

Stakeholders' feedback about the Indian Telecom Regulatory Framework - A Critical Analysis

Abstract:

This paper presents a descriptive analysis of stakeholders' feedback on the Indian Telecom Regulatory Framework with an aim to improve its transparency, predictability, accountability and strengthening the autonomy of the regulator. And so, objectives of this research are to understand stakeholders' feedback and suggestions w.r.t to scope and authority of the Ministry as compared to the regulator, stakeholders' feedback and suggestions for ensuring transparency and accountability in the policy formulation process and the stakeholders' feedback and suggestions for ensuring the autonomy of the regulator within the telecom regulatory framework. This study brings out following key findings study (1) Irrespective of their affiliations and profile, majority of the experts agree that telecom regulation in India is uncertain and unpredictable, justifying the need for critically analysing the Telecom Regulatory Framework (2) The primary reason for the unpredictable and uncertain nature of policy formation is the opaqueness in policy formation that sets in after submission of recommendations by TRAI to the DoT. (3) As number of bodies is involved in regulation in the country, it gives opportunity to operators to indulge in forum shopping for their individual benefits. (4) The role of Telecom Commission (TC) needs to reviewed as its erstwhile regulatory function is now being done by TRAI resulting in role – duplication. (5) Majority of stakeholders that the Telecom & Broadcasting ministries should be merged and issuance of single convergence license is the key demand and (6) TRAI needs to collaborate with premier institutes for starting courses on ICT regulation and that this option is the best one for human resources capacity building in ICT regulation.

Thus, the study concludes that for a developing country like India, significant reforms need to be initiated in the telecom regulatory framework so as to create transparent business environment in the Indian telecom industry

1. Introduction:

For India, telecom sector was liberalized in 1994 but, it was only in 1997, that the Telecommunications Regulatory Authority of India (TRAI) as per The TRAI Act of 1997 was established. The TRAI Act granted the TRAI the regulatory powers and the policy making for certain issues while the licensing continued to remain with the Department of Telecom (DoT).

The telecom industry in India has grown from having tele-density of 1.94 % and subscriber base of 14.8 million (TRAI Study Paper No. 2/2005) in 1997-98 to 71.34 % and 922.04 million in 2014 (TRAI, Press Release No. 13/2014) respectively. India has predominantly followed the ministerial-bureaucratic process for policy formulation and implementation. The Regulatory

process involves multiple bodies in the regulatory system namely the DoT, Telecom Commission, TRAI and Cabinet of Ministers (CoM). Since its liberalisation in 1994, the telecom industry in India has witnessed numerous irregularities in policy formation & implementation. In 2007, India was ranked below other Asian countries in parameters such as independence, transparency, consistency, pro- competitiveness. (TRE, 2007). Industry leaders and investors opined that the telecom sector is no longer an attractive option for investment on account of policy uncertainty. (Business Standard, 2009), (Fitch,2013), (Business Standard,2014). As a counter argument to this point, it has been said that India under this regulatory framework has shown exponential growth in cellular telephony during the 2008-2011 period. This spectacular performance may be attributed to the fact that in the initial stages of cellular licensing in India, 2G spectrum was bundled with the license resulting in low initial investment for companies and hence role played by political institutions seemed less important as capital investments were low (Andonova and Diaz-Serrano (2009)). However, the 2012 Supreme Court's judgment on the 2G spectrum case has made auction as the mandatory mode of spectrum assignment. This has resulted in increase the cost of spectrum acquisition from around US\$370 million for 2G spectrum in 2008(Jain(2010)) to around US\$ 3.5 billion for a Telco aiming for Pan-India coverage. (DoT,2010).

With involvement of the Supreme Court of India in the 2G spectrum allocation case and the subsequent cancellation of 122 licenses by it in 2012 has further worsened the regulatory environment in India. All these factors seem to have contributed to the 85% decrease in FDI in telecom in India from US\$ 2 billion in 2011 to US\$ 304 million in 2012-13. (Hindu Business Line, 2013). With subdued participation of foreign investors, the state owned banks were encouraged to fund the Telcos in their spectrum bids resulting in the overall exposure to the telecom sector of around US\$ 20 billion (as per 2011 exchange rates) (TRAI Recommendations, 2012). The fact government institutions have invested in or lent to telecom firms serves as a guarantee that government would not allow them to fail (Desai ,2006). Hence, the benefits of low capital requirements and asset mobility associated with cellular telephony have been nullified to certain extent in the post 3G auction scenario.

Since 2013, the government has allowed 100% FDI in telecom, but, there were very few investments, with industry observers stating that lack of regulatory clarity is keeping investor away from the telecom industry in India. ((Krishna and Machad, 2013)).

Considering all these points, the researcher felt the need to study the stakeholders' feedback about the Indian Telecom Regulatory Framework, with an aim to improve its transparency, predictability, accountability and strengthening the autonomy of the regulator. And so, objectives of this research are to: (1) Collect stakeholders' feedback and suggestions w.r.t to scope and authority of the Ministry as compared to the regulator. (2) Collect stakeholders' feedback and suggestions for ensuring transparency and accountability in the policy formulation process? (3)

Collect the stakeholders' feedback and suggestions for ensuring the autonomy of the regulator within the telecom regulatory framework.

2. Literature Review:

There have been multiple single country analyses on developed countries like US (Cherry and Wildman, 1999) and Chen (1997), UK (Scott, 2000), China (Gao and Lyytinen, 2000), Japan (Mogaki, 2013), Turkey (Sosay, 2009) and (Bagdadioglu & Cetinkaya, 2010) and developing countries like India (Dossani and Manikutty 2000), (Singh et.al, 2000), (Mukherji, 2009), Pakistan (Gao and Rafiq, 2009), Sri Lanka (Balasooriya et.al, 2006), South Africa (Makhaya and Roberts, 2003), Mexico (Mariscal, 2004) and Botswana (McCormick, 2001). Some studies have traced the history of regulatory reform; the ones on developing countries have highlighted the inefficiency of the regulatory framework in the respective countries.

Rafiq Dossani and S. Manikutty (Dossani and Manikutty, 2000) observed that, in the Indian telecommunications sector, the "neat" division on roles for the policymaker and the regulator is needed. However, in India as the policymaker awards licenses it leads to lack of transparency and conflicts of interest. Rekha Jain too in her 2001 paper has said in the context of spectrum auctions that there is absence of clear separations in DoT's responsibilities for policy, regulation and operations led to several delays and lowered the credibility of the government. (Jain, 2001). Rajni Gupta (2002) in her paper brings out the fact that disillusioned with the Indian government's bad handling of telecom deregulations, several multinational companies started to pull back their investments and blamed the government for having 'unfriendly telecom policies(Gupta,2002) . The telecom reform process from 1994 to date has been well researched and researchers have highlighted the political controversies such as labour disputes, a large-scale corruption scandal over the selling of basic service licences in 1996 and a series of public interest litigations against the state's handling of the terms of reform (Chakravartty, 2004). Ashok Desai (2006) in his critique states that the healthy development of the telecom industry in India requires a radical change in the policy approach. (Desai ,2006).The history of India's telecom liberalisation and the dynamics of institutional change have been traced in a study by Rahul Mukherji in which he presents the involvement of The Prime Minister's Office and the Ministry of Finance in pushing for privatization in 1994 against the resistance by the Department of Telecommunications. (Mukherji, 2009). Chun Liu and Krishna Jayakar (Liu and Jayakar, 2012) compare the telecommunications policy-making process in the case of IPTV China and Conditional Access System (CAS) in India and conclude that both the systems exhibit somewhat similar ministerial-bureaucratic decision-making model and that India has witnessed an increasingly litigious environment in case of policy making.

