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Fundamentals of Regulatory Systems: Organizational Change

by
Sanford V. Berg and John G. Corlett¹

Abstract

Regulators frequently face difficult economic trade-offs in their decision making. They must know how to assess the effects of policies on stakeholders under conditions of imperfect information. Part of the art of regulation revolves around understanding the linkages between choice of market structure, design of regulatory rules, and institutional requirements. In addition, different aspects of sector performance will be prioritized differently, depending on the nation's level of development. Three factors determine the effectiveness of independent regulatory commissions during periods of change:

(1) The legal instrument that brought the agency into existence determines the resources available to the organization. Budgets require funding mechanisms and procedures promoting accountability. Resource level and resource mix (the percentage of highly motivated professionals) determine the range of activities suitable for the organization.

(2) Courts interpret the legal mandate, as it is expressed in the law. Since the law itself is often the product of political compromise, initial legislation may be inadequate for the effective performance of agency duties. Agency initiatives can substitute for formal legislative revisions, but these are likely to be challenged by some stakeholders.

(3) The values or principles supporting the agency are derived from the national culture and a shared political vision. At the birth of the agency, leaders and key professional staff may not have reached consensus regarding priorities. Agreement on fundamental principles is essential if the agency is to develop a consistent set of policies.

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Background

Nations around the globe have created new government agencies to perform functions previously done by government ministries or government-owned firms. Independent regulatory commissions (IRCs) have been established to curb budget depletions caused by subsidies and to promote infrastructure sector expansion via private participation. The pace of market liberalization and privatization has not meant government withdrawal from the sector; rather, regulatory commissions are generally responsible for providing incentives for operating efficiently, improving service quality, and promoting competition where feasible. The objective of improving sector performance means that leaders of these new agencies have had to help design systems of governance and develop regulatory rules that support these reform objectives.

Reform objectives include:

- *Constraining* the exercise of *monopoly power* by incumbent suppliers,
- *Stopping subsidies* to the sector (to reduce the drain on the Treasury),
- *Providing incentives* for operating efficiency and quality of service,
- Optimizing the *structure* of the sector (encouraging *competition* where feasible),
- Promoting least-cost system *expansion* (incentives for new investment),
- Stimulating *innovation and* (for electricity regulators) *energy conservation*.

Achieving these objectives requires some prioritization, since policymakers must make political and economic trade-offs. Furthermore, the IRC must engage in activities that support these priorities and yield improved sector performance. For the work of the agency to move forward, the agency must possess *resources* adequate to engage in activities, a *legal mandate* that legitimizes the activities, and *values* that uphold the activities. Political and institutional forces that influence the reform process affect each of these three factors.

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(2) Courts interpret the *legal mandate*, as it is expressed in the law. Since the law itself is often the product of political compromise, initial legislation may be inadequate for the effective performance of agency duties. Agency initiatives can substitute for formal legislative revisions,

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Both regulators and infrastructure managers need to understand how these three factors contribute to the complex system of regulatory governance that can either block new initiatives or promote innovative policy responses to what are very difficult economic and political problems.

1. The Organization as a Complex System: Three Factors

Governance has two components: design (agency structure) and processes (internal and external). Stern and Holder (1999) identify three key elements of agency design: *clarity of roles* (vis-à-vis the ministry and the operating companies), *autonomy* (independence from excessive political pressure), and *accountability* (through appeals procedures and reporting requirements). In addition, they describe three features of the regulatory process that promote the legitimacy and effectiveness of new regulatory agencies: *participation*, *transparency*, and *predictability*. These features of the process relate to both internal and external constituencies. Before examining these components associated with the structure and processes (activities) of IRCs, we need to describe in greater detail how the three factors affect the potential success of daily activities. Figure 1 depicts three circles representing Resources, Legal Mandate and Agency Values.² The intersection of the three circles represents the set of activities or functions that the IRC can expect to successfully perform.

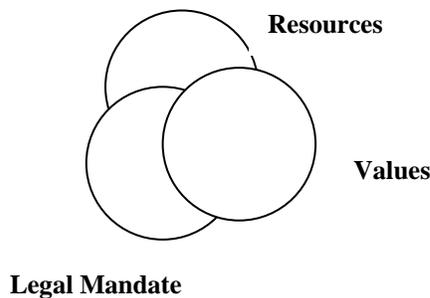


Figure 1. Effective Activities

Outside the center area, one of the three vital inputs is missing, which decreases the likelihood that the function will be successfully performed. Thus, a number of design questions need to be addressed in establishing the IRC. Let us summarize the elements of each component.

² The material in the next few paragraphs draws from Berg, Memon and Skelton (2000)

Legal mandate: How clearly defined are the agency's functions? Should the regulatory entity have jurisdiction over one industry, one sector or several sectors? Does the law provide appropriate authority, instruments and appeal procedures? Does the law specify the objectives of the agency, while leaving some flexibility for the development of effective procedures and specific policies that support the objectives established in the law?

Berg, Memon and Skelton (2000) identify activities (or functions) required for effective regulation of prices (rates) in conjunction with incentives for cost-containment, an objective of most new regulatory regimes. The nine functions and their links to prices are as follows:

- i. *Licensing* specifies operating standards that have impacts on costs/tariffs.
- ii. *Performance standards* on quality and reliability have cost and tariff implications.
- iii. *Monitoring data* on costs, revenues, and performance is essential for tariff determination.
- iv. *Tariff setting* determines revenue sufficiency for operating costs, capital costs (returns, asset values, deferred loans), etc.
- v. *Uniform Accounting Systems* provide comparable cost data (generation, transmission, distribution) for tariffs.
- vi. *Arbitration* among firms and consumers is required for tariff and competitive-access disputes.
- vii. *Management audits* promote cost and tariff reduction via yardstick comparisons.
- viii. *Human resources policies* have operating cost and tariff implications.
- ix. *Reports* on costs and tariffs will emphasize current and future performance and efficiency.

The key issue is whether the law explicitly provides the instruments that facilitate these activities. Note that each of these nine functions has implications for the prices that will be charged to consumers. In addition, they enable an IRC to meet other regulatory objectives, including the promotion of system expansion and improved service quality. Furthermore, by clearly delineating the responsibilities of the IRC and the government ministry historically responsible for sector oversight, the legal mandate provides for a division of responsibility between the ministry and the agency. If the law provides the tools enabling the agency to gather information and establish incentives for good performance by the regulated firms, then the sector will come closer to meeting the objectives written into the law. Finally, an appeal procedure provides some checks and balances so that activities supporting regulatory decisions are in line with the law.

HIF of Hungary is an example of a regulatory agency without an adequate legal framework. HIF was created by law, but the minister defines its duties. The nine functions noted above are not clearly laid out. In fact, HIF's role can change with every political change. Similarly, in Latin America, presidential decrees have played roles in the creation and operation of "independent" regulatory commissions. OSIPTEL (Peru) has clear laws, but the political system can weaken their implementation. Presidential decrees can override rulings made by the commission.

