered to perform this function, except the Telecom Regulatory Authority of India (TRAI). TRAI is not empowered to resolve disputes nor does it have powers to enforce compliance of its decisions on aspects such as quality of services. There is a separate Telecom Disputes & Appellate Tribunal, which performs these functions. In this context, in Brazil and Philippines the regulatory mandate and objectives are consistent and coherent across sectors.

It is observed that line ministry concerned is responsible for formulating policy objectives and in most instances corresponding regulators advise the ministry, as in the case of India as well. Some of the regulatory laws, including the Indian Electricity Act 2003 and the Petroleum and Natural Gas Regulatory Board Act 2006, provides for the ministry concerned to retain powers to issue 'policy directives' to the regulator which are of a binding nature.

The scope of the term 'policy directive' has not been clearly defined. In Canada, regulatory agencies used to enjoy significant role with regard to policy formulation, which is not the case any more as the government has taken back many such powers.

Regulatory agencies are thus expected to operate independently of the government but implement government policies. This requires that policies be stated explicitly and unambiguously.

III. ORGANISATIONAL STRUCTURE OF REGULATORY AGENCIES

3.1 Structure

In UK, the energy and telecom regulators have separate divisions to deal with the 'Market' and the 'Network/Spectrum' related matters. The water regulator also has similar structure: one section deals with 'Network regulation' on an exclusive basis.

Similarly, in Philippines the telecom regulator has a separate 'Common Carriers Authorisation Department'. In South Africa where the electricity and hydrocarbon regulators were merged to form one regulator the new agency continues to operate with separate wings for each of the sub-sectors.

The South African telecommunication regulator too, has a similar organisational structure. It is difficult to explain why a mutli-sector agency should have separate sections within to regulate different sectors especially in the sectors those are linked closely.

Opening up of branch offices in various parts of country is crucial for regulatory effectiveness, especially in large countries like India. In Philippines, the energy regulator has three offices in different locations. The Canadian and Australian regulators have several offices across the whole country. However in India a regulator must get a permission of the executive branch of the government prior to opening a branch office. A regulatory law should empower a regulator to decide on matters such as opening of branches since these are administrative matters.

3.2 **Selection & Appointment**

This is one the most crucial aspects that need to be addressed up front. Appointing retired bureaucrats/judges to regulatory bodies has become the order of the day, which is not a healthy sign, as the very purpose of setting up institutions gets defeated. They lack the vigour and rigour required to do their jobs. The job also requires substantial knowledge of law and economics and its intersection. Attracting young blood and talent is the key to making these institutions work in a desirable manner.

In Philippines, the chairperson of the energy regulatory authority is required to be a lawyer with a minimum ten years of experience but rest of the members needs proven expertise in relevant disciplines. Similar provisions apply for the telecom regulator. The President appoints the regulators in both the cases. However, for water regulator no mention has been made of minimum qualifications and the process of appointment also varies. This difference in the approaches can be explained in the context of the fact that creation of water regulator was an outcome of a contract signed between service providers and government, rather than legislation.

In Sri Lanka the ministry appoints commissioners of the multi-utility regulatory commission while in telecom, the Secretary in the ministry is the ex-officio chairperson of the regulatory institution that makes it a subordinate office of the ministry.

In Brazil the qualifications for being appointed as regulators are not explicitly mentioned. Relevant ministries on the basis of recommendations made by a selection committee, appoint the regulators. The section committee also decides the qualification and appropriateness of a candidate. In practice efforts are always made to appoint professionals, or professionally inclined civil servants.

In South Africa, apart from the usual criteria, commissioners are required to represent the cross section of society. Respective ministries appoint the energy and telecom regulators. The process followed is not only transparent but also participatory involving public hearing and voting.

In UK, qualifying criteria is prescribed in accordance with the guidelines of the Office of the Commissioner for Public Appointments. It is the related ministry who appoints the regulators. Likewise, in Australia, the related ministry has a significant role in selection of telecom regulator while two of the federal energy regulators are selected by states/territories.

In India, line ministry appoints chairperson/members of telecom regulatory authority. The legislation provides for appointment of serving/retiring bureaucrats as regulator. Such provisions in the law contribute to undermining the possibilities of deserving people getting appointed as regulators. Contrary to that, the Indian Electricity Act 2003 provides for constitution of an expert committee that invites applications and recommends a few names to the ministry out of which the ministry selects one. However, the selection committee is not required to provide reasoning for recommending the names. Despite the fact that the same law applies across the provinces, stark variations have been reported: in Andhra Pradesh, selection process reported to have a greater degree of transparency while in Tamil Nadu it ranks lower. One instance was reported in which the provincial government of Tamil Nadu disbanded the selection committee because the latter recommended a candidate who was unacceptable to the government.

Thus the following is recommended:

- Qualifications for regulators should be mentioned explicitly in the legislation in an unambiguous manner
- Proper manpower planning should be done to ensure that selection of regulators is made in advance of a position falling vacant
- In order to identify the right candidate, applications should be invited against pre-determined selection criteria
- Restrictive provisions that deter people from the non-governmental organisation sector to move to regulatory bodies should be removed. Subject experts should be encouraged to join regulatory bodies on deputation
- Need to offer attractive salaries and compensation to attract young blood
- Prior to induction, regulators and their staff should be provided with a short term training

Table 4: Selection Mechanisms for Regulatory Agencies in Project Countries

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Telecommunications	Governor General appoints Chairperson and Deputy Chairperson. Minister is empowered to appoint Associate Members	Expert committee does the screening and recommends to the ministry	Cabinet has the appointing power	Chairman and Members (appointed by President based on advise of Parliamentary Committee and nominations from Public); board includes officials from related ministries	The Philippines President has the appointing power	Chairman is appointed by the Secretary of State	Appointed by Central government (represented by line Minister concerned). Nomination by search committee comprising of government officials and (judiciary, in some cases)	Appointment to the Commission is made by the Minister, with the concurrence of the Constitutional Council
Energy (Electricity)	Governor General has the appointing power	Expert committee does the screening and recommends to the ministry	Governor in Council has the appointing power	Appointed by Line Minister	The Philippines President has the appointing power	Chairman is appointed by the Secretary of State	Appointed by Central government (represented by line Minister concerned). Nomination by search committee comprising of government officials and (judiciary, in some cases)	Appointment to the Commission is made by the Minister, with the concurrence of the Constitutional Council
Urban Water Supplies	–	Expert committee does the screening and recommends to the ministry	–	–	MWSS board of trustees appoints the regulators. MWSS Board, is made-up of chairman and three members, who are all Presidential appointees	Chairman is appointed by the Secretary of State	–	Appointment to the Commission is made by the Minister, with the concurrence of the Constitutional Council

3.3 **Tenure and Terms of Appointment**

Provisions related to tenures vary across countries as well as the sector but there are several similarities as well.

In the UK and Brazil the tenure of regulators is uniform cutting across sectors. The regulators are appointed for a term of five and four years respectively (though the Brazilian telecom regulator is appointed for five years). In Australia chairpersons of various regulatory commissions are appointed for a term of five years while the provisions with regard to tenure of members and/or commissioners vary across sectors. The Canadian energy regulator is appointed for a period of seven years while the telecom regulator is provided with a term of five years. Variations in the provisions were also reported in Sri Lanka and Philippines. The Chairperson of the Philippines energy regulator is appointed for seven years while some of them are for a term five/three years. The Philippine telecom and water regulators do not have definitive tenure but serve at the pleasure of the President/executive respectively.

The provision for re-appointment is provided for in majority of the cases across the project countries. In some instances the executive branch of government retains the power of re-appointing a regulator. This has the potential to influence regulatory conduct by conveying signals about possible re-appointment if the person follows a compliant or a particular approach. It would be better if, even when a reappointment is made, the due selection process should be followed and the line ministry should not have a role.

In Australia and South Africa, regulatory legislations provide for appointment of part-time members. This appears sensible as a measure to facilitate association of those experts who are not able to join regulatory authorities otherwise. Indian telecom regulatory law provides for part-time members but this is not the case with the electricity regulatory law.

A possible source of influence is industry, which to some extent can be curtailed by restricting a retiring regulator from taking a job in the same industry. However such provisions were not found in most regulatory laws across project countries. The exceptions are the Brazilian water regulator where a retiring regulator cannot take a job in the same industry for one year. The corresponding requirement in the Indian electricity sector is two years.

No explanation is available for the absence of consistency and coherence across the sectors within a country. This reflects the lack of a well-crafted regulatory framework and the fact that various line ministries often frame regulatory legislation for their respective sectors in a manner that suits to them most.

3.4 **Removal**

In many of the project countries existing provisions for the removal of a regulator make the regulator vulnerable to the ministry's whims. This was observed not only in developing but also in some of the developed economies.

In Canada, regulators serve at the pleasure of the Governor in Council, who is part of the government. In Australia the telecom regulator can be removed in case the ministry perceives the

regulator as a non-performer. So is the case with South Africa's electricity regulator, though the telecom regulator there is better protected, as removal of the latter requires a parliamentary inquiry. In Sri Lanka, the legislation protects the commissioners of the Public Utility Commission from an arbitrary action of the ministry: prior to a possible removal the regulator is given opportunity to present its viewpoint and approval of the parliament is needed. (The Commission has been kept in abeyance ever since the law was passed). In Brazil, the regulators cannot be removed without a judicial conviction and administrative proceedings. These provisions are applicable across the sectors without any exception. However, the Brazilian government has taken action recently to reduce the power of the regulators who were seen as unaccountable for their performance and actions. So the sustainability of extreme independence might be questioned. In Philippines, the energy regulator can be removed only when found guilty in a judicial probe. In contrast, President of Philippines has the powers of dismissing the telecom regulator and the arbitration panel created out of the concession agreement can remove the water regulator.

