Regulatory Roulette

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- Telecommunications: Rs 40,000 crore a year on 2G networks, and another Rs 35,000 crore likely on building the 3G network in the coming year
- Power: Rs 200,000 crore to expand capacity by 30,000–40,000 MW in the next five years
- Airports: Rs 35,000 crore to build/modernise six airports, with another Rs 60,000 crore to modernise 20 more in the next two years
- Ports: Rs 40,000 crore to build/expand eight to 10 ports
- Metro rail: Rs 10,000 crore apiece for new metro rail services in cities like Hyderabad, Kolkata, Bengaluru, Mumbai and Chennai

Going by these numbers, it would be natural to assume that all is well with the country's infrastructure sector.[1] However, while there have been significant victories, there have been equally noteworthy defeats. So, while the government managed to push through with its public–private partnership (PPP) model for the Hyderabad metro,[2] as opposed to the government-funded plans in cities like Kolkata and Bengaluru, it also got the cabinet to pass the Hoda committee recommendations on fixing port tariffs[3] before calling for bids. On the flip side, vested interests forced the government to put off even the partial privatisation of the Amritsar and Udaipur airports. While a new model format has been designed to ensure that even the kind of favouritism seen in pre-selecting bidders on the basis of their technical

qualifications[4] gets eliminated, it has been given the go-by in the recent bids for the modernisation of the New Delhi railway station. In fact, there is a concerted effort to drop it altogether on the grounds that it discriminates against Indian infrastructure developers.[5] It has already been dumped in the road sector.

So is everything hunky dory with the sector and, by implication, with the regulatory regime that governs it? Yes and no. There can be little doubt that in the sectors where independent regulators have been put in place, such as telecom and power, the system has evolved in a more transparent manner. Having said that, there is considerable scope for favouritism and regulatory capture, more often by the very government that installed the independent regulatory mechanism as a means to free the sector from its clutches. This inefficient system has, however, not inhibited investment because the scale of shortages often imply that there are big revenues to be earned, as also because most players feel they can manipulate the system to their advantage.

This paper attempts to capture salient regulatory successes and failures in recent years. It goes much beyond just regulation since no such discussion is complete without an understanding of the process of tendering and of various other government processes involved in each stage of the project's life.

Introduction

Much of India's regulatory history is really about telecom since this is where the first regulatory structures were put in place and, naturally enough, this is where the most bitter court battles have been fought. Though there is no doubt that regulation has contributed to a better functioning system, a very large part of this change has been the result of long and expensive court battles.

The biggest achievement in telecom regulation, and this came without any court battles, is the directive forcing telephone providers to allow interconnection facilities with one another[6] and at rates fixed by the regulator. However, the principle of calling party pays (CPP), which effectively reduced tariffs by half, came only after a bruising court battle and a very public and head-on collision between private mobile phone players and the government. At

one point, private players cut off interconnections with various phone services (including those of the state-owned BSNL/MTNL) which they regarded as illegal; they followed this up with full-page advertisements in newspapers justifying their behaviour and exposing what they saw to be the government's bias. After this episode, the telecom minister lost his job.

Telecom, power, ports and petroleum (and, soon, the airports sector): regulatory experience has not been uniform across sectors. While telecom and power both have appellate structures where appeals against regulators' decisions can be made,[7] this is not so in the ports and petroleum sectors. Further, while the structure of the Telecom Regulatory Authority of India (TRAI) leaves less scope for government intervention (in theory if not in practice), this is not so in the case of other regulators. The government's ability to dismiss regulators in the other sectors is quite high.

Another concern centres on the fact that governments simply refuse to let regulators do their jobs; conversely, few ex-bureaucrats-turned-regulators, as they are increasingly in most sectors, want to upset the status quo anyway.[8] So, while the National Democratic Alliance (NDA) government dismissed the first TRAI for being too independent, subsequent governments became savvier. In fact, the NDA itself, under another minister, appointed a TRAI chief who was in sync with the government's thinking, and that is how the Reliance Infocomm CDMA-based mobile service was legalised. Under the United Progressive Alliance (UPA) government, the first telecom minister either simply ignored TRAI's recommendations or, at times, announced changes without going through the legal requirement of consulting TRAI. His successor did one better: he consulted the TRAI but took his pick from its recommendations, thus prompting the TRAI chief to say that the government was cherry-picking. This is illustrated in the case of the new 2G licenses (all mobile services currently on offer are 2G ones, with limited data transfer speeds) that were sold for a song early in 2008. Not only was there blatant favouritism, but the government also lost more than $10 billion in the bargain. A similar pattern can be observed vis-à-vis 3G[9] licenses which are to be auctioned, as the government has done its best to ensure that newcomers face a more difficult time than existing 2G mobile phone firms.

If a partisan choice of regulators isn't bad enough, the government has also taken to packing appellate tribunals with its chosen appointees. In the case of the Telecom Dispute Settlement and Appellate Tribunal (TDSAT), the Ministry of Communications wanted members that TDSAT chief, Justice Arun Kumar, did not agree to. For instance, Justice Kumar felt that the outgoing BSNL chief, A K Sinha, could not become a member as there were a large number of cases at the TDSAT against BSNL. This face-off resulted (briefly in 2007) in a situation when the TDSAT was unable to function because it did not have enough members.

In addition, the government has also ensured that successive regulatory systems, after telecom, are more under its control. The provisions of the bill introduced to set up the airports regulator provides for its easy dismissal by the government, dependent only on an internal inquiry.[10] In the case of the appellate body, by contrast, the chairman and members can only be dismissed after a reference is made to the Supreme Court. The same internal inquiry is sufficient to dismiss the newly-appointed petroleum regulator.

In the case of ports, a detailed study posted on the website[11] of the Committee on Infrastructure (the CoI is, in turn, serviced by the Planning Commission) found that the Nhava Sheva International Container Terminal (NSICT) got concessions worth about $1.5 billion thanks to the complicity of the shipping ministry and the port regulator, Tariff Authority for Major Ports (TAMP). NSICT, according to Bharat Salhotra,[12] who did the study, was allowed to charge excessive tariffs and, between 2002 and 2005, earned a return in excess of 100 per cent as against the permitted 20 per cent on equity.