Values: What core principles support ongoing activities of a new government agency? What attitudes must the leaders and professional staff have in order to gain the trust of stakeholder

groups (customers, investors, and government ministries)? For example, if independence of the IRC is important, how can such independence be best achieved? Similarly, what processes will promote transparency so stakeholders have confidence in the integrity of the system? What types of information are required so that appropriate incentives can be established?

Since values (or operating principles) are often not emphasized when agencies are created, it is helpful to have a definition of the shared values so essential for success. Another term that could be used is the *organization's culture*. Schein (1992, p. 12) offers the following definition of culture:

Culture is . . . a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.

Thus, *values* represent the principles that support the daily activities and vision of the IRC. These must be consistent with meeting the objectives of the agency. A task force for the Australian Competition Commission identified nine best practice principles of good regulation:

- i. *Communication* (information to stakeholders on a timely and accessible basis)
- ii. *Consultation* (participation of stakeholders in meetings)
- iii. *Consistency* (across market participants and over time)
- iv. *Predictability* (a reputation that facilitates planning by suppliers and customers)
- v. *Flexibility* (by using appropriate instruments in response to changing conditions)
- vi. *Independence* (autonomy in that decisions are free from undue political influence)
- vii. *Effectiveness and Efficiency* (cost effectiveness is emphasized in data collection and policies)
- viii. *Accountability* (clearly defined processes and rationales for decisions, with appeals)
- ix. *Transparency* (openness of the process)

Based on international experience to date, these principles (or values) need to be present to support the activities or work of IRCs.

We can see how several of these principles are essential for successful regulation. Participation provides stakeholders with opportunities to provide input into agency deliberations. Without access to the process, external groups will be unable to contribute fresh perspectives on policy alternatives, which leads to insular (and bureaucratic) approaches to solving problems. Since the professional staff of agencies are also stakeholders, the governance system must ensure their meaningful participation in resolving controversial regulatory problems. Transparency means that the general public and special interests can see the rationale behind agency decisions. Well-organized communication activities open the process to the light of day and highlight the priorities and analyses underpinning decisions. Again, agency staff determines transparency (through their interactions with stakeholders) and can benefit from the free flow of ideas between groups within the agency. Finally, predictability enables consumers to plan their purchases without undue concern regarding disruptive price changes. In addition, credibility within the international investment community is promoted when investors are able to forecast future trends in regulatory rulings. Internal agency procedures determine the consistency and predictability of decisions to a large extent.

Resources: Although budget size is just part of this factor, the level of resources must permit the IRC to complete its assigned functions. Additional considerations are the start-up strategy for the new entity and the kind of leadership required for the IRC, How does funding, the recruitment of professionals, and staff development affect the performance of the IRC and the sector for which it provides oversight?

Resources must be adequate for agency responsibilities. First, the funding mechanism determines both the financial sustainability of the agency as well as its degree of independence. If the political process can be used to punish the IRC for particular regulatory decisions, then the regulatory time horizon will be the same as that of elected officials—the number of months until the next election. In a capital-intensive industry with significant sunk costs, investors will avoid putting their funds into companies subject to the whims of the times. Certainly the IRC remains a creature of the legislature or the executive order that created it. The funding mechanism should promote autonomy and reduce the likelihood of political meddling.

Beyond the *level* of resources, the *mix* of resources is relevant to the IRC's ability to engage in activities necessary for its regulatory functions. For example, the selection of commissioners requires that the nomination process recognize that these leaders will determine the effectiveness of the organization. The quality and independence of those appointed to positions of leadership are signals to investors and consumers as to whether the government is truly serious about instituting sector reforms. Finally, experts in finance, engineering, accounting, law, and economics are necessary to analyze policy options. These specialists must be recruited and retained—so exemption from civil service salary brackets may be necessary to bring salaries up to market. A small staff of qualified professionals is preferable to a huge bureaucracy that lacks expertise and motivation. It should be noted that outside services can be obtained through consulting contracts.

The bottom line is that, without adequate resources, a new IRC will be unable to function effectively. Yet even with resources but without a legal mandate and shared values, an agency is unlikely to engage in activities that support improved sector performance. Thus, after considering a “best case,” we will examine situations where one or more of the three factors is inadequate, providing examples of how IRCs have actually addressed lack of congruence among the three factors.

1.1 Full Congruence

A well-designed regulatory agency begins with the overlap of three factors. Activities that are mandated by law (or at least not denied the agency), supported by shared values, and covered by the IRC's budget are likely to yield policies that meet the broad policy objectives of the agency. We take this to be the ideal state, recognizing that one or more of these factors is likely to be absent or inadequate for newly created agencies. Furthermore, over the life cycle of government agencies, the factors are likely to change as the law, budgets, or values change. Even if these remain unchanged, the context in which policy decisions are reached can change. These points will be developed in Sections 2 and 3.

Many analysts have characterized the task of regulatory agencies as balancing the interests of three groups: consumers, investors, and government.³ The task is clearly even more complicated, since the interests of different groups within each constituency can be at odds. In the case of consumers, large industrial consumers have different options than small residential consumers. If today's consumers have a low price that does not permit cost recovery, future consumers will experience deteriorated service quality and investments in new connections will not be made. Similarly, investors in incumbent firms will prefer different entry regulations than investors in new suppliers. Finally, government could be viewed broadly as elected officials and politicians. The Labor Ministry and the Environmental Protection Agency might not put cost-containment as a priority if it affects their constituencies in a negative way.

The activities of an IRC involve incorporating the concerns and interests of numerous groups into policies that improve sector performance. Thus, the presence of resources, mandate, and values does not make effective regulation easy, but they do make effective regulation possible.

1.2 Resources and Mandate without Values

The absence of shared values creates problems for agency decision making. In particular, new agencies lack a history that can give professional staff insight into how different processes and activities determine the effectiveness of the IRC. Two examples illustrate the problem of having only resources and a legal mandate for performing regulatory functions. One involves the issue of transparency and the other relates to creating shared values.

In the early years of electricity regulation in the United Kingdom, the Director General of the Office of Electricity Regulation (Offer) made regulatory decisions that lacked transparency. This value was balanced against other values and not emphasized. However, later decisions involved a more open communication process, with preliminary findings published by Offer and responded to by stakeholders.

New agencies that lack the historical experiences to create shared values may turn to in-country staff workshops and to international training courses and conferences to learn what values have been important elsewhere. As the commissioners gain experience and professional staff work on issues, they are likely to develop a set of common core attitudes—though the issues are generally so complex that total agreement on every issue is unlikely (and perhaps undesirable).

