ISSN 2319-6157

THE ADMINISTRATOR

Journal of LBSNAA

October, 2014
Volume 55, Number 2

LBSNAA

Lal Bahadur Shastri National Academy of Administration

Published by : TRPC
Lal Bahadur Shastri National Academy of Administration, Mussoorie (Uttarakhand)
Printed in India at Print Vision, Dehradun - 248 001

The Administrator

Volume 55 October, 2014 Number 2

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Making Peter,Tom, Dick and Harry pay for Paul's Follies: Regulatory Exceptionalism to Pacta Sunt Servanda during Performance of Public Contracts in India

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Abstract

The doctrine of Pacta Sunt Servanda revolves around the necessity of ensuring that reliable promises are made; and that any defaults by either party are properly evaluated and addressed during adjudication of contractual disputes. As an international best practice, this doctrine is always applied strictly with very few permissible exceptions; and in certain cases of public contracts, additional theories of exceptionalism operate so as to protect public interest even in case of omissions by public officials vis-à-vis important requirements of public procurement policy. India, on the other hand, recently witnessed certain orders by its premier regulator in the electricity sector, where the Pacta Sunt Servanda doctrine was substantially derogated from, potentially resulting in misallocation of risk and liability. This short academic paper examines in detail certain procedural and substantive deviations by the Indian regulator, either expressly or impliedly, and concludes with suggestions for restoring the balance in public contracts, with a view to ensuring reliability of contractual promises made in public domains.

"Exceptionalism" is a key defining construct of the legal framework for government procurement in the United States—one that recognises a special status for the State in its public contracting activities by reducing the obligations or expanding the power of the US Government as a contracting party, as compared to purely private contracts[1]. To the extent that the State is also a custodian of public interest, the exceptionalism doctrine therefore implicitly recognises a special status that safeguards cumulative public interest of US citizens as well. Relevant instances in this regard are special constitutional rights of the State not to be sued without its consent or without express waiver of its immunity[2] in the US, with the outcome that contractors, regulators and courts can go only up to certain limits and no further while claiming relief or while passing orders against the State. Similarly, the US Government cannot be enjoined from further unauthorised use of third-party intellectual property rights, or be subjected to enhanced damages for their willful infringement during the performance of a government contract[3] , thereby granting primacy to the rights of US citizens to uninterruptedly avail public goods and services over competing claims for third-party IPR protection. Yet another instance of exceptionalism operating in favour of public interest in the US is the "Christian" doctrine, which permits the incorporation by operation of law, of mandatory contract clauses that express a significant or deeply ingrained strand of US public procurement policy, if procurement policies are being avoided or

evaded, either deliberately or negligently, by lesser officials. In some cases, it has also been applied to incorporate less fundamental or significant mandatory clauses if they were not written to benefit or protect the party seeking the incorporation[4] . Thus, even if a public procurement contract in the US fails to specifically provide for an important clause, either because of omission or collusion by / of officials, the clause can be "read into" the public contract if it represents a significant, deeply-ingrained strand of US public procurement policy. Simultaneously, certain evolving legal developments in the EU seem to indicate an even harsher type of the Christian doctrine, where for the first time in 2004, the Regional Court of Munich stated an exception from the dogma that there could not be any detraction of concluded public procurement contracts because of an infringement of (European) Public Procurement Law[5] . The Court essentially held that under special circumstances, there could be a right for a public authority to terminate a contract as ultima ratio (a means of last resort) where there was an infringement of EU procurement law.

India, on the other hand, has a large number of cases where the State is usually at the receiving end, with little recognition of underlying public policy implications of such adversarial pronouncements: that undue financial hardship or injunctions against the State and against state / public utilities amount to, in effect, undue financial hardship and injunctions against Indian citizens who are the ultimate financers and consumers of relevant public goods and services. Realistically speaking, the negotiating authority of consumer / citizen stakeholders is too dispersed for them to effectively match strong litigation resources available with private parties making claims against the State or against state public utilities; and it therefore stands to reason that public fora tasked with adjudicating upon disputes involving such stakeholders may need to exercise some basic degree of caution and due diligence in the interest of meaningful and fair resolution of disputes relating to public contracts.

Introduction

India recently witnessed two such orders[6] by the Central Electricity Regulatory Commission[7] (CERC)—India's premier electricity regulator—that passed on added costs to public utilities engaged in purchase of power from certain private entities, and thereby in effect, added costs to electricity consumers, arising out of certain input costs whose risks under contract were required to be borne and absorbed by electricity producers. In effect, these orders confirmed and considerably expanded the interim orders[8] that were issued in this regard sometime last year. The dispute before the regulator related to electricity tariffs that were the result of a fixed-price contract settled by a competitive bidding process; and certain electricity producers subsequently claimed higher tariffs ostensibly attributable to new, unforeseen, post-award coal pricing regulations by the Indonesian Government. The regulator has allowed claims for compensatory tariffs outside of the contractual framework, in the process, making Indian electricity consumers and citizens pay for public and private welfare in Indonesia[9] ,

against cost risks that were to be borne by electricity producers themselves. While this leaves virtually no incentive for minimisation of input costs by electricity producers, a far more problematic dimension of these orders is the resultant disruption of the sanctity of a competitive public contracting process[10], other than disruption of the sanctity of contracts caused by these regulatory interventions. All this, when there was clear evidence before the CERC that force majeure or change of law clauses in the contracts did not apply to the benefit of private parties in the instant case; and that risks of input costs fluctuation were consciously borne by the private parties while entering into these contracts.

Given the significant cost implications on public utilities and electricity consumers, the CERC orders have generated considerable public attention and debate in India[11]. In view of this public interest background, and without commenting on the merits of the dispute before the CERC, this short academic paper explores some of the important legal complications that could emanate from various procedural and substantive aspects of the CERC orders. A proper legal analysis is particularly important in light of the minority opinion[12] expressed during the first interim orders of the CERC, where one dissenting member had noted adverse implications of excessive regulatory intervention on contractual disputes between electricity producers and procurers. The issues raised in the dissenting opinion at the time of the interim orders, even though important from public policy and legal perspectives, remain unaddressed and unattended to even at the time of the final orders that were issued by the CERC recently.

Regulation vs. Dispute-Handling

Under section79(1)(b) of the Electricity Act[13] 2003, the CERC has the authority to regulate tariffs of generating companies other than those owned or controlled by the Central Government as specified in section79(1)(a), if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State. However, the CERC's jurisdiction to handle disputes regarding tariffs set under its section79(1)(b) authority is covered by section79(1)(e) of the Electricity Act, which *mandatorily requires* the CERC *to refer such disputes to arbitration;* and the CERC can itself appoint an arbitrator[14] under certain circumstances if not provided under contract. These powers of the CERC to adjudicate can at best be delegated to members of the Commission itself[15] ; and cannot be delegated any further[16]. The principle contained in the law therefore clearly seems to be that the electricity regulator, while adjudicating upon contractual disputes, should not retain for itself the role of an arbitrator; and that while adjudicating upon disputes, the CERC must maintain an arms-length distance at all times in the interest of fair play between competing interests of producers, procurers and consumers.

In the instant case, while exercising its jurisdiction to adjudicate upon disputes with regard to tariffs already set, the CERC did not refer the dispute for arbitration as required by law, but implicitly read the power to adjudicate into disputes *within its authority to regulate tariffs*[17] under section79(1)(b) of the Electricity Act, even

though the Electricity Act clearly differentiates between *regulation of tariffs per se and adjudication of disputes by providing two different sub-sections* for each of these legal actions. This seemingly procedural deviation in the CERC's orders is important in view of its substantive implications, as under the Arbitration and Conciliation Act[18] 1996, an arbitral tribunal has the authority, at the request of either party to a dispute, to order any party that it take any interim measure of protection as the arbitral tribunal may consider necessary in respect of the subject matter of the dispute[19]. In addition, this Act also empowers a party to a dispute to make an application to a Court of competent jurisdiction for taking certain specific interim measures[20] in relation to contract performance during the course of arbitral proceedings already underway. Therefore, even if the contractual dispute had indeed been referred to by the CERC for arbitration as required by the Electricity Act, the ability of either party to the dispute to request interim orders from such fora would not have been impaired at all.

One problem with the CERC orders therefore is that it mixed up powers of regulation of tariffs under section79 (1)(b) with powers of dispute handling under section79(1)(e), when the legal requirements for the two are procedurally and substantively different. A second problem is that the CERC, while adjudicating upon a contractual dispute between two parties, assumed unto itself the role of an arbitrator—something that section79(1)(e) of the Electricity Act clearly does not provide for. Thirdly, the CERC utilised the services of an ad-hoc committee to assist it in resolving the dispute[21] rather than the arbitration methodology required by the Electricity Act. In the process, the CERC has also failed to maintain an arms-length distance between the process of regulation of tariffs and the process of resolution of contractual disputes, as was clearly envisaged under the Electricity Act. This is important, as on an earlier occasion in the instant dispute, the Chairman of the CERC had expressed a clear preference for requiring resolution of contractual disputes by core processes of arbitration[22], rather than using tertiary authority of the regulator for mediating and influencing contractual risk and liability allocation between electricity producers and procurers.

Transparency and Consultation Requirements

Under section 79(3) of the Electricity Act, the CERC is mandatorily required to ensure transparency while exercising its powers and discharging all its functions, including regulation of tariffs and the process of adjudication of claims. It is for this reason that the CERC regulations require an extensive process of publication of proposed tariffs and public consultations thereon. As a fundamental legal corollary, the transparency and consultation protocols that apply to original tariff setting need to apply equally to the process of post-award tariff renegotiations, since otherwise the very purpose of embedding transparency and consultation as mandated by law can be easily frustrated by non-transparency during post-award renegotiation of contracts[23].

As mentioned earlier, the CERC referred the dispute to an ad-hoc "expert" committee rather than to an arbitrator as was required by law; and this committee

seems to have conducted its deliberations with considerable amount of secrecy, without holding any public consultations or publishing a draft report and inviting comments thereon. Rather, the Committee thought it fit to classify its report as "Strictly Private and Confidential", a classification that is in clear contradiction to transparency principles laid down under section 79(3) of the Electricity Act. It is easy to see that if the Electricity Act requires the CERC itself to observe transparency in exercising its powers and discharging its functions, then this principle of transparency automatically flows down into the conduct of any body that performs any functions assigned to it by the CERC, as otherwise core transparency requirements imposed by law on the CERC can be simply whittled down by delegation of functions by the CERC.

In sum and on deeper examination, it appears that the ad-hoc committee has deviated from the transparency requirements enshrined in the Electricity Act by: (i) not inviting public comments on the dispute referred to it by the CERC; (ii) by not publishing an interim report in the public domain asking for public comments thereon; and (iii) by classifying its report as "Strictly Private and Confidential", when instead the subject-matter before the Committee warranted it to conduct public consultations, and its report to be readily available to the public for inputs and / or comments. In its final orders, the CERC did not take note of the requirements of section 79(3) that needed to be satisfied by the CERC itself, as well as by the ad-hoc committee functioning in pursuance of its directions. The submissions of merely one consumer organisation and two consumers who proactively got themselves impleaded before the CERC in some form were treated by the regulator as "adequate opportunity to interested parties", when section 79(3) of the Electricity Act clearly required the CERC to proactively involve consumers in a far more transparent and meaningful manner. In this context, it may be important to note that the Electricity Act provides for a Central Advisory Committee (CAC) to advise the CERC on, inter alia: (i) major questions of policy; (ii) matters relating to continuity of services by licensees; and (iii) protection of consumer interest[24] . Even though all three elements listed above were attracted in the facts and circumstances of the case, the CERC did not consider referring the matter to the CAC for its advice at any stage of the regulator's interim or final orders on the dispute.

Thus, a critical legal deficiency with this new development is the lack of involvement of important stakeholders in the process. Both electricity consumers and public stakeholders have rights originating from the Electricity Act, as well as from CERC's own regulations, to be involved in determination (and as a natural corollary, in re-determination) of tariffs. While the original tariffs were set through an elaborate process of public consultations, the re-negotiation thereof has now been conducted without following an equally transparent and consultative process, merely by adopting a different phraseology of a "compensation package" for the re-negotiation exercise[25] , which, de facto, amounts to tariff renegotiation, and one that could therefore have been done only through open consultations as envisaged under the Electricity Act.

Doctrine of Impossibility and Frustration of Contracts

Separately, the Indian Contract Act[26] 1872 contains abundant guidance on "impossibility of performance" and "frustration" of contracts. Under these provisions, contracts can be voided by a party unable to perform its contractual obligations due to unforeseen circumstances only after claiming "impossibility of performance" or "frustration of contract", but commercial hardship cannot be a ground for invoking such claims[27] . In fact, if the circumstances are such that a promising party would have known, upon due diligence, contract performance to be impossible in the first instance, then it is the promisors (in the instant case, the electricity producers) who would need to compensate the promisees (i.e. state utilities)[28] and not vice-versa.

The claim by electricity producers that their contracts had been frustrated was contained in the petition the CERC, but it is not known if there was any insistence by the CERC to require the claimants to comply with certain basic and preliminary requirements usually needed for successful invocation of impossibility and frustration under the Indian Contract Act. This is particularly important, since section 175 of the Electricity Act clearly establishes that the provisions of the Electricity Act (and therefore, implicitly, the orders of the CERC) are in addition to and not in derogation of the provisions of any other law in force. As a corollary, the regulatory or dispute-handling authority could not have been in derogation of the Indian Contract Act laying down the substantive and procedural requirements for claiming impossibility and / or frustration of contracts. In fact, in this case, there were two ways in which electricity producers could have claimed impossibility and frustration: firstly, under their contracts with Indonesian suppliers before an appropriate forum[29] in order to avoid the burden of Indonesian regulations; and secondly, before an Indian arbitral or judicial forum[30] , in respect of their contracts with electricity procurers. It appears that electricity producers made no claims in respect of the effects of Indonesian regulations on their contracts with Indian purchasers before either of these fora.

In this connection, it is also pertinent to note that section 63 of the Electricity Act requires the CERC to adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government, which indeed was the case with the present controversy. However, in effect, the CERC has ended up modifying the tariff it had adopted earlier, including changing the fundamental risk-allocation principles forming part of contracts concluded under policies on competitive determination of tariff issued by the Central Government: an intervention that could be seen as being non-compliant with section 79(4) of the Electricity Act that requires the CERC to be guided by, inter alia, the tariff policy published by the Central Government.

International Best Practices on Sanctity of Contracts

In international legal practice, sanctity of contracts and reliability of promises are typically considered to be core principles of contractual relationships under the

principle of pacta sunt servanda (agreements must be kept) that has evolved over time[31] . Over a period of time, in view of practical commercial experience, two limits to this principle have evolved: (i) clausula rebus sic stantibus (contract contained an implied term that certain important circumstances remain unchanged); and (ii) jus cogens (compelling law). Of these two competing principles, the former clausula rebus sic stantibus is of relevance to severe commercial hardship; whereas the latter jus cogens refers to certain fundamental, overriding principles of international law such as crimes against humanity and law of genocide from which no derogation is ever permitted.

In the UK, for instance, under the clausula principle, "frustration" can be invoked by an affected party to void a contract where a change of circumstances makes the performance drastically dissimilar from what was originally agreed upon in the contract. Similarly, in the US, "impracticality" can be invoked as a defence for non-delivery, if performance has been made impracticable by the occurrence of a contingency, the non-occurrence of which was a basic assumption on which the contract as made[32] . This exception is therefore applied very narrowly in most legal jurisdictions; and dispute resolution fora typically require claimants to prove all of the following elements: (i) lack of foreseeability and lack of risk-allocation; (ii) exploration of alternative performance; and (iii) timely notice[33] . Public procurement law governing federal contracts in the US is equally strict in its treatment of claims of exemption from non-performance due to impracticality of performance; and a contractor needs to clearly show: (i) that performance is substantially more difficult or expensive than foreseen by the parties at the time of entering into a contract; and (ii) that it has not assumed the risk of this difficulty or risk either by agreement or by custom. Under these narrow requirements, claims by contractors typically fail, for instance in the case of fixed-price contracts with conscious assumption of input cost risk, and where cost fluctuations are considered as normal, foreseeable risks in the ordinary course of business[34] .

These principles are similar to the Indian law, and require the change in circumstances to grave and to not have been specifically addressed at the time of contract formation. In contrast, a perusal of the CERC orders shows that the risks of input cost escalations were consciously borne by the electricity producers at the time of entering into contracts with procurers. Thus, the CERC's orders have had the effect of overturning a cardinal principle of contracts in India, by granting benefits to a non-performing supplier on account of commercial hardship, and diluting in the process core doctrinal requirements of "impossibility" and "frustration" that are important elements of the legal framework of the Indian Contract Act as well as of best international practices.

CVC's Oversight Guidance on Renegotiation of Public Contracts

It is interesting that these benefits have been granted to electricity producers in a non-transparent manner, without fully taking into account the legal rights of consumers or of the general public. In this connection, it is important to note that in the interest of transparency and competition in public contracts, oversight and

regulatory guidance in India typically requires public authorities to ensure that variation in terms and conditions of contracts should not be resorted to as a matter of routine. At the pre-contract stage, for instance, any variation in an RFP needs to be notified to all potential bidders, giving them adequate time and opportunity to comment on such changes, or to file revised bids. Insofar as post-award changes to public contracts are concerned, the Central Vigilance Commission[35] (CVC) guidance on contract administration[36] issued in 2002 specifically requires that any relaxation in contract terms should be severely discouraged after conclusion of a contract; and in exceptional cases where modifications are considered absolutely essential, the same can be allowed only after taking into account corresponding financial implications. These instructions apply equally to contracts awarded by the Government, as well as contracts awarded by state utilities that have been affected by the CERC orders. Against this background, the regulator's orders grant favourable post-award concessions to electricity producers at variance with originally agreed terms and conditions of signed public contracts: a change strongly discouraged by the CVC from procurement integrity perspectives.