In this particular case, the NDA government actually gave instructions to the port regulator that helped the private sector players. In another case—that of the privatisation of the Delhi electricity system—the Delhi High Court ruled that it was incorrect for the Delhi government to give instructions to the regulator. However, coming as it did about five years after privatisation, this ruling had little practical consequence. Yet another example involves the regularisation of Reliance Infocomm's illegal mobile services: when the telecom regulator wrote to the telecom secretary asking him to ensure

that Reliance Infocomm did not contravene the law, he was asked not to raise the matter again, and certainly not in public.

The delay in the appointment of the airports regulator (still dependent on the regulatory bill getting passed) will be critical. Most of the country's major airports are well on their way to being privatised/modernised. As such, the regulator's role will be limited as there will be no way of verifying costs or of laying down guidelines on how costs should be calculated. In a recent case, the Delhi electricity regulator pointed out that a large portion of the expenditure shown by one of the private firms was excessive and disallowed this while calculating the year's tariffs.

In the absence of a regulator in the airports sector, the Ministry of Civil Aviation performs this role, making a mockery of the system since it is ministry decisions presumably that private players want to appeal against. Apart from the ministry's questionable role in allowing the technical selection of bidders for the Delhi and Mumbai airports to get distorted, the ministry (and most of the government machinery) allowed the Delhi airport franchisee to come up with complex financial engineering enabling it to reduce the government's share of the revenue substantially in comparison to the initially promised amount. Extensive media debate has forced a re-evaluation of many of the proposals, but the process is still far from complete.

Roads, too, do not have a regulatory system and any disputes, as those over delays and payments, are settled by the very ministry which penalises the contractors in the first place. And since each state has a different system of functioning, there is enough scope for firms to work out deals that, to the layman at least, look terribly one-sided and offer great scope for favouritism.

So, in states like Rajasthan and Tamil Nadu, a private entrepreneur who has built highways has secured very high returns. Typically, the private firm sets up a joint venture with the state government, gets the government to contribute large amounts of zero-interest subordinate debt (since the contribution is not in the form of equity, the private firm continues to be a 50 per cent owner of the subsidiary), and also gets hefty commissions for organising the raising of debt and for project completion. In one case,[13] while the state government

had put in Rs 44 crore and got Rs 0.02 crore, the private firm put in Rs 70 crore and got Rs 91 crore back.

In the petroleum sector, while there are two regulators, one for downstream activities and the other for upstream, the government remains all powerful. For instance, in the dispute between the Ambani brothers on the Krishna–Godavari basin (KG basin) gas, there is enough evidence to show that the petroleum ministry has not been as impartial as it should have been.

As in the telecom sector, there have been some significant regulatory successes in the power sector too: the introduction of the concept of Availability-Based Tariffs and some discipline in terms of overdrawing power from the electricity grid are two such examples. Much of this, however, was in the early days of reforms. Subsequent years have seen a slowdown in momentum and progress has been very poor on critical parameters, such as 'open access'. The regulatory mechanism has not insulated the sector from the political process as a result of which, for example, the loss of electricity due to theft remains very high, making the sector financially unviable as a whole.

TELECOM

With 8–9 million new subscribers being added to the mobile network each month, this sector remains one of the best performing ones in the country. While there is enough reason to be critical of telecom regulation, it remains true that the industry would not have succeeded if critical rules and regulations had not been put in place by the regulatory regime. Of late, however, regulatory successes have been few, overshadowed as they have been by large failures.

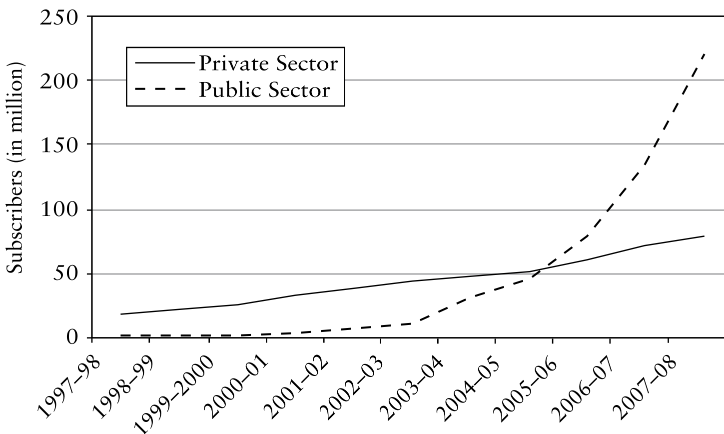
After the first TRAI under Justice Sodhi was dismissed for acting as if it had supreme powers over the sector, things ran pretty smoothly for some years. Then, in 2003, communications minister Arun Shourie rammed through with the regularisation of Reliance Infocomm's illegal CDMA-mobile services despite the TDSAT ruling that Reliance be asked to stop offering its service in the manner it was. More recently, communications minister A Raja selectively picked from a bunch of TRAI recommendations and awarded spectrum at bargain-basement prices; while one of those companies has now sold

45 per cent of its equity for a sum that is nearly six times what it paid just six months ago, another has sold 60 per cent. All told, the cost of this largesse means that the government has got roughly $10 billion less than it should have got while issuing the 2G spectrum.[14] And now, the new policy on auctioning spectrum (3G spectrum), which will allow mobile phone firms to offer broadband internet speeds on mobiles, consciously tilts against newcomers and tries to restrict the bidding to a handful of existing mobile phone firms.

Not surprisingly, the real growth in telecom took place after the mid-1990s, when the private sector was first allowed entry. From a total of around 5 million subscribers (of fixed land-based phones) in 1991, there are over 300 million today. While just a little over one-fourth of these connections are provided by the public sector, their revenue share is significantly higher—34 per cent of the 2007–08 industry revenue of Rs 129,083 crore.[15] Bearing in mind that tariff levels for mobile and long distance calls have, on an average, fallen by around 90 per cent since the mid-1990s, the revenue growth is clearly attributable to an increase in subscribers and in usage.