1.3 Values and Resources without a Mandate

The lack of a legal mandate opens up the IRC to challenges if it attempts to take on some function for which it has not been given explicit responsibility. Of course, the agency can argue that the function is implicit in its mandate, but some external determination may be still necessary. Certainly, as part of its regular reporting activities, the IRC should keep the legislative and executive branches informed of how the law affects its ability to achieve regulatory objectives. There is a careful balancing act here, since the IRC is a creature of the executive or legislative branch, it must keep government informed without appearing to overreach its

³ For example, see [W. Smith \(1997\)](#) and [Berg \(2000\)](#).

mandate.

For example, if the appeal process is poorly conceived, all the work that goes into preparing sound regulations can go for naught. Similarly, an IRC might lack regulatory authority to request data or even be denied particular instruments when the law states, for example, that rate of return on rate base regulation must be utilized. Or the agency may have authority but lack power to enforce rules—as when there are no penalties for noncompliance. Furthermore, current industry structure might not yield competitive outcomes in unregulated portions of the sector. Without some role in determining structure, the agency is left without an essential regulatory instrument.

Alternatively, since committees write laws that can be hundreds of pages long, ambiguities and inconsistencies can be embodied in the legislation. So the lack of a mandate may be due to inconsistencies that ultimately will be determined by the court system or resolved through new legislation. In the meantime, what is a regulator to do?

In Jamaica, under the leadership of Winston Hay, the utilities commission has tried to develop a shared vision and promote transparency to make up for unclear laws and contention over modifications of long-term contracts. In particular, did the monopoly contract apply to wireless services or only to wireline? The contract appeared to deny citizens new services and involved relatively high returns to the incumbent telecommunications firm. Increased public awareness and mutual commitment to “reasonable” modifications in the contract have helped move the system forward – ultimately promoting competition and service improvements.

In the case of California, the Public Utility Commission gave a report to the legislature stating what it intended to do regarding deregulation and restructuring of the electricity sector.⁴ Given agency values and the priorities for improved sector performance, this policy initiative seemed to offer advantages over the status quo. The agency had the resources necessary to provide supporting studies and to hold town meetings throughout the state during the period leading up to the declaration. It stated that, absent further legislative direction, it intended to move forward in the reform process. The legislature could have acted but did not, so the PUC moved forward. Ultimately the legislature passed a law addressing the issues raised by reform, including treatment of stranded costs. However, the case illustrates how an IRC can be innovative while keeping within the intent of existing legislation.

1.4 Values and a Mandate without Resources

The complaint of inadequate resources is a universal one. For underfunding to be considered a legitimate problem, the agency should be able to demonstrate that current resources are, indeed, being wisely used to meet the priorities of the organization. That is, the agency is operating on its production possibility frontier and with little or no waste and organizational slack. Tasks and responsibilities are well-defined, links to key activities and outputs are understood, time is not burned in bureaucratic meetings, and staff is working in a cost-effective manner.

⁴ Needs an explicit reference to procedures used in the California reform initiative. . . *The Electricity Journal* ?

In addition, no decision-maker feels that he or she has all the data and analysis necessary for perfect confidence in the regulatory rules ultimately promulgated.⁵ While adequate resources is a matter of degree, there certainly can be times when the inability to bring resources to bear on a task results in missed deadlines and/or unexplored (but potentially productive) policy options. An actual instance is described below.

In 1992, the New York Department of Public Service faced some issues in the development of regulatory incentives. Niagara Mohawk had proposed an incentive plan that utilized benchmark comparisons, so that it would be rewarded if its performance exceeded that of pre-determined indices. The commission lacked resources to conduct an independent study of the yardstick proposal and wanted to ensure that its professionals fully understood the implications of the program. The company realized that the proposal could not be accepted (or modified) in a timely manner. Thus, it was willing to fund an independent study by a team selected by and reporting to the commission.

The consulting team analyzed the data sources, explored technical features of the proposed cost indices, and described the incentive impacts of the performance-based regulation plan. They also participated in meetings with various stakeholder groups who wanted to ensure that the resulting policy was consistent with their interests. Thus, the sessions facilitated communication among the parties and promoted transparency in the development of a proposed incentive plan. The resulting process supported regulatory values and was consistent with the agency's legal mandate.

The consulting team also examined suggestions by other parties to the discussion. One such proposal for a benchmarking index was found to lack many of the positive features of the company's plan (for an evaluation of the customer bill index, see Berg [1995]). The various stakeholders seemed to feel that the process improved participant understanding of the incentives and the Department of Public Service developed a mutually acceptable plan that made everyone better off. So in this instance, the resources came directly from the company being regulated, an outcome consistent with the values of the regulators (stronger incentives for cost-containment and sharing of savings with consumers).

In Australia, Austel used the same technique for obtaining independent estimates of universal service costs. As telecommunications competition was being introduced, the oversight authority (at that time) wanted to determine the extent of any asymmetric burden on the incumbent – for its investments for universal service. Austel had the industry fund the study, but the consultant reported to Austel.

Remedying the resource problem directly can involve political compromise. If hiring the nephew of the finance minister leads to a sustainable funding, then the option ought not be ruled out. No system is entirely insulated from political pressure. The art of regulation involves knowing when to draw the line, so that principles are not so badly compromised that the credibility and legitimacy of the agency are threatened.

⁵ At times, paralysis by analysis can result if decision-makers seek perfect knowledge. They must recognize that, when considering the impacts of rule changes, no policy initiative is without risk and that there are no guarantees that all the relevant scenarios have been examined.

1.5 Mandate Only

If the law states that the IRC *can* do something, presumably there are circumstances when it need not do so. If the activity is perceived as counterproductive (in terms of the impacts on industry performance) or conflicts with agency values (such as transparency or the avoidance of micro-management), then flexibility of response is useful. However, if the law states that the IRC *must* do something, the situation is more complicated. The long-run solution is to inform policymakers of the implications of following the letter of the law, and then work (behind the scenes) to make the law consistent with best practice regulation.

When an agency emphasizes a particular set of principles and has only minimal funding, a problem arises if the law is inconsistent with those principles. For example, in Argentina's natural gas sector, the law requires the regulatory agency, Enargas, to document the sources of cost savings available to firms. Such information could arise from a detailed management audit, but an agency without the staff and other resources necessary to identify cost-containment opportunities cannot comply with the law. Furthermore, in this case, the purpose of the documentation process was to calculate the dollar savings associated with productivity improvements and to use these to determine the X-factor to be applied to gas distribution companies in a price control review.

Since this requirement was interpreted as requiring the agency to develop cost-containment programs that companies could adopt to achieve these savings, it placed the IRC in a position of engaging in the micro-management of firms, which ran counter to widely shared agency values. How could these positions be reconciled? To handle the problem in this price review, the agency also decided to examine total factor productivity numbers to gauge the feasibility of plans. Thus, the numbers at least had a reality check while maintaining consistency with legal mandates. Such gyrations may not be desirable over the longer term, since transparency can be threatened if formal and informal processes are not aligned. The key point here is that the formal process (agency identification of firm cost-containment programs as required by law) ended up diverging from the actual process used to estimate X.