The World Handbook for Evaluating Infrastructure Regulatory Systems, 2006 recommends three methods namely Cross-Country Statistical Analyses, Cross-Country Descriptive Analyses and Single-Country Structured Case Studies. It also discusses scenarios in which these methods are

used as well as highlights their limitations. The researcher has used the list of ten attributes for an effective regulator mentioned in the World Handbook.

Discussion regarding regulatory framework in general as well as its criticism is abundant, but, there is very little literature specific to detailed study of Indian Telecom Regulatory Framework. There is also very little published research on analysis of stakeholders' responses on the efficacy of telecom regulatory framework in India and the changes that the stakeholders want.

3. Research Methodology:

For the selection of research method, the researcher referred to the **World Bank Handbook for Evaluating Infrastructure Regulatory Systems, 2006**, which is suggested as the guiding document for research in regulation. According to the Handbook, principal methods for evaluation of Regulatory Systems are performed in one of three ways

1. Type 1—cross-country statistical analyses.
2. Type 2—cross-country descriptive analyses (with and without benchmarking).
3. Type 3—single-country structured case studies.

A third approach is single-country structured case studies analyses of an existing regulatory system. Typically, it examines the formal legal and institutional aspects of the regulatory system, or it may go more deeply and review how the formal elements have actually been employed. These “deeper” studies often involve extensive interviews not only with the regulator but also with government officials, executives in sector enterprises, and consumers. The advantage of interviewing individuals with widely different perspectives is that it ensures that the study will not simply reflect what government officials or the regulator want the study to say. The key advantage of in-depth case level analysis is the ability to uncover what may be missed in large-scale data collection. (Hosman and Howard, 2014, pg 70)

The single-country structured case studies research method involving stakeholder interviews has been used by multiple researchers. Vogel (1996) utilises interviews mainly involving party politicians, government officials, and other relevant elites to compare Japan's regulatory reform and UK's equivalent in the 1980s. Dossani and Manikutty (2000) in their paper have shown in the context of India's telecom sector how institutional forces affect organizations' processes and decision-making leading to a consideration of the importance of regulation versus policymaking. They use in-depth interviews involving government officials and regulatory officials in India. McCormick (2001) analyses several notable aspects of the process of reform in telecom sector in Botswana and highlights those worthy of emulation by other African states. Her findings are based on field work conducted that draws on three primary sources of evidence: documentation, archival records, and elite interviews. Mukherji (2009) explores the causes behind the institutional change that included the privatisation, establishment of the regulator in India's telecommunications sector. He uses the in-depth interview method with senior experts, bureaucrats and regulatory officials to understand the context and issues involved. Laura

Hosman and Philip N. Howard (2014) in their article analyse the development of the telecom sector and of telecommunications technology adoption in the states of the former Yugoslavia–Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia. Their analysis has been based on of interviews with officials employed in the various governmental agencies responsible for telecommunications-related policy, as well as interviews with current and former directors and employees of telecom regulatory agencies in these countries.

Thus, researchers have extensively used qualitative research methods involving stakeholder interviews to explore the research questions of public policy.

3.1 Research Proposition for this research work is “The Indian telecom regulatory framework is perceived by stakeholders as unpredictable and uncertain as it has a number of regulatory entities with overlap in the roles of policy formulation and implementation, an opaque process of policy and regulation formulation with the telecom regulator being granted a low degree of autonomy”.

And the related questions are :

- How is the telecom regulatory framework for Telecom Regulation in India structured?
- What are the stakeholders’ feedback and suggestions for improving its transparency and predictability?
- Has the structural division of the authority and scope of the regulator been ensured as compared to role of the Ministry and bureaucracy?
- What are the stakeholders’ feedback and suggestions w.r.t to scope and authority of the Ministry as compared to the regulator?
- How is the process of policy and regulation formulation designed? Does it ensure transparency and accountability?
- What are the stakeholders’ feedback and suggestions in order to bring in transparency and accountability?
- How does telecom regulatory framework ensure the autonomy of the regulator?
- What are the stakeholders’ feedback and suggestions for strengthening the autonomy of the regulator?

3.2 Selection of variables to be included in the questionnaire for collection of stakeholders’ feedback:

In addition to The World Bank report on Africa Development Indicators (2007), the researcher referred to papers by Levy and Spiller (1997) and Gülen et al (2007) to identify the characteristics of regulators observed in the developed countries.

Drawing from above mentioned resources , the researcher arrived at a final list of variables specific to the Indian Regulatory System. The researcher has collected data with the help a semi-structured questionnaire and the same has been attached in the annexure.

Respondent profile & Grouping of Stakeholders:

The researcher employed purposive sampling method for categorising the respondents into four types: (1) Government officials (2) Regulatory officials of the telecom operators (3) Academicians, Independent Consultants and Consumer organisations: (4) Former government officials.

(1) Government Officials:

- **Department of Telecom Officials:** The researcher contacted several officials but only a few officials agreed to meet him. This was probably because of the fact that several bureaucrats from telecom department were being summoned and questioned by the Supreme Court. The researcher was able to meet officials from Telecom Engineering Centre (TEC), the equipment testing and standardization arm of the Department of Telecom (DoT). The officials belonged to the Indian Telegraph/Telecom Services (ITS) Cadre of the Indian Government. Most of the officials responded to the questionnaire on the condition of the anonymity.
- **Official of Prasar Bharati:** The official belonged to the broadcast engineering cadre and was very forthcoming with giving additional information.
- **Official of National Disaster Management Authority (NDMA):** This official before moving to NDMA had served in the DoT.
- **Serving Advisor and Jt. Advisor of TRAI:** The researcher was able to interview two serving officials of the Telecom Regulatory Authority of India (TRAI). Both these officials belonged to the Indian Telecom Services (ITS) cadre, Government of India.

(2) Regulatory officials of the telecom operators: The respondents that were contacted represent their respective organisations in regulatory discussions and are also responsible for liaising with the government regulatory bodies. Officials from following organisations responded to the questionnaire Airtel, BSNL, Radius Infratel, Uninor, Reliance Communications, Vodafone, Videocon, Loop Telecom, Star TV, Aircel, Cellular Operator Association of India (COAI), Spice, Idea, Orange, MTS, VIOM, Association of United Service providers of India (AUSPI), Association of Competing Operators (ACTO), Internet Service Providers Association of India (ISPAI), AT&T, American Tower Corporation (ATC).

