ISAS Working Paper

No. 199 – 1 December 2014

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State, Ideas and Economic Reform in India[1]

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This paper argues that the state is an important institution for initiating economic reforms in India. Ideas held within the state are especially important. When the state reposed faith in a closed economy model with stringent government control, it could not be forced to shift to a new path during the balance of payments crisis in 1966, despite considerable foreign pressure. On the other hand, when the Indian state became aware of the pathologies of persisting with import substitution through the 1980s, it used the balance of payments crisis in 1991 to re-orient India's economic paradigm. India did not change course because of the balance of payments crisis in 1991. Nor did India embrace globalisation and deregulation because of entrepreneurs in 1991. In fact, the powerful corporates were opposed to substantial economic deregulation in 1991. I have argued that substantial economic change in India often resembles a tipping point.

The way the state thinks may be necessary but it does not explain how some of the major shifts in economic policies and institutions occurred in India. I have argued that state knew

[1] This paper has benefited from a presentation at a conference in Leicester (United Kingdom), organised by the Sheffield Political Economy Research Institute and the De Montford University, on 6 October 2014.

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how it needed to move in the 1980s and had initiated significant reforms during that time. Why then was the state unable to carry out the paradigm shift in economic policies favouring globalisation and deregulation in the 1980s?

I have likened the reform process to a tipping point model of economic change. A tipping point is an earthquake model of economic change. Tectonic shifts take place till they reach a critical mass. What appears to be large-scale abrupt change or earthquake has occurred largely because of slow movement of forces endogenous to the system. I have argued that 1991 was a tipping point for two reasons. The pathologies of import substitution in India till the 1980s had created the dominant idea – India needed to deregulate and globalise. This idea had come to dominate the government at the very time when a balance of payments crisis came along. The crisis helped deal with big businesses that were afraid of competition at that time. But the substantial reason for economic change was ideational change within government rather than the crisis itself. India could have responded to the crisis differently had it been sceptical of economic deregulation and globalisation at that time (*Mukherji 2013; Mukherji 2014*).

The state and society are often in conflict in India. While changes in thinking within the state do explain change, the power of oppositional groups or the inattention of the state in some areas tells why reforms were more successful in some areas and not others. The state in India suffered from differing capacities in different issue areas. This paper will describe the evolution of economic deregulation in different arenas – telecommunications, stock markets, ports and the power sector in India. I argue, while all these infrastructure sectors were impacted by the dominant paradigm of economic globalisation and deregulation, the capacity of the state to deal with opposition varied from one issue area to another. Indian telecommunications and stock markets were the most successful in attracting private and foreign investment but India's ports and its power sector were in a dismal condition. Let us explore why.

Telecommunications[3]

The telecommunications saga closely follows the tipping point model. The state became deeply interested in developing telecommunications for improving efficiency in the 1980s.

[3] Substantial parts of this section are adapted from Mukherji 2014, 108-46.

India was therefore ideationally well placed before 1991 when the system tipped comprehensively in favour of private sector service provision. Private sector still remained a process in evolution. Private participation in the absence of a regulator till 1997 created litigious and messy investment environment. A regulator without substantial powers could hardly deal with the situation till 2000. Beyond that period we find that while effective regulation worked, sometimes regulators did not possess either the power or the will to oppose predation by the corporate sector.

India has undergone a telecom revolution, despite many scams that blocked progress in the sector. The country has 922 million telephone lines with a tele-density of 74 percent. 40 percent of rural India has a connection. And, more than 95 percent of these connections constitute mobile connections. India had only 13 million cell phones in 2002. For India, it has been a revolution in mobile telephony – once considered an elite service. These mobile phones are transforming the lives of the rich, the middle class and the poor in urban and rural settings.

How did India's telephone revolution occur? The process was driven both by advances in digital technology and the arrival of the private sector in service provision. How did the Indian state engender this change? India's institutions of economic governance changed from a public sector monopoly to ones that engendered private sector competition.

The 1980s: Engendering Efficiency

Key developments in India's telecom sector suggested that the country had shifted away from the notion that telecommunications was an elite service in the 1980s. When the government had viewed telecommunications as such, posts had been privileged over telecommunications. The government now clearly understood that telecommunications would engender growth and efficiency in India.

The H C Sarin Committee's recommendations (1981) were significant. First, it was recognised that telecommunications should be given more importance relative to posts within the Ministry of Communications. It was suggested that a separate department of telecommunications be set up within the Ministry of Communications. Second, it was urged that the government-owned Indian Telephone Industries be supervised by the Ministry of Posts and Telegraphs rather than the Ministry of Industry.

Prime Minister Rajiv Gandhi initiated bold policy moves to bolster telecommunications and engender greater freedoms in the business environment. The department of telecommunications (DOT) was established within the Ministry of Communications in 1985. In 1986, the Mahanagar Telephone Nigam Limited (MTNL) was set up as a corporatized government-owned entity that would be largely free from government interference. It would provide services in Delhi and Mumbai. The success of MTNL and the suggestion of a Rupees 100 bonus to telephone employees led the rest of sector to rising in protest. Such was the fury of this protest that the DOT wanted to merge MTNL with DOT, once and for all.