In India, the provisions related to removal of regulators vary. The electricity regulator can be removed from the office only in case found guilty in a judicial probe however the telecom regulators do not have such protection and can be removed by the related department in the government. (Please see box 3).

Box 3. The TRAI Fiasco

In 1999, the tussle over turf issue between Government of India and the Telecom Regulatory Authority of India reached such a level that Government responded to scrapping the entire TRAI Act, 1997. This became necessary since the Act protected Members of the Authority, as their removal was subject to proven guilt in a judicial probe. The Government got rid of the then Chairperson/Members of TRAI by repealing the entire Act. Only one member of the erstwhile TRAI was reappointed under the new TRAI Act, 2000.

What led to this situation?

In September 1999, TRAI said that the pricing of cellular phone calls should shift to a 'Calling Party Pays' (CPP) regime, which means that calls from fixed phones to mobile ones would be charged slightly more than the prevailing rates and mobile subscribers would simultaneously stop paying for incoming calls. This is the standard practice in most countries worldwide. A war broke out. The government-owned Department of Telecommunications (DoT) was the biggest service provider, followed by the Mahanagar Telecom Nigam Ltd (MTNL). MTNL argued that higher call rates were anti-people and proceeded to challenge TRAI's decision on the ground of jurisdiction. The court found TRAI's powers severely limited and insufficient to ask for a shift in pricing regimes. It could make such recommendations to the Government, which would then decide what was to be done.

Unlike USA's Federal Communications Commission, which is liberal on issues relating to operating licences, monitors monopoly powers and auctions wireless bandwidth, the TRAI could do nothing but set caps in a given pricing structure and determine how various operators would share revenues. It also had no say when disputes broke out between operators.

To drive the point home, the Government decided to rewrite the TRAI law, sack the existing Head and Members to create a pliant, well-behaved TRAI. At that time, independent economic regulation was at a nascent stage in India. This experience is perceived to have made the Government extra cautious, while delegating functional independence.

The 'after effect' can be observed in several laws passed subsequently. In the amended TRAI Act, 2000, the Government has kept its over-riding power of issuing 'policy directives' and has gone to the extent of empowering itself to supersede the Authority in certain situations. Furthermore, under the new law, the Government can terminate the tenure of the Members and Chairperson, with just a perfunctory right to be heard.

In its new *avatar*, the TRAI can determine terms of interconnection between operators, but it does not have the power to settle disputes between operators. A new entity called the Telecom Disputes Settlement and Appellate Tribunal (TDSAT) was created for that purpose. This one incident appears to have left a lasting impact on the overall approach of the Government towards such institutions, having spill over effects.

The Government is still the policy maker and seller of telecom operating licences. It also owns all the equity in India's biggest telecom company, called the Bharat Sanchar Nigam Ltd (BSNL). The TRAI is supposed to regulate the BSNL, however, both of them report to the DoT!

UK is a peculiar case in this regard as the related laws do not refer to removal of regulators at all. This should be seen in the light of the fact that regulatory autonomy is not often interfered with. However this cannot be recommended to other countries to emulate as would leave open space for discretion. Instead, the regulatory legislation should provide for appropriate provisions in an unambiguous manner. UK places great emphasis on performance measurement and performance monitoring and reporting. Independence depends on performance.

The following is recommended:

- Protection against arbitrary removal by the government is necessary
- Prior to a possible removal from its office a regulator should be given opportunity to defend and a judicial/parliamentary probe be initiated. A sitting judge of the Supreme Court could conduct the judicial probe.

IV. FUNCTIONAL AND FINANCIAL AUTONOMY

4.1 Interface with the Line Ministry

To make the regulatory agencies autonomous several of the regulatory legislations have been amended in the project countries.

Autonomy is generally abridged by a ministry/department retaining powers to select and remove regulators; retaining powers to issue compelling directives and/or supersede a regulator; and retaining control over budget allocations and the appointment of staff. Autonomy is also provided by transparency of relations between the Ministry and the regulator. In United Kingdom, for example, communications between the Ministry and the regulator are carefully regulated and made public so that it is always clear who is taking which position. This transparency and due process of relations is an effective protection against arbitrary, hidden, and corrupt actions on either side.

In Sri Lanka, no consultation with the regulator is required before the ministry concerned issues directives to the regulators, even though the related laws do not provide for a ministerial over ride of

the decisions of the regulators. Such provisions were not made in case of the telecom regulator because the ministry concerned is represented in the board of the regulator and this representative is expected to handle these issues.

In the past, the South African telecom regulator could receive policy directives from the ministry but the new legislation has stopped this practice. The new law explicitly provides for the regulator not to get influenced by the ministry. It is not known, however, how effective this has been in practice. None of the sectoral regulatory legislations provides for the regulator's decision to be superseded by the ministry concerned. Even so, it is worth noting that the question in many countries is not really whether sectoral legislation permits ministry decision-making, but whether the mandate of the ministry overlaps sufficiently with that of the regulator so that both claim the power to make decisions.

In Brazil, regulatory legislation does not provide for the ministry to allow it to supersede the decisions of the regulatory agencies. Nevertheless, the government is capable of influencing regulatory process by other means as the ministry concerned retains the power to issue policy directives and no consultation is required prior to that. Brazil also follows a unique performance contract system in which the regulator signs a management contract with the line ministry. The regulator is responsible to perform certain functions and is held accountable to the ministry as per the terms of the contract. The contract usually sets out activities and performance targets for the regulator and the ministry allocates funds in a certain proportion. Further, regulators can enter into a contract with the service providers and monitor the compliance. But recently there have been attempts to roll back the power of the regulators.

In Philippines, the energy regulator appears to be more independent compared to its counterpart in the telecom sector. Related ministries are not entitled to issue directives to regulator in either case. Despite the fact that the telecom regulator remains attached to the ministry, it is expected to perform the job in an independent manner. The law says that the ministry cannot influence/review the commission's quasi-judicial functions.

In Canada, the telecom ministry can direct the regulator on specific issues and even supersede the decisions made by the latter. But these powers are used only rarely because of a general understanding that regulators need to be left alone to do their jobs effectively. Prior to issuing policy directives the minister has to consult the regulator and take the approval of parliament and publish it in the Gazette to give an opportunity for public comments. The Canadian energy regulator advises the ministry on policy related matters, on being approached for advice. The related ministry in Australia can also issue directives to the telecom regulator, though the ministry must organize consultations and publish the same in the Gazette. Clearly, here again, a high degree of transparency goes along with ministerial interference

Regulatory agencies in the UK are fairly independent. The Secretary concerned in government has powers to issue guidelines on specific policy matters. This process has to be done in a transparent manner and consultations have to be organised with stakeholders. In addition, the energy secretary is entitled to issue guidelines to the energy regulator on social and environment related matters. The regulatory laws in the UK do not provide for the ministry to supersede orders of a regulatory agency. Communications between the Department of Trade and Industry (DTI) and Gas and Electricity Markets Regulator (OFGEM) are legitimate, but are carefully and formally structured

through two main instruments: DTI can issue transparent "policy guidance" that is always subordinate to the mandate law. The elaborate process of issuing policy guidance includes public consultation and parliamentary review. OFGEM must have "due regard" for the guidance, that is, must follow it unless its legal mandate contradicts it in some way. If the policy guidance is not followed, the Government can always choose to propose legislation to achieve its goal.

In India, the regulatory legislations provide for the line ministries to issue policy directives without prior consultation with anyone, which is a poor practice In the electricity sector, the provincial governments have exercised such powers on many occasions. The telecom department in the Government of India has even gone to the extent of intruding into matters related to tariffs, which is considered to be the exclusive domain of the regulator. Presently the line minister is made answerable to the Legislature even for functions that have been transferred to the regulator. This empowers the line ministry to intervene in the functioning of the regulators. This impairs regulatory functioning and consequently its efficacy.

It is desirable to maintain arms length distance between the regulators and the concerned line ministry to ensure that the latter does not influence the former, unduly. Anyhow it needs to be appreciated that the line ministry is responsible for the overall development of the sector and regulator is instrumental in attaining the objective. In fact, both the regulator and the line ministry share a common responsibility of orderly and sustained growth of the sector, attracting private investment, enhancing consumer protection, etc.

Thus, it is necessary for having appropriate processes in place to facilitate consultations between the line ministry and the regulator, so that a possible compromise on regulatory autonomy is avoided. The manner of consultations between the Reserve Bank of India (RBI) and the Ministry of Finance (MoF) is a good model. The RBI holds consultations with the MoF on regular basis, at formal and informal levels, without compromising on its autonomy.