Forum Shopping and Exhaustion of Remedies

The orders under examination showcase the severe public interest implications of unbridled forum shopping, arising out of the failure to require exhaustion of remedies by claimant parties. In the first instant, the impossibility effects of Indonesian regulations should have been agitated by electricity producers before the appropriate forum under their contracts with Indonesian suppliers of coal: something that was apparently not done. Secondly, the case clearly required electricity producers to agitate their dispute before an Indian arbitral forum, both under the dispute-handling provisions of the Electricity Act, as well as under specific contractual arrangements that were governed by provisions of the Indian Contract Act and the Arbitration and Conciliation Act. But instead, the instant dispute was handled directly by the CERC itself, without invoking an arms-length arbitration process. Thirdly, if at all the dispute was to be referred to a committee rather than the arbitrator, a proper course of action under the Electricity Act was for the CERC to refer it to the CAC rather than an ad-hoc committee as has happened in the instant case that could have placed better legal resources with the committee members[37].

An important evidence regarding potential forum shopping in this case is that an electricity producer had separately filed a petition in April 2013 before one of the state regulators—the Rajasthan Electricity Regulatory Commission (RERC)—requesting for essentially identical reliefs as had been sought from the CERC. This was followed by the filing of an interlocutory application (IA), within a fortnight of the main petition, asking the RERC to allow an ad-interim pass-through of imported coal costs[38] . While the main petition is still before the state regulator at the time of writing this paper, the IA was not accepted by the RERC, and a final order disposing off the IA was issued on January 2014 by the RERC—a full month before the CERC's final orders under analysis. Strangely, the state

utilities failed to bring these important developments to the notice of the ad-hoc committee as well as the CERC: that similar relief had been claimed by an electricity producer from the state regulator, or that the IA had been rejected by the state regulator; thus resulting in a situation where the CERC orders have remained oblivious and uninformed of these important legal developments.

Interestingly, the CERC also made the Central Government a respondent in the instant case, notwithstanding the superior position that the Central Government enjoys under the Electricity Act by way of: (i) issuing tariff policies under section 3 of the Electricity Act; (ii) issuing policy directions under section107 thereof; and (iii) its power to make rules to be enforced by the CERC under section176 thereof. Thus, by reducing the Central Government to the status of merely a respondent in a specific dispute before the CERC that actually related to contract administration and adjudication between two other parties, the CERC has inadvertently derogated the position that the Central Government enjoys under law. If, for instance, the Central Government were now omit to refer or appeal in the matter before an appropriate forum so as to uphold sanctity of concluded contracts or to uphold the importance of transparent stakeholder consultations, the Central Government could well find itself being hit by principles of res judicata. The resulting natural implication would be that the one important policy and rule-making institution / forum—the Central Government—that is expected to uphold the rights of consumers and citizens could find its hands tied down, thereby making protection of public and stakeholder interests dependent upon the inefficiency of public policy processes. In the instant case, the problem has been compounded further because the state public utilities—the procuring entities under the relevant public contracts—failed to properly highlight important legal aspects while filing counters before the CERC and the ad-hoc committee. As can be easily seen from a bare perusal of the counter-submissions now available in the public domain, the state utilities made a number of unclear submissions couched in usual official / administrative language, rather than presenting strong and narrow arguments with clear legal bases, when the latter would have been a far more effective litigation strategy for protection of their own commercial interests, as well as the interests of electricity consumers in the affected states.

Conclusions

The legal aspects of regulatory exceptionalism in the instant cases appear to have significant implications meriting urgent attention of governance institutions, while offering insightful glimpses to legal researchers and students into potential misallocation of risk and liability by dispute resolution fora. These cases contain a number of interesting departures from the requirements laid down by law for contract enforcement and electricity regulation in India, such as: (i) the regulator utilising the services of an ad-hoc committee that remained ill-informed of legal nuances, instead of using the proper committee as required under law; (ii) using an authority of direct regulation for dispute resolution, thereby intervening in contracts concluded under principles adopted and approved by the regulator

itself, instead of using its authority of arms-length dispute-handling through arbitration; (iii) diluting the principles of transparency and advance stakeholder consultations mandated by law for tariff-setting (and by extension to tariff renegotiations) by adopting the different phraseology of a "compensatory tariff"; and (iv) derogating from well-established principles of frustration and impossibility of contracts, with resultant misallocation of risk and concomitant liabilities to parties that are in no position to control the risk of input costs[39] . Given critical legal implications as outlined above, the regulator's orders may need urgent attention of affected Central and State Governments as custodians of public interest, as well as individual consumers and other stakeholders who have been adversely affected in the process. Prima facie, as outlined earlier, the regulator's orders go against the basic principles contained in the Indian Contract Act, as well as procedures for tariff re-determination under the Electricity Act.

The cases examined in this short paper also highlight the imperative need for adequate capacity-building amongst regulators in India, particularly on theories of law and theories of contracts[40] , as otherwise, regulators in India may tend to view their work as merely a technical one, without the need to properly appreciate and mitigate full public policy and legal implications of regulatory intervention and exceptionalism. In addition, they may need to also appreciate the importance of continuing and open adversarial argumentation, rather than mere reliance on in-house consultation and expertise. This may be of importance particularly in developing countries where it is relatively easier for vested interests to not only dominate public debate and discourse, but also operate in public policy spaces with tacit approval or oversight of at least some of the important stakeholders. The suggested course corrections are important, as else, we might increasingly witness post-award benefits and bailouts mediated by regulators, either because of inadvertent omissions or because of regulatory / state utility capture or overreach, and the exercise of tertiary regulatory authority may end up side-stepping relatively core legal requirements—as established by the Indian Contract Act, as well as legal authority of the State to control its contracts under the Indian Constitution and the compliance authority of institutions such as the CVC—all in one single shot.

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Notes :

[1] For an exceptionally insightful analysis of the doctrine of exceptionalism; see, generally, Schwartz, J. I. (2004), The Centrality of Military Procurement: Explaining the Exceptionalist Character of United States Federal Public Procurement Law, available online: http://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2024&context=faculty_publications.

[2] For details, see, generally, Jackson, V.C. (2003), Suing the Federal Government: Sovereignty, Immunity and Judicial Independence, available online: http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1111&context=facpub. See, also, Porter, R. (2006), Contract Claims Against the Federal Government: Sovereign Immunity and Contractual Remedies, available online: http://www.law.harvard.edu/faculty/hjackson/ContractClaims_22.pdf.

[3] See, e.g., Bergmann, W.C., and Bukola, A. (2009), Intellectual Property Rights in Government Contracts, available online: http://www.bakerlaw.com/files/Uploads/Documents/News/Articles/INTELLECTUAL%20PROPERTY/Andrews_Litigation_Reporter_Bergmann_Aina_7-2009.pdf.

[4] Christian Doctrine, Cohen Seglias, available online :http://www.cohenseglias.com/federal-contracting-database/christian-doctrine.

[5] Marschner, E. (2007), Contract and Adaptation of Contracts in the European Public Procurement Law—AComparative Study on the German an/documentsarchive/phdconference2007/contractandadaptationofcontractsintheeuropeanpublicprocurementlawerikmarschner.pd English Law of Public Procurement, available online http://www.nottingham.ac.uk/pprgdf.

[6] Coastal Gujarat Power Ltd. Vs. Gujarat Urja Vikas Nigam Ltd. & Others (Petition No. 159/MP/2012, February 22, 2014), available online http://www.cercind.gov.in/2014/orders/SO159.pdf. See, also, Adani Power Ltd. Vs. Uttar Haryana Bijli Vidyut Nigam Ltd. & Others (Petition No. 155/MP/2012, February 22, 2014), available online http://www.cercind.gov.in/2014/orders/SO155N.pdf.

[7] Official Website: www.cercind.gov.in.

[8] See, e.g., Coastal Guarat Power Ltd. Vs. Gujarat Urja Vikas Ltd. & Others (Petition No. 159/MP/2012, April 15, 2013), available online http://www.cercind.gov.in/2013/orders/159_mp_2012.pdf.

[9] Gulzar, N. (2013), Moral Hazard from CERC Ruling is a Reflection of India's Corporate Culture, available online http://gulzar05.blogspot.in/2013/04/moralhazard-from-cerc-ruling-is.html.

[10] Varottil, U. (2013), CERC Order in the Adani Power Case, available online http://indiacorplaw.blogspot.in/2013/04/cerc-order-inadani-power-case.html.

[11] See, e.g., State Utilities upset by recent CERC orders in favour of Adani Power and Tata Power, The Economic Times, March 3, 2014, available online http://articles.economictimes.indiatimes.com/2014-03-03/news/47859291_1_new-tariff-norms-tariff-regulations-private-power-producers; Why CERC's compensation to Tata, Adani for high coal prices sets dangerous precedents and dents competition, The Economic Times, March 2, 2014, available online http://articles.economictimes.indiatimes.com/2014-03-02/news/47799790_1_central-electricity-regulatory-commission-tata-power-and-adani-high-coal-prices; CERC bails out Tata Power, states may challenge order, Mint, February 22, 2014, available online http://www.livemint.com/Industry/PegcwBtILxHhBm5gbVyN5H/CERC-bails-out-Tata-Power-states-may-challenge-order.html.

[12] Coastal Gujarat Power Ltd., supra n.9.

[13] Act. No. 36 of 2003, available online http:/powermin.nic.in/acts_notification/electricity_act2003/pdf/The%20Electricity%20Act_2003.pdf.

[14] §158, ibid.

[15] §143, ibid.

[16] §97, ibid.

[17] Coastal Gujarat Power Ltd., supra n.7; Adani Power Ltd., supra n.8.

[18] Act No. 26 of 1996, available online http://keralamediation.gov.in/AC%20Act.pdf.

[19] §17(1), ibid.

[20] §9, ibid.

[21] The full report of the ad-hoc expert committee is available at http://www.cercind.gov.in/2013/Reports/COMREP_CGPL.pdf.

[22] AG says CERC can alter tariff. Will it?, Daily News and Analysis, August 30, 2012, available online: http://www.dnaindia.com/money/report-ag-says-cerc-can-alter-tariff-will-it-1734391.

[23] As a matter of fact, some of these pro-public consultation arguments were specifically brought to the notice of the CERC but did not get requisite due attention, perhaps due to the public policy focus of Prayas' submissions instead of a legal and/ or regulatory focus. See, for instance, Prayas (2013), Prayas submissions to CERC regarding petition for tariff revision filed by Coastal Gujarat Power Ltd. (Mundra UMPP), available online http://www.prayaspune.org/peg/publications/item/239-prayas-submissions-to-cerc-regarding-petition-for-tariff-revision-filed-by-coastal-gujarat-power-ltd-mundra-umpp.html. See also, CERC suggested to hold public hearing on tariff issues, Mint, August 27, 2013, available online http://www.livemint.com/Industry/9NOJM6JwuwPwAw2i2l0DFP/CERC-suggested-to-hold-public-hearing-on-tariff-issues.html.

[24] §81, supra n.14.

[25] For details of the compensation package determined by the CERC; see, supra n.7.

[26] Act No. 9 of 1872, available online:

http://comtax.up.nic.in/Miscellaneous%20Act/the-indian-contract-act-1872.pdf.

[27] For an insightful discussion on impossibility of performance and frustration under the Indian Contract Act, including important case law; see, Sharma, G., Impossibility of Performance and Frustration, available online: http://drgokuleshsharma.com/pdf/frustration.pdf.

[28] §56, supra n.27.

[29] The particular forum as agreed under their cross-border contracts with Indonesian suppliers of coal.

[30] As applicable under relevant provisions of the Electricity Act read with the Arbitration and Conciliation Act.

[31] Jiafeng, Y. (2010), A Study of Economic Hardship, copy available with the author. For an excellent treatment of grounds for exemption from contractual duties; see, also, Kull, I. (2001), About Grounds for Exemption from Performance under the Draft Estonian Law of Obligations Act, available online: http://www.juridicainternational.eu/public/pdf/ji_2001_1_44.pdf.

[32] Ibid.

[33] Augenblick, M., and Rousseau, A.B. (2012), Force Majeure in Tumultuous times: Impracticality as The New Impossibility, available online: http://www.pillsburylaw.com/sitefiles/publications/bylinedarticleforcemajeureintumultuoustimesjournalofworldinvestmenttrade031312.pdf.

[34] Cibinic Jr., J, Nash Jr., R.C., and Nagle, J.F. (2006), Administration of Government Contracts, pp. 314-322, Wolters Cluwer (Fourth Edition).

[35] Official Website: www.cvc.nic.in.

[36] Central Vigilance Commission (2002), Common Irregularities/ Lapses Observed in Award and Execution of Electrical, Mechanical and Other Allied Contracts and Guidelines for Improvement thereof, ¶22.1.5, available online: http://cvc.nic.in/COMMON%20IRREGULARITIES.pdf.

[37] Even though the ad-hoc "expert" committee utilised the services of a legal consultant, it is clear from a bare reading of various legal defects in the dispute-handling process outlined in this paper that this committee remained bereft of proper legal advice on risk-allocation principles under the Indian Contract Act.

[38] Adani Rajasthan Power Limited Vs. Jaipur Vidyut Vitaran Nigam Ltd. & Others (Petition No. RERC-392/13, Dated January 30, 2014), available online http://rerc.rajasthan.gov.in/Orders/Order216.pdf. See, also, CERC Tariff Hike may need State Regulator nod: Raj Discom, Moneycontrol.com, February 25, 2014, available online http://www.moneycontrol.com/news/business/cerc-tariff-hike-may-need-state-regulator-nod-raj-discom_1047804.html.

[39] Fundamentally, the public-private partnership mechanism is essentially based on the concept of passing on to private concessionaires/ parties the risks that they are more qualified to assume or to control; see, e.g., Mairal, H.A. (2007), The Impact of Public Procurement and Rules of Government Contracting on Public Spending and Attracting Private Infrastructure Investment, available online:http://www.uncitral.org/pdf/english/congress/Mairal.pdf.

[40] Verma,S.(2013),Dispute Resolution in Public Contracts, SSRN, available online: http://ssrn.com/abstract=2267056.

Epilogue

In an important and related development in a subsequent but similar dispute, the Rajasthan Electricity Regulatory Commission (RERC)—a State Electricity Regulator—has directed : (i) the payment of an interim compensation to an electricity producer; and (ii) setting up of an ad-hoc committee, with undefined terms of reference, to recommend to the RERC suitable compensatory tariff: all this while holding that changes to input costs did not constitute either force majeure or change in law under agreed contracts —the underlying Power Purchase Agreements (PPAs). The state regulator's orders suffer from similar defects as with CERC orders analysed earlier in this paper, namely: (i) the regulator utilising the services of an ad-hoc committee, instead of using the proper committee as required under law; (ii) using an authority of direct regulation for dispute resolution, thereby intervening in contracts concluded under principles adopted and approved by the regulator itself, instead of using its authority of arms-length dispute-handling through arbitration; (iii) diluting the principles of transparency and advance stakeholder consultations mandated by law for tariff-setting (and by extension to tariff renegotiations) by adopting the different phraseology of a "compensatory tariff"; and (iv) derogating from well-established principles of frustration and impossibility of contracts, with resultant misallocation of risk and concomitant liabilities to parties that are in no position to control the risk of input costs. While giving no public notice or opportunity to electricity consumers to rebut the petitioner's claims, the RERC orders also create a rather peculiar and unprecedented situation from legal and regulatory perspectives, by effectively directing respondents to agree to the constitution of an ad-hoc committee with unknown terms of reference . In addition, while calling its hearings "final" , the RERC ended up issuing an interim order on the subject . Quite evidently, breaches of long-respected boundaries of contract law in India through regulatory exceptionalism and overreach are still continuing and show no visible signs of abatement.

Liberalization in Rail Container Freight Segment in Indian Railways: A Critical Analysis

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Abstract

The wave of liberalization and privatization witnessed in the various sectors of Indian economy has had a limited impact on Indian Railways. This essay seeks to explore the case of one attempt at liberalization and reregulation undertaken by the Ministry, namely permitting private entities to undertake movement of container freight on privately-owned rakes. It examines the stimuli behind the decision, its impact on the sector and how the piecemeal attempts at liberalization fail in the absence of wider structural responses and an independent regulator.

Introduction

A state-owned entity, Indian Railways is a vertically integrated body and a monopoly. It is responsible for production, procurement and maintenance of infrastructure as well as operations, marketing of railway services. The wave of liberalization, privatization and emergence of independent regulatory agencies witnessed in the various sectors of Indian economy, particularly the network industries (especially Telecom, Electricity, Airlines), has had a limited impact on Indian Railways; though there have been sporadic attempts to liberalize its "non-core"[1] activities. This essay seeks to explore the case of one attempt at liberalization and reregulation undertaken by the Ministry, namely permitting private entities to undertake movement of container freight on privately-owned rakes. It examines the stimuli behind the decision, its impact on the sector and whether it has succeeded in achieving the intended outcomes. The outcomes are analyzed based upon political underpinnings of liberalisation: Pragmatic vs Tactical vs Systemic, absence of an Independent Regulatory Agency (IRA) and the nature of railways as a network industry.