Rajiv Gandhi also set up an autonomous research entity – Centre for the Development of Telematics (C-DOT) in August 2004 with the help of engineer entrepreneur Sam Pitroda. C-DOT was successful in inventing the famous Rural Automatic Exchange Switches that were superior to the switch manufactured by the government-owned Indian Telephone Industries in collaboration with the French multi-national company, Alcatel. C-DOT switches were licensed to private companies for production for the first time.

The setting up of MTNL and C-DOT infuriated the telecom bureaucracy in India located within DOT. These autonomous organisations could not have been set up without the blessings of the Prime Minister's Office under Rajiv Gandhi.

The Private Sector & Regulation in the 1990s: The Tipping Point

India was at a tipping point before the balance of payments crisis of 1991. Not only were the above-mentioned policy changes driving the system towards private sector participation, there is evidence to suggest that influential parts of the government were convinced about private sector service provision by that time. A government committee, headed by M B Athreya, had opined in March 1991, months before the Congress-led government approached the International Monetary Fund in May 1991, that India needed private sector participation in basic telecommunications services and that entry of the private sector would create the need for an independent regulator. These ideas earned the generous support of Prime Minister Narasimha Rao and Finance Minister Manmohan Singh but were fiercely opposed by

Communications Minister Sukh Ram. The prime minister and the finance minister were convinced that private sector participation would be fiscally prudent and would also engender efficiency. The only early concession made by the communications minister was that mobile telephony, which was considered an elite service without substantial business potential, was opened to private sector participation in 1992.

This conflict of interest between the prime minister's office and the department of telecommunications (DOT) took an ugly turn when N Vittal was appointed Telecom Secretary at Prime Minister Rao's insistence – despite the disapproval of Sukh Ram. Vittal initiated the National Telecom Policy of 1994, against the wishes of the communications minister. Basic telephony was opened up for private participation.

This was a layered process of economic liberalisation where the private sector was gradually becoming more prominent, despite opposition from the incumbent – the DOT. The system had clearly tipped towards favouring private sector participation after 1991.

The next stage of the layered process was the setting up of the regulator. The prime minister's Office and the ministry of finance had batted for private sector participation but the DOT had opposed it tooth and nail. The result was that private sector entry was allowed under conditions where the DOT as regulator and service provider acted in a predatory manner with respect to private companies. Consequently predatory behaviour on the part of the DOT generated a litigious environment that necessitated the birth of a regulator.

Private companies suffered for a variety of regulatory reasons. First, only basic services had been opened up when this was a loss-making enterprise for the government. Basic services in India had been subsidised by long-distance services. Opening up basic services without the advantage of operating in the long-distance area was a clear disadvantage for the private sector. Second, bidding rules were defined in such a way that the size of the bid, or the amount a company offered to pay to obtain a license, largely determined who would obtain the license. Private companies had offered the government more than US$5 billion over a 20-year period. Such a financial commitment should have led to a monthly charge Rs. 8,000 (US$201) per month, but the DOT allowed private companies only Rs. 1,872 (US$47).

Third, the DOT diverged from the rules during the tender process by invoking its absolute powers under the Indian Telegraph Act (1885). No licenses were offered in 9 circles because the bid amount was considered too low. Fourth, the DOT charged unreasonable interconnection rates from private cellular operators to connect to its network and charged even parties who received calls from the cellular network. Finally, Sukh Ram's dealings carried the stench of personal benefit. The combination of these five factors created crisis for private investors.

The challenges facing private operators led to such a litigious environment that Justice Ahmadi of the Supreme Court opined that the Telecom Regulatory Authority of India (TRAI) had become a dire necessity by 1996. The litigious environment needed an independent regulatory presence. It was after much opposition within the Parliament that the regulator was born in February 1997. Private sector participation now enjoyed another layer of defence. The first regulator Justice Sodhi and his deputy were men of integrity who struggled to create a level-playing field for private operators.

The TRAI as a layer of defence for private sector operators was soon challenged when the government-owned company MTNL decided to enter the telecom business after raising US$358 million from global depository receipts. The government wanted to enter the cellular business without paying a license fee. This infuriated the private sector, which had bid large amounts to secure their respective licenses. The TRAI failed to defend the private operators in this situation when Justice Usha Mehra pointed out in her 1998 Delhi High Court Judgement that the TRAI did not enjoy the powers to arbitrate between the DOT and service providers under the Indian Telegraph Act of 1885. *(Delhi High Court, 1998)*

This was another crisis for private investment. And, government-owned banks such as the Industrial Credit and Investment Corporation of India opined that private companies were operating efficiently but the regulatory environment was not conducive for their growth.