While the spread of telephony and the dramatic fall in prices is an indirect testimony to the efficacy of regulatory policy, the biggest achievement, as mentioned earlier, is the facility of interconnection

Figure 1
Telecom Growth



(the user of one phone service, say Reliance, being able to talk to, or receive calls from, users of, say BSNL) first announced by the first TRAI chief in 1999. After many iterations, the first comprehensive interconnection usage charge (IUC) order was announced on 24 January 2003. This laid down, on the basis of costs, the exact charges to be paid when a call originated from another network, the cost to be paid for carrying calls over different distances, and the charges to be paid while terminating the call on another network. These principles also stipulated that a certain maximum timeframe had to be set for all interconnections to take place as, without rule and time-based interconnection, no telephony is possible.

It is the use of this cost-based principle that led the regulator to argue, for instance, that tariffs of leased lines were around 70 per cent higher than they should be—based on their costs as well as international benchmarks. And though it took over a year for TRAI to finally get service providers to fall in line (the case was dismissed by the TDSAT once when VSNL argued that TRAI had not shared its data on the matter), the sharp reduction in leased line costs which is currently taking place is owed entirely to TRAI.

Another issue which has been successfully resolved, though no thanks to the regulator, has been that of points of interconnection (POI).[16] Just a few years ago, in 2005, TRAI found that BSNL was refusing to give private operators POI to enable their subscribers to talk to BSNL subscribers. Of the 918 pending demands of private operators cited by the TRAI, 367 had been pending for more than a year. TRAI ordered that such interconnection, which is the lifeblood of the telecom industry, be provided within 90 days. BSNL successfully challenged TRAI's jurisdiction at the TDSAT and the case is now pending at the Supreme Court.

But with the equation changing and private lines significantly outnumbering those of BSNL, the latter no longer has so many outstanding POIs. Indeed, the most congested POIs are now with Bharti Airtel, more as a consequence of demand rising much faster than investment. Between December 2007 and March 2008, for instance, the number of POIs with higher-than-acceptable congestion levels fell from 315 to 275 while the number of subscribers rose from 233 million to 261 million. There is still a long way to go, but trends

clearly indicate improving levels of quality and, more importantly, that the outstanding regulatory issues are not so great any more as far as POIs are concerned.

Reliance Mobile, Phase 1

In 2001, fixed-line phone providers like Reliance Infocomm began offering their customers full-blooded roaming facilities[17] (essentially, they were offering mobile services without having paid the licence fees) through the use of wireless in local loop (WiLL) or code division multiple access (CDMA) technology. Initially, fixed phone providers brought their copper line till a central area in a colony and, instead of extending this to each house, they connected each house wirelessly through WiLL/CDMA. With improvements in technology, the distances of the wireless signal too increased. So, the fixed phone licencees whose licence fee was much lower than that of licencees of mobile services, and who also enjoyed better commercial terms (their subscribers, for instance, did not have to pay for each incoming call and they got to keep a larger share of long distance revenues), were now able to offer full-blown mobile services. The Cellular Operators Association of India tried, in vain, to remedy this situation by variously appealing to the ministry, to TDSAT,[18] to the Supreme Court.

TDSAT finally gave a split verdict in August 2003. While the head of TDSAT, the only judicial member, ruled that the WiLL service had to be stopped, the other two members ruled that while the services should not be stopped, a method should be found to ensure that the mobility offered was restricted. The government, however, refused to implement the order and, in October 2003, came up with a new policy recommending unified access. This allowed the WiLL mobile players to offer full mobility after paying a license fee equal to that paid by the most recent cellular licensees (who were awarded the license in an auction a few years prior to this). The penalty plus license fee added up to around Rs 2,000 crore. Reliance had, in the meantime, built up a big subscriber base by virtue of the fact that it offered (till then, illegally) mobile services, and the value of this subscriber base was far greater than the penalty imposed.

Calling Party Pays

When finally introduced on 1 May 2003, the directive of calling party pays (CPP) single-handedly changed the fortunes of the mobile industry. Till then, if someone made a call from a mobile phone to a fixed line network, a fixed charge was paid to the fixed line company. Yet, when the reverse was done, the mobile phone company did not get paid. Since a WiLL/CDMA-mobile was still classified as a fixed line, users did not have to pay CPP when they called a regular mobile.

By 2003, when the WiLL mobile phones began stealing the march over the cellular ones (since they offered incoming calls free), cellular firms decided to take action and cut off all POI with the WiLL phones. A crisis ensued, with the then communications minister Pramod Mahajan reading the riot act to cellular firms, following which the latter put out full page advertisements in newspapers exposing the policy-induced favouritism shown to WiLL-mobile firms. Within a week of this, on 24 January 2003, CPP was brought in for cellular firms as well! It is a different matter that the TRAI chief then delayed the launch of CPP for another few months. With CPP, effectively, the tariffs on regular mobile phones halved and that is when the industry really took off.

ADC Regime

Access deficit charge (ADC) is perhaps the only instance of firms subsidising their competitors. In May 2003, TRAI announced that a sum of Rs 13,000 crore had to be paid to BSNL to compensate it for installing below-cost phones (subsidised to the subscriber), and this money would be recovered through a cess of sorts on all phone calls. The industry, however, pointed out that the calculations were incorrect and, within four to five months, TRAI revised this figure down to Rs 5,335 crore—the amount of ADC charges were to fall with each passing year. Detailed rates were then fixed of the ADC to be paid on both national and international long distance calls. TRAI, in June 2004, determined a range of ADC payments depending upon the rentals BSNL charged its customers: if the rental was Rs 200 per month, the ADC had to be Rs 1,402 crore and this would go up to

Rs 3,436 crore if the rentals was Rs 156. In January 2005, however, TRAI decided to plump for the figure of Rs 5,300 crore it had estimated prior to its detailed calculation.

Other than forcing the industry to fund the competition, ADC had several other problems. For one, TRAI never fully established BSNL's need for funds so raised, as is evident from the back and forth on the amounts of ADC. Also, since ADC was charged on long distance calls, there was an incentive to mask international calls (see the section on 'Reliance ADC theft' later in this paper) as local and therefore avoid making a payment on it to BSNL. Over the years, however, ADC rates were lowered and it has recently been phased out completely.