Thus following is recommended:

- Policy directives should be consistent with the objectives of regulatory bodies
- Prior to issuing policy directives, the line minister should consult the regulator and publish it in the Gazette to give an opportunity for public comments, and then take the approval of parliament
- Regulatory agencies are to be made autonomous by legislation, which would end the line ministry's role in intervening in their functioning
- Given the fact that the regulatory agencies are instrumental in realizing policy objectives stated by the government, the concerned line ministry should defend and back the regulator's decisions before the Parliament as and when required.
- RBI-MoF consultation model should be replicated as and where feasible

4.2 **Financial and administrative autonomy**

Financial resources at the disposal of a regulator help in effective implementation of its mandate. It is important that a regulator is not dependent on discretionary funds allocation by the line ministry; otherwise this would provide an opportunity to the line minister to intervene in its functioning.

Similarly, there is need to ensure that the regulatory body is staffed with skilled human resources to carry out regulatory functions.

Following approaches are observed in project countries relating to funding mechanism for a regulatory body:

- Funding part of line ministry's budget
- Funding from Parliament appropriations, but money allocated as per line minister's discretion
- Regulator funded from resources independent of government's budget, but levy/fees, etc determined by the line ministry
- Regulator raises resources through levy, fees, etc, which is either determined by itself or is mentioned in the enabling legislation

In Brazil, the regulatory agencies propose their budget and seek the approval of the legislature. The electricity and telecom regulators of Philippines follow a similar approach though the water regulator is allowed to raise resources through imposing levy/cess on the services with prior approval of its Board. In Canada, the regulatory agencies also raise resources through levy/cess. So has been the case with the regulatory agencies in the UK. The National Energy Regulator of Australia receives its budget as allocated by the ministry while the telecom regulator has to get its budget proposals approved by the legislature.

The case in South Africa, presents a disturbing scenario with respect to telecom regulator. Earlier it was observed that selection/appointment and dismissal provisions followed for ICASA provides it enough freedom from discretionary actions of the line minister. However, in case of funding, ICASA does not enjoy any independence and government allocates budget to ICASA at its discretion. This seriously compromises on ICASA's ability to implement its mandate effectively. This issue came out strongly in a case where ICASA had planned to challenge Telkom, the state-owned incumbent, in court. Though it demonstrated ICASA's willingness to take action against the SOE, the regulator had to request government for funding to fight the case against Telkom. ICASA further pleaded government to help it resolve the problem, being the majority shareholder in Telkom! Similar problem of limited resources is encountered by TRAI, the telecom regulator of India that had sought government's permission for an independent source of funding. However, the proposal was turned down by Ministry of Finance.

In India, there is a general apathy towards granting financial autonomy to regulatory agencies. In most cases, relevant provisions of law that seek to ensure financially autonomy are also not implemented. In cases where regulators are allowed to raise resources, they do not have the freedom to spend it. The insurance regulator, for instance, is currently having a dispute with Ministry of Finance in this regard.

Several regulatory agencies in project countries are funded from sources independent of government's budget, but government decides the allocation/quantum of money. For instance, in South Africa, the Financial Services Board is allowed to raise funds through imposing fee/levy on companies it regulates, but it is the government that determines the quantum of levy/fee.

Financing a regulatory body through imposition of levy/fee is considered prudent, given the budget constraints governments generally face, particularly in developing countries. At the same time, proper arrangements are required to be in place in cases where the regulator is empowered to determine levy/fees, etc to ensure the autonomy is not misused.

Thus the following is recommended:

- Need to make budgetary allocations for the regulators on the basis of broad heads of expenditure.
- Regulatory agencies, across the utility sectors should be allowed to cover their expenses through fees, cess, etc.

Table 5: Funding Arrangements for Regulatory Agencies in Project Countries

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Telecommunications	Grants appropriated by the Legislature and the regulator can also raise through levy, fees, etc	Grants appropriated by the Legislature	Regulators raises through levy, fees, etc	Grants appropriated by Parliament; Parliamentary Portfolio Committee on Communication controls fiscal transactions	Grants appropriated by the Legislature	Regulator raises funding through levy, fees, etc	Grants from Government (though law provides for regulator to raise funds through imposing levy, etc)	Regulators raises through levy, fees, etc
Energy (Electricity)	Ministry allocates the budget	Grants appropriated by the Legislature	Regulator raises through levy, fees, etc	Levy (determined by Minister); government's budget	Grants appropriated by the Legislature	Regulator raises through levy, fees, etc	Grants from Government (though law provides for regulator to raise funds through imposing levy, etc)	Ministry allocates the budget
Urban Water Supplies	–	Grants appropriated by the Legislature	–	–	Budget is derived from fees paid by two private concessionaires. Budget needs to be approved by MWSS Board of Trustees	Regulator raises through levy, fees, etc	–	Ministry allocates the budget

4.2.1 **Staff**

Financial autonomy determines the ability to appoint skilled personnel. Regulatory authorities often compete for qualified personnel with private sector firms and other entities that tend to have access to greater financial resources and flexibility in their hiring processes. Weak financial autonomy can greatly damage an authority's ability to compete in this area. The problem could be further compounded if regulatory bodies do not have freedom to appoint staff and determine their salary. To fulfill its obligations effectively, an agency needs staff composed of individuals with qualifications, skills and experience necessary to support agency's regulatory responsibilities.

The ministry of energy in South Africa can direct the regulator to use the ministry's staff but the regulatory commissions decide on nature, strength, and salaries of their staff. In Australia the law provides for an exchange of staff between the telecom ministry and the regulator. In Canada the Governor in Council, who is part of the government, decides on the staff strength with the regulatory agencies and their remuneration. In Brazil the regulator decides on these matters with an approval of the legislature. Similarly, the UK regulators are also empowered to decide on their staff strength etc. though their salaries are subject to standard civil service scales.

In India, the respective legislation in electricity and telecom sectors provides for creation of a fund with the respective regulatory agencies to be utilised for the purposes of respective laws. Regulators in both the sectors are empowered to impose a cess/levy on services with a prior approval. However, in practice neither of the provisions has been implemented except creation of a Fund with a few provincial electricity regulators.

The feedback received during personal interviews organised with commissioners/staff of some of the regulatory agencies in India also confirms that lack of financial autonomy and therefore the inability of the regulators to recruit staff at attractive terms have been undermining the efficacy of these institutions.

For instance, in case of India, most of the staff in regulatory agencies is on deputation from various government departments. In general, Government of India prescribes salaries and other terms and conditions of service of regulator's staff. In several cases, the number, nature and categories of staff too is determined with the approval of federal government.

In the larger context, ability of regulatory agencies to offer attractive emoluments and to invest in skill development of their staff is subject to the extent of autonomy (financial and functional) ensured by law. Regulatory agencies will find it difficult to attract and retain high quality staff unless they are allowed to raise required resources, and be given the freedom to structure the pay scales to make it attractive for their staff.

The following is recommended:

- Regulator is allowed to determine the nature, strength and compensation of its staff, as well as appointing consultants.
- Staff coming on deputation is not skilled and tuned to the workings of the regulatory authorities. It is better to appoint staff on regular basis from the market according to the requirement of the regulatory authorities

V. REGULATORY ACCOUNTABILITY

5.1 Reporting

Across the project countries, including India, regulatory agencies are required to submit their reports to the legislature *via* the ministry concerned. In Sri Lanka, the telecom regulator is not required to submit any report since it is a subordinate office of the ministry. The Philippines energy and telecom regulators report to the legislature and President, while water regulator reports to its Board of trustees. In addition of submitting activity report to the legislature, regulatory laws in the UK require a regulator to appear before the related Standing Committee of the Parliament when asked for.

5.2 Regulators' Scrutiny

Appropriate mechanisms are required to make independent regulatory agencies accountable. Accountability could be political and legal in form. Political accountability includes submitting reports to legislature, which may have a special committee to scrutinise and debate its contents. Legal accountability enables those aggrieved by a decision to issue a formal complaint or appeal. Here one observes a divergence between countries, which establish specialist commissions or tribunals, having powers to determine disputes only within a sector, or a related sector, and those, which rely exclusively on traditional institutions such as judiciary having competence over general administrative matters.

Broadly speaking, the following two approaches are followed in project countries to make independent regulatory bodies accountable:

- Annual reporting to legislature
- Provision of appeals against orders of regulatory authority

All independent regulatory bodies in project countries are required to submit their annual reports and/or audited accounts to legislature. In most such cases, regulatory bodies are made accountable to legislature through the line minister. Legislative oversight over regulators' performance does not seem to be effective, as annual reports submitted by regulator are not necessarily discussed with any seriousness. Regulator's actions are questioned only when there is an impending crisis or a serious debate in a country. In fact, in most such cases it is the line minister that is questioned, and not regulator. This practice makes line minister assume performing functions that are otherwise delegated to a regulator by law. This assumption gives a good alibi for the line minister's interfere in the functioning of regulatory body.

The practice followed by South Africa shows the way forward in such cases. In case of ICASA, the communications regulator, there is a Parliamentary Portfolio Committee on Communications that maintains an oversight over the regulator's performance.

In Philippines, the legislature even grants licences to telecom operators hence can scrutinize the regulator for efficacy. The water regulator was created through a contract therefore in theory the regulator is not subject to legislative scrutiny but in practice the former provides explanations to the latter when asked for. In Sri Lanka, the minister may ask the commissioners of the multi-utility regulator to appear before the parliament or its sub-committee to clarify matters that might arise

from the activity report submitted by the regulator. In UK, the regulatory agencies report to the legislature committees on a regular basis and the latter is empowered to scrutinise the former. In Brazil regulators are not liable to legislative scrutiny. In India, too, legislations do not provide for scrutiny by the legislature, though in practice telecom regulator appears before the Standing Committee on Communications of the parliament to submit its viewpoints. Similarly the electricity regulator appears before the parliamentary committee on energy. It is worth noting, however, that all of this scrutiny has little value if the goals and performance measures of the regulator are not agreed in advance. Scrutiny cannot be just a form of political pressure, but accountability for clear performance.