It was around this time that Prime Minister Atal Behari Vajpayee acted with remarkable purpose. He removed Telecom Minister Jagmohan and took over charge of the ministry. A Group on Telecommunications was established in early-1998 that charted the path for further telecommunications reforms. Thereafter he initiated a Group of Ministers on Telecommunications who implemented the policy advice given by the Group on Telecommunications. This policy effort produced the New Telecom Policy of 1999. Rarely has public policy in India moved with such purpose.

The result of these moves was historic. The TRAI Act was amended in 2000. It was imperative now for the DOT to consult the TRAI even though licensing powers remained with the DOT. Private operators were bailed out to the tune of US$857 million and the DOT was also allowed entry into the sector. Finally, a telecom court – the Telecom Dispute Settlement Appellate Tribunal (TDSAT) was established the same year. An empowered TRAI and the TDSAT constituted an additional layer of protection for private operators.

2000 and Beyond: The WLL Crisis

The story in the new millennium shifted from regulatory capture by government-owned companies to the threat of capture by private monopolists. The first issue that arose was with regard to the wireless in local loop (WLL) technology using the CDMA digital technology. Private companies wanted to use this technology for limited mobility within a short distance charging area. Companies such as Reliance Infocomm, which had not entered the telecommunications business, lobbied for using the CDMA cellular technology with limited mobility to garner cheap fixed service licenses that came with expensive rural service commitments.

This lobbying confused both the DOT and the TRAI. Evidence suggests that even the DOT had resisted the WLL idea as part of the New Telecom Policy in 1999. It was around October 2000 that the DOT changed its mind, justifying that the Telecom Policy of 1999 permitted WLL. Even though the TRAI expressed surprise, it failed to give an independent opinion and initiated a consultation paper in January 2001. The TRAI finally acquiesced to the DOT's dictation.

This policy move infuriated the GSM cellular operators. They worried that Reliance Infocomm and other companies would use cheap WLL licenses to compete with GSM cellular services within the local area.[4] The WLL service came as a fixed license within the short-distance charging area. It could be used like a local mobile phone when GSM cellular services at this time were also being largely used as local mobile services. GSM cellular operators served local and long-distance operations but local area calling dominated the GSM business.

[4] GSM and CDMA are two different types of technology used by cellular telephone operators. That CDMA was being deployed for limited cellular operations at much cheaper price irked the GSM operators.

The GSM operators approached the TDSAT, requesting it to strike down the WLL operation. The majority opinion of two retired civil servants, R U S Prasad and P R Dasgupta, within the TDSAT supported WLL licenses using the CDMA technology in 2003. They argued that WLL was part of the policy initiated in 1999; that policy had to keep pace with technology, especially to fulfil rural commitment; that it would be possible to maintain the distinction between cellular and WLL services; and finally, that GSM operators had been bailed out in 1999. WLL was therefore a respectable policy for the TDSAT. The chair of TDSAT, Justice D P Wadhwa, however, gave a strong dissenting opinion for a number of reasons. First, the telecom policy of 1999 had treated cellular as separate from fixed. Therefore, WLL could not be sustained. Second, neither Reliance Infocomm nor Tata Teleservices, the major WLL operators, were serving rural commitments. Rural service was therefore a pretext for garnering the cheap WLL licenses. Finally, Justice Wadhwa opined that it would be impossible to maintain the distinction between WLL and cellular services. (*TDSAT 2003; TDSAT 2003a*)

Justice Wadhwa’s opinion turned out to be prophetic. Reliance Infocomm was caught using mobile switching centres carrying calls beyond the short-distance charging area. It was clear now that the distinction between WLLM and mobile services had been violated. The GSM operators had approached the Supreme Court at this time after the TDSAT’s unfavourable opinion in 2003, when Reliance Infocomm was caught red handed.

This regulatory capture by Reliance Infocomm was averted by the TRAI Chairman, Pradeep Baijal. He enjoyed the support of Communications Minister Arun Shourie during this endeavour. The GSM operators settled the case outside the Supreme Court and under the guidance of the TRAI. Reliance paid a penalty of US$107 million for violating the short-distance charging area. And, it paid US$214 million as the gap between what it had paid and what the fourth GSM mobile operator had paid in areas being served by Reliance. Reliance Infocomm was thus offered a unified CDMA and GSM license, which was available to other service providers as well.

The resolution of the WLLM crisis led to a substantial competition among service providers – one that engendered a substantial decline in tariffs. This led to a surge in telephone connections and sowed the seeds of India’s telecom boom. Telephone connections rose from 13 to 70 million between 2002 and 2004.