Reliance ADC Theft

Within a year of helping regularise Reliance Infocomm's illegal mobile services, the government began helping it again; this time after the company was caught trying to avoid the ADC payments. Towards the end of 2004, there was enough evidence to show that Reliance was changing the calling line identification (CLI) on international calls received by its network and replacing these with local numbers. Since an ADC of Rs 4.25 per minute had to be paid on every international call, either received on a network or made from it, this masking had the potential of saving more than Rs 1,000 crore. When the Department of Telecom's (DoT) investigation wing first confronted Reliance with this, the company denied it; later when numbers on which this was happening were given to Reliance, the company admitted that it had reserved 30,000 numbers in Mumbai, Chennai and Kolkata for the purposes of CLI change.

In spite of this the regulator refused to investigate the matter, citing problems of insufficient staffing. Apart from the theft angle, allowing Reliance to get away with this meant that the firm could, and was, offering cheaper long distance telephony to its subscribers and this gave it an unfair advantage over the competition. It was clearly a matter for the regulator to take action on. While staffing was an issue, TRAI did not even attempt to ask Reliance how it was offering US-to-India calls for 11.9 cents (Rs 5.47 a minute) when it

had to pay Rs 4.25 for the ADC, Rs 1.15 (2–3 cents) for carrying the calls to India and another 30 paise to the telephone firm in India on whose lines the calls terminated.

Even as the government jailed all small offenders who in the past offered 'callback' facilities to avoid paying the high official long distance rates, it repeatedly refused to take strong action against Reliance. In fact, the suggestion of cancelling its license was ignored completely, and the period of investigation limited to keep the penalties down. Reliance was not even asked to furnish details of accounts of its US subsidiaries/affiliates which sold the Reliance calling cards used for the ADC-avoidance game.

Tata to Propriety

One of the more bizarre stories in India's telecom regulatory history is that relating to the Tatas and then communications minister Dayanidhi Maran. Both have interests other than telecom in common: the Tatas own a direct-to-home television service and Maran's brother runs Sun TV. In 2006, Tata Sky approached Sun TV to buy its feed; there was a dispute on the commercial terms and the matter went to the TDSAT which ruled that, according to the rules laid out by TRAI, Sun would have to supply the channels Tata Sky wanted. Sun refused to comply and, in mid-2007, the matter came up before TDSAT once again.

While TDSAT gave the two sides some time to resolve the issue, the Tatas went back to TDSAT with another problem, this time vis-à-vis their telecom firm Tata Teleservices. The Ministry of Communications had threatened to encash the company's bank guarantees for not paying what is called 'microwave access' fees and the dispute was over the fee amount. The Tatas alleged that the ministry had completely arbitrarily changed the way the fee was to be calculated. The ministry calculated the Tata's back-taxes from 1999–2000 and applied penalties on this, all on the basis of some new rules that were, equally arbitrarily, backdated to March 2005.

TDSAT saw this to be somehow connected to the Tata Sky–Sun dispute. The government lawyer backed down, saying that the ministry would examine the Tata arguments; TDSAT got him to commit

that the government would not make any more threats of encashing Tata bank guarantees till the matter was examined by the TDSAT. Nothing more has been heard of the matter since.

Reliance Mobile, Phase 2, and Others

When, in early 2007, it became evident that the defence forces would be releasing 20–25 MHz of spectrum, the government asked TRAI if new players could be allowed entry. Though saying yes, TRAI was ambivalent on the issue of auctioning spectrum (this was curious since the previous disbursement of spectrum/licenses, in 2001, was through an auctioning process). This ambivalence apart, TRAI decided to dramatically hike the minimum number of subscribers a firm had to have to be eligible for extra spectrum.[19]

TRAI was also asked if CDMA/WiLL mobile firms like Reliance should be allotted GSM mobile spectrum. It said yes, subject to a higher annual licence fee. Once the new norms governing subscriber numbers required for additional spectrum were in place, the government no longer felt legally obliged to give the about-to-be-released spectrum to existing telecom firms and this opened the gates for new firms.

What followed was perhaps the most disgraceful episode in India's telecom history. In the fourth week of September 2007, communications minister A Raja announced that only applications submitted by 1 October would be considered for allocating spectrum. A mad rush followed and, apart from various firms whose antecedents are still not known, even real estate firms put in applications for this spectrum.

While it remained unclear as to just how the government would allot the spectrum among the scores of applicants, at 2.45 pm on 10 January 2008, the ministry announced that those wanting licenses would have between 3.30 and 4.30 pm that day to deposit their cheques. Another mad rush followed and clearly those who knew when the window would open were in a better position. The chosen few then got spectrum at a price of Rs 1,651 crore for an all-India license, or exactly the same price paid by firms who bid for such spectrum in 2001 (at a time when there were a total of 4 million

mobile phone users in the country, a figure that is reached in just two weeks today).[20]

In September 2008, one of these beneficiaries, Swan Telecom, sold 45 per cent of its equity to UAE-based Etisalat for $900 million. In other words, Swan got a valuation 5.8 times of what it had paid the government, and all this in the space of just six months. A month later, Unitech brought in Telenor with a 60 per cent stake, taking the enterprise value of its mobile operations to Rs 11,620 crore. Apply this increased valuation to all the 120 licenses the government allotted at bargain-basement prices, and it will be evident that the government underpriced the spectrum by at least $10 billion!

As for the dual-technology issue, Raja chose to accept part of the TRAI recommendations, junking the one on higher annual licence fees, for firms who would now have both GSM and CDMA mobile spectrum. A separate category of dual-technology users was announced on 19 October 2008, a day after Reliance Communications (as it is now known) was issued a letter of intent (based on an application it had made in 2006 when the policy did not allow firms to get both GSM and CDMA spectrum on the same license!). So, after missing the bus on cellular or GSM-mobile services in 1994 (Reliance walked out of most auctions after it felt the bids were atrociously high), Reliance was given another chance in 2003 when it got CDMA-mobile; and when it realised that the majority preferred using cellular or GSM-mobiles, it got yet another chance.