Unlike the railway reforms undertaken in the various state-owned railways (The Netherlands, UK and recently China) which are often characterized by vertical separation of operations from infrastructure and privatization in passenger and freight segments, the reforms in Indian Railways have essentially been attempted in the form of corporatisation, liberalization (reregulation) and, in a limited sense, privatization[2]. Until the liberalization of the rail-container segment in 2006, the preferred form of reform in Indian Railways was "corporatization" wherein a set of "non-core" activities were hived-off to a department-owned corporation. This entailed separation of ownership and management. There is autonomy for the corporation that more[3] often that allows the corporation flexibility and encourages innovation combined with the incentives that the market offers. Container

Corporation of India (CONCOR) is one such entity. Similarly catering and tourism related services in Indian Railways have been hived off to the Indian Railways Catering and Tourism Corporation (IRCTC). The other model, that is of Reregulation entails opening up of certain areas to competition from the private sector, with a revised regulatory framework. The government department retains a degree of regulatory control.

This essay examines a case of liberalization and reregulation. Rail-based container movement in Indian Railways was a monopoly of a "National Champion", Container Corporation of India (CONCOR). It did not require any budgetary support, and, in fact, paid dividend to Indian Railways. Given the vast hinterland of India, rail-based export-import container movement has tremendous potential, and the company witnessed an exponential growth since its inception in 1986 and grew at over 10% every year. However, in the overall scope of operations and revenues of Indian Railways, container traffic accounted for not more than 4% of its throughput and 5% of its revenues[4].

Background

In 2006, the Ministry of Railways decided to allow Indian companies, including subsidiaries of foreign companies registered in India for private ownership and operation of container trains on Indian Railways' network. The private operators, known as Container Train Operators (CTOs) could own and operate their own trains under license on payment of one-time registration fee and haulage fees to the Indian Railways (access charge for using the track and the network). A precise policy and regulatory framework was spelt out by means of a Model Concession Agreement (MCA).

In the political economy of India and for historical reasons, Indian Railways has been generally as a "strategic" sector having a role in nation-building (as an integrator). Besides on account of populist reasons and public sentiment there had been little political appetite for liberalization. Ministry had been keen to retain its monopoly and the departmental undertaking CONCOR had considerable influence within the ministry to stall any move towards liberalisation. The performance of CONCOR, operationally as well as financially had been quite impressive[5] and it was making new investments in rolling stock and terminal capacity to handle the growing demands that were fuelled by a rapidly growing Indian economy in this period. More importantly, Indian Railways too witnessed a financial turnaround: from 1999 onwards, it was generating surplus[6].

Nevertheless, there were a number of reasons for introducing private competition in a monopolistic segment of railways operations. There is a convergence of views on the importance of competition in improving the performance of network utilities and also in bringing down user tariff. If regulation could be confined to the core natural monopoly network, and competition introduced for the services supplied over the network, then efficiency and innovation can be encouraged (Newbery 2001). The popular view was that CONCOR was charging higher rates in absence of competition[7] and it was hoped that competition would usher in not

only efficiency but also economy. Ministry looked at higher levels of capacity creation and service innovations by having more players. During this decade (1996-2006) Indian economy was growing in the range of 8-9% per annum with the result that the export-import traffic also grew in excess of 15% per annum. CONCOR, with all its efforts, it was felt, was not able to meet the growing demands for rolling stock and terminals.

The Ministry also looked at the rail container sector to bring in more revenues for the organization by means of License Fee and haulage charges[8], and above all to increase the share of rail in the overall intermodal mix. The urgency was driven by the populist policy of cross-subsidising passenger traffic by freight and non-traditional earnings[9].

Unlike the railway reforms in Europe that were legitimated and / or driven by the directives of supranational bodies like the EU (Lodge 2002), Indian Railways' decision was not driven by any supranational agency. External stimulus came from other stakeholders in export-import trade: Port authorities, exporters and importers, shipping Lines and other ministries such as finance and Commerce.

Often major policy decisions are triggered by a crisis, and in case of rail container traffic, the trigger was a heavy congestion at Mumbai Ports and the delay in evacuation of inbound containers in 2006, causing a block in the supply chain in the ports and the railway network. The consensus in the cabinet was that reforms were needed to augment the existing rail-based infrastructure and bring about efficiency through competition. This leads us to the Ideational factors and isomorphism that played a part in the liberalization process.

With upswing in the economy and the wave of liberalization across the world and across industries, there was an atmosphere for reforms. State-owned network Industries, electricity (production, transmission and distribution) and Telecom (especially after 1999) witnessed widespread reforms in India including liberalization and privatization, and these sectors offered models for emulation. Railways Ministry was also under pressure to undertake reforms and the rail container sector segment appeared most attractive as it had the right kind of visibility and offered a good example of credible commitment by the government. It was tactically sound at the same time as it did not impinge on the politically sensitive and patronage-linked passenger and the core freight traffic. In its limited effort at reregulation, Indian Railways opted for domain-oriented approach (like the German Railways) unlike paradigm-oriented approach of railways reforms in the UK (Lodge 2002).

There was thus, a convergence of factors leading to the policy announcement and contrary to popular perception; there was no major outcry, populist reaction or antipathy. On the contrary, the shipping lines, the industry and ports welcomed the move. Even the investments and achievements by CTOs[10] were encouraging. By 2009, CTOs had invested nearly Rs 30,000 m in terminals, rakes, and handling equipment. Apart from the one time license fee of Rs 6400 m, they paid Rs 5850 m as haulage in 2008-09 to Indian Railways[11]. By 2010 CTOs had achieved a throughput that was 20% of that of CONCOR[12].

However, once the initial euphoria subsided, the limitations of the reforms became more evident. This is reflected in the very modest increase in the rail coefficient of the container traffic[13] since the policy announcement. Moreover, the number of privately-owned CTOs has fallen to 11, and the accent has been more on cherry-picking and cream-skimming rather than developing new streams of traffic[14].

Discussion & Analysis

As to the reasons why the first move at liberalization had a relatively modest impact, the explanation lies partly in the nature and the way liberalisation was effected, and in the nature of railways as a network industry. Due to various reasons, viz. populist culture of patronage in the Ministry and the reluctance of the bureaucrats in Railways, there was a degree of tentativeness in going all out for reforms. Indian Railways continued to be the policy maker, a monopolistic service provider, a competitor and the regulator. There was no provision of IRA in the policy and no appellate tribunal that one witnessed in other network industries that underwent liberalization like Electricity and Telecom.

De-jure there was a level-playing field for all the operators (including "National Champion" CONCOR); however, de-facto things were quite different (mainly for historical reasons). For example, while CTOs had to buy land for constructing terminals at market prices, CONCOR had been provided land at prime locations by Indian Railways on a long-term lease at nominal rates. Officers from Indian Railways were allowed to go on secondment to CONCOR which benefits from this precious resource, while the government policy restricted lateral movement of domain-experts (railway staff) on secondment / deputation to the private CTOs.

Liberalization in Indian Railways did not entail any vertical separation of infrastructure and operations and it continues to retain monopoly over haulage and the tariff thereof. Indian Railways has increased haulage charges on ten occasions from 2007-2012[15]. For the CTOs, haulage accounts for 70-75% of the operating costs and each upward revision comes as a setback. This is a double whammy for the reform process, besides hurting the CTOs, it militates against the inter-modal shift from road to rail that the policy sought to achieve .Moreover, the policy did not provide CTOs any service level guarantees from Indian Railways. CTOs were demanding guaranteed transit time or a fixed time tabled schedule for container trains, which Indian Railways denied on the ground of network capacity constraints.

These facts, seen from the point of view of the analysis of liberalization in network industries, underscore the need for an effective IRA and highlight the inadequacy of a 'pragmatic' reform in a subsector of network industry, besides calling for more comprehensive "upstream" reforms if the desired outcomes are to be achieved. From experiences and success in railways sector worldwide, it has been observed that unbundling of roles, separation of infrastructure from services, non-discriminatory access rights for infrastructure to all operators, and competitive access to private operators is essential (Cantos and Campos 2005). The European Union, in its reforms towards increasing rail market share, required railways in state member countries to be operated commercially like private companies,

opened the freight market to competition, separated accounts for infrastructure from services, provided competitive access to private operators, and introduced a defined policy for capacity allocation and infrastructure charging (European Commission Directive 2001). Although, it has to be conceded that the rail coefficient in freight traffic and has not increased much in Europe. Even within Europe there are variations in the forms of reregulation individual countries have undertaken (Thatcher 2011).

Presently, Indian Railways is the licensor, operator and the regulator. There have been too frequent increases in haulage charges. The way to address these anomalies is to have a strong IRA in place that can look at the issues of access, equity, service-level guarantees and tariff. Given the domain-oriented (Lodge 2002) nature of the reforms and the Ministry's hold, the independence of the Regulator is of paramount importance. However, the proposed Rail Tariff Regulator announced by the ministry[16] lacks complete autonomy and separation from the regulators as the Ministry's control is absolute in terms of budget and appointments.

Rail container liberalization represents a "pragmatic" form insofar as it was discrete and context-specific as opposed to tactical and systemic. It has been in the nature of introduction of competition downstream which limits the scope for competition and tariff reduction since proportion of fixed costs is high in network industries especially railways. Vertical separation, with a separation in the Indian Railways' roles of licensor, operator and regulator, as witnessed in the privatization of British Rail and most recently in Chinese Railways, addresses the anomalies in the rail container sector liberalization, and also paves way for liberalization of other sectors in the organization: passenger, parcel and the freight segments (Raghuram 2011).

With its long railway leads, the segment has the potential for expansion provided the supply-side constraints of track capacity and faster and guaranteed transit are addressed. Indian Railways' example of liberalization in container traffic segment shows that piecemeal liberalization in network industry is not a sufficient enabler of efficiency, economy and expansion. For that to happen, structural reforms (upstream) in the organization and an IRA are important preconditions, especially in absence of supranational stimulus and the lack of political commitment.

Conclusion

Indian Railway's example of liberalisation in container traffic segment shows that piecemeal liberalization in network industry is not a sufficient enabler of efficiency and economy. Moreover, additional capacity creation and an increased quantum of investment from the private sector, as was envisaged in the policy, is unlikely to materialise in network industries unless the requisite structural reforms are undertaken. These reforms, such as vertical separation (between operations and maintenance on the one hand and the Ministry and the Railway Board on the other) are imperative. Besides a level playing field that separates the department and the departmental undertaking is also necessary. And finally, reregulation

would always be incomplete without an independent regulator. The creation of an IRA is arguably the foremost requisite if the government of the day is to signal its credible commitment to liberalization and reregulation. Taken together, these reforms, in the Indian context are a must for liberalization in railways to succeed especially in the absence of a supranational stimulus (as in the European Union) and the lack of sufficient political commitment towards more systemic reforms.

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Notes:

[1] Non-core: ancillary activities like catering, on-board services and sectors as distinct from bulk freight traffic and all forms of passenger traffic.

[2] Privatization here refers to outright sale of on organization or partial disinvestment although there has not been a single case of outright sale of any undertaking of Indian Railways, there has been partial disinvestment of certain railway owned undertakings as a stage in the gradual rolling out of privatization process.

[3]There is no budgetary grant and the corporation is run like an independent business entity with autonomy in administrative matters, but the Department retains ownership and control over appointment of senior management of the corporation.

[4]Indian Railways Yearbook 1993 to 2012.

[5]CONCOR rate of growth (compounded Annual Growth Rate) was 10.5% from 1994-2006

[6]Operating Ratio (excess of revenue over expenditure or amount spent for every 100 units of income earned) improved from 95 to 83 between 1997-2006 (Indian Railways Yearbook 1998 to 2006) unlike the German and other European Railways that were facing financial crunch and required subsidies from the government.

[7]The cost of transport is an extremely crucial factor in this sector; studies have shown that in export-import logistics (in India), inland haulage costs had a rather disproportionately high share in the overall costing (Raghuram 2009).

[8]As mentioned earlier, container traffic accounted for around 4-5% of Indian Railways' revenue, and with creation of additional capacity through a policy statement, the ministry looked at the possibility of increasing the revenue by 10-14% per annum in this segment (Singh, 2009).

[9]Between 2002-2011 there was no increase in passenger fare, despite the average annual inflation rate of 7%., freight charges on an average increased by over 35% in this period.

[10]CTO: Container Train Operators, these were the private licensees that entered the segment

[11]One hundred Indian Rupees equal one Pound Sterling.

[12]CONCOR reported carrying a total of 2,308 thousand TEUs (twenty feet equivalent unit = 1 container), total CTOs traffic estimated at 450 thousand TEUs.

[13]Percentage of container traffic hauled by rail.

[14]Popular routes: Mumbai to Delhi still carries over 60% of the traffic, newer streams are not patronized by the CTOs to the extent envisaged and went underutilized.

[15]Haulage costs have increased by over 100% from the time of announcement of the policy. This contrasts with bulk freight goods tariff that has been increased by around 35% and passenger fares that were untouched until 2012.

[16]Creation of a Rail Tariff Regulator was announced by the Railway Minister during budget session of the Parliament in March 2014.

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Policy Implications for Promoting Use of LPG Stove and Improved Biomass Stove in Indian Households Based on Cost Benefit Analysis

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Abstract

Huge number of annual morbidities and mortalities (4 to 5 lakhs) are caused by the smoke effects from use of biomass stove for cooking purposes in Indian households. This research project was undertaken by the author as part of coursework of Master's, as a student of Environmental Economics and Policy at the Nicholas School of Environment Duke University to determine the cost benefit ratio of using LPG stove, improved biomass stove and biomass stove for various sizes of Indian households. Primary data used in the study is sourced from Indian Human Development Survey (IHDS) 2004-05 that the author analyzed using STATA 11. Secondary data used in the CB analysis are based on published scientific articles from where boundary values were determined. The result shows that positive benefits occur from use of LPG stove occur for larger size of Indian households only. Also improved chulhas (ICs) actually can cause more smoke effects to the users since they are likely to be used for longer hours. This has policy implications for promotion of smokeless chulhas (stoves) and clean fuels like LPG amongst approx. 160 million Indian households that use traditional stoves.

Introduction

Description of problem

Use of bio mass for cooking is prevalent in many parts of the developing world. Due to incomplete combustion of solid fuels like firewood, coal, animal dung and farm refuse contains harmful gases like Carbon Monoxide, Nitrous Oxide, Sulfur dioxide and particulate matters of sizes of from less than 1 µm to more than 10 µm. There are severe problems associated with use of biomass based stoves. There are users who suffer respiratory infections and several severe life threatening health problems. There is an established causation between several diseases such as Acute Lower Respiratory Infection (ALRI), Acute Respiratory Infection (ARI), Heart Disease and hypertension (Dherani, Pope et al. 2008). Causation for respiratory infections in traditional stove users varies (Perez-Padilla 2010).

Determinants of indoor air quality

The mass concentration of airborne air particulate matter (PM) in particles below 2.5 mm in aerodynamic diameter ($PM_{2.5}$) has been significantly associated with excess annual mortality from cardiac disease and lung cancer, whereas larger ambient air particles that deposit in the thorax (PM_{10}) are associated with

pulmonary system irritation and ultrafine particles ($PM_{0.15}$) have been associated with lung inflammation (Laden 2000; Pope, Burnett et al. 2002; Pope III, Burnett et al. 2004; Lippmann 2009; Stanek, Sacks et al. 2010) These pioneering studies have demonstrated the potential utility of using such data in analyses that can provide a sound basis for guiding future research and control activities on those PM sources that have the greatest public health relevance (United States EPA 2004). Acute respiratory infections (ARI) contributed the largest share of 8.5% of lost Disability Adjusted Life Years (DALYs) to the Global burden of Death and Diseases (GBDD) in 1990 (Smith, Corvalán et al. 1999).

Mortality and morbidity rates

As per the World Health Organization (WHO), Indoor Air Pollution (IAP) may have caused 1.96 million premature deaths worldwide in 2004. Approximately 70% of Indian households, more than 160 million households, comprising about 770 million people are estimated to depend on polluting cook stoves that burn solid fuel, mainly wood or coal. It is also estimated that approximately 400,000 to 550,000 people primarily women and children die of the resulting indoor air pollution each year in India. This makes the cook stoves problem in India and the potential market for cleaner cook stoves amongst the largest in the world (Zhang 2009).

Dosimetry of smoke from cook stoves

The health damage produced by air pollution is dependent on the dose received by the population in question. Because dose is difficult to measure for large numbers of people, air pollution studies have tended to focus on exposure, which is usually assumed to be closely proportional to dose. In practice, however, a surrogate for exposure, ambient concentration, has been actually measured in most instances (Smith, Aggarwal et al. 1983). Concentrations of PM^{10}, averaged over 24-hour periods, were in the range 300 to 3,000 (or more) micrograms per cubic meter (g/m^3). 24-hour concentrations can be taken as a reasonable estimate because these levels are experienced almost every day of the year. By comparison, the U.S. Environmental Protection Agency's annual air pollution standard for PM^{10} is 45 g/m^3. With use of biomass, CO levels are generally not as high in comparison, typically with 24-hour averages of up to 10 parts per million (ppm), somewhat below the World Health Organization (WHO) guideline level of 10 ppm for an eight hour period of exposure (Saksena, Thompson et al. 2004).