The 2G Scam

This scam was a substantial blip in the life of a sector which was adding 10 million additional lines every month with the existing operators serving the sector in 2007. The sector seemed on an invincible auto pilot in 2007. A new Telecom Minister Andimuthu Raja accepted the TRAI's recommendation that there should be no cap on the number of service providers and that new operators would be judged on a first-come-first served basis in August 2008. This provision led to such a surge in applications that on 24 September 2008 the minister decided to accept applications only till 1 October. One hundred and sixty five applications had arrived. To this were added another 408 upon declarations of intent after the 1 October deadline. The last application deadline was then retroactively moved to 25 September 2007, on 10 January 2008. On the same day, in another press release the DOT asked all companies who had applied till 25 September to submit their checks by 3.30 pm. The DOT issued 121 letters, and 78 of the applicants complied with the terms and conditions on the same day. The successful companies would have known the favourable verdict for them to have complied with guidelines at such short notice.

This irregular way of granting licenses for the 2G spectrum drew substantial criticism. There were many irregularities. 13 of the applicants did not possess the requisite share capital at the time of application. Reliance Telecom held 10.71 percent of equity stake in the successful applicant Swan Telecom. This was beyond the permissible limit. Swan Telecom subsequently re-sold its license to a Dubai-based company Etisalat International India Private Limited mopping up an extra US$701 million. Another company, Unitech International, sold its licenses to Telenor Asia and gained over a billion dollars from the sale. The Comptroller and Auditor General of India wrote an influential report that suggested that the exchequer lost about US$14 billion in the process of selling the 2G spectrum below market price, according to one estimate. (*Comptroller and Auditor General of India, 2010*)

The manner in which these licenses were granted drew criticism from the prime minister, the finance minister and the law minister in 2007. Unlike Prime Minister Vajpayee on the eve of the New Telecom Policy of 1999, Prime Minister Manmohan Singh failed to act. He turned a blind eye to this scam largely because the telecom minister came from a major coalition partner, the Dravida Munnetra Kazhagam (DMK) from Tamil Nadu. It was only in 2011 (a few months before the DMK lost comprehensively in the state) that Raja was sent to judicial custody. And, the Supreme Court quashed the 122 licenses in 2012. While this sent a clear signal that crony capitalism would not work, it also worried investors that India made rules that are broken by the Supreme Court. The 2G saga has not augured well for the telecom sector in recent times.

The telecom sector is slowly bouncing back to life. Tele-density has begun to grow, and new operators are making bids. What is significant, India was able to produce one of the world's largest networks at very competitive rates. India's tariffs are among the lowest in the world – a feature that has engendered rural tele-density, and mobile phones have reached the poor in India. Everyone in India is benefitting from the telecom boom.

In Sum

India was at a tipping point in 1991 building on new ideas and policies of the 1980s. So, the balance of payments crisis empowered the prime minister's office to promote the private sector against the wishes of the DOT. This had to be a layered process as the DOT fought hard to keep its exclusive privileges as policy maker and service provider. The votaries of private sector promotion had to struggle through various phases: (1) They had to get the private sector in; (2) They had to set up an independent regulator; and (3) That regulator had to be empowered and a telecom court had also to be established. Despite these layered regulatory changes, the 2G scam reveals the need for an even more powerful regulator free from the clutches of the telecom ministry. The minister should set policy, but implementing it in the form of awarding licenses is best left to the regulator, as is the case in the United States and United Kingdom.

It is important to note that what matters in the long-run are the dominant ideas. The party in power may be a centre-left Congress alliance or a centre-right alliance, led by Bharatiya Janata Party (BJP), but these parties generally build on the past. When in opposition they protest, but when in power they proceed along similar lines, depending on their capacity to implement policy.

The Stock Market[5]

India's stock market reforms resemble the revolution in telecommunications. Portfolio investment through the stock market route has brought substantial investment to Indian companies. Of the US$48 billion that arrived as foreign investment in India between 1992 and 2002, US$24 billion came through the portfolio route. In 2010 alone, the country attracted US$40 billion. It attracted 21.7 percent of the portfolio flows between 2000 and 2010. Scholars have argued that portfolio investment is more volatile than foreign direct investment in the production process. (*Garg and Dua, 2014: 16-28*) Despite this criticism, India has succeeded to a greater extent in reforming capital markets and attracting finance through the portfolio route than in attracting foreign direct investment.

The saga of stock market reforms resembles the telecom saga. The 1980s was a period of failed preparation for stock market reforms. The brokers of the Bombay Stock Exchange successfully resisted reforms that were sought by the ministry of finance. India's stock markets, and the pre-eminent one among them the Bombay Stock Exchange, were the exclusive preserve of brokers. These brokers were a tightly-knit club, and professional competence was inadequate for gaining entry into this club. The brokers enjoyed a monopoly over information and practised "badla" or carry-forward trading. Brokers enjoyed three days between a transaction and its settlement. Banks were prohibited from financing brokers and "badla" traders had a self-financing scheme by which they could maximise their returns between the day of trading and the day of settlement. The entire system was opaque, and there was no transparent way to gauge transactions through computerised display of settlements.