Another mechanism to oversee the actions of a regulator is by having appeals provision, which allows review of regulator's decisions. The judiciary is the common appellate authority but some variations exist. Wherever an independent appellate authority exists to review regulator's decision, judicial review has been confined to the question of law only. In cases where no appellate tribunal is constituted the judiciary has been given powers to review the decisions of a regulator even on substantive issues.

In Sri Lanka, the decisions of telecom regulator can be appealed before the government and a panel of arbitrators, subject to the nature of the issue. In Canada, the energy regulator can review its own decisions. In the telecom sector the government can rescind a decision of regulator, following due process in a transparent manner. In Australia and UK, an appeal about matters related to competition has to be filed before the Competition Tribunal.

The third form of accountability is to allow consumer groups to question and participate in regulatory matters. It is needed to empower the CSOs and consumer groups to work as watchdogs (Energywatch in UK is the independent gas and electricity watchdog) and they can potentially hold the regulators accountable. Another example of consumer watchdogs is seen in Zambia, where the Energy Regulation Board (ERB), and National Water & Sanitation Council (NWASCO) have agreed to form joint consumer Councils or watch groups that will cut across three sectors namely communications, energy and water. These groups will act as regulators' link between consumers and service providers. They would serve as an important contact point to channel consumer complaints, queries and other concerns pertaining to the quality of services or goods.

The fourth form of accountability is by way of arranging for independent/peer reviews on periodic basis. For example, peer review of competition authorities undertaken by OECD and UNCTAD. The OECD has used this method since its creation and peer review has, over the years, characterised the work of the Organisation in most of its policy areas.

The following is recommended:

- Creation of a consumer advocacy fund to build the capacity of consumers/civil society organisations so that they can raise consumer concerns more effectively and to facilitate review of regulators' performance by stakeholder group
- Creation of Consumer Watch groups to question and participate in regulatory matters
- Performance of a regulator can be evaluated through a peer/external review system

Table 6: Accountability Mechanisms for Regulatory Agencies in Project Countries

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Telecommunications	Annual report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to Competition Appellate Tribunal for competition matters, in other matters the federal courts are the appellate body	Report of activities submitted to Legislature, who tables it before Parliament, Appeal can be made to Courts	Report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to Federal Court of Appeal	Annual Report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to the High Court	Annual Report of activities submitted to the office of the President and Congress, Appeal can be made only and directly to the Supreme Court.	Annual report of activities is submitted to Secretary of State, who tables it before the Parliament, Appeal can be made to independent tribunal and/or Courts, depending on the form of regulatory decision.	Annual Report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to TDSAT	Not required to submit report of activities; Appeal can be made to Judiciary, Government, Arbitrators under different provisions of the Act
Energy (Electricity)	Report of activities submitted to Federal Government and the Parliament. Appeal can be made to the Courts	Report of activities submitted to Legislature, who tables it before Parliament, Appeal can be made to Courts	Report of activities submitted to Minister within 3months, who tables it before Parliament, Appeal can be made to Federal Court of Appeal	Annual Report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to the High Court	Annual Report of activities submitted to Legislature, who tables it before Parliament, Appeal can be made only and directly to the Supreme Court	Annual report of activities is submitted to Secretary of State, who tables it before the Parliament, Appeal can be made to independent tribunal and/or Courts, depending on the form of regulatory decision.	Annual Report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to the Appellate Tribunal	Annual report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to the Courts

Sectors	Australia	Brazil	Canada	South Africa	Philippines	United Kingdom	India	Sri Lanka
Urban Water Supplies		Report of activities submitted to Legislature, who tables it before Parliament, Appeal can be made to Courts	–	–	Report of activities submitted to the MWSS Board of Trustees, Appeal can be made to the Supreme Court	Annual report of activities is submitted to Secretary of State, who tables it before the Parliament, Appeal can be made to independent tribunal and/or Courts, depending on the form of regulatory decision.	–	Annual report of activities submitted to Minister, who tables it before Parliament, Appeal can be made to the Courts

VI. **Consumer participation**

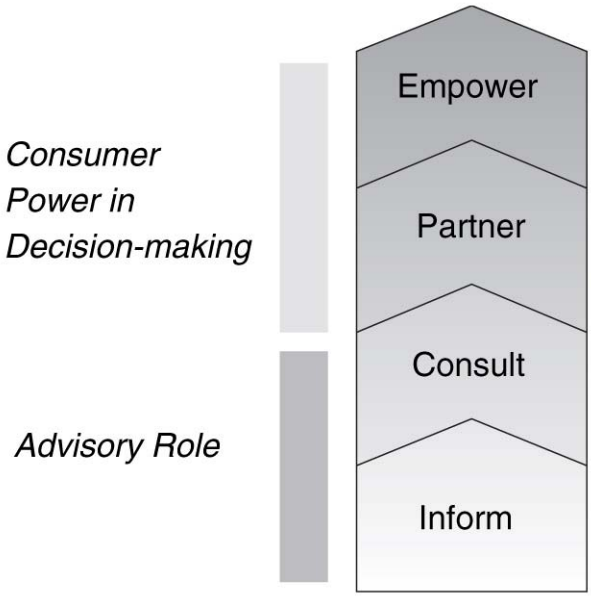
"*The literature exploring citizen participation in government policy-making depicts each level of citizen involvement in the political process as a distinct rung in the "ladder of citizen engagement," with successive rungs of the ladder corresponding to progressively higher degrees of citizen empowerment in determining the outcome of the decision-making process (Arnstein 1969). Similarly, there are different gradations of consumer participation in the regulatory process, varying to a significant extent across countries and sectors and depending on the type of regulatory model in place. The following levels of involvement could be identified as four critical rungs of the ladder of consumer participation in the regulatory process:*

- *Information: Information is the first step toward legitimate consumer involvement in the regulatory process. At this rung of the ladder, emphasis is placed on one-way flows of communication (from regulators to consumers) with no channel provided for feedback. Hence, when consumer participation is limited to information, consumers have little opportunity to influence the outcome of the decision-making process.*

- *Consultation: Regulators rely on consultation with consumers and other interest groups as a valuable source of non-binding advice to inform the regulatory process. Consultations can either be conducted on an ad hoc basis on specific consumer issues or throughout the regulatory process. However, if not combined with other modes of consumer involvement, consultation may not be sufficient to ensure effective consumer participation, as it offers no assurance that consumer input will be taken into account in the decision-making process.*

- *Partnership (acting and deciding together): The third rung of the ladder, partnership, involves some degree of "redistribution" of decision-making power as consumers are granted the right to negotiate with the regulator and the other stakeholders the outcome of the regulatory process. Given the diffuse interests of the consumer constituency, effective partnership with consumers hinges on the appointment of consumer spokespersons fully accountable to the consumer constituency.*

- *Empowerment (delegating decision-making power to consumers): At this rung of consumer engagement, consumers are empowered to manage their own infrastructure. Consumer empowerment works best when infrastructure networks are small and can be within the control of a single community—for example, small town water supply systems are often ideal candidates for local community management. However, consumer empowerment is generally unfeasible in the case of large-scale infrastructure, due to the complexity of managing diffuse consumers groups with conflicting interests.*



At the first two rungs of the ladder of consumer engagement (information and consultation), consumer participation plays an advisory role. At the topmost rungs of consumer engagement (partnership and empowerment), consumer participation leads to some degree of sharing of the decision-making power. However, given that the topmost rung of the ladder (empowerment) is seldom feasible in large infrastructure industries, this study adopts a three-rung ladder (information, consultation, partnership) to illustrate the different levels of consumer participation in infrastructure regulation. Depicting different forms of consumer participation as ladder rungs is a useful tool to capture different gradations in consumer participation in the regulatory process. However, the tool presents limitations. First, the ladder is a simplification, as the distinction between the different levels is often blurred. For example, even when consumer advice is not binding, consumers' opposition to regulatory reforms may be strong enough to de-legitimize the role of the regulator. Second, higher rungs of consumer participation may not necessarily lead to better regulatory outcomes, in particular in newly established regulatory frameworks without a tradition of consumer representation. In fact, ascending the ladder of consumer participation is a lengthy and difficult process, which needs to be supported by an enabling institutional environment—the higher the rung of consumer participation, the more sophisticated the institutional environment needs to be to accommodate additional layers of consultations." [9]

6.1 **The Current Status**

Our findings reveal that though consumer advocacy is gaining importance in some project countries, in general the situation is not encouraging.

Facilitating public consultation is the second step towards a transparent decision-making and this is perhaps the most significant dimension that the regulatory institutions have provided to the consumers. Barring the exception of the water regulator of Philippines, each of the regulatory agencies in project countries organise consultations with the stakeholders and provide opportunity

[9] Muzzini, E (2005) "Consumer Participation in Infrastructure Regulation: Evidence from the East Asia and Pacific Region" World Bank Working Paper No. 66, Pg No. 2-3.

to participate in the regulatory process. As reported earlier, since the Philippines' water regulator was created through a contract with concessionaire it has not been mandated to involve the public in regulatory processes hence it only disseminates information related to the decisions.