For a Favoured Few

If interconnection is the first mantra in telecom, roaming is the other. So, for example, Vodafone subscribers in India should be able to use their phone in the UK. This is done through a roaming agreement that Vodafone has with some UK operators. Similarly, within India, telephone firms do not have networks in each city or village and depend on roaming agreements to allow their subscribers to use their phones while roaming. While such agreements work well among most operators, BSNL does not allow private operators to roam on its networks. Not being able to mandate roaming is clearly a failure of the regulatory system. But what is even more curious is

BSNL's recent decision to enter into a roaming arrangement with Swan Telecom, a company which does not have one subscriber till date. Even more curious: not only has BSNL allowed Swan to have inter-circle roaming (a Swan customer in West Bengal can use the BSNL network in Uttar Pradesh), it has also allowed intra-circle roaming (a Swan customer in Lucknow can use the BSNL network in Allahabad). This obviates the need for Swan to roll out a full network in the states/cities in which it has a license.

Keep it Closed

The 3G policy is even more bizarre than the allotment of new 2G spectrum. While the newcomers in the 2G space were asked to pay the same fees as that paid by those who got the license in 2001 (on the specious grounds that a level-playing-field had to be maintained), the opposite was envisaged in the case of 3G. In this case, the government has announced a policy which states that if a new player wins the 3G bid, it will have to first buy a 2G license. That is, it can either deposit Rs 1,651 crore with the government and get a 2G license (a 2G license which will have no spectrum as there is none to give), or the 3G aspirant can buy out an existing 2G player at a huge premium as has been seen from the cases of Swan and Unitech.

AIRPORTS

Pending an airport regulatory bill, all regulatory functions have been carried out by the Ministry of Civil Aviation. While the independence of the regulator is yet to be seen, what is visible are constraining actions on part of the government. The Airports Economic Regulatory Authority bill makes it clear that the regulator can be removed by the government after an internal inquiry; in contrast, the chairman and members of the appellate body can be dismissed only after a reference is made to the Supreme Court.

What is also not clear is how the new regulator is to fix tariffs since most of the costs will already have been incurred before the appointment of the regulator. In the Delhi/Mumbai/Hyderabad/Bengaluru airports there are few laid out procedures on how, for

instance, competitive bidding should be done for contracts above a certain value. In fact, there is no procedure to have these costs vetted before incurring them. So, if the costs are a given, the tariffs that result out of them are also largely a given. The Delhi airport's costs, for instance, have risen from around Rs 3,300 crore to around Rs 8,900 crore; the consortium explains this in terms of the expanded capacity of the airport. While there has been a big furore over the user development fee (UDF) in the Bengaluru and Hyderabad airports, high costs have ensured that if a cost-based UDF were to be levied in even the Airports Authority of India (AAI)-built Amritsar airport, it would be around Rs 1,000 a passenger, underscoring the need to keep a very strict vigil on costs.

The airport regulator will also have to define just what constitutes divisible revenues since, as in most infrastructure projects, airport projects are also likely to continue to be based on revenue share agreements. In the case of the Delhi airport, where the winning consortium won the bid on the promise of sharing 46 per cent of topline revenue with the AAI, it subsequently proposed a structure which would have reduced the topline considerably by creating a host of subsidiary companies. Since the topline was to go to the subsidiaries, only the declared profits of the subsidiaries would have been shared. This would have considerably reduced AAI's share and was the subject of much acrimony between the AAI and the private consortium. The consortium also planned on taking very large one-time deposits from builders who it sub-let AAI land to. The plan of not sharing this with AAI created another furore, so much so that AAI asked the consortium not to go ahead with its land development plans. The last word has not been heard on this as, if the consortium is to go ahead with its airport plans, it needs a substantial infusion of equity from the AAI. The terms of this infusion, however, are something that the Ministry of Civil Aviation needs to decide.

Ports

Unlike the telecom and power sectors where there is a separate regulatory and appellate process, the process of appeal in the ports sector

lies with the Ministry of Shipping. While the process is flawed, private sector interest in port development has been very high. Since setting up of what are called 'minor ports' requires only permission of the state government, the private sector has focused primarily on this. Private ports today carry about one-third of India's external traffic. In addition, most major ports also have private berths.

Regulation in the ports sector has been very erratic, heavily influenced by the ministry, and dependent largely on the head of the Tariff Authority for Major Ports (TAMP). The Nhava Sheva International Container Terminal (NSICT) story best exemplifies this.

Before getting to the details of this story, it is important to understand how port privatisation in the country has happened. As in the case of airports, telecom and several PPP projects, ports also work on the system of revenue share with the government. This means that bidders have to calculate their revenues and costs to ascertain how much they can afford to share with the government while still being profitable. At one level, the revenue share is a cost but it is a cost that TAMP does not take into account while fixing tariff levels for the port; if they did, a bidder could win any bid by offering to share 99.99 per cent of its revenue with the government; if all 99.99 per cent were to be considered a cost, it would result in a hugely inflated tariff for all users. This is the approach TAMP followed in the early 2000s. So, while giving the tariff order for the Chennai Container Terminal Limited in 2002, TAMP refused to allow the revenue-share royalty payment to be counted as a cost; similarly, in the PSA Sical case at the Tuticorin port, royalty payments were not counted as a cost.

The NDA government, however, directed TAMP to consider the revenue-share royalty as a cost. In 2005, the UPA government formalised this, stating that while royalty payments would not be treated as costs for deals struck after 29 July 2003, they would be treated as a cost for deals before this date if the royalties resulted in a loss for the new concessionaires. In this case, the revenue-share bid of the second bidder would be taken into account. So, let's say firm X won with a bid of 35 per cent and firm Y bid 25 per cent. Now, if firm X is making losses with its 35 per cent royalty payments, then a 25 per cent royalty will be treated as a cost by TAMP.

If this was not bad enough, when the tariffs for NSICT were being calculated in August 2005 for the immediately preceding period (2000–05) and projected for 2006–08, TAMP allowed it to pass through as royalties as costs even though no losses were being made. In fact, things got so bad that the shipping ministry asked TAMP to reduce the amount of royalty being treated as a cost. This concession allowed NSICT to, over its 30-year concession, benefit by $1.46 billion. Conversely, in the case of the Chennai Container Terminal Limited, TAMP refused to allow expensing of royalty and found, in March 2002, that the company still made a profit of 19.5 per cent. The ministry, however, directed TAMP to allow some part of the royalty as a cost.