The ministry of finance was uneasy with traditional brokerage practices, especially as it realised the potential of the stock market for financial resource mobilisation. Mahendra Kampani, a merchant banker, tried to change this situation when he was elected President of the Bombay Stock Exchange in 1987. He was supported by the ministry of finance in this endeavour. He attempted to create a stock depository and a stock index based on the 100 best scripts. He introduced a Stockscan system to report changes in market prices, and hired leading consultants like Arthur Anderson and Computer Maintenance Corporation to advise on computerisation.

5 A large portion of the historical analysis draws heavily from *Gent, 2007: 328-358*.

This infuriated the brokers of the Bombay Stock Exchange (BSE). He was ousted from his position by Manu Manek in 1988. The traditional brokers were critical of Kampani's modernisation, which they thought was akin to being a sycophantic supporter of the ministry of finance.

Stock market reforms were therefore on the anvil around 1991, even though there was substantial opposition from traditional brokers. First, computerisation of the stock exchange would deal a heavy blow to illicit trading practices. The ministry of finance had recommended this in 1985 and again in August 1991. A National Clearing and Settlement Corporation and a Central Depository Trust had also been recommended. The ministry of finance had also recommended a National Stock Market System, which would develop a debt market and whose members would be selected largely for professional reasons rather than on connections or inheritance, as was the case with the Bombay Stock Exchange (BSE).

In the case of stock market reforms, the opponent was the broker community rather than the public sector incumbents. The BSE pretended to carry forward the recommendations without acting substantially. Even the process of computerisation was delayed within the BSE.

It was the stock market crisis, engendered by the Harshad Mehta scam driven by insider trading, which increased the resolve of the government to bring about stock market reforms. India was in a precarious balance of payments situation in 1992 at the time of the scam. This was the very moment when the government needed to exploit stock market reforms to mobilise resources for the country's growth. Driven by the BSE's intransigence and callous governance, the ministry of finance decided to set up an alternate stock exchange. It faced little opposition from the brokers of the BSE because the brokers were confident that such a project was sure to fail.

The ministry of finance gave substantial autonomy to the public sector bank: Industrial Development Bank of India (IDBI) and its chairman S S Nadkarni to design and implement a new stock exchange. Nadkarni's team took a more radical view to reform than the National Stock Market System recommended by the ministry of finance. The new stock exchange would be a publicly-owned for-profit corporation, whereas the BSE was a privately-owned non-profit association. The new National Stock Exchange's (NSE) management would be autonomous from the brokers. It would be governed by a professional management team. Membership was automatic based on a Rs. 10 million deposit and a fixed fee depending on the volume of trade. The Hong Kong-based International Securities Consultancy was consulted. India's largest software firm Tata Consultancy Services aided the process of creating the computerised National Exchange for Automatic Trading (NEAT). The NSE was born in October 1994, and its trading surpassed the BSE's within a year.

Competition from the NSE forced the BSE to change course. This came as a rude shock to the brokers of the BSE. Soon thereafter, the BSE adjusted to competition, and the other stock exchanges also followed suit. The BSE adopted electronic trading by March 1995, and all others adopted it by 1999. The BSE and the NSE handled about 98 percent of the trade in 2003.

Other reforms followed as well. The National Securities Clearing Corporation was founded in 1996. It introduced clearing and risk management schemes widely practised outside India. In 1996, the Parliament passed the Depositories Act. In October the same year, the NSE, the Industrial Development Bank of India and the Unit Trust of India inaugurated the National Securities Depository Limited. In 1999, the Securities and Exchange Board of India allowed the BSE to launch its Central Depository for Securities Limited. This led to a transformation from paper to dematerialised settlements. By 2001, 99 percent of the turnover was settled through the dematerialised route.

Despite these rapid developments, carry-forward or "badla" trading could only be reformed in 2003. The fact that the resolution of the settlement system took ten years from the Harshad Mehta scam that had provoked the ministry of finance to set up the NSE tells something about the political power of private actors such as brokers. Such concentrated power reveals why change in India is gradual.

The saga of stock market reforms was similar to the one in telecoms. Both were at a tipping point in 1991. In both cases, the state played an important role in fighting incumbents. In the case of telecoms, it was the DOT. For stock market reforms the powerful private sector opponents were the brokers of the BSE. In both cases the process was gradual. The TRAI was born in 1997 and the NSE in 1994. Regulatory consolidations have, however, been a long-drawn and ongoing process.

In the next section we turn to the dismal state of reforms in port development in India. Could it be that the state had expended more political capital to reform some areas rather than others?