(3) Academicians, Independent Consultants and Consumer organisations: The researcher was able to meet independent consultants, and Academicians. Some academicians from very reputed government funded institutions did not respond to the researcher's request for appointment. The independent consultants included a former Managing Director of government owned telecom operator, member of the team that had advised the government in the 1990s on the setting up of regulator. Academicians included a serving professor at reputed business school in northern India who is consulted by the government in spectrum allocation issues. The list of respondents also had former

academician who is currently serving as an industry expert and is a former Professor, IIT Delhi.

- (4) **Former officials of WPC and former senior officials of TRAI:** The researcher was able to meet 2 former officials of TRAI; one of them is an IAS cadre official and the second person worked for TRAI in the capacity of an advisor. The third official retired as the Head of Wireless Planning & Co-ordination wing of the DoT.

Profile of Respondents	Number of respondents
Government officials	8
Former Government officials	3
Academicians	4
Independent Consultants	4
Regulatory officials of Telcos & Broadcasters	14
Representatives of Consumer organisations	3
Total Number of respondents	36

Table 1: Profile of respondents

The average time with each respondent was about 30 minutes of in depth discussion guided by the questionnaire on the various aspects of the regulatory framework. This survey was conducted in New Delhi and Pune, India .

4. Descriptive Summary of the responses:

4.1 (A)Framework

- 1. Do you agree with International Investment Agencies who have termed the Indian Telecom Regulatory Framework as unpredictable and uncertain? 80 %** of the respondents agree that the Indian Telecom Regulatory Framework is unpredictable and uncertain. Among the stakeholders who disagreed were serving officials of DoT whereas stakeholders from Prasar Bharati, National Disaster Management Authority and former officials of TRAI & WPC agreed with the fact that the telecom regulation in India is uncertain. The key reason for this was opaqueness in policy formation post regulator's consultation process (**60%**) , **30%** quoted the absence of a coherent Telecom policy followed by absence of distinct roles for policy formation & policy implementation. Stakeholders also said that regulatory system with a large number of regulatory bodies is accompanied with chances of backdoor lobbying at every stage i.e. policy review by

Telecom Commission (TC), review by DoT and policy finalization by the Minister. This issue was also raised by a serving official of the TRAI who said that because there are multiple bodies involved, he has observed that Telecom operators tend to indulge in “forum shopping” (i.e. they try to influence decision- making process by presenting their case to different regulatory bodies i.e. TRAI, TC , DoT and then to the minister).

- 2. In the current framework do you see role duplication in some entities? Yes, NO. If yes, which ones? 29%** of the respondents said that there was role duplication and all of them said that respondents that TRAI & DoT should be merged. The DoT officials answered in the negative and one of the officials took effort in explaining the relevance of these bodies. According to him the TRAI took care of interests of private Telcos, but the policy advice to the Government is being done by these bodies. Hence, there was a need for the DoT and Telecom Commission (TC) to exist. On the issue of role duplication, the reason given was that every policy decision should be studied from different perspectives and hence the requirement for different entities to have their in-house subject matter experts. The TRAI official reiterated that the number of concerned bodies should be reduced. The respondents from the telecom operators were divided on this point, while some agreed, others disagreed.

- 3. What approach should be taken to tackle with this issue? (AND /OR) Merger with other regulatory entities 2) Omission, why? 3) Bifurcation of certain entities-**

The DoT & Prasar Bharati officials answered in the negative and one of the officials took effort in explaining the relevance of these bodies. One industry expert and policy researcher suggested that WP&C, Telecom Commission & TRAI should be merged to form a single entity. Moreover, he also added that recommendations on policy issues are currently given by TRAI, Telecom Commission and the DoT before they are finalized by the Minister. This involves delay and duplication of work; instead we should have one recommendatory body and another approving body. Others pointed out the lack of separation between policy formulation and policy implementation as the key problem. A respondent also added that TRAI considers all parameters before making any decision; they are autonomous, while DOT is politically driven. The Government should amend the TRAI act to widen the scope of TRAI to include licensing. The stakeholder from CUTS said that India needs to set a sunset clause for sector regulator and follow the Japanese model of having a competition regulator and doing away with telecom regulator.

- 4. The 6th Pay Commission in its report has recommended that the necessity of Telecom Commission should be reviewed, do you agree with this suggestion**

42 % of the respondents agreed with the 6th Pay Commission report which has recommended that the necessity of Telecom Commission should be reviewed. The DoT

officials were unanimous in responding in the negative. The official commented that the report had probably overlooked the Telecom Commission's function as a cross-ministerial body that in charge of studying the impact of a particular regulation in telecom on various ministries of the Government such as Finance, Home etc. He also hinted that Sixth Pay Commission is mostly staffed with IAS officers who belong to general administration hence may not be totally aware of the technical functions of Telecom Commission. Through their body language the officials also gave an indication of the uneasy and competitive relationship shared between the IAS and ITS cadre of government officials. Moreover, the official explained that the TC earlier had four members (1) Member (Finance) (2) Member (Services) (3) Member (Technology) and Member (Production). He also explained that the post of Member (Production) which fell vacant in 2006 was not filled up keeping in view the corporatisation of Department of Telecom Services (DTS) and Department of Telecom Operations (DTO) into BSNL and part of the work relating to production activities such as Telecom Factories having gone to BSNL. So, in the opinion of the official the DoT has after recommendations of the Sixth Pay Commission taken action w.r.t to the members of TC. The TRAI officials too pointed out that the scope of Telecom Commission is wide and has inter-ministerial role on policy issues. The former TRAI officials also agreed that the scope of Telecom Commission is wide and has inter-ministerial role on policy issues. But one of the officials agreed that the necessity of telecom commission should be reviewed except that its inter-ministerial role of co-ordination needs to be taken care of. However, the government officials from Prasar Bharati and NDMA said that there was a need for review of Telecom Commission as the last review was done in 1991.

One stakeholder who is an academician and consultant to TRAI opined that with the establishment of TRAI, the role for Telecom Commission has become redundant. Its inter-ministerial role on policy co-ordination should be handed over to the Prime Minister's office as it will be easier from PMO leading to faster decision making. He also informed the researcher of a similar development where the inter-ministerial role of FCC in the US is being proposed to be taken over by the President's office. Regulatory officials of the Telecom Operators said that Telecom Commission played very active role during recent spectrum issues.

5. Like in some developed countries, should the Telecom and I & B ministries be merged to facilitate the Telecom-Broadcasting convergence?

95 % of the respondents said that the Telecom and I& B ministries be merged to facilitate the Telecom-Broadcasting convergence and that this merger should facilitate (1) **Single license for telecom & broadcasting** and (2) **Common taxation**. All the Government officials serving as well as retired agreed that the two ministries should be

merged. However, they raised the doubt if the ruling party would have the political will as it would reduce the ministerial berths and this would mean fewer options for accommodating legislators of the coalition partners. Most stakeholders said that they should be merged however parameters for spectrum assignment should be different for the two. The consultant also brought out the point that this will require a lot of political will as the merging will face stiff resistance from the bureaucracy and politicians due to the fact that number of ministerial berths would come down. The respondent from the broadcaster said no as the two sectors had different needs and focus. And the government treats the two sectors differently in terms on license fees, taxation and it should remain as it is. The stakeholder from Prasar Bharati said that it must first facilitate the provision of one license for Telecom & Broadcasting and Common taxation as the second option. However, the single FDI policy may not be operationally possible as the Indian government like other governments would like to retain control on content broadcasted and hence the FDI limits for the two industry participants will always be different. Other stakeholders said that ranked them as single license for Telecom & Broadcasting and single policy for FDI, followed by common taxation.