1.6 Resources Only

Having excess resources would seem to be the ideal situation. The IRC has an opportunity to invest in complementary resources that "might" be useful in the future. However, there are at least three potential problems with an excessively large budget or staff. First is the temptation to use resources to more closely monitor firms. For example, the IRC could require monthly reports, instead of quarterly or annual reports, so staff has something to review. More detailed reports could be solicited, reviewed, analyzed, and interpreted. Opportunities for clarification could be scheduled, so professional staff could quiz managers about why certain decisions and financial outlays were made. However, the costs of compliance are non-trivial. In fact, the resulting micro-management not only raises the operating costs of the regulated firm, but it can dampen incentives for cost containment.

There is a case of a Latin American water regulator that obtained much of its staff from the water utility that had been privatized. The "excess" employees from the downsized company

were guaranteed employment at the IRC. The result can only be described as a nightmare. The most productive employees were retained by the water utility, which was now in a position to reward managers for high performance. The others were angry and now in a position to regulate the operations of the water utility. Their activities were not consistent with values promulgated within the IRC nor did the law require them. However, the temptation to “get even” was just too great, and the former utility employees negatively affected sector performance.

A second problem is that diseconomy of scale sets in with large bureaucracies. Given individual salary caps, funds will likely go to larger numbers of employees rather than to better professionals. Mediocre personnel make mistakes that then have to be remedied by others. The resulting rise in costs is disproportionately large relative to the benefits delivered in terms of meeting mandated sector objectives. Furthermore, management by meetings ultimately encourages passivity and discourages initiative within the agency.

The third problem is that fiscal oversight agencies will be monitoring IRC performance. There is benchmarking among regulatory agencies in terms of staffing levels, mix of responsibilities, and sector performance. Excessive resources will ultimately be identified, and those responsible for wasting tax money are unlikely to be rewarded. An old proverb states “Beware of making a wish . . . it may come true.” This observation is certainly true in the case of wishing for excessive resources.

1.7 Values Only

Perhaps the most frustrating situation is to have a clear regulatory vision and supporting set of values, but to be unable to move forward because of lack of legal mandate and severe resource constraints. However, one needs to assess whether values unsupported by law or funding are really essential. When values, such as transparency or consistency, are deemed worthy of being defended, there still are regulatory strategies that can move the agency in the right direction.

As was noted earlier, in the case of Jamaica, the agreement inherited by regulators provided a fixed return (16%) and limited entry. The agency challenged the entry provisions, arguing that the government had not intended to give control over the spectrum to the incumbent telecommunications supplier.⁶ Ultimately, the process yielded a compromise, but the absence of legal precedents did not make the process easy.

The Peruvian water regulator (Sunass) faced a different type of problem.⁷ The agency oversees 45 municipal water authorities. It lacked instruments for rewarding good performance or penalizing poor performance. So leaders in the agency decided that data collection and benchmarking would at least start the process of identifying poor performers and good performers. The process has not been easy, since uniform systems of accounts require careful development. The initial data submissions were subject to “revision” by the water utilities, partly because the rankings proved embarrassing to some managers, but also because the local authorities filled out forms incorrectly. Now other government agencies see how some public funding was wasted: many municipalities focused on political patronage rather than economic

⁶ **Need a citation**

⁷ Maria Louisa Corton (2000).

efficiency and system expansion. There is likely to be more pressure for reform, and perhaps Sunass will be given more instruments to promote cost containment and service improvements in the water sector.

The Norwegian electricity regulator took basically the same approach for the more than 200 municipal distribution utilities.⁸ In this case, the regulator had legal authority over distribution pricing, so besides having “League Tables” that exposed poor performance to the general citizenry, the regulator based the X factor (for price reviews for each utility) on the firm’s distance from the efficiency frontier. Poorly performing firms with more room for improvement in operations had their prices set to fall more rapidly than those of well-performing distribution systems. An implicit message from the regulator was that some mergers might be called for to achieve scale economies. Such benchmarking characterizes many regulatory regimes.

Other factors reinforced the benchmarking initiative in Norway. However, for many developing countries, the law is ambiguous regarding an IRC’s access to certain types of information. In such cases, the regulated utility might decline to submit the report or just provide poorly documented data. If there are no resources to press the case further or to estimate the data from firm-specific models, then the IRC is left with a dilemma. In one instance, a new IRC was unable to obtain information that it viewed essential for determining whether current prices were allowing “excessive” returns. When non-cooperation was the firm response, the agency adopted a relatively simple approach to establishing rates—based on “comparable” firms from another country. This strategy was not in violation of the law, and ultimately led the firm to be more forthcoming, since the alternative was so unpleasant.

In these situations, one long-term strategy is to communicate with those responsible for the law and for funding. If the agency has credibility with the government, investors, and consumers, the various stakeholders are more likely to accept the arguments of the IRC and provide support for factors that reinforce IRC principles. Another strategy is to interpret the mandate broadly and give others opportunities to intervene as appropriate. The case of deregulation in California really could fit into this situation as well. To reach its policy conclusion, the Public Utilities Commission held an extensive series of workshops, ultimately relying heavily on consensus building among stakeholders. The process was not inexpensive, but participants were the ones making investments in studies and extensive discussions. The vision of the regulators triggered a new initiative, even though resources for studies were limited and the legal mandate was somewhat in question.

Let us now take another cut through these issues and consider which factors are likely to be binding constraints over the life cycle of an IRC.

2. Lessons from the Regulatory Life Cycle

Some observers of the regulatory process have described agencies as having a regulatory life cycle. Beginning its existence with public perceptions that a “problem” exists and that a new agency can resolve the problems facing the sector, the commission starts with youthful energy, protecting consumers and promoting objectives laid out in the legislation, but ends up as a

⁸ Jan Moen, need a citation.

calcified agency that protects producers (Bernstein, 1955). Thus, regulators eventually succumb to the interests of the firms they regulate or to politically powerful consumer groups. It is useful to consider how the three factors (legal mandate, resources and values) come into play in this story of “regulatory capture”.

2.1 Process Leading to Birth

Many regulatory agencies are established in crisis situations. When existing arrangements are not leading to strong sector performance, reform objectives are responses to a litany of complaints about public sector firms behaving as monopolies, requiring public subsidies, operating inefficiently, squelching potential competitors, providing poor service, and not innovating. It would be naive to think that privatization and/or an IRC could remedy these problems easily. Institutions develop over a period of decades, and no institutional innovation is likely to improve performance painlessly.

Thus, broad public concerns or an actual crisis generally provide the stimulus for reform. If expectations are too high, the IRC is doomed to failure, especially when those currently receiving utility service are paying low (below-cost) prices. Those without service will not immediately benefit from rate re-balancing, but those individuals whose prices rise will certainly have much to say. The lack of targeted subsidies and non-transparency of past policies means that there is much work for a new IRC.