The other way in which TAMP helped NSICT is through the manner in which it fixed tariffs. If a port had Rs 100 as costs after including reasonable profits and 100 units of freight, the tariff allowed was fixed at Re 1 per unit. If, however, the number of units doubled, with costs remaining the same, the tariff would be halved to 50 paise per unit. When TAMP fixed NSICT's freight, it assumed a traffic far lower than actually happened (the traffic was around two-thirds higher than forecast). Logically, the higher profits that NSICT got should have been taken away. TAMP, however, allowed NSICT to retain the 2000–05 excess profits and lowered the rates for 2006–08 by what it itself admitted was too little.

It is, however, unfair to just target TAMP. Given that the regulator has to look at costs to determine tariffs, the process of determining costs is very important. One way to do so is to look at benchmark costs and efficiency levels. But Guideline 2.4.1 of the rules which determine TAMP's functioning states 'This would, therefore, naturally exclude any comparison of an operator … with … different operators.' Guideline 2.13, which deals with unforeseen profits of the type got from traffic projections exceeding the actuals, states that a company gets to keep half of these. So, a private port gains from showing lower traffic projections and getting tariffs fixed on this basis and then gets to keep half the profits.

During the late 1990s, the government opened up the retail end of this sector to private players and, in return, committed investment in the upstream section (in refineries, for instance). A slew of companies announced plans to set up retail outlets as the government declared that it would phase out subsidies in petroleum pricing. One of them was Reliance Industries Limited which, in any case, had a significant investment in the upstream sector. Over the years, however, the government failed to phase out subsidies; in fact, they got worse as global crude prices rose. Despite the recent softening in global oil prices, the under-recoveries at the retail end could be around Rs 200,000 crore in 2008.

While the government forces the public sector oil companies to bear the losses, it cannot mandate private oil firms to do the same. In an ideal world with a regulator, the government should have been asked to bear the burden of the consumer subsidy. Indeed, that is what Reliance Industries proposed with some justification. After all, if there were no Reliance petrol pumps, consumers would have gone to the government-owned IOC/HPCL/BPCL and the government would have borne the subsidy, either directly or indirectly. So why not give the subsidy to Reliance? That way, the subsidy burden would not go up, but IOC/HPCL/BPCL would be spared the cost of building the new retail outlets they needed to meet the rising consumer demand. The government, however, was wary of handing out what seemed to be outright dole and so rejected the request. Reliance then did what any rational investor would: having, in any case, reduced sales from its outlets to a bare minimum and, instead, exporting most of its products over the last few years,[21] it is today in the process of closing down even those pumps it ran at very low levels of sales.

There are two regulators, one for upstream exploration activities (Directorate General of Hydrocarbons) and another for downstream retail level activity (Petroleum & Natural Gas Regulatory Board). The retail regulator, however, has no powers to fix retail prices—that remains the exclusive preserve of the government. Interestingly, however, despite there being an appellate tribunal, the Ministry of

Petroleum's role continues to be a powerful one. In the case of the gas supplies from Reliance Industries Limited's KG basin, for instance, the ministry's role has, at best, been dubious, designed to show how powerless the regulatory and appellate process is.

In 2004, Reliance Industries won a global bid called for by the state-owned NTPC asking for supplies for its Kawas and Gandhar power plants. Around the same time, the Ambani brothers reached an agreement (now in the courts) that KG basin gas would be supplied to Anil Ambani's power plant in Dadri in Uttar Pradesh, being executed by Reliance Natural Resources Limited (RNRL). Since the NTPC contract was a global one and clearly an arms-length one, the contract between the two brothers was identical in terms of pricing and other terms and conditions.

After a period of time, however, Reliance Industries decided it wanted to change some of the terms in the NTPC contract and sent it a fresh contract, duly signed from its side. NTPC refused to accept this, and rushed to the Bombay High Court asking it to ensure that Reliance Industries fulfilled its obligations.

As for the contract with RNRL, Reliance Industries sent it to the petroleum ministry for approval. It did so because, under the contract it signed with the government when it got the license to prospect for oil and gas in the KG basin, it agreed to split a certain part of the revenue with the government. Since the revenue clearly depends upon the prices got, ensuring that the price is correct is important. This is why the RNRL contract was sent to the government. The ministry, however, rejected the contract saying that the price discovery was not an arms-length process. This was actually incorrect since, under the contract, the ministry had no power to fix prices; rather, its only role was to ensure that it got its share of profits at the correct price (alternately, it could take it in the form of gas). That is, the gas could be supplied free as long as the ministry's share was calculated at the market price. Indeed, the view that the ministry could not fix the price of gas was something the ministry reiterated time and again, even to questions raised in parliament and to an empowered group of ministers (EGoM).

If this was not bad enough, in June 2008, the government came out with a gas utilisation policy aimed at ensuring that RNRL never

got the gas, never mind that this ensured Reliance Industries did not have to fulfil its contractual obligations to NTPC either or the power shortages this would cause. On 25 June, the Press Information Bureau issued a release on the recommendations of an EGoM on how gas was to be used. While one would expect the EGoM to make such recommendations for all gas found in the country, the release laid out the priorities for allocating only KG basin gas! The allocation priorities? First, for existing gas-based urea plants, then 3 mmscmd for existing LPG plants, up to 18 mmscmd for gas-based power plants lying idle due to lack of gas and for plants that will come up during 2008–09 (neither NTPC nor Dadri are going to come up in 2008–09!), 5 mmscmd for city gas projects, and the rest for existing gas-based power plants. If this was not enough to ensure that the Dadri plant never came up, additional guidelines said only those users who were connected to a gas grid can get gas—Dadri's gas grid application has been pending with the ministry for more than two years!

It gets worse. While the NTPC case has hardly moved at the Bombay High Court, when the Reliance–RNRL case came up, the government lawyer stated that no conclusive deal had been struck between NTPC and RIL—since the RNRL contract was based on the NTPC one, not having an NTPC contract meant the RNRL contract was also null and void. But since this statement knocked the bottom out of the NTPC case against Reliance Industries, the power ministry (which controls NTPC) and NTPC protested. The petroleum ministry said it had not briefed the lawyer to make this statement and asked him to retract it formally. Interestingly, however, there are several communications from the lawyer to the petroleum ministry where he categorically states that all statements he made were based on the ministry's briefings.