4.2 (B) Process of Policy Formation

6. According to you, at which stage of the policy formation do opaqueness and uncertainty set in?

70% of the respondents said that opaqueness and uncertainty in the policy formation set in after the submission of recommendations by TRAI. And **30%** said that in some cases recommendations that were finalized by TRAI were never discussed in the open house. The DoT officials said that it totally false that the policy formulation process is opaque; in the opinion of the officials it is becoming more transparent. Officials from Prasar Bharati and NDMA said that opaqueness and uncertainty set in during review of TRAI recommendations by DoT and policy finalization. Moreover, the DoT does not provide reasoning for its stance on a particular policy issue.

The TRAI officials too asserted that the policy formation process is transparent. One of the former officials said that the policy formation process is transparent. However, he did say that DoT does not give reasons for its stand in a transparent manner. Almost all of the respondents from the operators replied that opaqueness and uncertainty set in during the review of TRAI recommendations by DoT and policy formation. Some respondents also cited examples to point out that TRAI comes up with recommendations which were not even discussed nor raised in open house. Another respondent said that the consultation paper prepared by TRAI is too biased towards the decision they want to consider. Some respondents said that entire process is opaque. The respondents also pointed out that DoT does not publicize the reasons behind its decision after review of TRAI recommendation. One stakeholder opined that incumbent operators have links in TRAI and so old operators get advantage, while new operators suffer. The COAI respondent commented that after

the TRAI consultation process, the recommendations enter a black box and one cannot predict the outcome.

7. Will the setting a reasonable deadline of 3 months for the DoT to take action on TRAI recommendations solve the problem of delay in finalization of regulations?

67% of the respondents said that setting a reasonable deadline of 3 months for the DoT to take action on TRAI recommendations can solve the problem of delay in finalization of regulations. The DoT officials' response was no. They said that this deadline will result in unnecessary interference and may hurry up the due diligence process of policy/regulation formulation at Telecom Commission and DoT. The Prasar Bharati and NDMA official responded in affirmative and added that it will speed up the policy finalization process. The stakeholders from the consultant group said that it will lead to faster decision on policy matters and that internationally this is an accepted norm for the time frame for decision making by the regulator. The telecom operators' officials said it will lead to faster decision on policy matters. However, one of the respondents said that this may not apply to all policy decisions and may also lead to hastening of the due diligence process leading to faster but not necessarily sound decisions.

8. Will the participation of DoT/ Telecom Commission as stakeholders in the TRAI consultation process solve/minimize the problem of delay, opaqueness & uncertainty in policy formation?

62% of the respondents said that the participation of DoT/ Telecom Commission as stakeholders in the TRAI consultation process will solve/minimize the problem of delay, opaqueness & uncertainty in policy formation. The reply from DoT officials was "Why will DoT participate in the TRAI consultation process" accompanied by hand gestures indicating that TRAI is on a lower pedestal as compared to the DoT. Moreover, they also pointed out that if DoT participates in the process, it might end up influencing the recommendations as well as the policy formulation. The Prasar Bharati officials said yes and agreed that it will to transparency. The NDMA official said no, but added that DoT must provide justification for its stance on the policy issue. The TRAI official replied in the negative and added that, since the DoT will review the recommendations of the TRAI and hence if it were to participate in the consultation process it may lead to influencing the TRAI recommendations. Most of the respondents from operators who said yes agreed that it will lead to transparency. But some respondent raised the point that because DoT will give its view in advance the TRAI recommendation it will become more of an order from DoT. Another respondent pointed out that in the past on some occasions DoT has participated as one of the stakeholders. Another stakeholder senior in age raised the question "Why should they? It is an apex body; it should not participate in the process at all.

4.3 (C) Autonomy

9. Which are the area(s) that the TRAI needs autonomy in?

Out of the total respondents **38 %** feel that TRAI needs functional autonomy, **24 %** say it needs financial autonomy and **38 %** said that it needs autonomy for recruitment. The TRAI Act has empowered the TRAI in all these areas. In fact TRAI is fully empowered to adopt the best possible method for capacity building. This was the response from DoT officials. While Prasar Bharati official said financial autonomy is the most important followed by functional and operational, the NDMA official said that it needs autonomy in the area of recruitment and remuneration. In fact it has been a tradition that only government officials of the Indian Administrative Service cadre have been selected as Chairman. There has to be representation of other stakeholders in the TRAI. Most of the other stakeholders said that TRAI needs autonomy in the following order- financial autonomy, functional & operational, capacity building in ICT policy research followed by recruitment & remuneration.

10. Which method would best suit the purpose of strengthening the TRAI financially?

Contribution to TRAI General Fund from the one time License fees, Contribution from operators as a percentage of their Revenues , Funding from directly the Consolidated Fund of India (not through DoT).

For financial autonomy **34 %** respondents said that TRAI funds should directly come from Consolidated Fund of India (CFI), **14 %** people suggested that operators should contribute to TRAI fund from annual license fees and **52 %** respondents said that the present system of receiving funds from CFI through the DoT was ok. The DoT officials informed the researcher that although the TRAI funds are routed through the DoT, this is standard operating procedure as funds from CFI can be withdrawn by the line ministry only; hence, the TRAI funds come through the ministry and DoT. The former TRAI advisor confirmed this and added that direct withdrawal of funds from the CFI has been granted only to the judiciary, CAG and the Election Commission of India. No regulator in India has been empowered to receive funds directly from the CFI. So, it will require an amendment in the TRAI Act for this to be implemented. In the opinion of the DoT official the operators should not be allowed to fund the TRAI as it may influence the functioning of TRAI. Prasar Bharati official said that the TRAI should be funded by the contribution by the operators. This will lessen the burden on the Government. While the NDMA official said that there is no need to strengthen TRAI financially. It is well funded. Most of stakeholders said that TRAI should be made financial autonomous through Funding from directly the Consolidated fund of India (not through DoT) and through funding from contribution from operators as a percentage of their Revenues. One stakeholder stated that TRAI needs to receive funds directly from CFI (Not through DOT) and that it should not at all be through DOT, because it creates powers of DOT over TRAI. Some stakeholders suggested that contribution to TRAI General Fund should

be made from the one time License fees and that it should be only 1% of the operators' license fees. The former advisor of TRAI expressed the opinion that like SEBI, IRDA, TRAI should be allowed to retain some portion of the license fees so to make it partly autonomous financially.