Ports

India's ports sector poses a puzzle for students of India's economic deregulation. This is a commercial sector where the lobbies ranged against private sector participation should have resembled those in the telecom sector. Measures to deregulate the sector had begun since the late 1980s (Ray 2005). Why then has the sector been unable to garner investments and unable to produce a single world-class major port in India? India has excellent airports in cities like Delhi, Mumbai and Hyderabad but no great ports. No port in India, including the Jawaharlal Nehru Port Trust (JNPT) is comparable to the one in Colombo, let alone ones in Shanghai or Singapore. In December 2013, India had 13 major and 187 non-major ports, of which 139 were along the west coast. The dismal performance occurred despite 100 percent foreign equity stipulation and a generous 10-year tax holiday regime. This is an alarming situation for an economy whose trade to GDP ratio rose from 20 percent in 1991 to greater than 50 percent in recent times, and where 95 percent of this trade by volume is handled by ports.

India's major ports, run by government-dominated port trusts, served 91 percent of the traffic in 1994-1995 and 57 percent in 2013/2014. Minor ports run by private companies have grown in importance (*Feedback Consulting Services Private Limited, 2014*). This affects not only India's exports but also essential coal and crude oil imports. The decline in India's major ports and the rise of its minor private ports is worrisome. Ports need to connect with the hinterland in a systematic way – and major ports are generally more amenable to such balanced development.

Take the example of the Mundra Port in Gujarat run by billionaire entrepreneur Gautam Adani. The 13-year-old Mundra Port overtook the 56-year-old government-managed Kandla Port in 2013/2014. It handled 100 million tons of cargo compared with Kandla's 87.01 million tons last year. Kandla and Mundra ports are 60 kilometres apart overlooking the Arabian Sea from the Gulf of Kutch. Whereas Kandla added 8 dry cargo and 6 liquid cargo berths since 1997, Mundra added 28 over the same period. Kandla lost out despite its 69 kilometres of pristine coastline alongside 244,000 acres of land because of Mundra's superior infrastructure. Mundra's reliable berths allowed larger vessels to download cargo with greater ease. The port could charge a higher tariff because it did not fall under the jurisdiction of the Tariff Authority on Major Ports (TAMP), being a small privately-owned port. It was owned by the Government of Gujarat and given on a 30-year lease to the investor, Adani. Shippers were willing to pay a higher tariff because a six-day wait in a port can cost the company half a million dollars. To give one example, automaker Maruti once exclusively used India's largest port JNPT in Mumbai. It has shifted half its cargo to Mundra (*Prabhakar, The Economic Times, 3 August 2014).*

What are the major unresolved regulatory issues obstructing the development of major ports in India? First, there are a number of reasons why the TAMP's methodology discouraged investment. The bidding procedures for a private terminal operator within a major port resemble those in the telecommunications sector of an earlier era. Private operators such as Port of Singapore Authority or Larsen and Tubro bid for container terminals within large ports governed by port trusts. The size of the bid rather than servicing capacity is the major consideration for a successful tender application. The result is that private operators make unreasonably high bids ranging from 35-50 percent of revenues as royalty payment. But the TAMP does not treat this cost as part of tariff. It is the combination of excessive bids and non-treatment of royalty payments as part of the cost of a bid that caused substantial unease among government- and privately-owned operators of major ports. This is at the root of the systematic decline of India's major ports.

Moreover, even though royalty payment is not treated as cost within the TAMP's regulatory design, the regulator offers a 16 percent assured return on capital and operating costs. Terminal operators therefore have a perverse incentive to inflate capital and overhead costs.

Second, even though private terminal-operators have engendered healthy competition in India's major ports, the governance of major ports by government-dominated port trusts was the source of substantial inefficiency. For example, competition between P&O Ports of Australia and government-owned Nhava Sheva International Container Terminal (NSICT) in JNPT (Mumbai) had reduced costs in the 1990s. However, they both operated within a landlord port model where JNPT as the landlord port was responsible for activities such as scheduling entry, dredging, electricity, water supply and navigation safety. JNPT as the landlord port run by a government-dominated port trust charged a fee for all these activities from terminal operators such as P&O and NSICT. The result: Competition among terminal operators drove down costs but the landlord port's inefficiency increased transactions costs for importers and exporters. The government had successfully resisted the corporatisation of port trusts in the major ports (*Mukherji, 2010, 184-193*).[6]

[6] The one exception was Ennore Port in Tamil Nadu.

The central government knew what ailed India's major ports but could not deal with these regulatory issues between 2004 and 2014, the decade-long rule by the United Progressive Alliance with the Congress Party at its helm. Consequently, minor ports such as Mundra flourished with the blessings of entrepreneurial chief ministers such as Gujarat's Narendra Modi. It is for these reasons that an experienced operator, International Container Terminal Services broke its contract with Larsen and Toubro Shipbuilding Limited for running the Kattupalli Container Terminal in Tamil Nadu in July 2014. (*Paz, BuisnessWorld, July 8 2014*)

The current BJP government is seeking to reform port trusts by replacing government appointees with representatives from environmental agencies and the corporate sector. It is seriously considering the corporatisation of port trusts. A committee has been appointed to review the relationship between the landlord port and the container terminals (*Economic Times, 28 September 2014*). The ministry of shipping's tariff guidelines in 2013 sought to enhance the tariff-making flexibility of private terminal-operators. This may have been a factor in the Port of Singapore Authority's decision to construct a fourth container terminal in JNPT. Modi as Chief Minister was able to encourage the proliferation of minor ports in Gujarat that have taken substantial load off the major ports. Now as Prime Minister, will he be able to take on the opposition from the department of shipping and the government-dominated port trusts?