Roads

Progress in this sector has been patchy. Initially, after the government came out with the Golden Quadrilateral policy of four-laning important road routes in the country and bid out large stretches of roads, progress was quite rapid. Over the last five years, however, this has slowed considerably. Even so, the project did not suffer from

the kinds of problems that have plagued so many other infrastructure sectors, one of them being price gouging. The reason for this is that, at the outset, the government came out with a policy that laid down just how much tariff could be charged from users. Hence, there was never any doubt in anyone's minds—those who controlled the road or those who used it—as to what the tolls were. Sadly, however, the government did not pay much attention to getting full-fledged private participation in the sector. By and large, projects have been given to contractors on a piece-rate basis; only a small fraction involves the private sector on a build-operate-transfer basis.

In regulatory terms, however, the big problem in this sector is the absence of an independent regulator/arbiter. A good example is the Delhi–Gurgaon expressway where the contractor, the DS Group, has come in for some pretty serious flak due to inefficient traffic clearance at toll plazas. Not only does this clearly show that the company got the traffic projections completely wrong (and therefore did not provide for enough toll plazas), but there is also a problem of contracting since the contract did not lay down any service standards. Yet another problem which will haunt the project is the likelihood of the final bill for the expressway running into a thousand crore rupees. The reason for this is that the ministry kept changing the design of the project, in some cases till even two years after the project was awarded. But when it gives its bill, the DS Group will have to submit it to the same ministry which made the changes and that ministry may not necessarily be interested in clearing it. The issue could end up in courts for decades.

State governments do not even have these rules, and pretty much make them up depending upon bilateral negotiations. In some cases, state governments have practically given an open hand to private builders. In several cases, builders and the state governments form a joint venture and though both have equal share of equity, the state is asked to provide zero-interest subordinate debt as well. While this increases the state's contribution to the project, its equity, however, does not go up commensurately. In addition, the private partners get a commission for arranging debt funds as well as a commission for completing the final project. Since commission is linked to the spending, there is an automatic incentive to keep costs high.

In the case of the Noida Toll Bridge Company, a study available on the Planning Commission website (http://www.infrastructure.gov.in/pdf/NOIDA.pdf) points out that the returns for the project are in excess of 40 per cent (the project came up on the basis of a 20 per cent assured return) and rise with each year of the project. Interestingly, the way the project has been structured, every time there is a shortage in revenues (that is, not enough traffic on the bridge), this gets added to the capital costs of the project on which a 20 per cent return has to be paid. As a result, the 30-year concession period has already risen to 70 years. And the way the project is structured, the greater the failure to get commuters on the bridge, the greater the returns for the project.

Electricity

Nothing tells India's electricity story quite as evocatively as the losses of state electricity boards, the rising power shortages and poor capacity addition. In the last five years, India added just around 21,000 MW of power (a figure that is roughly half that planned). While in the current plan the government is looking for 78,000 MW of additional capacity, most reckon that the best case scenario is around half that. That this should happen is hardly surprising, given that the losses of the main buyers—the state electricity boards—continue to mount: compared to an average rate of return of minus 12.7 per cent in 1991–92, the figure was almost double at 24 per cent in 2006–07; revised estimates for 2007–08 are 18 per cent, but it is safer to wait for the actuals to come out.

Table 1
Financial Performance of the State Power Sector

	1991–92	*2005–06 (actual)*	*2006–07 (P)*	*2007–08 (RE)*	*2008–09 (AP)*
Commercial losses (excluding subsidy; in Rs crore)	4,117	22,733.80	28,824.90	25,701.40	26,461.80
Rate of return (ROR %)	–12.7	–19.7	–24	–18	–14.3

Source: Planning Commission.

Table 2
Energy Generated (gross; in billion KWH)

Year		*Year*	
1950–51	6.6	1992–93	332.7
1960–61	20.1	1993–94	356.3
1970–71	61.2	1994–95	385.5
1980–81	129.2	1995–96	418.1
1981–82	131.1	1996–97	436.7
1982–83	140.3	1997–98	465.8
1983–84	151	1998–99	496.9
1984–85	169.1	1999–2000	532.2
1985–86	183.4	2000–01	554.5
1986–87	201.3	2001–02	579.1
1987–88	219	2002–03	596.5
1988–89	241.3	2003–04	633.3
1989–90	268.4	2004–05	665.8
1990–91	289.4	2005–06	697.4
1991–92	315.6	2006–07 (P)	744.3

Source: Ministry of Power.

With generators reluctant to set up the required capacity, India's peak power deficit has risen from 11.8 per cent in 2001–02 to around 15 per cent right now while the average deficit has increased from 7.5 per cent to around 10.6 per cent in the same period.

In a nutshell, what this really means is that, with a few exceptions, regulators have not been able to insulate the electricity system from political interference. State electricity boards, or their successors, have not been able to either stop theft levels or hike tariffs to remunerative levels. If another 40,000 MW of power is to be added in the next five years, it would mean another Rs 35,000 crore being added to the annual losses (based on current loss levels). Why would any banker want to finance these projects?

The case of privatising power in Delhi is the best example of just how bad the system is. We have chosen Delhi since this is the most high-profile project in the country, with both the central and state governments involved in conceptualisation. If this is in trouble, imagine the prospects for projects in other parts of the country.

The project was mired in controversy from the outset, and rightly so since the state government offered concessions only to the last

two bidders after all others had walked out. During the negotiations, the Delhi government assured the private bidders that they would be allowed annual hikes of 10, 10, 10, 5 and 3 per cent—that is, roughly a 40 per cent tariff hike over five years. What was allowed, instead, was around 11 per cent over the first four years! Not surprising that the private players feel aggrieved. It did not help that the Delhi government underestimated the amounts of investments required—each Rs 100 crore of investment requires a 0.5 per cent or so hike in tariff levels. While the state's consultants estimated that Rs 1,019 crore was required to fix the system, the firms have actually put in Rs 3,200 crore in the first four years!