- 11. In its annual report 2010-11, TRAI has said that it is unable to attract & retain talent, what do you think are the major reasons for this? Large part of the staff is on deputation , Inability to offer attractive pay package to deputationists, Inability to offer attractive pay package to recruits from Industry /private sector , Lack of financial autonomy for deciding suitable salary structure for deserving candidates. Any other**

Inability to offer attractive pay packages- 62% and Lack of financial autonomy- 24%, large part of the staff is on deputation- 14 % .In the opinion of DoT officials the TRAI is not able to attract recruits from Industry /private sector as it cannot offer attractive pay package to them. According to the Prasar Bharati and NDMA officials the key reason is lack of financial autonomy for deciding suitable salary structure for deserving candidates followed by inability to offer attractive pay package to deputationists. In the opinion of the academicians turned industry expert, there is a bias in selection of TRAI members and Chairman. Fair opportunity should be given to candidates from the private sector, academicians, economists etc. In the present scenario, only IAS/ITS cadre candidates are appointed leaving no opportunities for appointment of non IAS/ITS professionals. As suggested by the academicians, the government should recruit regulatory officials for all regulators from the Indian Economic Services (IES) cadre. These officials can advise and assist the regulator in economic matters. The stakeholders from consumer groups opined out that the selection of the TRAI chairman should not be left to the minister or government alone; the potential candidates should be interviewed by the Parliamentary Standing Committee headed by the leader of the opposition. The opinion of this Parliamentary Standing Committee should be taken into consideration before taking the final decision regarding the appointment. This arrangement is followed in appointment of heads of regulators in the UK.

- 12. Does the fact that the TRAI chairman has tenure of 3 years have a negative effect on the TRAI regulatory functions? If yes, which areas do you think get affected the most?**

Descriptive statistics: 52% of the respondents said that fact that the TRAI chairman has tenure of 3 years has no impact on the TRAI regulatory functions. Of the 29 % respondents who said that it has a negative impact **half** of the respondents said that it adversely affects Development and nurturing of Human resource and the other **half** said that it affects Institution building of TRAI. The DoT officials said that the Government

organisations work with the help of certain well defined processes and hence, the chairman's tenure may not have an impact on its functioning. The Prasar Bharati official agreed with her colleagues from DoT but, the NDMA official added that the recruitment of the TRAI should be done in a transparent manner with opportunity given to candidates from the private sector, academicians, economists etc. And the tenure should be increased to 5 years. One of the TRAI officials opined that the recruitment of the TRAI should be done in a transparent manner with opportunity given to candidates from the private sector, academicians, economists etc. And that the tenure of the Chairman should be increased to 5 years. Academicians and consultants added that the shorter tenure has a negative impact on the institution building of TRAI and so the tenure should be increased to 5 years. The independent consultant pointed out that the Indian government should follow the method of appointing economists and academicians to the post of Chairman of the regulator followed by UK. This practice was initiated by the then PM of UK, Ms. Margaret Thatcher. Representatives of the operators said that shorter tenure of the chairman affects institution building and development and nurturing of human resources.

13. Many key positions in TRAI are held by officers deputed from DoT, BSNL/MTNL as they have in-depth knowledge of the sector and knowledge of Government functioning. Will it add to the efficiency and impartiality of TRAI if these officers are permanently tenured with the TRAI? Yes NO

34% of the respondents agreed with the point that it will add to the efficiency and impartiality of TRAI if deputed officers are tenured with the TRAI. No- 24 % and no comments- 42 %. The DoT officials said that the present system is OK as shorter tenure is usually associated with lesser chances for abuse of authority. But, their colleagues from Prasar Bharati and NDMA said that it will add to efficiency and impartiality of TRAI. The academicians and consultants too agreed that if the official is competent, he/she should be allowed to be tenured with TRAI. Some of the operators' representatives said yes and also added that there should be a balance between deputed and permanent staff. While other said that rotation is good as it prevents bias towards any one service provider. One stakeholder who said no highlighted that lack of representation of persons from private sector in TRAI staff.

14. How do you think the TRAI should address the need for human resources capacity building in ICT regulation? Which method do you feel- Collaborate with premier institutes for starting courses on ICT regulation, Collaborating with DoT in Telecom Centres of Excellence to Fund research projects in ICT policy domain, Any other

80% of the respondents say that TRAI should collaborate with premier institutes for starting courses on ICT regulation and that this option is the best one for human resources

capacity building in ICT regulation. Most of the stakeholders agreed in unison that the two initiatives that will lead to capacity building are collaborate with premier institutes for starting courses on ICT regulation and collaborating with DoT in Telecom Centres of Excellence to Fund research projects in ICT policy domain. Other sector regulators have set-up institutes for capacity building for their sector such as Institute of Insurance and Risk Management, set up by Insurance Regulatory Development Authority of India (IRDA) in Association with the State Government of Andhra Pradesh. National Institute of Securities Markets (NISM) established by the Securities and Exchange Board of India (SEBI), the regulator for securities markets in India. The Indian Institute of Corporate Affairs IICA was established by Ministry of Corporate Affairs with an aim of capacity-building in the domain of corporate affairs.

5. Discussion of the Findings of the stakeholder's interviews:

5.1 (A) Framework:

1. Only 29% of the experts agree with the idea that policy implementation functions of DoT and TRAI should be merged. It is important to note that a serving senior official in TRAI said that there should be only one regulatory body to avoid the problem of delay and forum shopping by telecom operators. Stakeholders pointed out the lack of separation between policy formulation and policy implementation as the key problem. And have added that Government should amend the TRAI act to widen the scope of TRAI to include licensing. 80 % of the respondents agree that the Indian Telecom Regulatory System is unpredictable and uncertain, thus justifying the need for this research effort.
2. 42 % of the respondents agreed with the 6th Pay Commission report which has recommended that the necessity of Telecom Commission should be reviewed. The Government officials as well as operators' representatives pointed out that the Telecom Commission has inter-ministerial role on policy issues. It also serves as a body that protects the interests of the government. However, finance ministry has a representative in the TRAI board to represent the government and to protect its interests. Hence, cross-ministerial considerations are addressed in the TRAI itself and hence, there is a duplication of this function in the TC. The issue of spectrum allocation should be moved to the Prime Minister's office (PMO) as it demands cross- ministerial co-operation which can be efficiently done from the PMO or should be merged with the DoT. The assertion that TC only supervises inter-ministerial issues is not entirely correct as TC also gives recommendations and approval to license related issues, which is a part of policy implementation and does not involve any inter-ministerial discussions. For instance, in the case of allowing winners of Broadband Wireless Access (BWA) spectrum to offer voice, the matter was referred to TC for its approval, which after due consideration was approved by the TC (Economic Times, Feb, 2013).

So, the TC does perform regulatory functions and hence the section of TC that does these functions should be merged with the TRAI.

3. Almost all the stakeholders replied in the negative saying that it will lead to role duplication as TDSAT is already functioning in this domain. Moreover the pendency with the TDSAT is not very high. One respondent pointed it out that even in the current system consumer groups first go to TRAI for mediation and if they are not satisfied they go to TDSAT.
4. 80% of the respondents said that the Telecom and I& B ministries be merged to facilitate the Telecom-Broadcasting convergence and that this merger should facilitate (1) Single license for telecom & broadcasting and (2) Common taxation. Former and the present I & B ministers have also seconded this suggestion for the merger of the ministries. Moreover, regulatory functions of the I & B ministry are being done by the TRAI. With reference to FDI, However, as pointed out by senior experts from the Government, the I & B ministry for national interests would like to have greater control on the content shown on TV and other media, hence, it is not feasible to allow FDI of 100 % in media company.