2.2 Infancy: Learning the Ropes

A newly born institution is somewhat fragile. Those who lost power when the IRC was established are now in a position to cause trouble. Managers placed under new pressures for cost containment may not appreciate being held accountable for improved performance. “What have you done for me lately?” is heard from various consumer groups. The press can become the mouthpiece for special interests that did not like the consequences of sector reform. Finally, the general citizenry is likely to be unaware of the new tasks that have been assigned the new agency.

During this early period, the commissioners and professional staff are learning the ropes as well. The agency has to develop procedures consistent with its values and with its legal mandate. These procedures are then tested in the interactions with various stakeholder groups. Often the data are quite inadequate, but establishing a uniform system of accounts and starting data collection are two urgent tasks that will only bear fruit later. Internal task forces at the IRC might be utilized to address particular issues to get groups thinking “out of the box”. In the process, relationships within the IRC will not necessarily match the published organizational chart. For example, the Mexican IRC (Comision Reguladora de Energia—CRE) has turned to interdisciplinary teams as a vehicle for developing policies to improve sector performance.⁹ The individual commissioners participate in task forces, thus involving the leadership of the IRC in

⁹ Hector Olea: Presentation at *the PURC/World Bank International Training Program on Utility Regulation and Strategy*. June 1997. Under Olea’s leadership the CRE illustrates how a moribund agency can be transformed into an active sector regulator. He introduced stakeholder input – opening the process through improved information, publicly announced meetings, and more thorough analysis of proposals.

the technical discussions that lead to recommendations on regulatory rules.

In other countries, IRC commissioners maintain some distance from the staff, operating more like judges than “team leaders.” Professional staff present cases, and commissioners exercise judgment regarding the impact of alternative rulings on allowed rates of return and or on price levels and structures.

Another example of operations in newly created IRCs is Pakistan. In 1999, Pakistan’s electricity regulatory agency faced a unique situation when it held its first public hearing on prices charged by the national utility.¹⁰ The new agency was determining whether prices were remunerative. This situation could be interpreted as a test for the regulators. Did they really have authority over the utility? Was it necessary for the utility to participate in public meetings held to obtain citizen input? In any event, no representatives of the utility were present at the start of the hearing.

The commission chairman responded forcefully, stating that without representatives to answer clarifying questions, the utility’s prices would remain the same as in the past. The commission gave the utility two hours to make an appearance. Within an hour, a team of junior executives walked into the hearing room. The utility appeared to conclude that the IRC had authority and the meeting was a legitimate way to communicate to the IRC and the general public. The values of the new IRC—to promote transparency and facilitate communication—were sustained.

2.3 Youth: Expertise and Initiative

One could argue that the most exciting phase occurs after the first few years. A vision has been articulated and procedures established. The activities are consistent with the legal mandate and the resource base of the organization. The firms subject to regulation have accepted the new system, and enough time has passed by to demonstrate some success and to identify areas for change. This phase of the regulatory life cycle has the potential to have significant impact on industry performance as market participants develop their own strategies within the rules of the game promulgated by the agency.

Samarajiva, former Director General of Telecommunications of Sri Lanka (1998-99), describes the first decade of the regulatory authority, shedding light on the evolution of a young IRC. Although established as an “under-funded” governmental department in 1991, greater independence was achieved in 1997. So, in a sense, the infant agency had been starved of resources and its legal mandate was not exploited. According to Samarajiva, the IRC began to take new initiatives involving public hearings on billing and tariff determination. Public input led to the incumbent's withdrawing its opposition to itemization on bills. At the same time, interconnection proceedings were instituted. Transparency and participation were two values given significant attention by the Telecommunications Regulatory Commission (Gunawardene, 2000).

Samarajiva argues that public notice and public hearings on issues of popular concern were

¹⁰ This description is based on conversations with Ali Nawaz Memon, a former Chairman of the agency.

important during this phase of the agency's development. He contrasts the strategic emphasis of his agency with that of India:

Irrespective of the legislative mandate, fledgling regulatory agencies must proactively take on high-profile public-interest tasks such as improving connectivity in rural areas and protecting consumers from operator abuse. If not, they will lack the legitimacy to perform any of their functions, including those of ensuring the continued inflow of investment and the prevention of disinvestment. The perception of an emphasis on pure competition-enhancing measures by the Telecommunications Regulatory Authority of India (TRAI), as against those with more popular appeal such as universal access and consumer protection, may have contributed to its loss of legitimacy, first in the eyes of the media, and then in the eyes of the government. The TRAI also suffered from the unfortunate integration of operational and policy functions in the incumbent Department of Telecommunications and the undeveloped state of competition in India at that point. The alignment of the policy and operational agencies created a powerful force that overwhelmed a regulatory agency that was buttressed solely by expertise and statute, and lacked broad legitimacy and the strategic support of competitive entrants. (Samarajiva 2000b)

A danger of youth is that a sense of populist urgency overwhelms the shared desire for continuity. If agency values change, then stakeholders need to be made aware of the new priorities. If stakeholders find out indirectly, the investors and consumers may not find the resulting surprise very acceptable. Characterizing this phase in terms of the three factors is not simple. At least shared experiences ought to have led to a regulatory culture that is been transmitted to new staff. Regulatory decisions represent precedents that anchor change and thus make the outcomes of price reviews more predictable. The problem with such anchoring is that it can prove dysfunctional in the next phase if the agency does not adapt to the technological tides and or other winds of change.

2.4 Maturity: A “Steady-State” (needs an example)

When has maturity been achieved? For a government agency, the answer might be when processes are handled in a perfunctory manner. This state of deliberative decision making can be a welcome respite from the uncertainties associated with the early years of the IRC. Some of the excitement is gone, but stakeholders can review the agency's record and the sector's performance with some sense of perspective.

Regulatory processes are well established. Priorities are widely accepted. And the activities of the IRC have evolved to suit the values of the organization. There is greater likelihood of congruence in terms of resource availability, the legal mandate, and values. The law may, in fact, still be the same one that created the agency (as with the U.S. Federal Communications Act of 1934, which was operative until 1996). Market participants are comfortable with the regulatory regime, perhaps too comfortable. Nevertheless, this phase might be viewed as a long-term goal for many: no crises, no major policy shifts.

2.5 Potential Senility: Worshiping the *Status Quo*

Finally, a dysfunctional stage can set in. Let us use the United States to illustrate how

regulatory agencies can harm economic efficiency. Many commentators have viewed the regulation of surface transportation as long outliving its usefulness. . In the 1950s and 1960s, the Interstate Commerce Commission presided over the decline of railroads as it limited competition in trucking. Railroads were actually prevented from responding to their loss of market share—all in the name of “balanced” transportation. Policies seemed to be based on inappropriate shared values; that is, views of the transportation sector that might have been true in the Great Depression of the 1930s, but were no longer relevant. Similarly, the Federal Communication Commission protected broadcasters from the emerging cable industry in the 1960s.