Methodology

The research project has used the data collected by a survey of households done in India in 2005 to determine the parameters for use in a cost benefit analysis of using two kinds of efficient stoves.

a. Improved biomass burning stoves.

b. LPG stoves.

The following types of households in the survey are considered separately for the purpose of making comparison on the costs and benefits of using a fuel type for cooking:

1. Users of only biomass cook stoves
2. Users of only improved biomass cook stoves
3. Users of only LPG cook stoves

Data source

The India Human Development Survey (IHDS), 2005 is a nationally representative, multi-topic survey of 41,554 households in 1503 villages and 971 urban neighborhoods across India. It has household indicators; a panel component; and a rich array of contextual measures. Data from the India Human Development Survey (IHDS) is publicly available from the Inter-University Consortium for Political and Social Research, http://www.icpsr.umich.edu/ICPSR/access/index.html.

The values of following inputs were computed using STATA from the data files and put in to excel calculations for obtaining cost benefits. The mean values were used for obtaining the CBA for normal case. The following are the highlights of the computed values:

1. The pattern of stove usage of those households that only used one of the three types of stoves under consideration for the CBA was segregated to determine the respective costs of fuel, excluding the cost of collection of fuel wood and the use of stoves in hours per day.
2. Rates of morbidities, the number of sick days and the costs of treatment, hospitalization, transport due to respiratory infections and major smoke related morbidities viz. cardio vascular disease, hypertension, cataract and cancer was determined separately for the three categories of households for adults and children separately. It was assumed that the two types of morbidities have additive effects.
3. Per day mean income was used to compute the wages lost for the number of sick days for the adult population.

Values of following parameters were obtained from review of scientific literature and put into excel calculation sheet for computing CBA for the three cases:

1. Mortality rates for the diseases assuming that the rates for ALRI and COPD were same as found in the literature.
2. The mean value of statistical life for India was used from the literature for the computation.
3. Percentage of treatment, medicine and transport costs that can be attributed to informal care givers costs separately for respiratory infections and major morbidities.

4. For LPG, the carbon intensity of LPG as obtained from the web is 58.3 g of emissions / MJ and the LPG conversion factor as obtained from web is 46.1 MJ / kg of fuel.

To obtain the benefits from morbidity reduction, the cost of illness was computed using the following formula separately for respiratory infections and major smoke related diseases:

COST OF ILLNESS = (medication / hospital / clinic / traveling) costs + number of days sick x (per day income + care givers costs (as % of medication / hospital / clinic / traveling costs))

The results were rerun for the two parameters that are normally varying in most of the households. Thus the sensitivity analysis is shown graphically.

a. Family size.

b. Use of stove.

Results

TABLE : COMPUTED VALUES FROM THE IHDS 2005 DATA

Parameter	Number of observations	lower value	mean value	upper value
household size	41554	1	6	28
fuel costs including capital costs				
biomass costs per month(Rs.)	3979	0	95	1175
LPG costs per month (Rs.)	25302	0	270	990
biomass costs for Improved stoves per month(Rs.)	170	0	101	700
Private cost of illness (Rs.) incl. loss of wage				
medication/ hospital/ clinic / traveling costs				
for respiratory infections				
for biomass users (Rs.)	774	0	210	8400
sick days adults	5940	0	7	30
sick days children	5874	0	7	30
for improved stove users(Rs.)	49	0	270	1400
sick days adults	26	2	11	30
sick days children	22	2	6	30
for LPG users (Rs.)	598	0	242	8400
sick days adults	1098	0	6	30
sick days children	1017	0	5	30

Parameter	Number of observations	lower value	mean value	upper value
for smoke related major morbidity				
for biomass users (Rs.)	2085	0	4783	210000
sick days adults	3113	0	64	366
sick days children	2819	0	63	366
for improved stove users(Rs.)	196	0	5518	108500
sick days adults	21	0	82	365
sick days children	2	0	8	15
for LPG users (Rs.)	1982	0	5962	510000
sick days adults	1591	0	41	365
sick days children	58	0	29	365
income per day per person	213041	0	53	5404
cooking time (hrs per day)				
for biomass stoves	54220	0	3	10
for improved stoves	413	1	5	10
for LPG stoves	25413	0	3	10
Incidence rate (%)				
respiratory infections (ARI)				
for biomass users	54651		4309	= 0.08 (8%)
for improved stove users	413		38	= 0.09 (9%)
for LPG users	22429		1393	= 0.06 (6%)
major smoke related morbidity (ALRI/ COPD)				
for biomass users	54651		1226	= 0.02 (2%)
for improved stove users	413		8	= 0.02 (2%)
for LPG users	22429		762	= 0.03 (3%)
household size	215754	1	6	38
fuel collection time per day for biomass users (hr)	133182	0	0.5	5.3

Regarding the computed values of incidence rate of small and major smoke related morbidities, the incidence rates do not appear to decline with the users of improved stove and LPG. This indicates that the use of LPG and improved stoves actually may not benefit the households' health in case they are not used exclusively and the households' living conditions do not change. However the futility of using mean values does appear to indicate that the results might not be true indicator of the net benefits for the members most exposed to the smoke.

TABLE: ASSUMED VALUES FROM PUBLISHED LITERATURE etc.:

Parameter	lower value	mean value	upper value
Mortality rates by ALRI, COPDetc. (%)			
for biomass users		28 (Smith, Samet et al. 2000; Kulshreshtha, Khare et al. 2008)	
for improved stove users		80 % of biomass stoves	assumed
for LPG users		20% of biomass users	-do-
Value of statistical life in India (Rs.)	1.3 million (Bhattacharya, Alberini et al. 2007)	15 million (Madheswaran 2007)	25.4 million (shanmugam 2006)
Care givers costs(as % of medicine, hospital and travel costs) :			
for major diseases:		2.8 (Stevens, Turner et al. 2003)	
for respiratory infections:	17 (Hollinghurst, Gorst et al. 2008)	24 (Ehlken, Ihorst et al. 2005)	70 (Lambert, O'Grady et al. 2004)
Social discount rate for India (%)		5.2 (Kula 2004)	
Private discount rate for India (%)		50 (Pender 1996)	
cost of traditional stove ($)		10	various sources
cost of LPG stoves ($)		50	- do-
cost of LPG fuel ($/kg)		0.42	-do-

adults	respiratory infections	major morbidities	total
for biomass stove users:			
medication / hospital / clinic / traveling) costs per year (Rs.)	210 x 12= 2520	4783	7303
wages per day (Rs.)	53		
sick days per year	7 x 12	64	
wages lost (Rs.)	53 x 7 x 12 = 4452	53 x 64 = 3392	7844
care givers costs	0.24 x 210 x 12 = 604	0.028 x 4783 = 134	738
total per year (Rs.)	7576	830 9	15885
total per year ($)	168	185	353
total per case ($)	14	185	
for improved stove users:			
medication / hospital / clinic / traveling) costs per year (Rs.)	270 x 12 = 3240	5518	8758
wages per day (Rs.)	53		
sick days per year	11 x 12 = 132	82	
wages lost (Rs.)	53 x 11 x 12 = 6996	53 x 82 = 4346	11342
care givers costs	0.24 x 270 x 12 = 778	0.028 x 5518 = 154	932
total per year (Rs.)	11014	10018	21032
total per year ($)	245	223	467
total per case ($)	20	223	
for LPG users:			
medication / hospital / clinic / traveling) costs per year (Rs.)	242 x 12 = 2904	5962	8866

Regarding the computed values of the cost of illness following observations are noted:

1. The costs of illness are higher for improved stoves than biomass stoves. Though improved stoves are known to be less polluting but even the best ICs do pollute through leakage of flue gases and from the top of the flue into the houses of neighbors (Smith, Samet et al. 2000). Perhaps the users of ICs use more of these stoves (mean = 5 hrs / day) since they give less heating and this exposes them more to the harmful gases as compared to the traditional stoves (mean = 3 hrs / day)!

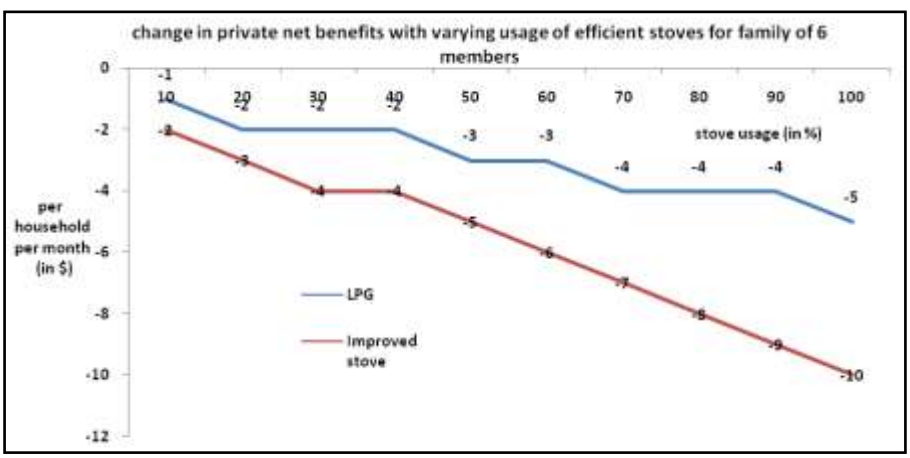
2. The costs of illness for traditional biomass stove users and LPG users are almost equal. The reasons for obtaining the same costs of illness could be different fordifferent types of users. Generally users of LPG stoves have higher incomes than those that use traditional stoves. Higher income households are known to obtain more medical advice since they are able to afford to do that. In actual situation, the intensity of disease in the two

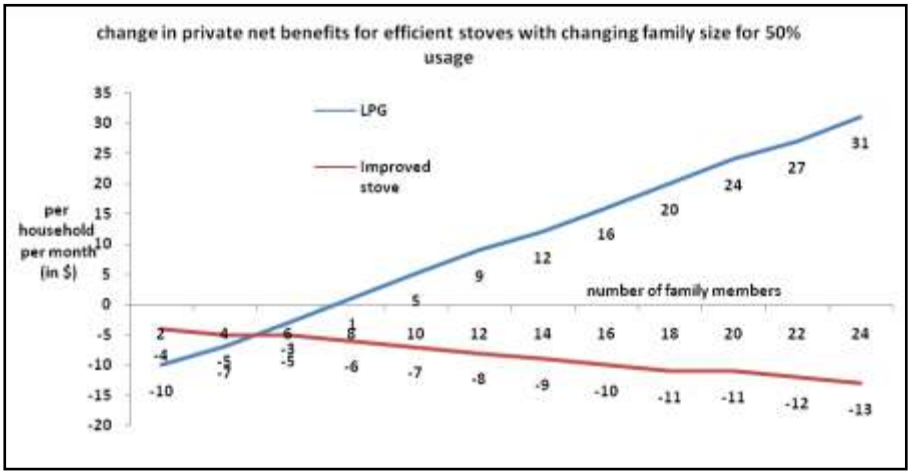
cases may be dissimilar to large extent since the poor (the traditional stove users) often are the last to approach medical facilities.

Sensitivity analysis

The result of the sensitivity analysis shows the following conclusions:

1. The usage pattern of efficient stove usage as percentage of the total time of stove use determines the net private benefits to the households. The benefits decrease linearly with the usage. For more costly and higher efficiency LPG stoves, the net private benefits are approx. 50 % less negative than for the users of improved stoves at the two boundaries of usage values (10% and 100%). This indicates that the use of LPG stoves at the parameters obtained in the survey will not yield positive net benefits to the households. The use of improved stoves actually is deleterious to the health as well as to the economics of the households.
2. Household size also determines the net private benefits that the households using efficient stoves can expect to obtain. For those using LPG stoves, net private benefits are approx. 150% more negative than those using improved stove with small family size of 2 members. At the boundary value of family size of 24 members, LPG users households' net befits are approx. 338% more positive than improved stoves users'. When the household size is 5 members, the LPG use net benefits become less negative than improved stove use. For family size more than 7, the net benefits of using LPG become positive and start to increase linearly with family size. However, opposite happens with improved stove and the benefits get more negative with large family size. In reality, smaller families find using LPG more affordable than larger families. Therefore family size is an important variable for accruing larger economic benefits from cleaner fuels.
3. With the present level of morbidities and mortality, the use of improved stove is less likely to provide any benefit to the households.





Conclusions

1. For net benefits per households for smaller households, results indicate that the net private benefits even for households' using LPG stoves are negative. For those using LPG, however, the benefits are generally less negative than that for those households that use improved stoves for corresponding levels of usage. There are larger households (>7 members) at mid or high level of LPG usage level in terms of cooking time that would have positive net benefits of using LPG stoves than larger households using improved stoves for larger proportion of their cooking time.

2. For net benefit per individual member, the net benefits per member of LPG using households is less negative than that for households using improved stoves. Per member net benefit for improved stove users and LPG stove users' varies between approx. $ -2 to -1(= $ -1 per member for mean family size) to $ -5 to +1(= $-0.5 per member for mean family size) for the smallest and largest family sizes. This shows that using LPG stoves is likely to give less negative net benefits or more positive net benefits at larger than mean size of the households' than using improved stove.

3. The actual morbidities and mortalities will vary between age groups and the level of exposure. It is well documented that the smaller children have higher vulnerabilities than the adults, except the very aged, as far as their morbidity pattern is concerned. Morbidities also depend upon the pre diseased state of health of the members of the households. Those previously more prone to respiratory infections might contract major smoke related diseases more often.

4. The result indicates that mean values of morbidities and mortality cannot be a good prediction for net benefits since mean values could actually be

boundary values for those that are most exposed to smoke. On the other hand, those that have smaller smoke exposure are not likely to benefit by using efficient stove.

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Notes:

[1] For an exceptionally insightful analysis of the doctrine of exceptionalism; see, generally, Schwartz, J. I. (2004), The Centrality of Military Procurement: Explaining the Exceptionalist Character of United States Federal Public Procurement Law, available online: http: / / scholarship.law.gwu.edu / cgi / viewcontent.cgi?article=2024&context=faculty_publications.

[2] For details, see, generally, Jackson, V.C. (2003), Suing the Federal Government: Sovereignty, Immunity and Judicial Independence, available online: http: / / scholarship.law.georgetown.edu / cgi / viewcontent.cgi?article=1111&context=facpub. See, also, Porter, R. (2006), Contract Claims Against the Federal Government: Sovereign Immunity and Contractual Remedies, available online: http: / / www.law.harvard.edu / faculty / hjackson / ContractClaims_22.pdf.

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Appendix

The calculation tables from Excel sheet are placed below:

Traditional solid biomass burning cook stove to improved cook stove	
Parameters	
Household size	6
Unskilled market wage ($ / day)	1.2
Value of time / market wage for unskilled labor	0.1
ARI incidence (cases / pc-yr)	0.08

% ALRI	2.00%
Value of a statistical life ($)	333333
ALRI case fatality rate (%)	28.00%
ARI cost of illness ($ / case)	14
COPD prevalence	2.00%
COPD mortality rate (per 10000)	28
COPD cost of illness ($ / yr)	185
Social discount rate (%)	5.20%
Private discount rate	50.00%
Stove cost ($)	10
Proportion buying wood	25.00%
Baseline cooking time (hr / day)	3
Baseline collection time (hr / day)	0.5
Baseline (wood) fuel cost ($ / kg)	0.12
New fuel (wood) cost ($ / kg)	0.12
Stove O&M cost ($ / month)	0.12
Reduction of ARI disease (%)	-12.50%
Reduction of COPD disease (%)	0.00%
Delay in COPD onset (yrs)	15
Life of stove (yr)	2
Cook time efficiency (% of old stove)	67.00%
Baseline fuel needed per hr cooking (kg / hr)	0.6
Efficiency of base woodstove	100.00%
Efficiency of wood-burning ICS	25.00%
Shadow value of time	0.3
Baseline fuel carbon intensity (g emissions / MJ)	12.1
New fuel carbon intensity (g emissions / MJ)	10.1
Baseline energy conversion factor (MJ / kg fuel)	16
New energy conversion factor (MJ / kg fuel)	16
Value of carbon offsets ($ / ton)	20
Tree replacement cost (US$ / kg firewood)	0.01
Usage (% of hh cooking)	50.00%
Training time (hr per hh)	1
Program costs per household - upfront and ongoing ($ / hh-yr)	2
CRF - social	0.539

CRF - private	0.900	
Calculations - Benefits		
Morbidity ($ per hh-month)	$	(0.04)
Mortality ($ per hh-month)	$	(2.53)
Time saved: cooking (hrs / month)	14.9	
Value of cooking time saved ($ / month)	$	0.67
Baseline emissions (kg / month)	10.45	
Carbon savings (kg / month)	(6.47)	
Value of carbon savings ($ / hh-month)	$	(0.13)
Value of reduced deforestation ($ / hh-month)	$	0.02
Total Benefits / month-hh	$	(2.00)
Calculations - Costs		
Capital (per hh-month)	$	0.45
Value of fuel collection time savings	$	0.77
Net cost of fuel ($ / month)	$	2.13
Additional O&M cost ($ per hh-month)	$	0.06
Program costs ($ per hh-month)	$	0.17
Learning costs ($ per hh-month)	$	0.00
Total costs (per hh-month)	$	2.80
Metrics		
Capital subsidy	0%	
Net Benefits (per hh-month)	$	(4.80)
Private Net Benefits (per hh-month)	$	(5.46)
per member net benefits	$	(0.91)