The port sector in India, unlike the telecommunications sector, did not witness the drive within the PMO that forced the department of telecommunications to deregulate the sector. The department of shipping had its way with engendering regressive stipulations within the TAMP and in engendering inefficiencies within the government-controlled port trusts. The only substantial way in which meaningful private sector participation could flourish in this sector was through the vehicle of minor ports when enterprising chief ministers like Modi gave a free hand to entrepreneurs like Adani. This was suboptimal for India's trade because the country was desperately in need of major ports well connected with the hinterland.

The Power Sector[7]

Power sector reforms in India were stalled by a phenomenon Ashutosh Varshney aptly termed "mass politics" (*Varshney 2007: 117-145*). When the number of reform opponents is large and well-organised, even a state with the best intentions is unable to deliver. This also sits well with Pranab Bardhan's arguments about India's dominant coalition of industrialists, farmers and professionals who would stall any rationalisation of subsidies. (*Bardhan, 1998*). The argument about the dominant coalition similar to the logic of mass politics reveals a lot about the status quo bias in the Indian political economy, even though it is unable to explain change in sectors such as telecommunications and stock markets.

That India was at a tipping point favouring reforms is valid as much for the power sector as it was for telecommunications or stock markets. The politics of free electricity to farmers was the single most important reason for the dismal failure of reforms in this area. Losses in this sector amounted to about one percent of India's GDP, and capacity addition in power generation has been dismal. Power sector reforms are critical if India is to launch itself as a substantial manufacturing hub. Why then have power sector reforms not taken off in India?

The sector was rearing for reforms in 1991. The World Bank-funded National Thermal Power Corporation had emerged as one of the largest profitable thermal power generation companies in the world in the 1980s. Moreover, the government responded very positively to the idea of reforming the electricity sector and engendering private sector participation in 1991. India was facing a tough fiscal situation and the government opined that private sector participation in the sector would help mitigate it.

A number of measures were taken in the immediate aftermath of the 1991 reforms. The Electricity Laws (Amendment) Act in 1991 was to attract private and foreign investment to the power sector. It promised a 16 percent assured rate of return to generating companies. There was to be a five-year tax holiday coupled with counter-guarantees. These counter-guarantees ensured that if state electricity boards failed to pay for electricity generation costs, the government would chip in. This was to assure that tariff collection would not be an impediment, especially for private sector power generating companies.

Why did the power reforms fail despite such bold measures? Did they fail because of cronyism in power purchase agreements that led to Enron-type scandals in the late 1990s?

[7] This section is largely adapted from *Mukherji, 2014: 147-180.*

Enron had negotiated a very favourable deal in terms of tariffs and counter-guarantees that the Maharashtra State Electricity Board and the Government of India could not respect. The deal had succeeded despite criticism from the ministry of finance at the centre, the World Bank and India's own Central Electricity Agency located within the ministry of power. Our view is that while such cronyism did not help the sector, it was not the fundamental reason for its inability to take-off.

Could it be that widespread electricity theft was behind the failure of the sector? Electricity theft, like cronyism, is a substantial bottleneck. But this bottleneck is relatively easier to govern compared with the demand for free electricity by farmers in many Indian states. *(Mukherji, 2007: 300-327; Mukherji, 2010: 177-225)*

The Indian farmer is a powerful leg within the dominant coalition. It becomes impossible to reduce unreasonable subsidies when the farmers come together. Farmers in many states used free power to extract groundwater with the help of electric pump sets. It is the power of the farmer's vote that has substantially blocked power sector reforms in India. This was the substantial diagnosis of a government committee headed by V K Shunglu in 2011.

I will elaborate this point by taking the example of power sector reforms in Andhra Pradesh. Andhra Pradesh is a test case because it was one of the best reforming states during the tenure of Chief Minister Chandrababu Naidu until 2004. (Rudolph and Rudolph, 2007: 231-264). [Editor's note: In May 2014, Naidu once again won a general election to become Chief Minister of a reconstituted state of Andhra Pradesh.) The original state of Andhra Pradesh had efficient government-owned generating companies on the eve of the reform process.

New policy ideas and their implementation proceeded rapidly within the state. A government report produced by the Administrative Staff College of India in Hyderabad (1995) signalled the detailed knowledge within the state regarding what ailed the power sector in Andhra Pradesh. The state worked closely with the World Bank on economic reforms in general, and power sector reform was an important component of the reform strategy since 1997. The Andhra Pradesh Electricity Act was enacted in 1998. Powered by reform ideas, the Andhra Pradesh State Electricity Board was unbundled into separate generating and transmission companies in 1999. By 2000, the Andhra Pradesh Electricity Regulatory Commission drew its first tariff order under the stewardship of an independent and able chairman – G P Rao.