Protectionism seems to characterize this phase of regulation, as agencies identify with incumbent suppliers and existing technologies. However, firms cannot be completely shielded from technological innovations and changes in consumer preferences. If an IRC finds itself stagnating, then the call for reformation or dissolution is around the corner. The deregulation of the airlines industry and dissolution of the Civil Aeronautics Board in the United States in 1975 is an example. It illustrates how political systems can reform regulation when there are convincing case studies of the efficacy of competition and empirical evidence of the positive impacts of contestability in industry performance. However, network industries such as airline transport can still be plagued by problems when hub airport capacity is not expanded and entry barriers are high (access to gates, landing rights, and reservation systems). Nevertheless, Alfred E. Kahn demonstrated regulatory leadership in changing the direction of the agency and promoting entry—even without a change in legislation. The law set a standard that the CAB should promote the “public interest,” and Kahn and his fellow regulators concluded that performance under protectionist policies was dismal (McCaw, 1984). Consumers were not protected from high prices when firms were protected from competition.

3. Context as Another Factor: Leadership under Changing Conditions [this section is somewhat academic and will need some examples if it is to remain in the paper.]

There is no simple recipe for effective regulation. In particular, the context in which regulatory decisions are made can change with new technologies that make segments of the market potentially competitive, with demand growth that reduces the importance of scale economies and facilitates entry, and with changing national priorities. We can think of the three circles in Figure 1 as now embedded in a larger sociopolitical context. When the context changes, regulators cannot remain rigidly attached to the past and avoid the “senility” phase of the regulatory cycle described above.

At one time or another, regulatory leaders grappling with external change must address internal adjustments—in terms of values, processes, and policies. Leaders confronting organizational change may be faced with three very different scenarios. In scenario one, a bureaucratically inclined organization with a long history needs to change but resists change. In scenario two, the organization experiences change as the only constant, change breeding change in a never-ending cycle. In scenario three, change is more a function of spontaneous, opportunistic action than a systematically thought out process. Each scenario requires regulators to use a different mental model and a different set of skills to help the organization. To be effective, leaders need to understand all three “faces” of organizational change and how best to operate when confronted by any of the three.

A rational viewpoint serves the leader very well under scenario one. When change is the exception, if it must be endured it can be more or less scientifically and programmatically managed. Here, once the organization has been motivated to change, the change leader serves as architect, engineer, and program manager of a planned change process. Social psychologist Kurt Lewin (1951) most

succinctly articulated this rational view of change. He saw organizational change as an essentially linear process of unfreezing an existing organizational state, managing a transition, and re-freezing the organization in a new, more desirable state.

A whole industry of change consultants has grown up around this basic concept. Their approach can be summed up in the steps they recommend: assess the current state, conceptualize a future state, plan how to get there, and implement the plan. Worth underscoring, perhaps, is the critical work of re-aligning the organization to make sure that the change sticks. Without the kind of mental model/framework discussed above, a change leader will be vulnerable to missing key aspects in the re-freezing part of the change work. He or she might, for example, miss the need to alter the organization's rewards system to support a change-dictated shift in employee behavior.

Linear and rational concepts and unfreezing/transition/re-freezing models lack effectiveness under scenario two. Here, change breeds change and more change. Faced with what one thinker has termed "permanent white water," managerial leaders often feel great uncertainty about what future state an organization could or should be working toward. And the prospect of bringing about an elaborately scripted and choreographed change process seems remote. The last thing the organization in such flux needs is to be "unfrozen." Another set of ideas for working with organizational change is clearly needed to complement the classical approaches.

Some writers and thinkers about organizational change have turned to the East for help. What they find is a worldview predicated on non-linear, "both/and" thinking. Applied to organizational change, this viewpoint can help the change leader re-frame his/her analysis of constant change. Rather than struggling to figure out where the permanent change is going, the leader comes to see change as a constant balancing and re-balancing process through which the organization strives to find both internal harmony and harmony with its environment.

Nearly constant change can have an irrational quality. Decision makers may feel out of control. Organizations probably must be led more than managed. The job of the leader in this scenario is not so much to manage as to serve in the leadership roles of steward and facilitator. The change leader must provide stability and grounding for the members of the organization in flux. Managerial leaders facing this kind of change discover that to figure out and plan for an outcome that keeps changing is less important than putting as many organizational resources as possible into making the organization as adaptive as possible.

Theorists and practitioners of organizational change have been slow to develop practical approaches to dealing with constant change. Some of the most promising work relates to Senge's concept of the "learning organization," one that is "continually expanding its capacity to create its future." For the learning organization, organizational life *is* change. Managerial leaders and organization members alike base every decision they make, every structure and system they create, on that premise. Another approach to "change overload" is a set of techniques loosely clustered under the rubric "whole organization change." These approaches attempt in one way or another to bring the whole organizational system together—all levels, all divisions, key external players—to solve organizational problems and position the organization to take advantage of emerging opportunities.

Scenario three offers yet another set of challenges. This is the arena of sudden acquisitions, overnight mergers, sudden sell-offs, pre-emptive downsizing, disaster, scandal, and strategic firing. Here, change has a "ready, aim, fire" quality as organizational leaders act swiftly in response to the exigencies of business. Change of this sort clearly has intentionality, but planning and managing, if present at all, take a backseat to the wielding of organizational power to re-shape the organization and its environment. Except for the initiator of the change, leaders working with this kind of change must have the attitudes

and skills of relief workers. They must carry out triage: engineer the clearing away of rubble, shore up remaining structures, and begin planning for how to get things moving again.

However change is viewed and whatever the approach taken in carrying out the change, there is an often misunderstood, underlying psychological dimension of change to which the managerial leader must attend. Organizational change is disconcerting. It stirs in many of the people involved -- even people strongly committed to the organization--deep feelings of uneasiness and even fear. Entirely natural and normal, these feelings can manifest as denial of the need for change and resistance to the change. Yet many managerial leaders, schooled in objective analysis of and rational discourse about the organization, are reluctant to acknowledge and deal with this irrational, or perhaps arational, dimension of change.

It is imperative that they do so. Failure to do so risks dehumanizing the change process and driving the creative and adaptive energies of organization members underground. Dealing with this side of change can be as simple as making it safe for people to express their doubts and fears, listening to those doubts and fears for data that can help shape the change process, and providing clear and consistent information about why the change is necessary. In this kind of atmosphere, the vast majority of organization members will be able to sort through their anxieties and move through their fears and uncertainties to a place where they can enthusiastically embrace the change. Those facing change move from denial to resistance, to acknowledgement and finally engagement—addressing the issues and adapting to the new situation.