5.2 (B) Process of Policy Formation :

5. **From the survey:** 70% of the respondents agreed on the point that opaqueness and uncertainty in the policy formation set in after the submission of recommendations by TRAI. And 30% said that in some cases recommendations that were finalized by TRAI were never discussed in the open house. These recommendations may have been added by the TC when it reviewed the original TRAI recommendations. This in the opinion of some of the stakeholders also gives an opportunity for back door discussions with the officials concerned. All these issues give rise to uncertainty and opaqueness. In the opinion of one of the former officials and serving Prasar Bharati official the DoT does not give reasons for its stand in a transparent manner. Moreover, **62%** of the respondents said that the participation of DoT/ Telecom Commission as stakeholders in the TRAI consultation process will solve/minimize the problem of delay, opaqueness & uncertainty in policy formation. This is not an alien suggestion as in case of stakeholder consultation process of Odisha Electricity Regulatory Commission, the State Department of Power participates as a stakeholder in Odisha, India participates as one of the stakeholders by contributing to the consultation process.
6. **67%** of the respondents said that setting a reasonable deadline of 3 months for the DoT to take action on TRAI recommendations can solve the problem of delay in finalization of regulations. The TRAI does give a date for publication of its position, but, the Telecom Commission and the DoT usually do not have a pre-prescribed date for publishing their positions.

5.3 (C)Autonomy to the regulator

7. Out of the total respondents **62%** feels that TRAI needs Functional & Financial autonomy. For financial autonomy **34 %** respondents said that TRAI funds should directly come from Consolidated Fund of India (CFI), **14 %** suggested that operators should contribute to TRAI fund from annual license fees and **52 %** respondents said that the present system of receiving funds from CFI through the DoT was ok. The former TRAI advisor confirmed this and added that direct withdrawal of funds from the CFI has been granted only to the judiciary, CAG & the Election Commission of India. So, it will require an administrative and legal amendment to enable the TRAI to be directly funded from CFI and this is the case with all sector regulators in India. Prasara Bharati official as well as operator representatives said that the TRAI should be funded by the contribution by the operators. This arrangement will reduce the cost of regulation for the Government and will also make TRAI financially autonomous. This model is being followed by SEBI and IRDA in India.
8. The opinion of stakeholders that there is a bias in selection of TRAI members and Chairman is not entirely wrong as former and serving senior TRAI officials have all been bureaucrats. Moreover, TRAI does not have an advisory council that represents various stakeholders and offers policy recommendations to the regulator as has been observed in case of IRDA and OERC. This arrangement can address the problem of opaqueness in policy formulation and implementation.
9. **52%** of the respondents said that fact that the TRAI chairman has tenure of 3 years has no impact on the TRAI regulatory functions. Of the **29 %** respondents who said that it has a negative impact and that it adversely affects Development & nurturing of Human resource and Institution building of TRAI. In the present scenario, only IAS/ITS cadre candidates are appointed leaving no opportunities for appointment of non IAS/ITS professionals. From the stakeholder responses it emerges that the selection of the TRAI chairman should not be left to the minister or government alone; the potential candidates should be interviewed by the Parliamentary Standing headed by the leader of the opposition. Moreover, the TRAI Chairman as per the TRAI Act 1997 can be appointed and dismissed by the central government for objective reasons without the approval of the Parliament thus comprising on the guarantee of tenure irrespective of the decision taken by the regulator.
10. 80% of the respondents say that TRAI should collaborate with premier institutes for starting courses on ICT regulation and that this option is the best one for human resources capacity building in ICT regulation. The TRAI presently conducts regular capacity building sessions for its officials and offers internships to postgraduate students. In comparison with other sector regulators such as RBI, IRDA, SEBI, the TRAI has not started or supported any academic institution for capacity building in telecom regulation.

6. Conclusions :

1. Irrespective of their affiliations and profile, a majority (**80%**) of the experts agree that telecom regulation in India is uncertain and unpredictable, justifying the need for critically analysing the Telecom Regulatory Framework.
2. The primary reason for the unpredictable and uncertain nature of policy formation is the opaqueness in policy formation that sets in after submission of recommendations by TRAI to the DoT as confirmed by **70%** of the experts.
3. As mentioned by a serving senior official of TRAI, the very fact that a number of bodies are involved in regulation in the country, gives opportunity to operators to indulge in forum shopping and playing one body (TRAI) against the other (DoT/Telecom Commission) for their individual benefits.
4. The role of Telecom Commission (TC) needs to be reviewed as its erstwhile regulatory function is now being done by TRAI and so, that section of TC can be merged into TRAI and function that deals with cross-ministerial co-operation in issues like spectrum allocation should be merged with the DoT, thus dissolving the Telecom Commission.
5. There is an overwhelming agreement (**80%**) from all the stakeholders that the Telecom & Broadcasting ministries should be merged and issuance of single convergence license is the key demand.
6. **67%** of the respondents said that setting a reasonable deadline of 3 months for the DoT to take action on TRAI recommendations can solve the problem of delay in finalization of regulations.
7. **62%** of the respondents said that the participation of DoT/ Telecom Commission as stakeholders in the TRAI consultation process will solve/minimize the problem of delay, opaqueness & uncertainty in policy formation.
8. **52%** of the respondents said that fact that the TRAI chairman has tenure of 3 years has no impact on the TRAI regulatory functions
9. With regards to autonomy, there is a contradiction in the opinion of the stakeholders and in particular the operators. Although they agree that there is lack of transparency in the regulatory system, they do not want measures that will strengthen the TRAI, its financial, functional or recruitment autonomy.
10. With most of the employees of TRAI coming from the telecom PSUs, there is very little active participation from other stakeholders.
11. **80%** of the respondents say that TRAI should collaborate with premier institutes for starting courses on ICT regulation and that this option is the best one for human resources capacity building in ICT regulation.

7. Recommendations:

1. Reduce the number of regulatory bodies to two (DoT & TRAI) instead of the 4-5 bodies.

2. The Government should review the role and need for Telecom Commission. In order to reduce the number of regulatory bodies in Indian telecom the government can have its representative in the TRAI board.
3. The Government should merge the Telecom and Information & Broadcasting ministries to form one converged ministry so as to reduce the number of regulatory entities in ICT industry in India.(2) Issue a unified license for telecom and broadcasting services.
4. (1) Involve TC in TRAI consultation process by having a representative of the TC in the TRAI board. (2) The DoT should make its position on a particular issue public while approving the policy/regulation. (3) Setting of a deadline for DoT/TC to give its approval on policy matters. Any modifications in license conditions should be mandatorily made only after the approval of the Competition Commission of India.
5. Initiate the process for amendment of the TRAI Act to facilitate funding of the TRAI directly from CFI (2) A percentage of the license fees should be deposited in the TRAI fund to be utilized by TRAI for its regulatory functions.
6. The government must mandate the TRAI to constitute an advisory council that has representation from stakeholders.
7. Involve the Parliamentary Standing Committee in the appointment of the board members/chairman of the regulator (2) Encourage the appointment of board members/chairman from private sector, academics consumer.
8. Collaborate with or start an institute that helps in capacity building in telecom policy & regulation.