The Indian telecom and electricity regulatory agencies have been very effective in this regard. In the electricity sector power purchase agreements signed by the utilities are supposed to be made public and debated. The telecom regulator also invites comments from stakeholders and organises open house discussions prior to taking a view on important matter. The regulatory agencies in both sectors are required to invite views from stakeholders prior to even framing various regulations.

The creation of institutional space to facilitate consumer participation often does not serve the purpose in case where stakeholders lack in capacity and resources to participate effectively. This was observed in many of the project countries that in general, consumer groups there do not have the wherewithal to participate in regulatory processes. It was reported that lack of institutional mechanism to fund consumer advocacy on a sustaining basis, and not just participation in the discourse, is the most significant reason of sub-optimal participation of consumer groups in the regulatory processes.

Inadequate participation of consumers deprives the regulatory agency from pertinent first-hand information about the state of affairs at the ground. This handicap often reflects on the regulatory efficacy. Utilities often hire best of the professional consultants to get their proposals prepared and cost of these expensive services is in general transferred to the consumers. However, governments, particularly in developing economies, continue to remain hesitant in allowing regulators to impose a miniscule cess to fund consumer advocacy.

Some of the most advanced economies do have institutional arrangements to fund consumer advocacy. In the UK consumer watchdog agencies have been set up for each of the utilities through legislative route which provides much needed legitimacy to these watchdogs and empower them to pursue the agenda vigorously. The government makes budgetary allocations to these watchdogs. In Australia, consumer advocacy in electricity sector is funded by the government in a structured manner wherein a Consumer Advocacy Panel has been set up to provide financial assistance to consumer groups. The Panel receives financial assistance from government, and yet maintains its independent status. (Please see box 4)

Box 4: Consumer Advocacy Panel in Australia

The Advocacy Panel grants funds for advocacy by representatives of business and domestic electricity customers affected by the National Electricity Market (NEM). The Advocacy Panel was established in 2003 to provide funds to representatives of domestic and business electricity customers for advocacy on the development on the National Electricity Rules and the national electricity market.

It is constituted under the National Electricity Rules and is independent of government and regulators. It comprises five members: four are representatives of business customers, domestic customers, electricity retailers and generators, and an independent Chairperson. The Australian

Energy Market Commission appoints the members. Under the Rules, funding for the panel comes from fees charged to market participants by the National Electricity Market Management Company. Funds are granted on application and decisions on applications are made by the panel at meetings held approximately every two months or as required for urgent or special applications.

In South Africa, the Director General of the telecom regulatory commission is empowered to grant funds to the consumer groups, which are recognised by respective provincial governments.

In India, consumer groups are not given financial assistance, which is a major constraint to their effective participation. In two of the provinces in India the electricity regulators have set up an office of consumer advocate as an adjunct of the Commission, and are provided financial support from the Commission. Recognising a definitive role of consumer groups in regulatory legislation and institutionalising the mechanisms to facilitate and broad-base consumer advocacy can enhance regulatory efficacy.

The role of consumer organisations should be recognised and enhanced "*by creating a Consumer Advocacy Fund and provide for membership in advisory bodies in every regulatory law"*. The fund would help in providing resources and building capacity of consumer organisations, so that they are able to raise consumer concerns more effectively. Providing for a 'consumer cess' on utility bills or by providing grants, etc could be the ideal way to establish the Consumer Advocacy Fund

6.2 **Capacity Building of Regulatory Staff**

"The critical component of capacity is related to the perspective that drives the intellectual and conceptual analysis of the regulatory structures and practices in the national policy- making space. The perspective includes values, ethics, history and the political ground that create the foundation of markets. Experience suggests that the material resource base is an important element of capacity, as far as regulatory institutions are concerned. This includes the physical infrastructure and other assets and resources. It is also important to provide financial and functional autonomy, as it provides a strong basis for taking independent position on issues of market distortions, without being subject to political interference and regulatory apprehension.

Another critical component of capacity is related to institution building. It involves the internal and external relationships and linkages. The capacity of an institution to manage its internal system and procedures is crucial for fostering and pursuing its mission and purpose. In this context, the internal capacity to relate and respond to the external environment and become adaptive and resilient is a prerequisite for achieving the goals of the organisation. Therefore, enhancing the capacity for organisational management and renewal is critical for its success. External relationships and linkages are equally important. Different groups of stakeholders have different expectations from the regulators and, very often, these are conflicting. Consumers expect lower prices, but the regulators cannot be populist at the cost of the financial health of the service providers. But, failing to meet popular expectations can bring criticisms that may create credibility problems for the regulators. Thus, regulators should be able to communicate their viewpoints and concerns to different stakeholders in an appropriate manner.

Capacity building should underpin the following desirable principles:

***1. Local context:** It is essential to have locally-based, locally articulated and locally originated capacity for critical reflection, learning, documentation and dissemination. The local bodies know and understand their constituency and their needs better than anyone else. Capacity-building initiatives should be looked at in this context and should be*

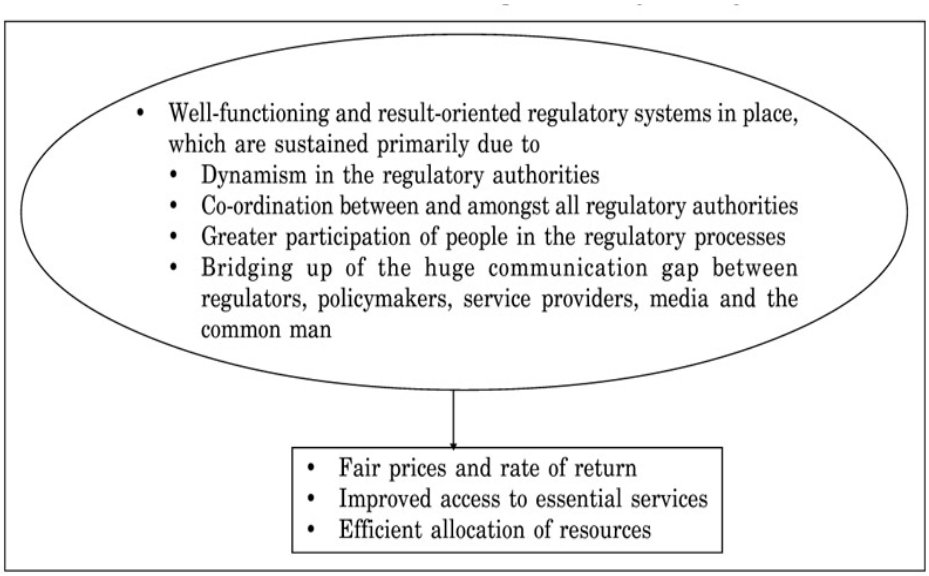
related to the work the regulators are involved in. Therefore, interventions towards building capacity of regulatory agencies should be rooted into the changing context and requirements of the institutions themselves

2. Continuous and ongoing process: *This view implies that capacity formation in an institution is an ongoing and long-term process. At different stages in the life of an institution, different types of capacities may become important. The ongoing nature of capacity building encourages the acknowledgement of its dynamic and procedural nature, as opposed to mere events and structure.*

3. Futuristic in approach: *Capacity-building has to be in relation to a search for relevance, identity and clarity of roles and perspective building. It needs to be more futuristic in its approach. It is important to look at the sector's future needs and see how best one can use different methodologies to enhance existing capacities.*

4. A systemic approach: *Capacity-building should be looked at with a systemic approach. There are other sets of actors whose capacities have to be enhanced to strike a balance. This would operationally mean building effective linkages, coalitions and alliances between the range of regulators and other economic and development actors.*

The expected outcomes of this whole process of capacity-building can be understood with the help of following the diagram"[10]*:*



The study reveals that regulatory staff in some project countries attended only a few training programmes, organised primarily by donor agencies. This is an enormous problem that probably should be given more attention here

None of the developing countries included in this study follow a structured approach in this regard, except in the Philippines where the law provides for energy regulator to ensure capacity building of its staff on a continuing basis. However the Philippines telecom regulator is not as active and the water regulator hardly does anything to augment capacities and hone skills of its staff. The water regulator relies extensively on external consultants.

[10] Supra Note. 8

In UK, regulators across the sectors follow a definitive and rigorous plan to enhance capacities of their staff. The regulatory staff participating in training sessions organised within and outside the agency is a common practice there.

6.3 **Assessing Regulatory Impact**

In Australia, the government makes assessment of the efficiency and competitiveness of the energy markets at regular intervals. The regulatory laws for the telecom sector also make a mention about the regulator to produce regulatory impact statements. In UK, regulators are also required to produce regulatory impact assessment *ex ente* and/or *ex post*. In Philippines, the government sometimes organises an impact assessment exercise of the regulatory regimes. For instance, a Joint Congressional Power Commission was set up in electricity sector to measure transparency in regulatory processes and evaluate the performance of industry participants. The telecom regulator works with the industry participants to get their feedback and the water regulator makes assessment of water quality etc. However these cannot be termed as impact assessment exercise done to assess the impact of a particular decision of the regulator. In South Africa, the telecom regulator is required to measure the extent to which the regulatory objectives stated in the law have been accomplished. The use of regulatory impact analysis (RIA) can greatly improve transparency and accountability and provide a basis for better public discussion of regulatory options.