Traditional solid biomass burning cook stove to LPG stove	
Parameters	
Household size	6
Unskilled market wage ($ / day)	1.2
Value of time / market wage for unskilled labor	0.1
ARI incidence (cases / pc-yr)	0.08
% ALRI	2.00%
Value of a statistical life ($)	333333
ALRI case fatality rate (%)	28.00%

ARI cost of illness ($ / case)	14	
COPD prevalence	2.00%	
COPD mortality rate (per 10000)	28.00%	
COPD cost of illness ($ / yr)	185	
Social discount rate (%)	5.20%	
Private discount rate	50.00%	
Stove cost ($)	50	
Proportion buying wood	25.00%	
Baseline cooking time (hr / day)	3	
Baseline collection time (hr / day)	0.5	
Baseline (wood) fuel cost ($ / kg)	0.12	
New fuel (wood) cost ($ / kg)	0.12	
Stove O&M cost ($ / month)	0.12	
Reduction of ARI disease (%)	25.00%	
Reduction of COPD disease (%)	-50.00%	
Delay in COPD onset (yrs)	15	
Life of stove (yr)	2	
Cook time efficiency (% of old stove)	100.00%	
Baseline fuel needed per hr cooking (kg / hr)	0.6	
Efficiency of base woodstove	100.00%	
Efficiency of LPG	25.00%	
Shadow value of time	0.3	
Baseline fuel carbon intensity (g emissions / MJ)	12.1	
LPG carbon intensity (g emissions / MJ)	58.3	
Baseline energy conversion factor (MJ / kg fuel)	16	
LPG conversion factor (MJ / kg fuel)	46.1	
Value of carbon offsets ($ / ton)	20	
Tree replacement cost (US$ / kg firewood)	0.01	
Usage (% of hh cooking)	50.00%	
Training time (hr per hh)	1	
Program costs per household - upfront and ongoing ($ / hh-yr)	5	
CRF - social	0.131	
CRF - private	0.509	
Calculations - Benefits		
Morbidity ($ per hh-month)	$	(0.14)

Mortality ($ per hh-month)	$	11.47
Time saved: cooking (hrs / month)		4.0
Value of cooking time saved ($ / month)	$	0.18
Baseline emissions (kg / month)		10.45
Carbon savings (kg / month)		(285.04)
Value of carbon savings ($ / hh-month)		(5.70)
Value of reduced deforestation ($ / hh-month)	$	-
Total Benefits / month-hh	$	5.81
Calculations - Costs		
Capital (per hh-month)	$	0.54
Value of fuel collection time savings	$	1.37
Net cost of fuel ($ / month)	$	11.90
Additional O&M cost ($ per hh-month)	$	0.12
Program costs ($ per hh-month)	$	0.42
Learning costs ($ per hh-month)	$	0.00
Total costs (per hh-month)	$	12.98
Metrics		
Capital subsidy	0%	
Net Benefits (per hh-month)	$	(7.17)
Private Net Benefits (per hh-month)	$	(2.83)
per member net benefits	$	(0.47)

Asymmetries in Organizations, Institutions and Policy Signals in the context of Sustainable Governance in India

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Abstract

This article focuses on the present asymmetries in community organizational design, institutional architecture of these organizations and signalling effect of multiple development policies and schemes of the government and consequences of these asymmetries on effectiveness of programme delivery and overall sustainability of rural communities in the Indian context.

While these three aspects of community organizational design, their institutional architecture and policy signals are the critical pillars of sustainable local governance, the article based on eight years of an action research and empirical studies across India, argues that at present they are neither symmetric within nor symmetric across each other. The present institutional architecture of the government and community organizations at the last mile are serving as mere agents to deliver various government schemes with people as mere recipients. Further, deployment of multiple institutions at the community level to deliver these schemes tends to increase asymmetries in information in the system leading to opportunistic behaviour among both the agents and the beneficiaries. In other words, the current design, architecture and mechanism of public service delivery inadvertently weaken the coordination processes of community/producer organizations that are crucial for sustainability of communities and sustainable governance in India.

Introduction

There has been increasing appreciation among the policy makers and development professionals in India that demand side institutions viz., people's organizations and institutions at the community level are critical for efficient and effective delivery of public services for an equitable society. That better local governance is the foundation to better governance at higher levels of the society is very well understood as has been reflected in the 73rd and 74th Amendment of the Indian constitution.

In the above light, this article discusses the issues of community organizational design, their institutional architecture and the nature of signals that multiple development policies implemented through multiple institutions of the government have on people and their community organizations. Following the exposition of the issues at the heart of local governance, the article proposes some thoughts on how to redesign community organizations, their institutional architecture and development policy strategy that can minimize information

asymmetry, opportunistic behaviour by community members, especially the elite and reduce transaction costs for sustainable governance at the grass root level viz. the Gram Panchayat.

First, the article delves on the context of small farmers / producers, in terms of their asymmetric disadvantages in resource base, capability base and traditional institutional base in relation to those in the current market economic system. It highlights how this context has shaped the various community organization based development interventions of the government over the last six decades. Second, based on the empirical evidences, it analyses the deficiencies in the supply side institutional and organizational arrangements of the governments and the significance of developing demand side institutional architecture of the community organizations.

Third, based on the empirical observations, it highlights the conceptual gaps and theoretical challenges in guiding state policy on optimal design of community organizations and optimal boundary limits of institutional architecture of these organization for better local governance. Fourth, it discusses the dysfunctional signalling effect of development schemes and programmes implemented by multiple agencies of the government on the efficacy of coordination processes in community organizations arising out of high information asymmetries in the present system. Fifth, the article discusses optimal design of community organization and optimal institutional architecture for these community organizations for sustainability.

The Context

The overall context of a small producer or a smallholder farmer in a rural agricultural setting is well understood. The current globally accepted description of producer includes not only small farmers engaged in agriculture but also hunters, gatherers, fishing folk, artisan, crafts persons, etc. S/he could be characterized as someone who holds or owns very little private property in terms of resources / asset / land with little liquid capital. S/he engages in large number of production activities in low volumes and little product specialization. S/he has bare formal education, has limited access to information, knowledge and adopts rudimentary methods and techniques of production and processing. S/he has little accesses to good basic infrastructure on health, education, water, electricity, and roads.

While the internal conditions of small famer or landless small producer, who form over 70% of total producers, is rather weak and vulnerable, the external conditions are highly unfavourable for their existence. The agricultural input market is better organized and prices of inputs have been rising. The players in the product market are better endowed with information, resources, capital and are better organized to bargain hard with small farmers / producers.

Further, at the village level, *sahukars/money lenders/local traders* have indeed been on an advantageous position to exploit the small producers. It is indicative of the fact that while prices of agricultural products have multiplied several times in recent years, farm gate prices that the farmers get have hardly increased over these

years. In the light of the modern market economic system, the small farmer and the landless small producer is indeed in a highly asymmetric disadvantageous position.

In addition, the uncertainty in weather and climate, especially in rainfall leads to incorrect assessment on timing of sowing by small farmers; makes the situation challenging and highly risky. Further, poor health, lack of primary education in the rural areas and reducing incomes from agricultural activities has lead to out-migration of people from rural agricultural communities. Not only has the overall climate of liberalization, privatization, and globalization exposed small agricultural producers to global commodity markets and industrial economic system, the culture of agriculture has been adversely affected especially with respect to agricultural production. Even in the best agricultural districts, nearly 30% of farmers are making net losses and another 20% are barely making profits from their agricultural activities (Nayak 2013d). While most farmer parents wish that their children stay in their villages; most of their children instead are forced to out migrate from their villages in search of alternate livelihood.

Institutional Architecture of the Government

During the last sixty years, the central government and the state governments have experimented and tried with various institutional and organizational arrangements to improve the situation of small farmers and producers as well as the rural agricultural communities. As against the Tata-Birla Plan of industrialization, 1944, that had only 10% provision for the agricultural sector (Nayak 2011), the Government of India since 1947 have been allocating significant budgets towards agriculture and rural development. The central government and the state governments have created constitutional provisions in terms of institutional arrangement and organizational arrangements to resolves the various asymmetries of farmers in general and small farmers in particular.

The formal cooperative activities began with the enactment of Cooperative Credit Societies Act, 1904, later it was revised in 1912. Primary Agricultural Cooperative Societies were formed from around this period. The Agricultural Produce Marketing Committee Act 1956 and the formation of organization like National Agricultural Cooperative Agricultural Marketing Federation in 1958 were some of the earliest initiatives. Similarly, the state governments have also formed state level departments, independent organizations and institutions to resolve these issues of small farmers.

Subsequently, the government initiated several provisions and institutions viz., Integrated Rural Development Programme (1978), NABARD (1982), PRI through 73rd Amendment of the Indian Constitution, Swarnajayanti Gram Swarojgar Yogana (1999), Mahatma Gandhi National Rural Employment Guarantee Act (2005), Right to Information Act (2005), and National Rural Livelihood Mission (2010). Specifically in the area of marketing, Agricultural Produce Marketing Committee was formed in 1956. Accordingly, the state governments created several provisions like formation of State Agricultural Marketing Boards, Regulated Market Committees, Check Gates, etc. In addition several institutions

like the Farmers' Commission, expert committees on rural credit, cooperatives, etc have been formed to assess and improve the well being of small producers in rural agricultural communities in India.

Not only has the government tried to create institutional arrangement and organizations, it has also been pumping a lot of resources through these institutions and organizations for improving the situation of small farmers / producers and rural agricultural communities. One may look at the number of development schemes and programmes that are directed at the district and Gram Panchayat level to appreciate this point.

The annual budgetary provision of only the Ministry of Rural Development is over INR 100,000 crores. As per the NRLM guidelines, the provision per family below the poverty line is INR 100,000 per year. Provision for various types of support viz., credit support, marketing support, livelihood support, natural resource management, watershed development, rural infrastructure, primary health, primary educations, basic infrastructure, etc have been created.

However, the existing institutions and organizations have not fared well in terms of delivery of these provisions to the resource poor and smallholder farmers. The capacity to absorb, internalize and create long term assets and value by people and community at the grass root level from these public investments have been far from expectations. Indeed, there seems to be a weak link between the public investment and long term impact on well being of the people and the community.

To improvise its delivery capacity, the governments have also increasingly used the services of Non Government Organizations (NGOs) and civil society organizations (CSOs). Thousands of NGOs and CSOs have mushroomed in this process. The social impact of the public investment still remained below par. Additionally, the organizational arrangement with NGOs often lead to capacity building of the NGOs more than the capacity building of the communities. Once the NGOs stop getting funds from a project, the initiatives undertaken in a community also ceases and ironically all the investment made in the NGOs also moves away from the community.

In recent years, governments have been collaborating with industrial organizations especially the large private corporations for improving delivery efficiency of public services. Individual farmers and small producer groups like SHG, CIG, FPO, small producer cooperatives, etc are being linked to large private corporations in the hope to improve the well being of small farmers / producers. The institutional arrangement in some states seems to be gradually moving from a welfare state mechanism to market mechanism under the broader framework of inclusive capitalism. Contract Farming, Public Private Partnerships, Crop Insurance, Agri-business model as per the traditional industrial organizational design, etc are some examples of the orientation and attempts made by both central and state governments. In recent years, large venture capitalists and large corporations have been seeking support from the governments to undertake grass root level community development as part of their corporate social entrepreneurship.

The government and policy advisers little realize that the basic grain of a traditional industrial organizational design is totally different from that of community organizations at the grass root level. While the former is built on the paradigm of competition, the later is built on cooperation. The position of design variables and the purposes of these two organizational types are so far apart that in the long run, large industrial enterprises will gain at the cost of community organizations in a competitive market economic system (Nayak 2010, 2014a).

In the above milieu of development approaches and challenges, the bright ray of hope to improve the well being of small producers including the psychological-social-economically weak communities appears to be the provision of National Rural Livelihood Mission (NRLM) 2010 of the Government of India. The emphasis on building local institutional platforms of the poor and converging all the resources to build and strengthen this local institution is indeed a wise and sustainable way forward for the well being of the poor communities. There are however several questions that need to be answered for the new mission to make a sustainable impact.

How will the multiple local institutions interact with each other? Will there be duplication of resources & efforts because of multiple people's institutions? What will be the cost of operating each of these institutions? Will each of these institutions be optimally designed for operational efficiency? Will the challenges of marketing and value addition of the small producers be handled through these institutions? What will be the steps & sequences of implementation? Is it designed for sufficient local resource persons for successful implementation? How long will it take to implement and exit? What is the overall strategy? What will be the total cost of implementation at the GP level? Will these institutions for livelihood cater to other needs of the community viz., health, education, basic infrastructure, etc? Although individual organizations are attempting to resolve some of these questions as they work in the complex setting of Indian rural communities; these questions still remain largely unanswered by NRLM.

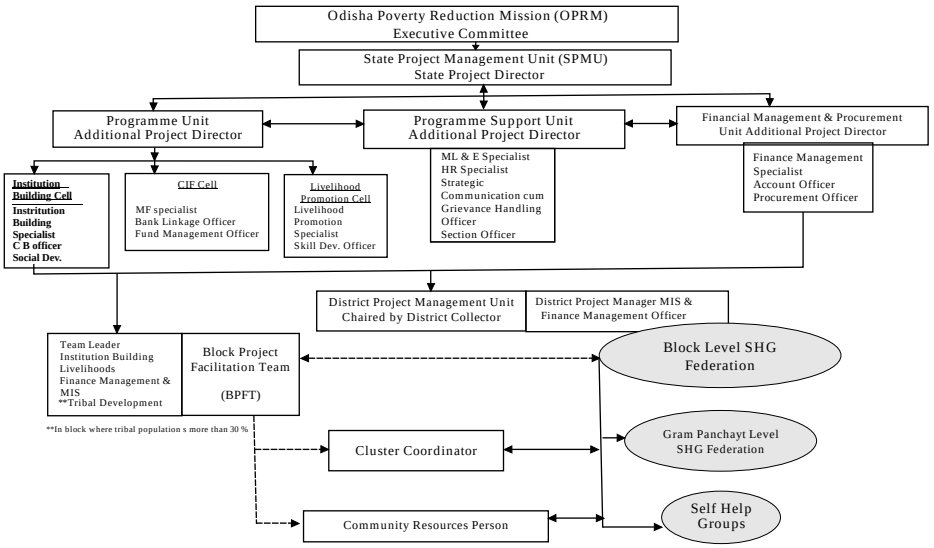
The latest attempt of the Government has been to promote Farmer Producer Organizations as Producer Companies as per section IXA of the companies Act 1956. Ministry of Finance and Ministry of Agriculture through NABARD have made a provision to promote 2000 farmer producer companies in the next two years (2014-16). While the Act came into being in 2002, development agencies have been struggling to stabilize the few hundred producer companies that have already been set up during the last twelve years.

Across the board, the institutions of the government for implementing these programmes are highly hierarchical, bureaucratic, centralized and top heavy with high transaction costs. While the supply side institution of the government seems to be well defined and overwhelming, the demand side institutions viz., people's organizations or community organizations have not been well conceived. Figure 1-2 are sample institutional architecture of the Odisha Livelihood Mission and Karnataka Watershed Development.

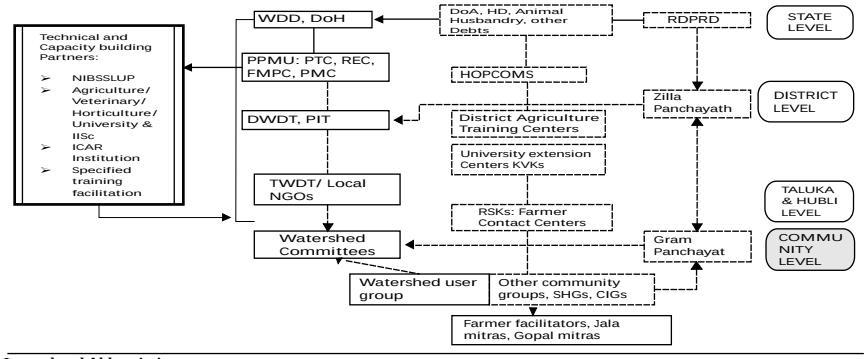
The centralized institutional architecture is similar across other states viz., Maharashtra, Bihar, North East Region, M.P., A.P. and others (Nayak 2014b). More

than 65% of the capacity building budget is employed on training and capacity of the officials and project managers of the institutions of the government leaving little for the capacity building of the local resource persons of the demand side institutions, viz., the community organizations or producer organizations.

PROJECT IMPLEMENTATION STRUCTURE – TRIPTI (Odisha Livelihood Mission)
(Government and people's Institution)



WATERSHED DEVELOPMENT DEPARTMENT - KARNATAKA
INSTITUTIONAL STRUCTURE FROM STATE TO COMMUNITY LEVEL



Design of Community Organizations & their Institutional Architecture

The critical design issues of organizations in general and community based producer organizations in particular are the issues of size, scope, technology, management and ownership. However, these issues have not been carefully looked into for long term sustainability of these organizations. Understanding optimal span of institutional architecture is also crucial for enabling effective relationships of these producer organizations in the given external market system.