Should the utility regulator with an already full plate of concerns care about this “touchy-feely” aspect of organizational change? Warner Burke, one of the grandfathers of organizational consulting, did a study recently about what managers and executives know about change. Overall, the scores were acceptable, if not particularly impressive. Managers had two particularly weak spots: (1) their knowledge of individual responses to change efforts and (2) managing the people side of change. In short, many managers had difficulty in interpreting their employees’ reactions to change and in guiding people through the complex and often confusing process of change. The point is clear: leaders of regulatory agencies ignore the organizational implications of change at their peril.

The rational, scientific bias of many managerial leaders has yet another potential downside when change is in the air. The impulse to reduce organizational life to that which can be dispassionately structured, planned, and measured misses the fact that when change is afoot, there are almost always going to be disagreements about ends and means. In a word, there will be politics, the process by which power is exerted in the organization. And if we know anything about politics, we know that it is neither rational nor manageable. The change leader who either denies or gives short shrift to the politics of change will almost certainly doom the change effort to failure.

The simple fact is that, when the stakes are high, rational discourse and program management cannot carry the day. Good data and persuasive argumentation are necessary but not sufficient to make change happen. The change leader must also marshal political forces. This essential political work begins with identifying the forces in the organization—individuals, groups, and coalitions—that have a stake in the change. The next step involves determining which of these forces favor the change on the table and which are against it. Finally, the leader must identify a strategy for working with this array of forces in a way that facilitates the change. This can mean recruiting and fostering a group of change champions—opinion leaders who are willing to support the change publicly and often. It can mean getting out the organization’s version, “selling” the change to employees. And it can mean working to neutralize opponents of the change. At bottom, accepting the reality of organizational politics as part of the change equation is to accept that change is in part a contact sport, not just a cerebral exercise. While regulation can create a positive-sum game, some stakeholders will be uncomfortable with the outcome, resulting in

counterattacks through court appeals, legislative lobbying, and appeals in the press.

Concluding Observation

This paper describes how the creators of new institutions face numerous challenges. Experience in developed and developing nations demonstrates that many problems have been successfully met, but some issues really have no solution. Words written in another context remain relevant when thinking about how IRCs develop. These new agencies

“ . . . had to be built up from the ground in accord with desirable goals, and the goals were modified by the objective conditions which confronted the builders. This is the nature of an experiment, where ideas guide activity to test certain conclusions and reach intended outcomes” (Koch, 1961, p. 125)

In the context of government, Koch argues that trial and error represents the typical learning style for leaders in new settings. The main corrective mechanisms are feedback from various stakeholder groups and performance in other countries. When the outcome or performance falls short of reasonable expectations, it is time for systematic study and new hypotheses regarding what will work in the institutional setting in which the agency finds itself. The three binding constraints represent a starting point for that analysis. However, changing market and institutional conditions also determine how broad regulatory policies and decisions in specific cases affect sector performance.

Appendix: Systems Theory Applied to Organizations

[The appendix is currently fairly academic. Solution: to incorporate key insights into the body of the paper without so much jargon or to tighten it as an appendix. Maybe the OB material just belongs in a different paper, but it seems that the material provides some good perspectives to decision makers. We just need to “speak to the audience” (non-academics).]

Ask the typical public or private sector manager to draw a picture of his or her mental model of an organization, and more often than not what emerges is some version of the classic, pyramid-shaped organizational “wiring diagram.” In other words, many managers equate “organization” with “structure.” Here, structure can be defined as the way the work (or activity) is divided up and reporting relationships established. This tendency to identify the “formal” hierarchical structure is not surprising, given the bureaucratic mind set prevalent in many large organizations. Unfortunately, the reality of organization is far more complicated, and capably guiding organizations through change requires a much more sophisticated understanding of relationships.

The antidote to this “organization is structure” dead end is for the leader to develop a multi-dimensional picture of the organization. Organizational science offers help in the form of system theory applied to the organization, organizational sociology, and organizational modeling. By walking thoughtfully through these three arenas and relating the key ideas in each to real life experience, the managerial leader can mold an intellectual framework that grasps the complexities of organizational life and provides a practical mental guide for leading an organization through change.

System theory originated in the natural sciences in efforts to understand sets of objects, the relationships between those objects, and the relationship between sets of objects and their environments. The solar system and the human body are understood to be systems. System theory has been widely applied to the study of organizations. The major applications arguably cluster around four themes:

- System as it illuminates **productive processes**: the input-throughput-output mechanisms that result in products and services going out the door. If the typical managerial leader has any knowledge of system theory, this is often the piece he or she has. This is a key insight into the organization as system, but it is not a full picture of same.
- System as it illuminates **energizing processes**: the myriad ways in which the organization affects and is affected by its environment. The key points are two. (1) The organization's boundary—the physical, social, psychological, and work/task dimensions that set it apart from its environment—must be semi-permeable, tight enough to focus the organization's energy so that it can accomplish its mission, but loose enough so that there is a robust exchange of ideas and energy with its environment. This semi-permeable boundary is characteristic of healthy living systems and gives rise to the term “open system.” (2) The boundary's quality of permeability makes it possible for the organizational system to get feedback from its environment and use it for purposes of developing greater adaptiveness.
- System as it illuminates **enabling processes**: the mechanisms that control and measure the relationships and interactions among the organization's subsidiary parts--individuals, groups, departments, profit centers. The key points are two: (1) something that affects one part or level of the system affects all other parts and levels; (2) no single part of the organizational system can be allowed to sub-optimize, or over-achieve...each part must operate in concert with all other parts.
- System as it illuminates **developing processes**: the systems and programs that provide for the differentiation, i.e., growth and development, of the organization's subsidiary parts-- individuals, groups, etc. The key point here is that differentiation must precede integration, that is to say, the individuals, teams, groups, etc. within organizations must themselves have the opportunity to operate as open systems before the whole organization can operate as an open system.

Organizational sociology brings a different, but equally powerful set of ideas to the table. Leading thinkers in this field suggest that there are four fundamentally different sets of basic assumptions about how organizations work...four equally valid lenses through which an organizational actor can view organizational life. Viewing organizations through the **rational** lens, a managerial leader will tend to pay primary attention to structure, efficiency, rules, roles, and hierarchies. Through this lens, change is viewed as unusual, and when it happens it is assumed to be orderly and incremental. Viewing organizations through the **human resource** lens, a managerial leader will tend to pay primary attention to taking care of people, developing people, and the fit between the people and the structure. As with the rational lens, change is viewed as unusual and when it happens it is assumed to be orderly and incremental. Viewing organizations through the **symbolic** lens, a managerial leader will tend to pay primary attention to the mutual growth and interaction of the learning individual and the learning organization, the meaning of the organizational experience, organizational culture, and the organization as an open system. Through this lens, change is viewed as normal and often transformational. Viewing organizations through the **political** lens, a managerial leader will tend to pay primary attention to power, conflict, negotiating over scarce resources, the messy marketplace of ideas, and the organization as a battlefield. As with the symbolic lens, change is viewed as normal, though often sudden, opportunistic, and unpredictable.