6.4 **Regulators Mandated to Reduce Regulatory Burden**

Reducing the burden of regulation on industry can add to the overall economic efficiency of the entire industry. To that effect, the regulatory framework and approaches in some countries have incorporated enabling provisions. In some instances the governments have adopted policies that reduce the burden of regulation across the economy, including utilities.

In UK, the government recommended overhauling the regulatory approaches and as a result it set up the 'Task Force on Better Regulation'. In Canada, an 'External Advisory Committee on Smart Regulation' was constituted by the government in a bid to improve effectiveness of the regulatory framework in dynamic environment. In Australia, the government had set up a task force on reducing the regulatory burden in the telecom sector.

Some of the regulatory agencies have been attempting to promote self-regulation by the industry and enabling competition as measures to reduce the burden. For instance, the regulatory agencies in the UK are mandated to reduce regulatory burden in accordance with the provisions made in the Regulatory Reform Act 2001. The Australian regulators follow an approach of promoting competition as a measure to minimise regulatory burden.

As discussed earlier, the Australian approach of regulation has been of letting competition work in a segment, which is characterised as 'light-handed' approach of regulation. In particular, the Australian telecom regulator encourages the industry to regulate itself and the regulator steps in only when the industry is reluctant/fails to regulate itself.

In Canada though the regulatory legislations do not make specific reference of reducing the regulatory burden, nevertheless the recent approaches of regulation have been of promoting

competition in the segments it is possible and in such event regulator takes a backseat. In fact, the Canadian telecom regulatory law contains a self-extinguishing feature, i.e. the law will be wound up when the industry has matured sufficiently to maintain a competitive situation. In any event, if there is any anti-competitive practice, the Canadian Competition Bureau exists to deal with it.

In Philippines, there is no mention in the laws regarding reduction of regulatory burden, yet in general, minimising the burden of government and regulations is being encouraged.

In India, since competition is working well in telecom sector the regulator has preferred taking a backseat on tariff related matters. In the electricity sector, the federal and many other regulators have notified 'open-access'. Tariffs for generation facilities are being determined through competitive bidding. But many practical difficulties have not been addressed yet. Competition in the sector is virtually absent,

6.5 **Interface with Competition Authority**

Liberalisation of markets traditionally associated with natural monopolies has given rise to a dilemma of institutional policy. In some areas, regulation in the form of price controls has been regarded as a temporary phenomenon pending arrival of sufficient competition. Legislation then typically requires of regulatory agencies both to promote competition and, if the market is insufficiently competitive, to control prices. The dilemma arises because typically, within the jurisdiction, there is a competition authority to enforce the competition law. Despite a common goal, conflicts between sector regulators and competition authority could arise, the resolution of which will depend on which is judged to be more effective of the two authorities on the basis of specific problem under consideration.

Following approaches are observed across the project countries:

- Concurrent jurisdiction of both the agencies. In many of the project countries (Brazil, Sri Lanka, and Philippines) the powers to address competition concerns are given to the respective sectoral regulators
- In Canada, South Africa and the UK powers are shared between the regulator and the Competition Authority. The procedural rules of defining the responsibilities of both the Competition Authority and the Regulator are governed as per the provisions made in the respective legislations. In UK, there is a concurrence party established as a membership organization of the competition and regulatory authorities, which decides the agency to handle a particular case depending upon the issues involved.
- In some countries (South Africa and Canada) it is handled on formal basis i.e. it is governed by a MoU whereas in some countries it is on an informal basis such as Brazil, Philippines, and Australia (in fact the competition authority also deals with sector regulation here).

In South Africa, a regulators forum has also been created to facilitate mutual consultation and maintain consistent and uniform approaches on competition related matters. There are agreements signed between both the authorities, such as an 'Interface Agreement' in Canada, which sets out understanding of their respective jurisdiction, specifying areas as to where one body or the other has jurisdiction and where the jurisdiction is shared.

Due to the existence of formal interactions in some project countries such as South Africa and Canada, in case of any dispute, the agreements or the MoU becomes the basis of their understanding. Both the regulator and the competition authority are governed by the agreement and they abide by the same. The agreements are drafted for the benefit of the industry stakeholders including the general public and provide greater clarity and certainty.

Addressing competition concerns in regulated industries has always been challenging for the reason that possible overlaps between the jurisdictions of sectoral regulator and competition authority exist which may lead to turf war and forum shopping. Lack of clarity in related laws often adds to confusions, and India is a typical example.

On the one hand, we have a very clear statement in the TRAI Act that it will be subject to the rulings of the competition authority and its power to determine entry, mergers or other matters relating to competition are primarily recommendatory. On the other hand, the Electricity Act creates ambiguities as the preamble clearly talks about the objective of promoting competition in the electricity market. The commission (central or state) is empowered to regulate production, supply or consumption to promote competition and is further allowed to regulate distribution to prevent abuse of dominance. Thus in its regulatory functions the law clearly directs the regulator to act in a manner so as to promote competition and efficiency. Further they are also required to advise the government on measures to promote competition. In a similar manner we see that in the financial sector the RBI is authorized on all matters relating to bank licensing, and restructuring.

On the other end, the nature of the competition authority's power vis-à-vis statutory regulators is ambiguous. The law implicitly recognises that sectoral regulators have a role to play in competition matters and says that statutory regulators may refer competition matters to the competition authority but to what extent the competition authority can influence the regulators in the absence of such requests is not clear. This ambiguity runs the risk of creating either gaps or conflicts in the functioning of the respective agencies.

To add to this ambiguity, the Department of Telecommunications has come out with its own guidelines to regulate intra-circle M&As, despite there being merger regulation provisions in the competition law of the country. These guidelines have so far not created any problems, because presently the competition authority is not yet in place due to a legal imbroglio, however, when the latter becomes active, the DoT guidelines would add to further confusion and turf wars.

Institutional structures are still evolving in several of these countries. The above discussion highlights the need for developing cooperation frameworks between competition authority and sector regulators. This could be done through establishing a regular information exchange with all sector regulators. For instance, in South Africa a Regulators Forum has been established as an informal body through which sector regulators envisage maintaining a consistent and coherent approach while dealing with competition matters.

6.6 Compliance with regulatory orders

The common approach undertaken by the regulators in all the project countries for compliance of its orders is by way of fines, revoking of licenses or modification of license terms. The telecom regulator in India is not empowered in this regard.

The South Africa energy regulator has been reported fairly successful in this matter. The legislation requires the regulator to ensure that the service providers comply with the conditions given in the licenses. In case of non-compliance, the regulator has the power to impose massive monetary fines. The Philippines' energy regulator has not been able to do much due to weakness in the law.

Brazil's energy regulator has been reported as a near failure. The supply crisis in 2001 made this more evident. In the water sector in Philippines, the water regulator has also been somewhat less successful which can be attributed to the lack of independence and capacity to some extent. The Australian approach is quite different. The regulator allows self-regulation by the players in the market and the regulator only intervenes when the players are not willing or fail to regulate themselves. The approach has been reported to be considerably successful.

In relation to the telecom sector, Philippines regulator has been a success story in ensuring compliance of its orders. The regulator i.e. the National Telecommunications Commission has been able to fulfill its task of promoting competition and safeguarding consumer rights. One of the reasons for its success has been transparency of rule making, in which all the stakeholders are consulted before and after the policy is issued. The vigilance of the non-governmental organisations, media and the articulate middle class also keeps the regulator on its toes. In line with its success, the regulators in Canada also have been successful in their mission, due to their "light-handed" approach of regulation in which competition rules are allowed to prevail in the market, instead of being overloaded with excessive regulation.

VII. REGULATORY FRAMEWORK IN THE IDENTIFIED UTILITIES

7.1 Energy

The trend that emerges is, of having a single regulator for energy sector. The electricity and gas regulators have been merged in some project countries, both in developing and industrial economies. Out of the project countries, it is only in India where separate agencies exist to regulate electricity and gas sectors. The situation was similar in South Africa and UK till some time ago. Now, the gas and electricity regulators have been merged into a single entity in both the countries.

The degree of independence varies across the project countries. Nevertheless, electricity/energy regulators are observed to have been given much more independence in comparison to the corresponding agencies in telecom sector. This probably has to do with the greater need for interconnection policies in energy transmission and distribution.

A two-tier regulatory framework is generally observed to be a popular model followed in the sector, i.e. regulatory agencies are set up at both levels, federal and provincial. This feature should be viewed in context of the governance structure followed in a particular country, and division of responsibilities between the federal and provincial governments. For instance, only federal agencies

regulated the energy sector in Brazil, South Africa and Philippines. This may be because it is probably more related to historical traditions and allocation of duties than to any rational strategy.

In some of the project countries, efforts have been made to bring in greater harmony in regulatory approaches across the provinces within a country with the objective of facilitating integration of the regional energy markets. Australia and Canada have been trying hard to develop national energy markets to harmonise with the international regulatory requirements when the need arises.

In Australia, a competitive National Electricity Market is evolving through seamless integration of regional markets across provinces. To that end, a comprehensive national regulatory perspective has replaced the erstwhile state-focused approach. The federal regulatory agency has been given far more powers to ensure implementation of a national perspective instead of the regional one. A common reporting format has been created for utilities so that the regulatory agencies across the provinces follow a common set of performance parameters. Except in a few provinces, multi-sector utility regulatory agencies are responsible to regulate the sector at the provincial level. As a major step towards the ongoing drive of integration, the gas transmission and distribution industry will also come under the purview of the National Energy Regulator by year 2007.