There have been some insightful contributions of scholarship and policy in agriculture and rural development, especially in institutional and organizational studies. For example, at least 3 of the 25 committees on cooperatives during the last about 100 years of cooperative movement in India, have recommended to keep the cooperatives smaller in size. Similarly, the National Commission on Agriculture (1976) and National Commission on Farmers (2004) have recommended smaller clusters for regulated market facilities for small farmers under the PACS. However, there has been little attention to implement these recommendations.

Caution on size with regard to organizational design for overall long term sustainability has been fairly referred to in the past (Schumacher 1973; Reserve Bank of India 1914; Mehta 1960). While 'economies of scale' has been the basis of efficiency for industrial production during the last about two and half centuries since Adam Smith (1776), the significance of scope and diversity has appeared in several descriptions (Marx 1927; Kondratiev 1921; Panzar & Willig 1977; Teece 1980; North 1984; Nayak 2013c, 2014).

While intensive technology has been the basis of competitive advantage in industrial production, appropriate and local technologies have been cited as the basis of efficiency and sustainability in agriculture (Howard 1940; Shiva 1993; IAASTD 2009; Collette 2011; Gopalakrishnan 2012; UNCTAD 2013; Nayak 2013c).

Since Adam Smith (1776), the significance of private ownership (Mason 1994) to efficiency has been highlighted; at the same time, the significance of trusteeship (Sethi, 1986) and common property (Ostrom 1990) has also been discussed in literature. Similarly, the significance of managerial skills in industrial production is well appreciated (Taylor 1997; Barnard 1968; Chandler 1993) and its significance and most importantly, its adaptation to farmer producer organizations have also been elaborated in detail (Nayak 2013a).

Further, even if the organizational design of one or a few community based producer organizations are optimized, the chances of their sustainability will depend on how stable their relationships are with other external organizations and institutions. In other words, if asymmetries across these community organizations are not minimized, these demand side community organizations are unlikely to have stable transactional relationships, the basis for their long term viability. Empirical observations show that there are only a few well developed institutional architectures of the producer organizations in the country.

Kaira Dairy Cooperation (AMUL) in Gujarat and Karnataka Milk Federation (Nandini) and SHG Federations of Andhra Pradesh are a few with stable

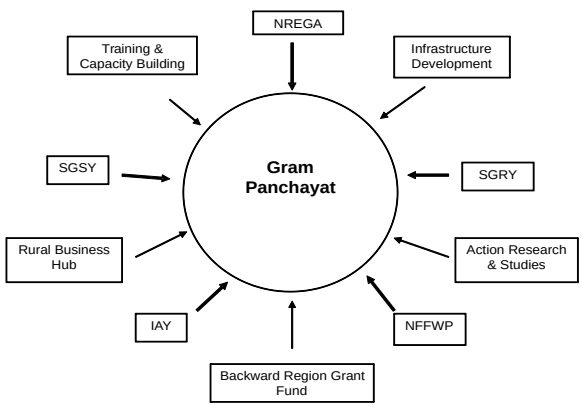
institutional architecture of producer organizations. However, the spans of boundaries of institutional architectures of these producer organizations are spread over the whole of their respective states. Whether these are optimal institutional boundaries for these community / producer organizations has hardly been discussed. The general perception has been that of larger the sphere of influence the better it is for the producers / members. However, empirical evidences on the net gain to members of these producer organizations / cooperatives and their overall participation in decision making processes of these large networks are not commensurate to investments (Nayak 2014b).

Dysfunctional Signalling effect of Government Schemes on Coordination Processes

Since the late seventies, both the state governments and the national government have been rolling out a number of development schemes and programmes and more so during the last two decades. These schemes are being implemented by multiple departments and their agencies at the district level. The budgetary support by the state and central government for various development activities in a district has been rather substantial as of today. Table 1 (Appendix) provides data on the different departments and the budgetary allocation for one sample district, Jhabua, Madhya Pradesh. The total budgetary allocation for various development activities of this district for the year 2014-15 amounted to INR 63,779 lakhs. While this amount may vary depending on the size of the district; the budgetary provision available per Gram Panchayat typically averages around INR 200 lakhs per annum.

While some of the development activities for the rural communities are carried out by the departments directly, many of the development schemes relating to livelihood, health, agriculture, basic infrastructure are implemented through the Gram Panchayats or through different community organizations. A mapping of the various schemes at the Gram Panchayat level is shown in Figure 3.

Figure 3: Few Schemes for a Gram Panchayat (G.P.)



Source: Annual Report, 2005-06 Panchayati Raj Department, Govt. of Orissa and Annual Report, 2007-08, Ministry of Panchayati Raj, Government of India.

While there are sufficient budgetary provision for people at the district level and GP level, the social impact does not seem to be commensurate with the public investments. It is therefore critical to review the issues that hinder the efficient utilization of the currently available funds. Presently, the different schemes are implemented by multiple agencies of the government or civil society organizations appointed by the government to the same set of people in a GP. The structural design of implementation in a high information, knowledge, resource, political, and social asymmetric environment tends to generate opportunistic behaviour among those few who might have some advantages on asymmetric generating variables. Some describe this phenomenon as elite capture in rural communities (Dasgupta 2007; Dutta 2009; Platteau 2013).

The opportunistic behaviour of people within a community often tends to disable the coordination processes of a community organization such as producer organization / cooperative. Once the coordination processes are weakened or disrupted; it is natural that the efficiency of a community organization becomes sub optimal. Empirically, it has been found that the social capital of rural communities have been reducing and hence establishing sustainable producer organizations / cooperatives based on cooperative principles is becoming harder by the day. Despite the huge investments in over 94,000 primary agricultural cooperatives, over 500,000 SHGs, and emphasis of the government to form thousands of producer companies for over a decade now, community based producer organizations are not taking off the ground. This has been largely due to poor coordination and diminishing social capital and cooperation within the communities.

The policy of giving out to people by the politicians, government, and their agencies seem to set in a culture where instead of coordinating their efforts for long terms development through their own community organizations; people in the rural communities tend to look up to the agencies of the department to seek benefits from the government. The various schemes of the governments for people in a GP in the present scheme of things may be metaphorically visualized as a situation where "*a group of hungry people are exposed to an orchard of trees with loosely hanging fruits*". In the overall analysis, it appears that implementation of various schemes by multiple institutions has dysfunctional signalling effect on the coordination processes of community based producer organizations.

In the context of transactional losses, information asymmetry, opportunistic behaviour suboptimal performance of development schemes due to multiple implementing agencies; let us focus our attention to optimal organizational design and institutional architecture of these community organizations.

Optimal Organizational Design & Institutional Architecture

Optimizing organizational design and institutional architecture are probably the key areas of innovation for realizing sustainable outcomes for the rural communities from the huge public investments that are being made by different

government and development agencies. The significance of viable community organizations for sustainability has also been reiterated by the Working Group on Agriculture, 12th Five Year Plan, 2013, Government of India.

The suggestions being made here on the sustainable design issues are based on the last eight years of action research and empirical observations of producer organizations across the country that started in the Xavier Institute of Management, Bhubaneswar and has continued at the National Centre for Sustainable Community Systems *(centre.lbsnaa.gov.in/ncscs/)*, Lal Bahadur Shastri National Academy of Administration, Mussoorie.

Organizational Design: In terms of size of community organization; optimal membership would be about 1000 small producer members / families within a geographic cluster of about 4000 hectares to 2000 hectares, depending on the topography and micro-climatic conditions and human habitations. This geographical cluster is essentially about 8-4 micro watershed areas that are largely co-terminus with 1-2 GPs depending on whether it is hilly, plain or coastal area.

Given the resource base, need base, and capability base, leveraging scope and maintaining production diversity is the best fit for the small farmers / producers. In other words, the scope of product basket needs to be larger. Given the various asymmetries in health, education, rural credit and rural infrastructure, the community organization also need to incorporate these activities as part of their development functions in order to provide holistic ecosystem services to its members. The various development schemes of the government could therefore be gradually converged into such a community organization in a given cluster / GP.

In terms of production and process technology, integrated low cost agriculture and simpler and decentralizable technologies are effective and gives better control for the small producers / farmers. Producer organizations of small producers / farmers therefore need to be designed for sustainable agriculture and for simple local value addition of their produce.

As per the provision of section IXA Act of the Companies Act, 1956, only the direct producers can be the owners of a producer organization with one member one vote policy. This provision of the Act needs to be adhered to in the formation and operation of a producer organization. However, continuous process of social mobilization in the community is to be designed for in the initial two years to develop the feelings of ownership among the members. Action research results show that over 50% of the investment in the first two years of interventions account for systematic social mobilization for building a community owned producer organization.

Further, the management of the community organization also needs to be with the stakeholders / rural youth from within the community. Selected local youth could be trained and hand held for a couple of years so that they can manage their operations on their own. The functions of the executives / local coordinators in the community organizations would include all activities along the value chain of

activities of a typical small farmer / producer. The activities of the management team therefore shall include community mobilization for building trust and cooperation among the producer members and the community, improvement in agricultural production and productivity through integrated low cost agriculture, improvement in post harvest management and value addition of agricultural produce, integrate agricultural activities with other economic activities to enhance the value of labour of small producers across 365 days, facilitate community banking and retailing, facilitate marketing and stabilize their marketing network, facilitate community health care and improvise the primary education for the children in the community (Nayak 2010; www.navajyoti.org)

Market Landscape: Unlike for large industrial corporations, the market landscape of producer organization consisting of small and marginal producers should be at an optimal distance (say within 200 Km) from the producer community. The strategy is to optimize characteristic distance between the producer organization and the market in order to reduce transactions costs and enhance net income to the producer members (Nayak 2012).

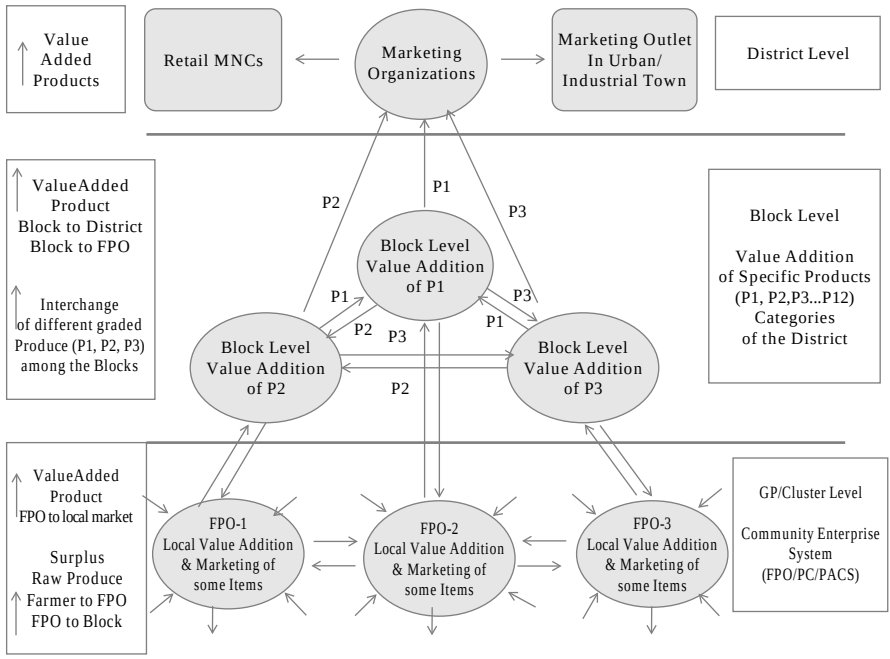
Institutional Architecture of Producer Organizations: In the growing market economic system that is based on external competition and rivalry, producer organizations based on the principles of cooperation are less likely to survive. This phenomenon is largely because the language, logic and values in the paradigm of cooperation are indeed contrary from those in the paradigm of external competition (Nayak 2014a). Hence setting up producer cooperatives / companies in isolated pockets without an enabling ecosystem for development of these producer organizations may be futile. Further, the target oriented schemes of the government implemented through multiple departments, agencies and institutions at the grass root level tends to have dysfunctional signalling effect, coordination process and social capital in a community and hence tends to undermine the functioning and purpose of even an optimally designed producer organization as discussed earlier.

Given these experiences, there is an increasing appreciation among the policy makers and development practitioners that cluster based producer organizations of the people as a single window for convergence of development schemes of the government is the way forward. However, this can be realized only if an appropriate architecture of producer companies at GP level, block level and district level were planned and implemented (Nayak 2013b). Figure 4 shows an option for optimal institutional architecture where the small producers can have a say and the architecture is strong enough to effectively transact with even the global market systems. Facilitating such institutional architecture has the potential to improve coordination and transparency, minimize opportunistic behaviour, reduce transaction costs, improve public service delivery and lead to self reliant and sustainable communities.

In Summary, the asymmetries in community organizational design, their institutional architecture (if any), and the institutional architecture of the

government to deliver development schemes and programmes have been at the core of the less than desirable levels of efficiency, effectiveness and equity. Indeed, there is a great need for the Indian polity and policy to review them and adopt appropriate development approach before it is too late. Accordingly, it is suggested that optimally designed community based producer organization need to be promoted which can serve as a single window for the various schemes of the government to converge at the grass root level. Further, the state and the district administration have to build an optimal institutional architecture of these community organizations within the district and not beyond to recreate sustainable communities for sustainable governance in India.

Figure 4 : Institutional Architecture & Relationships



Source: Nayak, 2013b

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Appendix

Table 1: Budgetary Provisions of different Departments
Jhabua District, Madhya Pradesh, 2014-15

S.N	Name of Department	Total (Rs. in Lakhs)
1.	Department of Animal Husbandry	1027.01
2.	Agriculture Department	538.00
3.	Department of Public health & family welfare	699.10
4.	Sha. Aupras (Skills Development Department)	116.72
5.	Tribal Development	5684.31
6.	District Education center	13536.44
7.	District Planning & Statistics	177.61
8.	Antyavsayi Cooperative Development Committee	18.36
9.	ITDP	2711.93
10.	Department of Public Health Engineering	2594.94
11.	Back Ward Classes & Minorities Welfare	48.72
12.	Water Resources Division	3016.15
13.	Labour Department	74.90
14.	District Trade & Industries Centre	324.84
15.	Horticulture Department	1038.83
16.	Department of School Education (Free Cycle exercise)	1.71
17.	Women & Child Development	1499.67
18.	PIU	8019.15
19.	Social Justice	1848.00
20.	Deputy commissioner of Co-operatives	218.86
21.	Directorate of Handloom M.P	36.04
22.	Land record	142.80
23.	Public Work Department	2010.84
24.	Urban Development	17.56
25.	Employment	4.43
26.	Zila Panchayat	16685.26
27.	Forest Division	1247.23
28.	Ayush Department	79.98
29.	District Registrar	7.15
30.	Tribal Finance & Development Corporation	4.16
31.	Excise	40.79
32.	District Malaria	40.56
33.	Revenue Department (Collector's Office)	178.64
34.	Manager, Village Industries	85.38
	Total Allocation	63779.07

Critical Review of Management Innovation of "Zero Stock Check" Adopted by Food Corporation of India

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Abstract

'Zero Stock Check' has been introduced by Food Corporation of India (FCI) in the year 2013 as a 'management innovation' for better management of stocks of food-grains in its food storage depots, especially for dealing with the state of repeated occurrences of an alarming number of instances of excessive shortages of stock of food grains. This article attempts to critically review the state of stock accounting in FCI and limitations faced by it in applying regular management tools developed by it over a period of past 50 years and compiled by it in the form of Storage Manual, in dealing with the prevailing crisis in respect of stock management. It also attempts to examine the potential of the innovative management tool of Zero Stock Check to deal with the imminent challenges being faced by FCI in respect of stock accounting, which assumes special significance in the regime of National Food Security.

Introduction

Food Corporation of India (FCI) was set-up on 14 January 1965 under the *Food Corporations Act 1964*. It has experience of about 50 years in the field of food grains procurement, scientific storage, movement, distribution and sales on behalf of the Government of India. Protocols for storage and preservation of food grains developed by FCI have been compiled in the form of *Storage Manual*. FCI follows certain standard patterns for stocking of food grains and record keeping for proper stock accounting which facilitate physical verification of stock at any point of time. In spite of this, repeated occurrences of an alarming number of instances of excessive shortages of food grains in FCI Depots have been reported during last several years. Though, instances of shortages of stocks in depots due to various operational reasons have not been uncommon but with rise in price levels which FCI food grains may fetch in open market, the nature of instances of shortages of food grains has recorded change from pure operational losses to a blend with pilferage and misappropriation necessitating criminal action against the custodians followed by changes in custodians of stocks. But, new incumbents resisted taking over custody of stock as they not only apprehended mismatch between the actual stock available in a depot and the stock-position reflected in depot ledgers, but also apprehended manipulation in stack formation which rendered physical verification of stocks (PV) by means of peripheral counting combined with weighment of sample stacks redundant. FCI Management has recognised this state of stock accounting in following words-

"Instances of large variations in the stock have been reported as a result of special PV conducted in many depots in the recent past. At present, the PV conducted on Quarterly, Annual basis and Special PV are based on peripheral counting of bags and 100% weighment of only selected / part stacks. The PV through 100% weighment of only part & baby stacks which constitute a very small percentage of the overall stock holding of the corporation, leaves occasion for misappropriation of the stocks at depot level. In order to arrest the same, it was discussed during the MPR meeting held on 24.01.13 that 100% liquidation of stocks for making 'zero' stock level in the depots is required. It is, therefore, decided that Executive Directors (Zone) shall select one depot in each Region on quarterly basis to arrive at the actual stock holding and resultant loss by making the stock level 'zero' in the selected depots".