There is a hidden trap in this seemingly straightforward material, for the organizational sociologists suggest further that each of us tends—for reasons of constitution and experience—to prefer one or two of these lenses and to find the other two or three unhelpful at best and alien at worst. The reality, however, is that each lens provides a valid view of organizational dynamics. And if the managerial leader can bring only one or two of them to bear, she or he is in trouble. While the lens one prefers will illuminate some realities of organizational life, it will blind one to others. Successful managerial leaders must intellectually leverage themselves to a point of being able to see all four views of organizational life as valid and useful.

With a little system theory, a dash of organizational sociology, and a dollop of practical experience, the managerial leader is ready to put pen to paper and try again to draw a picture of her/his mental model of an organization. The picture that results should be very different from the “wiring diagram’ mentioned above. It has the potential to become an important framework for managerial thinking and action. It can help clarify the inevitable muddiness of organization dynamics and change. It can serve as a prod for questions that can move the organization into the zone of high performance: what’s working, what’s not working, what needs to change, and what change can the organization support? It can provide a framework for gathering data to more fully understand what is going on. And it can help focus and plan organizational change by limiting analysis and action to a workable number of variables. Such a model ends up being a statement of the managerial leader’s “educated biases” about how things work, with an inevitable sub-text of how they ought to work.

Academics and consultants typically go through a similar process of walking through system theory, organizational sociology, and their own experience, often producing organizational effectiveness models that become the basis for their writing about and working with organizations. The Open System Diagnostic Model is representative of these models. The fulcrum of this model is the organization’s **work**-- what the organization does for a living and how it does it. The work is the central arena of organizational life, energized equally by the requirements of the customer and the capabilities of the organization, embedded in the people, the culture, and the strategic intent. The model argues that if one fully understands the organization’s work, most of what needs to be known about the organization will become apparent. The **direction** (strategic intent), **culture** (shared values), and **behaviors** (how people act as they deal with each other and the work) are fundamental to how the work gets conceptualized and carried out. The **customer** is co-king, partnering with the organization to define and judge the work.

Structure and systems (the cross-cutting carriers of energy and information, e.g., MIS systems) are viewed as important but secondary elements of organizational life. The model is biased toward the rational, human resources, and symbolic lenses. Lacking a political reference, it probably would not be useful in helping to understand an organization where politics were the dominant currency of interaction.

By virtue of experience, the typical senior utility regulator, is well-positioned to manage the myriad operational challenges facing the agencies newly created to oversee or manage infrastructure reform. This same decision-maker may not, however, have the skills and insights required to ensure that the regulatory agencies themselves develop into high performance organizations. This paper will present three inter-related sets of ideas in a manner designed to alert the senior regulator to some key issues of internal organizational effectiveness facing regulatory institutions that are in the midst of change. The three sets of ideas are: (1) the organization understood as a complex system; (2) the three faces of organizational change; and (3) the -- for some -- uncomfortable reality of politics as an aspect of organizational change.

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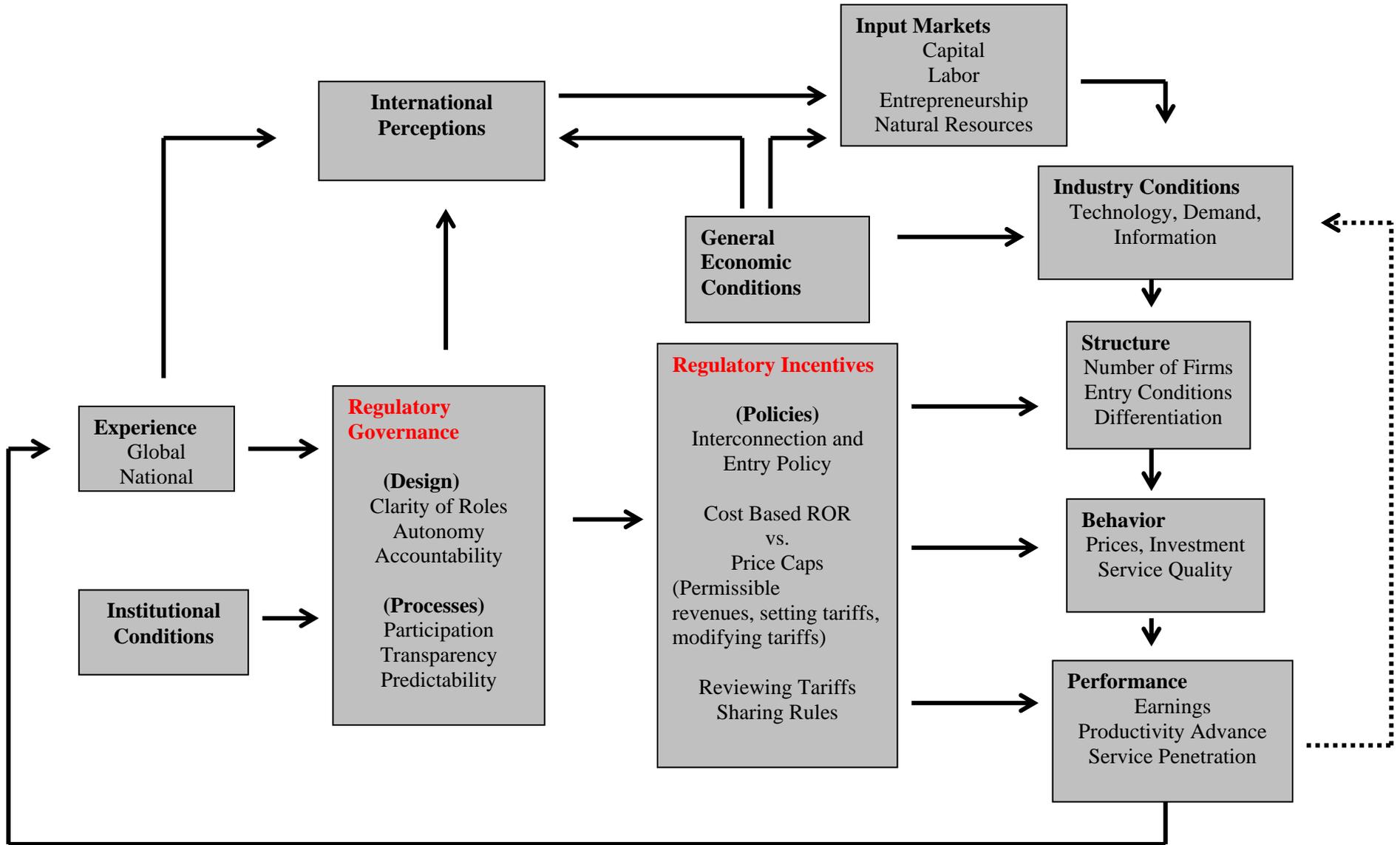
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Figure 1. Regulatory Governance, Incentives and Performance



**Figure 2. Classical Independent Regulation:
“Balancing” Interests**