This was rapid progress in a federated polity, where different sub-national states moved with differing speeds in issue-areas such as power sector reforms, especially when they enjoyed substantial powers. What then was the impact of this significant political will to transform the sector in a pro-active state such as Andhra Pradesh?

It was farmer's power that posed the most substantial challenge. Even during the hey-day of reforms, farmers in Andhra Pradesh, who were being charged a nominal tariff based on the power of their transformers, refused to have their electricity consumption quantified; they worried that if electricity consumption by farmers was metered, this would be a significant step in the direction of charging an electricity tariff.

When the centre-left Congress party coalition came to power in 2004, the announcement of free power to all was one of the first announcements made upon the election of Chief Minister Y S Rajasekhar Reddy in the undivided Andhra Pradesh. This populist move was an easy path to voter endearment. This was despite the fact that the quality of electricity provision under the free electricity regime was rather poor. Electricity was often being provided at night and for a few hours – so that farmers could not make substantial use of electric pump-sets at the dead of night. The quality of supply was so poor that transformers were burning out with great rapidity. And, electrocutions were being reported as result of poor maintenance of utilities.

My village surveys in canal irrigated and dry villages in Andhra Pradesh suggest that free power was preferred to better-quality subsidised power provided by the Telugu Desam Party (TDP) under Chief Minister Naidu until 2004. Despite this, there still remained a significant minority in some villages that preferred higher-quality subsidised power.

The politics of free electricity to farmers in Andhra Pradesh suggested that good economics was not good politics in the power sector in Andhra Pradesh. Subsidised power could be a win-win situation for all. It would curb the waste of electricity and groundwater, and increase the reliability of supply. But it would also require statesmanship on the part of a leader to convince farmers about the long-term benefits of subsidised power. Free electricity, on the other hand, and other such populist measures were an easy and reliable way to win elections. Such a situation could also drive a vicious cycle of competitive populism as the route to political power. It is this disincentive in states such as Andhra Pradesh that has largely posed a major stumbling block for the reform of the power sector in India.

What can we say about the Politics of Reforms?

We find that the state in India is a powerful mover of change, even though powerful social actors within and outside the state often frustrate its efforts. Be it incumbents like the DOT, powerful brokers, farmers or the department of shipping, powerful vested interests ranged against the reform process reveal why economic reform in India is gradual. We find that powerful farmers who are numerous and well-organised and participate in "mass politics", thwart substantial economic reform in India. This is the single most-important reason why reforms in India's power sector, critical for its manufacturing competitiveness, have not taken off.

What then is the role of the state? India has moved substantially even though it has moved gradually. It has made the transition from a country where most middle-class persons did not possess a telephone connection in the 1990s to one where mobile phones have substantially penetrated among the rural poor. Its stock markets have attracted investments from the world over. How did this process of change occur?

We contend that understanding change requires us to discern the evolution of ideas within the state, which move surely but gradually. When these ideas move substantially in a certain direction they have the propensity to tip over to paradigmatic changes in the governance of a sector. Substantial changes in ideas are internal to the government. Indeed these ideas need to be internalised. India can rarely be coerced to changing course due to foreign pressure. When these ideas change substantially, a crisis can produce significant change for substantially endogenous reasons. The crisis acts like the last bicycle that went over the bridge before it collapsed. Did the bridge collapse because of the bicycle, or was it because the system had been substantially undermined?

Transformed sectors such as telecommunications and stock markets benefited from substantial ideational changes within government before the balance of payments crisis in 1991. The balance of payments crisis was like the last bicycle that traversed the bridge before its collapse. But transformation in both sectors was a gradual process that needed to deal with powerful incumbents. In telecommunications for example, this was a layered process that first had to battle the incumbent (DOT) and persuade it to invite private investment; and subsequently to install and consolidate a regulator that could promote competition. This process is an ongoing one as new challenges such the 2G scam thwarted the sector's steady progress.

But powerful incumbents stand in the way. More research is required to understand why the ports sector, dominated by the department of shipping, could not be substantially reformed. The department of shipping, like the department of telecommunications, resisted change. Why then did other parts of government not pressure the department of shipping to corporatize port trusts and make the Tariff Authority on Major Ports' (TAMP) regulatory norms more amenable to private sector participation? Our framework suggests that the state may not have been mobilised to the same extent in every sector.

Finally, the dismal failure of power sector reforms reveals how powerful actors engaging in "mass politics" – the politics of getting a large number of voters to thwart the reform process, pose a substantial hurdle to the reform process. We find that the perception among the majority of Indian farmers that free electricity is a right has made it rather challenging to impose tariffs on farm consumption in many states. And, a service provision in the absence of tariff collection has the propensity to discourage investment in service provision.

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