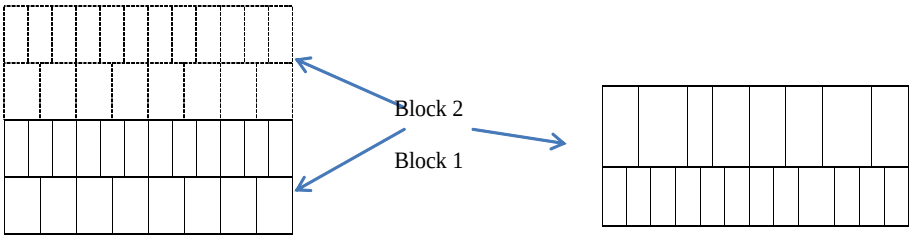
It is in the above mentioned background that *Zero PV* was introduced by FCI which is essentially a '*Zero Stock Check*' and provided required level of comfort to new custodians.

Overview of Present System of Stocking and Stock Accounting in FCI Depots

a. System of Stocking of Food Grains in Traditional FCI Depots

Except for a very limited bulk storage capacity of total 3.5 lakh MT in the form of silos set up by M / s Adani Agri Logistic Limited under revenue guarantee model of Public Private Partnership with FCI, food grains are stored by FCI in a large number of Food Grain Storage Depots (FSD) scattered all over India. FCI Depot which is directly managed by a Depot Manager may have a number of sheds / godowns. Generally a shed / a group of sheds of a depot are under direct management of a shed in-charge. A stack which is a heap of food grain bags is the basic unit for stock accounting in a FCI depot (Picture:1). A full stack may consist of about three thousand bags which are arranged in the form of blocks placed adjacent to one another giving stability to the stack; each block comprising of food grain bags arranged in a standard pattern of header and stretcher bags (Sketch: 1). This pattern of arrangement of bags facilitates peripheral count of bags in a stack which is assigned a distinct identity for which stack-plan is displayed prominently in sheds.

Picture 1. Typical Arrangement of Bags in a Stack



Sketch 1.Typical Arrangement of Bags in Two Successive Layers of a Block in a Stack

b. Depot Ledgers and Reporting of Stock Position

A stack of food grains is the basic unit for recording operations of receipt, issue, sales and handling of stocks. Stack-ledgers are maintained by shed in-charge who prepares shed ledger by consolidation of stack ledgers for the stacks in a shed. Shed-ledgers are further consolidated by Depot Manager in to Master Ledger. Depot Manager is expected to update Master Ledgers based on inputs received in the form of Daily Statement of Receipt and *Daily Statement of Issue* received from shed in-charges and also the Movement-Challans for inward and outward movement of stocks. He may cross verify entries with help of other records like Gate Register, Master Register for gunny, work-slips for labours, release orders, rail receipts, and contractors' bills etc. Daily stock position in depot is reported by depots to District Office by e-mails under *Integrated Rapid Reporting System* (IRRS) and monthly statement of stock is reported by *Monthly Stock Account* (MSA). *Stock Ledger Summary* (SLS) is prepared for a FCI district by District Office for the purpose of preparation of Annual Account of the district which is further consolidated at Regional and Corporate levels.

c. Storage and Transit Losses: Inevitable During Food Grain Stock Management

It is a fact that all food grains have limited shelf-life which can be enhanced to some extent by proper preservation; however, certain amount of damages to food grain stocks during storage is inevitable. In addition, food grains stocks may record loss of weight during process of natural drying; and in certain field conditions, it may not be practically possible to collect spillage of food grains caused during handling. Loss of stock due to such reasons is termed as storage losses. Similarly, some loss of food grains during transport may not be retrievable which is termed as transit losses. Stock accounting system followed by FCI takes in to account storage and transit losses.

d. Defining Storage and Transit Losses

Difference in weight of a stack at the time of its formation and that at the time of its total liquidation is termed as Storage Loss or Storage Gain. Storage gain is generally recorded in case of wheat but the same may not apply to rice stocks.

Storage Loss (%) = {(weight of food grains in a stack at formation – weight of food grains in stack on liquidation) / weight of food grains in a stack at formation} x 100

Similarly, Loss of stock during rail transportation of food grains from dispatching center to receiving center may be caused due to grains falling on dirty surfaces during handling so that retrieval of fallen / scattered grains is not possible. Pilferage of food grains from railway wagons which may have structural defects may add to rail transit losses. Transit loss is defined as follows:

Transit Loss (%) = {(Dispatch weight of stock– Receipt weight of stock)/ Dispatch Weight} x 100

e. System of Periodic Reporting of Storage and Transit Losses

Custodian of Stock in one or more sheds in a depot is required to generate reports regarding storage and submits the same in form 29.10every month. Depot Manager consolidates the Information in form 29.10 regarding SL for all the stacks fully liquidated and form 34.3 for TL for railway consignment received in the depot and is responsible for submission of the same to the FCI district office. A District Manager is responsible for consolidating the periodic reports received from all the depots falling under jurisdiction of the FCI district and submits the same to Regional Office.

f. System of Verification of Stock Position: Physical Verifications (PV)

FCI has a system of monthly physical verification of stock by Depot Manager in addition it has a system of two types of routine physical verifications of stock which are invoked every quarter with reference to the last date of the quarter; namely, Quarterly Physical Verification (QPV) and Physical Verification as per method prescribed by Indian Statistical Institute (ISI PV). QPV carried out with reference to last date of a financial year is termed as APV and when carried out with reference to any other date as a special step for verification of stock is termed as Special PV (SPV). PV officer, who is appointed for the purpose, has to report on or before the reference date for carrying out PV who in turn collects a declaration made by shed in-charges about stack-wise stock position in sheds under his control as on the reference date for PV, which is known as a Census Declaration. Under QPV / APV / SPV, only peripheral count of all the gunny bags in all the stacks in a depot is carried out and only baby stacks / part stacks are weighed. To the contrary, food-grain stock in selected stacks are liquidated completely recording the total weight of food grains in the stack in ISA PV; giving information regarding average bag weight in addition to storage losses. Physical Verification of new / old serviceable and old unserviceable gunny bags / PVC Bags, Chemicals, equipment etc. is also carried out during PV operations. It is reiterated that in all such PVs a stack of food grains is the unit for ascertaining SL.

g. Organizational Structure for Monitoring & Control

An officer of the rank of Executive Director heads the stock division at FCI HQ who is at the helm of the affairs of stock accounting. He is assisted by heads of Zonal, Regional and District level offices of FCI who in turn, are assisted by a set of subordinate staff manning Commercial, Storage, Movement, Accounts, reconciliation and Physical Verification Sections.

Business Model of FCI: Reimbursement of Operational Losses

Under the scheme of things, FCI is not authorised for taking commercial decisions; it does not decide anything about the procurement price of food grains or its issue price under various schemes or the terms & conditions for open market sales and exports. Minimum Support Price (MSP) of food grains for the purpose of procurement, Central Issue Price (CIP) of food grains under different schemes of the Government of India and allocations of quantity of food grains under Targeted Public Distribution System (TPDS) and other Welfare Schemes are also fixed by the Government of India at which food grains are issued by FCI. The difference between the Economic Cost (MSP plus post procurement and distribution cost) and the Central Issue Price , which may, hereinafter, be referred to as Operational Cost, is fully reimbursed by the Government of India as food subsidy. In other words, storage and transit losses, to the extent the same cannot be recovered through process of fixing of responsibility, are reimbursable by government of India to FCI.

Factor Influencing Environment for Effective Administration of Stock Accounting

a. Open-ended Definition of Operational Cost and Guidelines-Vacuum for Regularization of Losses

As per the existing business model, FCI is to be fully reimbursed by the Government of India by way of food subsidy for 100% Operational Cost. The Operational Cost includes Storage and Transit Losses that have been written off, after adjusting the Storage Gain due to increase in moisture content of food grains stocks determined in the similar way as the Storage loss, and any recoveries made from those held responsible for unjustified Storage and Transit Losses. The process of writing off losses is known in FCI's parlance as 'Regularization' of Storage and Transit Losses. But, existing guidelines are inadequate about the manner in which the cases of Storage Losses and Transit Losses are to be scrutinized and the manner in which so-called PV Losses are to be treated. The existing guidelines are also silent about the procedure and authority for regularization of losses due to criminal acts such as misappropriation / theft / pilferage by custodians etc. In practice, shortages of stock due to misappropriation / theft / pilferage too gets bracketed as Storage Losses or Transit Losses and thereby, as Operational Cost, which entitles FCI to get reimbursement for the same from Food Subsidy Bill; this easy option has immense potential to inhibit activation of internal control mechanism within FCI.

b. Writing off / Regularization of Storage and Transit Losses Within Internal Competence of FCI Functionaries

FCI management has been granted with absolute powers for writing off of Storage and Transit Losses which, in FCI's parlance, is termed as 'Regularization' of Storage and Transit Losses. This, along with guidelines-vacuum regarding the manner in which losses of food grain stocks due to theft, pilferage and

misappropriation by custodians are to be written off, provides a conducive environment for slack internal control mechanism and leniency in fixing of responsibility for which several driving factors / incentives exist; firstly, a clean balance-sheet; secondly, the loss gets fully covered by Food Subsidy Bill without uncomfortable questioning by the Government and other constitutional watch-dogs.

c. Interchangeability of Storage Loss and Transit Loss

Dispatch weight and receipt weight of food-grain stocks are reported by two different set of officers situated at two different depots, therefore; tendency has been noticed on part of functionaries at dispatching end to over- report dispatch weight of stock and thereby, reduce Storage Losses at dispatching end. Similarly, receipt weight is recorded by functionaries at receiving end who have opportunity to under-report receipt weight and thereby, reduce Storage Losses at receiving end. Thus, there is certain amount of constraints in fixing accountability for higher transit losses. As SL and TL have interchangeability and conversion of SL to TL dilutes accountability, this interchangeability is often misused for camouflaging higher Storage Losses. Due to obvious reasons there is absence of serious effort to have technology solution to determine admissible value for transit losses instead, half- cooked solutions such as- lining of railway wagons with plastic sheets and taking insurance coverage for transit losses are advocated vehemently without having a properly appraised project report.

d. Weak Internal Control Mechanism

Though there is a dedicated Stock Division in FCI HQ assisted by its counterpart Sections / Divisions at Zonal and Regional Levels with a number of officers dealing with subjects of stocks, storage, PV, SL & TL etc.; there is no comprehensive job-chart and accountability structure for senior supervisory officers of FCI. As a result, though a number of periodic reports which originate from depots / districts are received by senior supervisory officers; critical scrutiny of the reports by them for drawing useful inferences takes a back seat. Even the detected cases of pilferage or misappropriation of stocks are seldom examined critically for effecting system improvement and issuing advisories for field officers. For all practical purposes, responsibility to supervise and control stock management begins and ends at the level of District Managers.

Ground Truths:

(a) Preventing Reporting of Cases of Pilferage and Misappropriation of Food Grain Stocks

Instances of pilferage or misappropriation of food grain stocks by custodians in collusion with other depot functionaries and protected by supervisory officers have been detected in alarming number. Removal of food grain bags out of stock with malafide intentions may be accomplished at a number of stages such as during transportation from railway yard to a depot or during road transportation from one depot to another and also after receiving the stocks inside depot. Full bag

shortages are created in all such cases of pilferage or misappropriation and effort is made by the culprits to ensure that such malpractices do not get detected and reported. When the act of pilferage and misappropriation of stock has tacit protection from supervisory officers; then the fact that depot ledgers are not maintained properly, PV is carried in perfunctory manner, glaring defects and shortcomings in physical verifications carried out in perfunctory manner are not brought on record are overlooked. In some other types of cases, standard pattern of stack formation and average gunny weight may be found to be manipulated; thereby, preventing immediate detection of cases of full bag shortages. Yet another common method of camouflaging full bag shortage is by manipulating figures of gunny consumption and savings which makes the process of drawing conclusions from PV reports a bit difficult; requiring intelligent interpretations. As effective check has not been exercised on this methodology of camouflaging pilferage and manipulation of food grain stocks, the practice of artificially increasing SL and TL combined with manipulation of gunny accounts and average bag weight is found to has become very common. Some of the commonly applied methods for preventing reporting of pilferage or misappropriation are being elaborated as follows-

a. Perfunctory Physical Verification of Stocks

This has been the most commonly applied method of concealing cases of shortages of food grain stocks due to misappropriation or pilferage. This method had been widely used by culprits in ill-famous case of misappropriation of paddy / rice from paddy procurement centers in Bihar region which was first detected in year 2011 in respect of PPC Dumaraon, District – Patna, involving not only supervisory officers of FCI but state government functionaries and rice millers also. In spite of this, prevalence of perfunctory physical verification continued unabatedly. In such cases, PV officer carries out PV without ensuring that essential depot records like stack-ledgers, shed ledgers, master ledger, gunny registers, labour registers etc. exist in updated condition, stock position furnished through census declaration is in conformity with entries in depot ledgers and stacks are in countable position. In other words, PV officers affixes signature on pre-prepared PV report without actually carrying out physical verification. For example- in case of FSD- OJM (WB) supervisory officers ordered SPV after getting to know from QPV officer that depot records were not maintained properly by custodians as a result of which QPV for June 2012 could not be undertaken by him. It has also been noticed that in yet another type of cases, supervisory officers overlooked the defect on face of the PV reports even after getting to know about the same and PV officer had been carrying out PV in a misleading manner without fear of being questioned. One of the glaring examples of this kind of PV can be found in Annual PV Report of FSD Saharsa, RO- Bihar for year 2012-13. In this case, the PV officer had completed PV in respect of a number of stacks by putting remarks that – "Stock not in countable position, so Book Balance taken as PV Balance" and the same was accepted by supervisory officers in Regional Office of Bihar who had knowledge that depot ledgers were incomplete for the period relevant to the PV. Similar state of affairs has been noticed at other FSDs, to name a few- FSD Dhamora (UP) during year 2011-12 and 2012-13, FSD Manduadih (UP) during year 2012-13, FSD- Gonda

(UP) during year 2013-14, FSD- Whitefield (Karnataka) during year 2013-14, FSD-Cossipore (WB) during year 2012-13.

b. Manipulation with Formation of Stacks to Make Peripheral Counting Impossible

As full bag shortages can be easily detected in Physical Verification (PV) by peripheral counting, if and only if, the standard stacking pattern is followed; therefore, stack formation is manipulated and made unaccountable to camouflage full bag shortage of stocks. In certain instances, the custodians resort to slackening of bags, for example the bags were found to be slackened in FSD- Manduadih, District Varanasi, for compensating for the shortages detected by a CBI team in year 2012-13. Following pictorial depiction (Picture 2) shows stack formation in

Picture 2. Manipulated Stack Formations at FSD Khuraghat, Gorakhpur, UP

b. Hollow Formation in Stacks

Another method to escape detection of full bag shortages is by hollow-formation in stacks (Picture 3) which can be detected only after breaking the stacks or by inspecting the stacks from all sides including from top, as the case may be. Such cases have been recently detected in UP Region and CWC Godown in Moga, Punjab.

Picture 3. Hollow Formations in Stacks at (L to R) FSDs of Dhamora, Roza and Harduagunj, in UP

c. Gunny is Money : Manipulation with Gunny Account to Camouflage Full Bag Shortage of Stocks

There is every possibility that some gunny bags may get torn and its contents getting lodged in crevices and annular space in the stack releasing certain number

of empty gunny bags. This is recorded in depot operations as Gunny Savings. *Gunny savings* may also occur if bags are lighter in weight and process of standardization is undertaken. Saved gunnies have to be recorded in gunny registers as old serviceable or cut and torn unserviceable gunnies and sent to central stores from time to time. At the time of finally killing of stack the quantity of food grains which may have flown out of torn bags and lodged in space between bags in a stack has to be collected, packed in serviceable gunnies and accounted for. Gunnies used at this point of time are known as *Gunny Consumed*. Thus by recording gunny savings one may reduce the number of full bags as closing balance of stock in a stack and if the figures of gunny savings are fictitious it has potential of hiding shortage of full bags during PV. Thus, gunny savings and gunny consumption play vital role in stock accounting and it is necessary to detect cases of fictitious gunny savings / consumption which can be ascertained by carrying out physical verification of gunnies with reference to gunny registers; for this one has to open the bales of unserviceable gunny bags and count them which is seldom carried out with accuracy. Ground-truth remains that gunny registers are generally not found in depots, or are not updated and depot manager does not monitor daily gunny savings and consumption in various sheds by updating master gunny register and old, unserviceable gunnies are not deposited and accounted for in central store. In absence of stack-wise gunny register and daily gunny savings / consumption details, one may not be able to ascertain facts by making reference to work-slips of labourers which, in most of the instances, are manipulated due to prevalence of system of 'Proxy Labour'. But, surprisingly, there is no adequate emphasis on gunny accounting and the Stocks Division of FCI has not developed any management tool to monitor this vital aspect and enable supervisory officers to apply norms to differentiate between bonafide gunny savings / consumption from the malafide one. Modus operandi of concealing shortages of food grain stocks through gunny savings during process of PV can be understood from the fact that each custodian of stocks submits to PV officer a statement known as 'census declaration' which shows stack-wise number of bags in sheds. PV officer tallies stack-wise actual number of bags of food grains found by him in the sheds with stack-wise number of bags declared through 'census declaration' which in turn, should match with the number of bags shown as closing balance as on reference date in stack ledgers. Therefore, full bag shortages existing on any date can be camouflaged by manipulating closing balance of stock through the route of recording fictitious gunny savings. After PV is over, the shortages are finally converted into storage loss by applying fictitious gunny consumption. One may apply a test of checking average bag-weight at issue and bag-weight in closing stock. In case, a very large number of gunny bags are shown to have been saved then average bag-weight in closing balance will be unrealistically high. On the other hand, if unrealistically large number of gunny bags are recorded as consumed then the average bag-weight at issue will be too low as gunny consumption may result into reduced bag weight if actually there are not enough loose grains to be packed at the time of killing of stacks. For illustration, reference is made to pattern of gunny savings and gunny consumption at FSD

Phulwarisarif, as reported by General Manager, FCI Bihar Region for the month of July 2013 in respect of commodity-wheat which is at APPENDIX- A. If, details for one of the stacks, say, stack no. 2B / 9 is referred to, one may observe as follows.