8. References:

1. 2013 Outlook(2013): Indian Telecommunication Services available at [http:// india ratings .co.in /upload /research/specialReports/2013/1/18/fitch18Indian.pdf](http://india ratings .co.in /upload /research/specialReports/2013/1/18/fitch18Indian.pdf) assessed on 5th March 2014.
2. Ashley C. Brown, Jon Stern, and Bernard Tenenbaum and Defne Gencer (2006) , “Handbook for Evaluating Infrastructure Regulatory Systems”, The World Bank.
3. Ashok V. Desai (2006), “India's Telecommunications Industry- History, Analysis, Diagnosis”; Sage Publications India Pvt.
4. Asoka Balasooriya, Quamrul Alam and Ken Coghil (2006) , “The Effectiveness Of The Telecommunications Regulatory Regime: The Case Of Sri Lanka Telecom,.
5. Barbara A. Cherry and Steve S. Wildman (1999), “Institutional endowment as foundation for regulatory performance and regime transitions: the role of the US constitution in telecommunications regulation in the United States”, Telecommunications Policy 23.
6. Brian Levy and Pablo Spiller(1994), “The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulations”, Journal of Law, Economics & Organisation, Vol 10,.
7. Carsten Fink, Aaditya Mattoo and Randeep Rathindran(2001) , “Liberalizing Basic Telecommunications :The Asian Experience”.
8. Cellular Mobile Telephone Service, (2005) license available at <http://www.dot.gov.in/cmts/cmtsindex.htm> accessed on 27th April 2013.

9. Chun Liu & Krishna Jayakar (2012) , “The evolution of telecommunications policy-making: Comparative analysis of China and India”, *Telecommunications Policy* 36 (2012) 13–28.
10. CUTS Center for Competition, Investment & Economic Regulation (CUTS C-CIER)(2008), “Comparative Study of Regulatory Framework in Infrastructure Sector: Lessons for India” ,.
11. Declining FDI in telecom worries FinMin (2013) , September,2013 available at <http://www.thehindubusinessline.com/industry-and-economy/info-tech/declining-fdi-in-telecom-worries-finmin/article5176461.ece> assessed on 28th March 2014.
12. Department of Telecommunications, Results of 3G auctions(2010) available at http://www.dot.gov.in/sites/default/files/3G_Auction_-_Final_Results_0.pdf assessed on 10th March 2014
13. Eric Harwit(2008), “China’s Telecommunications Industry: Development Patterns and Policies”
14. Gertrude Makhaya and Simon Roberts (2003), “Telecommunications in Developing Countries: Reflections from the South African experience”, *Telecommunications Policy* 27 (2003) 41–59
15. Gül Sosay (2009), “Delegation and Accountability: Independent Regulatory Agencies in Turkey” *Turkish Studies* 09/2009.
16. Gurcan Gulen, Ruzanna Makaryan, Dmitry Volkov and Michelle Foss (2007) , “Improving regulatory agency efficiency and effectiveness- Best practices, processes & Organisational Structures”.
17. Harsha Vardhana Singh, Anita Soni, and Rajat Kathuria (2000) , “Telecom Policy Reform In India” ,.
18. Irene Wu (2008), “Who Regulates Phones, Television, and the Internet? What Makes a Communications Regulator Independent and Why It Matters”, *Perspectives* | Vol. 6/No. 4 769,.
19. Jim Chen (1997) , “The Legal Process and political economy of Telecommunications Reform” , *Columbia Law Review*, Vol. 97, No. 4,.
20. Jon Stern (1997), “What makes an Independent Regulator Independent? .”, *Business Strategy Review*, , Volume 8 Number 2, pg 67-74.
21. Judith Mariscal(2004), “Telecommunications Reform in Mexico from a Comparative Perspective by ,*Latin American Politics and Society*, Vol. 46, No. 3,Autumn.
22. Laura Hosman and Philip N. Howard (2014) , *Telecom Policy Across The Former Yugoslavia: Incentives, Challenges, And Lessons Learned* , *Journal Of Information Policy* 4 67-104.
23. Leonard Waverman and Pantelis Koutroumpis (2011) , “Benchmarking Telecoms regulation- the telecommunications Regulatory Governance Index” , *Telecommunications Policy*, vol. 35, issue 5, pages 450-468.
24. Martin Painter and Shiu-fai Wong (2008) , “Varieties of the Regulatory State? Government-Business Relations and Telecommunications Reforms in Malaysia and Thailand”, Elsevier.
25. Masahiro Mogaki (2013), *The Transformation of the Japanese State in an Era of Governance: A Case Study of the Evolving Regulatory Framework*.
26. National Telecom Policy,(1994) available at <http://www.dot.gov.in/telecom-polices/national-telecom-policy-1994>.
27. National Telecom Policy (1999) available at <http://www.dot.gov.in/telecom-polices/new-telecom-policy-1999>.
28. National Telecom Policy(2012) available at <http://www.dot.gov.in/sites/default/files/NTP-06.06.2012-final.pdf>
29. Necmiddin Bagdadioglu & Murat Cetinkaya(2010), “Sequencing in telecommunications reform: A review of the Turkish case” , *Telecommunications Policy*. Volume : 34.

30. Patricia K. McCormick (2001) , “Telecommunications reform in Botswana: a policy model for African states , Telecommunications Policy 25.
31. Paula Chakravartty (2004), “Telecom, national development and the Indian state: a postcolonial critique,.
32. Payal Malik (2007), “WDR Dialogue Theme 4th cycle discussion Paper”, WDR0703.
33. Ping Gao and Kalle Lyytinen (2000) , “Transformation of China's telecommunications sector: a macro Perspective”, Telecommunications Policy 24 , 719-730.
34. Ping Gao& Adnan Rafiq (2009), “The transformation of the mobile telecommunications industry in Pakistan: A developing country perspective”, Telecommunications Policy 33 , 309–323.
35. Prashant Singhal (2013). The telecom tangle available at http://www.business-standard.com/article/management/the-telecom-tangle-113102000608_1.html assessed on 5th March 2014.
36. R. Jai Krishna and Kenan Machad (2013) Wall Street Journal India, ”Telecom Sector Needs More Than FDI available at <http://blogs.wsj.com/india-real-time/2013/07/18/telecom-sector-needs-more-than-fdi/> assessed on 11th March 2014.
37. R.S. Jain (2001), “Spectrum auctions in India: lessons from experience” Telecommunications Policy 25 671–688.
38. Rafiq Dossani and S. Manikutty(2000), “Reforms in The Telecommunications Sector In India”.
39. Rahul Mukherji (2009), “Interests, Wireless Technology, and Institutional Change: From Government Monopoly to Regulated Competition in Indian Telecommunications”, The Journal of Asian Studies Vol. 68, No. 2.
40. Rahul Tongia (2006), “Connectivity and the Digital Divide- Technology, Policy and Design tradeoffs for Developing Regions”.
41. Rajesh Jain (2010). India’s Telecom Scam: How Can a Corrupt System Be Cleaned? Available at <http://knowledge.wharton.upenn.edu/article/indias-telecom-scam-how-can-a-corrupt-system-be-cleaned/> assessed on 10th March 2014.
42. Rajni Gupta (2002), “Telecommunications Liberalisation: Critical Role of Legal and Regulatory Regime” , Economic and Political Weekly, Vol. 37, No. 17 (Apr. 27 - May 3, 2002), pg. 1668-1675.
43. Ramesh Subramanian (2008), “The (Continuing) Evolution of India’s Telecom Policy” , available at <http://www.iima.org/CIIMA/7%20CIIMA%202008-8-3%20Subramanian%2033-48.pdf>
44. Richard W.S.Wu, and Grace L.K.Leung(2012) , “Implementation of three network convergence in China:A new institutional analysis Telecommunications Policy, 955–965.
45. Rohan Samarajiva, Helani Galpaya & Dimuthu Ratnadiwakara (2007) , “Telecom Regulatory Environment (TRE) assessment: Methodology and implementation results from five emerging economies”.
46. Sanjoy Banka (2006) , “Mergers & Acquisitions (M&A) In Indian Telecom Industry- A Study” ,December 2006 The Chartered Accountant.
47. Scott Wallsten (2003), “Of Carts and Horses: Regulation and Privatization in Telecommunications Reforms”, Journal of Policy Reform 6.3: 217-231.
48. Scott Wallsten (2001) , “An Econometric Analysis Of Telecom Competition, Privatization, And Regulation In Africa And Latin America, The Journal of Industrial Economics, Volume XLIX.
49. Scott Wallsten (2002) , “Does Sequencing Matter? Regulation and Privatization in Telecommunications Reforms”.