So what the regulator did was to disallow certain expenditure. For one, it reduced the depreciation allowed to these firms—this was contested in the court and the regulator lost. In addition, certain items of expenditure were put in abeyance: companies were told that they would get paid a flat interest rate on these expenses for a while; and the cost of power was taken as lower than what it is likely to be in the latest tariff order—but all of this will have to be given to the firms sooner or later. But, given the highly political nature of electricity tariffs (the last time around, the Delhi government forced the companies to absorb half the tariff hike while it absorbed the other half), it is uncertain if this will be allowed either.

Other major issues that have yet to be resolved though there is both a regulatory and an appellate structure in each state, are issues like 'open access'. Under the law, regulators were to allow firms/big users to buy power from wherever they liked—the power would just be wheeled in on the existing power lines for a small fee. However, thanks to the opposition of the state electricity boards, open access has not been allowed.

At the end of the day, it all boils down to whether the system has been freed up enough to be able to cut losses. For, whether it is open access or trading in electricity, as long as there is a significant shortage, nothing is going to work. And the power sector cannot cut losses unless there is the political will to raise tariffs and to allow state electricity boards to take tough action to curb theft. None of this is true in the sector so far.

Bottomline: India's infrastructure regulatory system is far from perfect, is open to regulatory capture, and will improve only after affected parties regularly and strongly challenge it, in the courts and out of them. If there are large investments despite all this, it is because the acute shortages are an indication of the revenue potential of infrastructure provision. Also, most existing players do not regard regulatory uncertainty as something to be afraid of; rather, they are largely confident of their ability to manipulate it. This uncertainty is instrumental in keeping away newer and less confident players, thus retarding the level of competition. Infrastructure gets built, even if with a lag and at possibly far greater expense.

Notes

1. Of the total investments announced as of June 2008 (and captured in the CMIE CapEx database), around half is in the infrastructure space, of the type described in this paper. Total infrastructure investment in the country is in the region of 5–6 per cent of GDP, or around Rs 250,000 crore per year, and it needs to go up to around 8–9 per cent if India is to sustain a 7–8 per cent GDP growth over the medium-to-long term.
2. While the central and state governments expected to pay anywhere between 30 and 40 per cent respectively of the project's Rs 12,410 crore cost as a one-time capital subsidy, the winning bid offered to pay the government Rs 1,240 crore (the present value of the Rs 30,300 crore to be paid over the lifecycle of the project).
3. The Nhava Sheva International Container Terminal (NSICT) was found to be overcharging customers by over 80 per cent between 2002 and 2005 due to faulty regulation. However, according to the new norms, ceiling tariffs will be indicated in the bidding documents which will also detail how efficiency gains are to be accounted for and passed on to consumers.
4. When the Delhi and Mumbai airports were privatised, it was found that the marking done on the technical bids had favoured the Anil Dhirubhai Ambani Group; these marks were then reversed after a series of committees looked into the matter.
5. Instead of the project authorities deciding in an opaque manner on which firms make the technical cut, the new format simply asks bidders to list their previous experience and weighs these in a pre-specified manner. So, for an airport project, each consortium will give details of the airports built by them and the passengers using them—the idea being that, for an airport project, it is the experience in building and running airports that matters. Since few Indian firms of even the size of L&T have built airports on their own, this means they have to tie up with global majors to qualify on even technical grounds. And since it is the foreign players whose experience counts, they will typically give the Indian players a minority share in the joint venture used to do the bidding. The Planning Commission, whose idea this

was, argues it is not its job to create work for Indian firms but that its mandate is to ensure good quality infrastructure gets built.

6. Had the interconnect regulation not been there, the subscribers of private mobile connections would not have been able to connect to BSNL/MTNL who controlled the entire market initially. This would clearly have circumscribed the potential subscriber base for private providers who, today, account for three-fourths of all mobile telephony in the country.
7. The very first telecom regulator, the TRAI, used to preside over appeals against its own judgements. When the TRAI was dissolved (for, among other reasons, telling the government that the state-owned telecom firm MTNL could not offer mobile phone services on its fixed land license even though the government had notified this), it was replaced by a new structure that separated the regulatory and appellate structures.
8. The first regulatory chiefs—Justice Sodhi at the first TRAI and S L Rao at the first CERC—were not bureaucrats, but they were the early exceptions.
9. 3G refers to spectrum on which, thanks to improvements in technology, mobile firms can offer subscribers internet speeds that are comparable to those available on broadband today.
10. The telecom regulator cannot be dismissed without a reference to the Supreme Court.
11. http://www.infrastructure.gov.in/pdf/NSICT.pdf.
12. He can be reached at bharat.salhotra@sloan.mit.edu.
13. See K Malmurugan and Sabina Narayan. 2006. *Evolution of an Integrated Urban Facility: The IT Corridor Story*.
14. A Raja, for the record, dismisses this as incorrect and argues that the value paid includes money for revenues likely to be generated by these companies in the future. See http://www.pib.nic.in/release/release.asp?relid=44348 and http://www.pib.nic.in/release/release.asp?relid=44661.
15. The public sector share is higher due to a higher share of BSNL in the long distance traffic.
16. Literally, a point on company A's network which allows company B to connect its subscribers to company A's subscribers.
17. While Tata Telecom also offered mobile phone services on fixed line licences, these did not have roaming facilities of the type offered by Reliance Infocomm. Hence, while a person registered with a Tata phone in Delhi could not use it in Gurgaon, a Reliance subscriber had no such restriction.
18. TRAI figured the only way to offer restricted mobility would be through the use of a switching system called V5.2 and so it recommended that this system be included in the licenses of the WiLL players. Reliance Infocomm, however, used a Mobile Switching Centre which is what the cellular firms used and could hence offer full mobility. The then TRAI chief, M S Verma, even wrote to the telecom secretary, Shyamal Ghosh, on the matter in January 2001 and was told to stop raising the matter.
19. Under the existing norms, the existing mobile phone players were entitled to extra spectrum since they had enough subscribers to justify this. The government, however, refused to give this to them—had it done so, none of the extra spectrum

released by the defence forces would be left, and so there could not possibly have been any new licensees.

20. Among the firms who got the new licenses were Swan Telecom, Unitech, Loop Telecom, Datacom, Idea Cellular and Reliance Communications.
21. A very large part of India's export boom comes from exports of petroleum products by Reliance which, ironically, is a direct fallout of distorted domestic pricing policies.