Box 5: Regulators push for greater consistency in Australia

Electricity regulators in the provinces of Australia have developed a nationally consistent set of information reporting guidelines to allow electricity businesses operating in the National Electricity Market to report directly the comparable information.

The Utility Regulators Forum, comprising independent national, state and territory economic regulators, set up a working party early in 2001 to work with electricity distribution and retail businesses to develop a common reporting framework. The Electricity Supply Association of Australia was also involved, and draft proposals were released for public comment in August 2001.

In the past, different information was submitted by the electricity industry in each jurisdiction. This exercise by the Forum has been a major demonstration of the ability of the regulators to find a common position that suits all parties. The agreed nationally consistent reporting requirements will cover the performance and financial reporting of electricity distribution businesses, and the performance reporting of electricity retailers.

The information from each site is comparable and it is left to each jurisdictional regulator to work with the industry to agree a timeframe for collection of the complete data requirement. This is a major achievement and a significant step towards achieving national consistency. Other areas can be addressed in a similar way in order to achieve a more consistent approach to regulation by jurisdictional electricity regulators, for the benefit of the Australian consumer.

In a meeting organised in March 2002 the Forum also decided to undertake a coordinated review of the distribution-pricing chapter of the National Electricity Code, as another opportunity for joint regulator-industry review of where there is a lack of clear guidance in the code.

Canada is attempting to accomplish similar objectives, but has been less successful mainly because the federal government has been relatively less effective in persuading provincial governments to agree on integration of the regional energy markets. The Canadian gas market is more liberal than that of electricity. One distinct feature of the Canadian gas market is its nearly seamless interface with that of the US. Canadian and U.S. natural gas markets operate as one large integrated market therefore a potential change in any of the regions affect the other.

Such seamless integration has both pros and cons. The regulatory agencies of the two countries have a MoU to facilitate information sharing and streamlining the regulatory approaches without committing any obligation to each other. Gas sector deregulation in Canada offers some valuable lessons to the electricity sector, especially in respect to third-party access and the introduction of wholesale competition.

In Brazil and South Africa, the public sector is regaining a leading role, which was diluted during the period of restructuring and experimentation. It appears that attainment of competitive outcomes is the key and ownership structure of the utilities does not matter. The current approach followed in Brazil and South Africa has been relying more on effective regulation rather than competition. A long-term contract-based power pool has been operating there (Please see Box 6) though it is different from that of the UK. The regulator focuses on compliance of the terms of the contract signed with the utilities. In Brazil, the regulator contracts out the tasks to be performed to service providers and monitors compliance. Regulator imposing penalties for non-compliance is a common feature there. Hence quality of contract signed between ministry and regulator and that of between the regulator and service provider determines the regulatory efficacy to a great extent.

India has also been striving to accomplish similar objectives: enactment of Electricity Act 2003 was a major step. In India separate regulatory agencies to regulate petroleum & gas and electricity sectors have been established. In light of the trend that emerges from the study, India could consider establishing a single regulator for electricity and oil & gas sectors. Local context inclusive of geographical size etc. should also be considered while deciding on that.

Box 6: New regulatory framework in electricity sector in Brazil

The new regulatory framework for the Brazilian electricity sector has the following key features:

Electricity demand and supply will be coordinated through a "Pool" (*Ambiente de Contratação Regulado*, ACR). Demand will be estimated by the distribution companies, which will have to contract 100 percent of their projected electricity demand over the following three to five years. These projections will be submitted to a new institution (*Empresa de Planejamento Energético*, EPE), which will estimate the required expansion in supply capacity to be sold to the distribution companies through the Pool. The price at which electricity will be traded through the Pool is an average of all long-term contracted prices and will be the same for all distribution companies. All current electricity procurement contracts remain in place; therefore, each distribution company will have different portfolios of contracts.

To optimise the functioning of the Pool, self-dealing (*i.e.,* the purchase of electricity by distributors from their own subsidiaries) will no longer be possible. As such, vertically integrated companies will

need to be unbundled. Parallel to the "regulated" long-term Pool contracts, there will be a "free" market (*Ambiente de Contratação Livre*, ACL). Although in the future, large consumers (above 3 MW) will be required to give distribution companies a three-year notice if they wish to switch from the Pool to the free market and a five-year notice for those moving in the opposite direction.

A transition period is envisaged during which these conditions will be made more flexible. These measures should reduce market volatility and allow distribution companies to better estimate market size. If actual demand turns out to be higher than projected, distribution companies will have to buy electricity in the free market. In the opposite case, they will sell the excess supply in the free market. Distribution companies will be able to pass on to end consumers the difference between the costs of electricity purchased in the free market and through the Pool if the discrepancy between projected and actual demand is below five percent. If it is above this threshold, the distribution company will bear the excess costs.

The government opted for a more centralised institutional set-up, reinforcing the role of the Ministry of Mines and Energy in long-term planning. EPE will submit to the Ministry its desired technological portfolio (*i.e.,* the shares in supply of electricity produced through hydropower plants, gas-fired plants and other renewable fuels), and a list of strategic and non-strategic projects. In turn, the Ministry will submit this list of projects to the National Energy Policy Council (*Conselho Nacional de Política Energética*, CNPE). Once approved by CNPE, the strategic projects will be auctioned on a priority basis through the Pool. Companies can replace the non-strategic projects proposed by EPE, if their proposal offers the same capacity for a lower tariff.

Another new institution is a committee (*Comitê de Monitoramento do Setor Elétrico,* CMSE), which will monitor trends in power supply and demand. If any problem is identified, CMSE will propose corrective measures to avoid energy shortage, such as special price conditions for new projects and reserve of generation capacity. The Ministry of Mines and Energy will host and chair this committee. No further major privatisations are expected in the sector. (Source: OECD)

The public sector continues to play a vital role in energy/electricity sectors across most of the project countries although the level of private sector participation has been increasing gradually. While the UK government continued with the policy of letting private sector plays a decisive role, however, South Africa and Brazil paused in between and preferred returning to the earlier policy of public sector playing a major role.

7.2 **Telecommunication**

In most countries, regulatory independence is rather weak when compared with the counterpart agencies in electricity sector in the same country. This is observed not only in developing countries such as India, Sri Lanka and Philippines but also in Australia and Canada.

However, it is also equally true that the telecom sector is observed highly competitive in most project countries and the credit, to a great extent, goes to the evolution in the technology and to reliance on consumer choice. Nevertheless, regulation has played a vital role in facilitating competition and the trend is the regulator taking a backseat when the market is competitive. Australia and Canada have been following such 'light-handed' approach. The Indian telecom regulator is also working on similar lines without an explicit mention of that. The telecom sector is

more structurally competitive than the electricity sector, and hence the light-handed approach to regulation has been much more successful.

Increasingly there has been a trend of convergence amongst regulatory agencies within related sectors and the same is reported from some of the project countries. The sector is being governed at the federal level across the project countries and it was reported from many of them (Sri Lanka, South Africa, Canada, India) that the regulators face difficulties in providing a level playing field for private operators vis-à-vis state-owned incumbents.

The situation in Australia can be described as of consolidation and convergence and so has been in case of Canada. The Australian Communications & Media Authority (ACMA) was created in 2005 as a result of a merger of Australian Communications Authority and Australian Broadcasting Authority. The regulator operates at the federal level and it operates through several offices across the country and performs audit of service quality and compliance of other regulations on an extensive basis. Perhaps, the Indian telecom regulator would become more effective if it follows a similar structure and approach. The emphasis has been on encouraging the industry to regulate itself even for tricky functions including access, technical standards, interconnection standards, and service standards. The industry itself has developed several codes including consumer code, operations code, and network code. These codes provide for regulating the relationship between service providers and consumers, amongst the service providers, and technical operations of networks, to ensure end–to-end connectivity. The regulator intervenes in an event of the industry failing to regulate itself. The stated approach is termed as 'light handed', which is gaining popularity to regulate competitive segments of utilities. The competition authority has jurisdiction over competition related matters in the industry.

7.3 **Urban Water Supplies**

Water utilities are mainly regulated at the local level across the project countries. The only exception is UK where an independent regulatory agency exists at the federal level. In Philippines water utilities in a couple of cities are regulated by a specialised agency.

The Office of Water Services (Ofwat), UK regulates the industry that consists of regional incumbent water and sewerage companies and water-only utility companies. Licenses are issued to them to perform specific duties and the regulator monitors compliance. The regulator works in close association with the environment regulator to set and monitor the standards of quality of water. Service providers are supposed to compete for industrial consumers but not for domestic customers and the price is tightly regulated. As economic regulator, Ofwat is responsible for setting limits on pricing and protecting customer interests, encouraging competition and adequate investment within the industry.

As reported earlier, the MWSSRO in Philippines is an unusual type of regulatory agency. The regulator was created through a concession contract, wherein government-owned corporation MWSS leased its facilities to two private companies i.e. Manila Water Company, Inc. and Mayniland Water, Inc. The functioning of the regulator includes, monitoring compliance of concession agreement, setting and enforcing standards for water quality, level of service, and approving the rates that the two private concessionaires can charge from the users. However, the public is not consulted while raising the water tariffs and on other matters as well. The regulator is not viewed as

independent and it does not facilitate public participation in the regulatory processes. In a situation when a regulator does not facilitate transparency in decision-making by making it a participatory exercise, the very purpose of independent regulation is defeated. Hence, the stated kind of regulatory structure should be avoided.