50. Scott Wallsten(2003), “Regulation and Internet Use in Developing Countries Related Publication .
51. Telecom Regulatory Authority of India (2014), Press Release No. 13/2014, available at <http://www.trai.gov.in/WriteReadData/WhatsNew/Documents/Press%20Release%20on%20Telecom%20Subscription%20Data%20as%20on%2031st%20January,%202014'.pdf> assessed on 28th March 2014.
52. Telecom Regulatory Authority of India (2005) , Study Paper No. 2/2005 on ‘Indicators for Telecom Growth available at <http://www.trai.gov.in/trai/upload/studypapers/2/ir30june.pdf> assessed on 28th March 2014.
53. Varadharajan Sridhar & Rohit Prasad(2011), “Towards a new policy framework for spectrum management in India”, Telecommunications Policy, vol. 35, issue 2, pages 172-184, 2011.
54. Veneta Andonova & Luis Diaz-Serrano (2009), “Political institutions and telecommunications” , Journal of Development Economics 89 77–83, 2009.

Appendix 'A'

Questionnaire used for collection of stakeholders' feedback about Indian Telecom Regulatory Framework (ITRF)

(A) Framework

1. Do you agree with International Investment Agencies who have termed the Indian Telecom Regulatory System as unpredictable and uncertain? Yes No

If Yes, What do you think are the reasons (in order of priority)

Opacity in policy formation post regulator's consultation process

Absence of distinct roles for policy formation & policy implementation

Large number of regulatory bodies

Lack of Autonomy to the regulator

Absence of a coherent Telecom policy/ regulations irrespective of the political party/ minister in charge.

2. Is there a need for modifying/ redesigning the telecom regulatory framework? Yes
NO

3. In the current framework do you see role duplication in some entities?

Yes NO If yes, which ones?

- (1) Telecom Commission & TRAI- Regulation (2) WP&C and TRAI- Spectrum Management for Govt. & Commercial use (3) DoT and TRAI- Policy formation & policy implementation (4) Any other

4. What approach should be taken to tackle with this issue? (AND /OR)

- 1) Merger with other regulatory entities
2) Omission, why?
3) Bifurcation of certain entities-

5. The 6th Pay Commission in its report has recommended that the necessity of Telecom Commission should be reviewed, do you agree with this suggestion – Yes NO
If No, r h-

6. With the current framework, are the rights of individual consumer safeguarded? If yes how and which body does it _____.
If no, which body do you think can do that?

7. Should the TRAI be given certain limited reconciliatory powers to settle minor cases amongst licensees so that the pending cases with TDSAT can be reduced?

Yes NO If No, reason

8. Like in some developed countries, should the Telecom and I& B ministries be merged to facilitate the Telecom-Broadcasting convergence? Yes No , If No please give your suggestion
9. Which of the following points should the modification facilitate (rank them in order of priority)?
- (1) Single license for Telecom & Broadcasting
 - (2) Common taxation
 - (3) Single policy for FDI
 - (4) Effective Interconnection & revenue share between telecom & broadcasting providers
 - (5) Any other _____

If No, why?

(B) Process of Policy Formation

10. According to you, at which stage of the policy formation do opaqueness and uncertainty set in?
- (1) Consultation process
 - (2) Recommendation process by TRAI
 - (3) Review of TRAI recommendations by DoT and policy finalization.
11. Will the setting a reasonable deadline of 3 months for the DoT to take action on TRAI recommendations solve the problem of delay in finalization of regulations?
Yes No . If No, please suggest other alternative.
12. Will the participation of DoT/ Telecom Commission as stakeholders in the TRAI consultation process solve/minimize the problem of delay, opaqueness & uncertainty in policy formation? Yes NO
If No, reasons

(C) Autonomy

13. Do you feel that in the current regulatory framework, the TRAI is adequately empowered? Yes NO
If No, in which changes should be made to the current framework to empower it?
14. In which area(s) does the TRAI need autonomy (rank them in order of priority)
Financial Functional & Operational Recruitment & Remuneration
Capacity building in ICT Policy Research.

15. Which method would best suit the purpose of strengthening the TRAI financially?

Contribution to TRAI General Fund from the one time License fees

Contribution from operators as a percentage of their Revenues

Funding from directly the Consolidated fund of India (not through DoT).

16. In its annual report 2010-11, TRAI has said that it is unable to attract & retain talent, what do you think are the major reasons for this? (rank them in order of priority)

Large part of the staff is on deputation

Inability to offer attractive pay package to deputationists

Inability to offer attractive pay package to recruits from Industry /private sector

Lack of financial autonomy for deciding suitable salary structure for deserving candidates. Any other

17. Does the fact that the TRAI chairman has tenure of 3 years have a negative effect on the TRAI regulatory functions? If yes, which areas do you think get affected the most

Institution building of TRAI

Development & nurturing of human resource

Any other If No? Reason

18. Do you agree with the suggestion that position of TRAI chairman should be elevated to a constitutional position like the Chief Election Commissioner or the CAG Yes

NO

19. Many key positions in TRAI are held by officers deputed from DoT, BSNL/MTNL as they have in-depth knowledge of the sector and knowledge of Government functioning. Will it add to the efficiency and impartiality of TRAI if these officers are permanently tenured with the TRAI ? Yes NO

20. How do you think the TRAI should address the need for human resources capacity building in ICT regulation? Which method do you feel

Collaborate with premier institutes for starting courses on ICT regulation

Collaborating with DoT in Telecom Centres of Excellence to Fund research projects in ICT policy domain

Any other