In Australia, respective state/territory agencies are responsible to regulate price and performance of water services. The provincial agencies, some of which are autonomous of the respective government, usually decide on pricing of bulk water, storm water, wastewater and general water supply services. The competition authority, ACCC, has powers to take up the matters related to competition concerns and access to networks etc.

In Brazil the federal water regulator is responsible for resource management. Drinking water supplies and sanitation are responsibilities of the provincial governments and municipal councils. The local governments decide the user-charges, which therefore vary considerably as the price is linked with performance of the water/sanitation companies. By and large, the state-owned companies perform poorly, compared with their municipal and inter-municipal counterparts, though one of the reasons is that, the state-owned companies cover rural areas. Of late, discussions are taking place for adopting of a new regulatory framework in the sector.

The Constitution of Canada, like in India, provides the provinces direct control over potable water distribution and that of municipal waste treatment. In many provinces further delegation has been done and municipal corporations are operating the water service deliveries and some of them operate as a consortium. The federal government has a vital role in setting up drinking water quality standards and it works extensively with the provincial/territorial governments towards this end. The water service deliveries in Canada are managed by a variety of arrangements including, municipal councils, private corporations, local community etc. The mechanism to regulate the user charges and other economic regulatory aspects as well, vary across cities. In some of the provinces, specialised bodies perform such functions while in some cases the municipal councils are responsible. Clearly, given the local jurisdiction over the subject the institutional arrangements and regulatory approaches vary significantly.

The regulatory structure in South Africa is comparable with that in India and Canada. The constitution holds local governments responsible for urban water distribution. However, in a possible instance of local government failing to perform its job the Department of Water Affairs and Forestry in the federal government is empowered to take direct action to strengthen the local government and temporarily perform the stated functions. The institutional framework in water distribution sector in South Africa has a three-tier arrangement. The Department sells raw water to intermediaries called Water Boards that process and further supply potable water to municipalities on commercial terms. The municipalities then distribute the supplies to the consumers. The Department is responsible for setting norms and standards and monitors the compliance. The South African water supply industry can be characterised as a mix of arrangements. The ownership and management control varies ranging from government providing service; to a management contract for the operation of a single plant; to a large metropolitan area seeking contract with a private company to build, operate and manage facilities under a concession type agreement.

7.4 **Transport**

Transport sector comprises several sub-sectors: roads, railways, aviation and seaports. Barring a few exceptions, executive branches of the government have regulated the sector. Nevertheless, of late, the trend of setting up independent regulatory agencies is catching up.

In the UK, the railways and aviation sectors are regulated through agencies, which are independent of the related line ministries.

Canada is the only example from the project countries that has an over-arching mutli-sector agency at the federal level to regulate transport sector. The agency is expected to operate independent of the related line ministry. The Canadian agency has been facilitating uniform national markets for highway transportation across the provinces. The agency also regulates the Canadian aviation industry, which is dominated by public sector incumbent. Until 1996 the regulator was empowered to decide on mergers in the industry however, this function has now been transferred to the competition authority. Instances were reported when the government overruled competition regulations in the aviation sector.

In Australia, though the respective provinces regulate the transport sector and some of them do so through autonomous agencies, in any event the competition authority is competent to deal with the competition related matters in the sector. The competition authority decides pricing of airport services, nevertheless, the airline operations are subject to open competition and general competition rules are applicable.

Brazil is reported as the only developing country that has autonomous agencies to regulate all transport sub-sectors: highways & railways, aviation and seaport sectors.

South Africa, Philippines and Sri Lanka continue to regulate their transport sector through related department/ministry. The Port Regulatory Authority of Sri Lanka has powers to safeguard competition and prevent anti-competitive practices, including cross-subsidisation and price fixing. It is reported that the Sri Lankan government has plans to set up an independent regulatory agency, however; so far no step has been taken to that effect. It is interesting that the very first regulatory institution set up in Sri Lanka was the National Transport Commission (NTC) established in the decade of 1980, however the agency remains non-functional ever since.

In India, a tariff authority was set up to determine tariffs for the ports that come under the jurisdiction of the federal government, called 'major ports'. The mandate given to the authority is very narrow and it reports to the related ministry. Another model noticed was that of the ministries having specialised advisory agencies attached to them. Many of these agencies have been created through legislative route. The Airport Authority of India (AAI) and the National Highways Authority of India (NHAI) are such examples. Like the NHAI, the AAI too, is an arm of the ministry created through an act of the parliament that, besides being responsible for safety and security regulation, allocates port space and user charges for the competing airlines which also includes the state-owned incumbent. Even private participation in airport expansion and management is being facilitated by AAI, which is not independent of the ministry.

Based on the above discussion it can be concluded that majority of the transport sectors are regulated by respective governments. A trend of setting up independent regulatory agencies is catching up gradually. The limited experience in the project countries suggests that the sub-sectors have been regulated through separate agencies, though two examples exist of following multi-sector approach: the Canadian transport regulator and the Brazilian highways and railways regulator.

It appears that each sub-sector in transport industry has its own challenges, which are peculiar to the sector. A trend of public-private-participation through concession contracting is picking up in some of the project countries therefore setting up independent regulatory regimes would be imperative, sooner than later.

VIII CONCLUSION

The purpose of the study was to compare regulatory frameworks in the identified countries, consisting of a set of developing and developed countries, with a view to draw lessons pertinent to India.

Regulatory framework and approaches have to be renovated and reinvented from time to time to address new challenges. Even countries that have long history of independent regulation fine-tune their regulatory framework over time to make it more effective and efficient as per changing circumstances.

Increasingly, the importance of standardisation of the regulatory approaches and structures has been realised to accomplish consistency and cohesiveness in the regulatory approaches across various sectors and the provinces within a country.

The notion of regulators' independence in functional and financial terms and through transparent and highly structured procedures is increasingly gaining ground and is being viewed as a vital attribute towards attaining regulatory efficacy. The message is that mere setting up of regulatory institutions is of little help in accomplishing the policy objectives, unless they are empowered and allowed to perform their job.

However, contrary to the popular perception, some of the regulatory agencies in industrial economies such as Canada and Australia are vulnerable to the line ministry's discretion. What appears to matter most is the level of maturity of institutions and individuals. For instance, in UK regulators are reportedly autonomous though the legislation makes no reference on several counts, such as removal of regulators and leaves space for discretion. Nevertheless, it is advisable to make specific provisions in the law itself in an unambiguous manner considering the political-economy scenario prevailing in India specifically and in developing economies generally. It is important, in this context, to realize that transparency and accountability for performance permits more discretion and informality. In developing countries, less discretion is advisable because these other characteristics of a good regulatory regime are underdeveloped.

It also emerges from the study that while framing regulatory legislation, the socio-economic-political realities should be taken into account as done in some of the project countries: black-population empowerment programme in South Africa, rural electrification programme in India, extending access of water services to poor people in Philippines, universality of service obligations in almost

every developing country, protection of interests of old-aged electricity consumers in UK. Therefore, one size would not fit all, although some basic principles of independent regulation, which recognizes the issue of disadvantaged consumers, have to be incorporated while designing regulatory institutions. Irrespective of the approaches adopted to address competition related matters, competition authority and regulatory agencies must learn to work together for the common goal.

In Australia and Canada efforts have been made by respective federal governments to persuade provincial governments to adopt common policies. In wake of the fact that India follows a federal structure of government that is comparable with those followed in Canada and Australia, the process of arriving on consensus could be studied to draw pertinent learning. The study should also comprehend the incentive structures that should be in place for the provinces, etc. In both Australia and Canada, the process of convergence has not been through fiat and top-down orders, but through much more complex structures of coordination, shared powers, and responsibility for performance. India could learn a lot from these experiences

India can benefit substantially from the experiences of experimentation that has been taking place worldwide. To that effect, a comprehensive study could be taken up to gather experiences from various countries about their efforts to harmonise regulatory approaches across provinces within a country. Furthermore, efforts made by other countries to prepare themselves for a GATS regime and those required by India could be studied for empowering our trade negotiators.

KEY RECOMMENDATIONS

- Need to harmonise regulatory approaches across the utility sectors
- Evolution of regulatory frameworks is a dynamic and incremental process, hence is required to be flexible and the government should review the same at appropriate intervals in order to maintain effectiveness and the dynamism to face new challenges
- Provisions in the law with regard to the likely conflict between the Competition Commission of India and the various utilities regulatory agencies should be spelt out in an unambiguous manner so that no scope is left for discretion and disputes
- Prior to a possible removal from its office, a regulator should be given opportunity to defend and a judicial/parliamentary probe be made mandatory
- Prior to issuing policy directives, the line minister should consult the regulator and publish it in the Gazette to give an opportunity for public comments, and then take the approval of the parliament
- Regular consultation between the line ministry and the sector regulators should be structured through MOUs or similar instruments
- Creation of a consumer advocacy fund to provide sustainable resources and build the capacity of consumers/civil society organisations so that they can raise consumer concerns more effectively and be able to participate in the regulatory process effectively

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