Observation on stack No-2B/9:

i The PV team signed the stack ledger on 30.07.13 for C.B. of 29.07.13.

ii The PV team certified the figure 109 Bags= 137.29.530 (Qtls-Kgs-Gms). The average weight per bag comes to 125.959 Kgs which is not possible.

iii PV was certified on 30.07.13 for the CB as on 29.07.13 where no loose grain was reported. On 08.08.13, 109 bags were handled during issue of stock. Hence consumption of 155 gunny bags on 08.08.13 is not possible at all.

iv First 200 bags were shown as saved on 19.07.13 during stay of PV team and after PV certification on 30.07.13 for 29.07.13, 155 bags have been shown as consumed on 08.08.13 when stack was under issue and killed on 08 / 08 / 13 indicates possible shortage of approx 155 to 200 bags.

v The wheat was issued on higher average weight than average receipt weight.

vi The gunny saving is only possible either where average receipt weight is abnormally low and huge number of bags requires refilling or huge number of cut & torn bags are received in the stack and requires replacement. In this case either of above situations is not found as average receipt weight is normal and no loose grain was reported during PV.

(b) Artificially Increasing Storage and Transit Losses to Generate Surplus Food Grain Stock

If one goes to a food storage depot and verifies full bag weight by drawing samples bags of food grains; one may find that average full bag weight is very near to dispatch weight; if the stock has been received from other depots by rail-rakes. In cases, the stock is locally procured; the full bag weight may be very close to standard bag weight. However, if one knows reading the depot records, it may be very commonly found that recorded bag weight on receipt by rail rake is lower than actual average bag weight and likewise, average bag weight at the time of issue is recorded lower than actual average bag weight. Recording of higher or lower average bag weight at the time of dispatch of stock by dispatching depots is also common in cases of dispatches of stock by rail rakes; which is done with malafide intention of generating surplus stock at the end of dispatching depot by artificially creating higher transit losses or storage losses, as the case may be. Recording of lower bag weight on receipt of food grain stocks by rail rake has direct effect of artificially creating transit losses which in turn generates surplus stock of food grains at the end of depot receiving stocks which can be safely removed / misappropriated. Likewise, recording of lower bag weight at the time of issue of stock has effect of increase in storage losses. However, from angle of stock accounting, a lower bag weight at issue generates surplus stock in hand which may be available for pilferage and misappropriation. In such cases, surplus

stock is generated in terms of quantity but not in terms of surplus number of bags of food grains which remains the same as originally recorded in stock account. Therefore, slackening of gunny bags is resorted to and thereby, additional numbers of bags are created for the purpose of camouflage misappropriation during PV operations. However, if custodians do not anticipate supervisory inspection combined with accurate PV, then State Agency, which is generally in symbiotic relationship with FCI functionaries, may be issued less number of full bags of standard weight plus suitable number of empty bags which may save effort required for slackening of full bags to match a lower bag weight as reported for artificially creating SL. In this context, reference is drawn to a Test Weight Check Memo and Truck Delivery Challan for Stack No. A-2/8 of FSD Talkatora, Lucknow, UP for date 11th August 2014 for raw rice grade- A of year of production of 2012-13 and received at FSD Talkatora on 19th March 2014; the summary of which is tabulated below:

TABLE- 1

Test Weight Check for Stack No. A - 2/8, FSD - Talkatora, Lucknow (UP) on Date - 11th August 2014									
Average Receipt Weight in Kg	RTL %	Average Dispatch Weight in Kg	Moisture Percentage on Dispatch	Moisture % on Receipt	Test Moisture %	Average Test Weight in Kg	Average Issue Weight in Kg	Reported SL %	Test Check SL %
48.502	0.46 %	48.73 (Derived)	Not Mentioned on RR	13.40%	12.40 %	48.427	48.057	0.92	0.15

It may be observed from above that as the rice stock of year 2012-13 may not have such a high moisture content of 13.4% at time of its receipt; moreover, SL figures appears inflated by wrongly recording per bag average weight. Similarly, at FSD Kuraghat, District- Gorakhpur (UP) which has reported one of the highest SL and TL in UP during last six months, average test weight of rice bag in stack No. 4 B/2 was found to be 49.900 Kg against average book weight of 49.365 Kg and average test weight of wheat bag in stack no. 4 A/2 was 50.251Kg against average book weight of 49.6 kg during test weight on 3rd August 2014. Recording of lower bag weight at the time of issue of stock has effect of increase in storage losses. Similar trend has been found in several other FSDs including FSD at Dighaghat, District-Patna in Bihar Region during inspection conducted on 19 August 2014[1].

(c) Preparation of Master Ledgers Preceding Preparation of Stack and Shed Ledgers!

Generation of surplus of food grain stocks by manipulation of average bag-weight and therefore, of gunny account requires a well-coordinated effort to generate depot records. To facilitate manipulation of bag-weight for consignment received by rail-rake, TL is generally not declared at the earliest after weighment of sample wagons; rather, Independent Consignment Certification Squad (ICCS) constituted

by District Office takes its own time to works out average bag-weight to match a certain level of TL which it deems safe to declare. In majority of instances the stock from sample wagons are directly issued without stacking inside the shed on one or other pretext. In cases of manipulated SL / TL, lorry-wise number of bags which is required to be recorded as issued from the depot has to be adjusted taking into account the average bag weight to be declared and recorded in stock ledgers. In this situation, Stack Ledgers and Shed Ledgers cannot be written by custodians of food grain stocks unless he gets coordinated inputs from Depot Office headed by Depot Manager. Therefore, in such cases, first the Master Ledger is generated using inputs from weigh bridge data, without insisting on Daily Statement of Issue and Daily Statement of Receipt from sheds. It is mainly for this reason that commonly the shed-ledgers, stack-ledgers and gunny-registers are not found maintained in updated condition. It may also explain as to why wage-slips are not prepared on time and no one examines wage-slips during depot inspections even though per labourer monthly wages may be Rs. 4 to 5 lakh[2] . As, it requires higher level of skill to make accurate backward calculation of number of bags taking into account manipulated values of SL and TL, therefore; one may find erratic trend of shortages and excess of bags in various stacks. Ironically, gravity of stack-wise shortages and excess of number of bags is overlooked and its implication is neutralized by applying algebraic sum of shortages in some stacks and excess in others even across different sheds and different commodities. Even, the moisture content of food grains in stacks as recorded by quality control functionaries may, in most of the cases, suffer from incoherence and inaccuracy.

Mapping Efficacy of Supervisory Response to Put Check on Mismanagement of Stock Accounting

Supervisory response to the state of mismanagement of stock accounting may be mapped by its efficacy in putting effective check on material and grave deviations from good practices relating to stock accounting prescribed by FCI through Storage Manual. As per Annual Report of FCI for the financial year 2012-13, storage and transit losses sustained by FCI has been Rs. 850.37 Crores involving about 3.85 lakh MT of rice and 1.20lakh MT of wheat. This data may not match with the figures compiled by the Stock Division of FCI due to revision by it from time to time even after preparation of Annual Accounts of the Corporation. Following picture emerges by the mapping-

a. Common Major Deficiencies in System of Stack Management and Depot Record Keeping

i. Master Ledgers are generally prepared first, without receiving Daily Statement of Issue and Daily Statement of Receipt of Stock, directly using weigh bridge data; preparation of stack ledgers and shed ledgers follows preparation of Master Ledger,

ii. Shed level Gunny Registers and Master Gunny Registers are either not maintained or are not updated; the entries in gunny registers, if any, have

a number of over writings; daily gunny savings / consumption in sheds not recorded in Master Gunny Register and unserviceable gunnies are not stored in Central Store of Depot.

iii. Work-Slips for depot handling labours in depots do not conform to number of bags handled taking into account spatial position of stacks inside sheds.

iv. Recording of incoherent moisture levels of food grains stocks in various stacks.

v. Stack-formation in a manner that peripheral counting of bags accurately may not be possible.

vi. Deliberately issuing stock without fully killing stacks and thereby, maintaining a number of part-stacks / baby stacks in a shed with the objective of concealing shortages in stock; this also results into underutilization of storage space and thereby stacking food grains in alleyways too,

vii. Identity of food grain stack not being maintained by frequently changing stack plan / numbering,

viii. Stacking new arrival of food grain stock on existing part stacks; at times, different crops stacked together or on alleyways or dumping on platform, sanctity of stacks is not maintained in a large number of depots.

ix. Not following principle of FIFO to conceal excessive shortages in stocks in certain stacks, hollow formation in stacks at some or other inaccessible part which can get exposed on killing of stacks.

b. Major Shortcomings Noticed in Respect of Carrying Out Periodic and Special PV

i. In spite of repeated occurrences of cases of pilferage and misappropriation of food grain stocks, PV officers continue with the practice of not closing last entries in shed ledgers, especially upon finding shed ledgers incomplete with reference to reference date of PV, thereby causing loss of evidence regarding state of updating depot ledgers; they do not record status of record in depot while preparing their report.

ii. PV officers are also found to be carrying out PV with reference to Census Declaration handed over to him / her even though the figures in the same may not tally with stock position depicted in corresponding stack ledgers.

iii. It is commonly observed that PV officer sign pre-prepared PV report without actually carrying out Physical Verification of Stock. In several cases, stack-ledgers and gunny registers are written after PV so as to convert full bag shortages into storage losses by manipulating figures of gunny consumption.

iv. Rewriting of Records by fudging the entries to conceal losses are still being detected; such cases have resemblance with the incident of fudging

of records as detected in FSD Dhamora, District Moradabad and FSD Dankuni, RO WB during the year 2012-13, this is generally followed by revision of IRRS and MSA with retrospective effect. In several cases, it is also found that the PV officer do not verify overwritten / doubtful entries in stack ledgers with reference to original documents such as 'Daily Statement of Issue' / Release Orders etc.

v. Perfunctory PV are still carried out much after reference date on several pretext including stack not being in countable position or continued inflow of stock by rakes; PV officers do not attest the stock position on depot ledgers as verified by them.

vi. Despite full bag shortages not given effect to the same in depot ledgers, subsequent PV officer is found to be reporting no shortage of stock and thereby causing doubt regarding quality of earlier PV which proves to be fatal in criminal as well as departmental actions initiated, if any.

vii. Paying no attention to PV of gunny / plastic bags and thereby, contributing to conversion of misappropriation into storage loss.

Management Response to the State of Stock Accounting

a. Leniency in Dealing With Old Cases of Storage and Transit Losses Where Records are Not Available

Existence of state of mismanagement of stock accounting can be traced back to as early as year 1995 from official circulars. However, response to the same has been in the form of dilution of internal control mechanism which can be said to stand incentivized by widening difference in economic cost and issue price of food grains. It is clear that even before the year 1995, there were a large number of cases of storage and transit losses in which depot records were missing / not available, making it impossible to take decision regarding writing off of such losses. Management decision was taken and communicated vide Head Quarter's Circular dated 20 April 1995[3] providing for regularization of such storage and transit losses in absence of relevant records so that FCI could get reimbursement for the same under Food Subsidy Bill. The said guidelines were reiterated in the year 1998[4] . To quote the operative parts of the said guidelines-

> "……Zonal Managers / Senior Regional Managers / District Managers are the competent authorities to write off of such losses who satisfy themselves on the merit of each case and give certificate that the records are not available / traceable inspite of concerned efforts made by such authorities and there is no other alternative left except to regularize these losses and such competent authorities would take a conscious decision accordingly".

It is noted with concern that the above policy decision had been taken in absence of full details of such problematic cases, general cause of the situation of missing records and total financial implication of cases with missing records etc. Not only

the Stock Division of FCI but its field offices too, do not have information regarding the number of old cases of storage and transit losses with missing records which are yet to be regularized. As a result, not maintaining relevant records pertaining to cases of storage and transit losses stands incentivized and there is proliferation of such cases of missing records even after the year 1995.

b. Half-Cooked Measures to Control Rail Transit Losses

FCI has taken a number of 'innovative' measures to control rail transit losses such as introduction of Rail Transit Loss Insurance[5] . As due to very nature of rail transit losses the same is not a suitable for insurance coverage unless the premium amount exceeds the amount of rail transit losses, it was realized at certain stage during implementation of the scheme of insurance that the insurance coverage was not to the advantage of FCI and the scheme was discontinued. Thereafter, a good amount has been spent on implementation of an idea of lining of railway wagons by thin plastic sheets so that rail transit losses could be controlled. However, in absence of a detailed project report defining deliverables and also the methodology to measure the deliverables the scheme has been abandoned for the time being. Now, yet another concept of introducing carrying & forwarding agent for controlling rail transit losses is on anvil.

c. 'Scientific Study' Entrusted to ICAR to benchmark Storage Losses

Indian Council of Agricultural Research (ICAR) has been entrusted with a 'scientific study'[6] with project cost of Rs. 320.53 lakhs under title as– 'Study on Determining Storage Losses in Food Grains in FCI and CWC Warehouses and to Recommend Norms for Storage Losses in Efficient Warehouse Management' to benchmark the level of Storage Losses. ICAR has initiated its field work based on premise that type of food-grains, agro-climatic conditions at place of storage, variation in moisture content of food grains, degree of exposure to ambient atmospheric conditions and storage period are some of the most important factors influencing storage losses. On one hand, developing an empirical formula for bench-marking storage losses factorizing multiple variables which do not render them to easy measurement is going to be a big challenge; on the other, ICAR does not have expertise in warehouse management and it seems to be oblivious of issues relating to stock accounting.

d. Lack of Sanitized Data Regarding Storage and Transit Losses

Information regarding storage and transit losses is generated by a depot which is finally compiled to form part of Annual Account of FCI. Information regarding storage and transit losses which stands regularized is also available with functionaries of Stock / Storage wing as well as Finance & Accounts wings of FCI at all levels of field offices. There is, therefore, no valid reason for discrepancy between information regarding storage and transit losses and parts of the same yet to be regularized as reported by Stock Division and F&A Division of FCI HQ. But the factual position is otherwise and for example, storage losses as depicted in Annual Reports of FCI is different from the statistics reported by Stock Division of

FCI HQ has been shown in the Annexure (APPENIX B).

e. Reluctance to Putting Segregated Data of Storage and Transit Losses in Public Domain

FCI depicts information regarding storage and transit losses that occurs during a financial year, the quantum out of the same which has been regularized etc. through Note 11- B provided in Annual Report of FCI. However, the information provided has limited application with respect to getting reimbursement from the government of India towards storage and transit losses which has been regularized during the year of report. There is no format which provides commodity-wise details, in quantitative terms, of storage loss, storage gains and transit losses which has occurred during various financial years, quantum regularized and quantum yet to be regularized which can be used as useful management information. Further, losses of stocks due to pilferage, misappropriation and theft is not fully shown as such, rather the same is clubbed with Storage and Transit Losses. Suggestions made by Vigilance Division in this regard have been only partially responded to by F & A Division which has introduced some details of storage and transit loss combined, both in quantity and value terms, by adding one more Table to Note 11- Bof Annual Report of FCI for the financial year 2012-13. However, Stock Division has preferred not to put any details in this regard.

f. Dilution of Definitions of Storage and Transit Losses for the Purpose of MOU Between the Department of F& PD, Government of India and FCI

It may be noted that Memorandum of Understanding signed between the Department of Food & Public Distribution, Government of India and FCI defines target for maximum storage losses as the loss of stock with respect to 'quantity of food grains issued' whereas standard definition of storage loss is the stock of food grain as a ration of the 'quantity of food grains in stacks killed'. Similarly, the transit losses have been defined with respect to quantity moved which includes the quantity moved by road etc. This has effect of artificially enhancing performance of FCI in controlling storage and transit losses by diluting the definitions of storage and transit losses. In spite of this, Stock Division of FCI does not compile figures of SL /TL through standard reports generated by Depots and compiled at District, Regional and Zonal levels but generates another set of data; resultantly, SL and TL as reported by the Stocks Division of FCI are generally in wide variation with the figures reflected in FCI's Annual Account.

g. Regular Monitoring of Storage and Transit Losses by the Board of Directors

As desired by Secretary, department of Food and Public Distribution, Ministry of Consumer Affairs, Food & Public Distribution, Government of India[7], a regular agenda item on storage and transit losses is being listed for every meeting of its Board of Directors starting from its 362ndmeeting held on 5 March 2014.However, the Stock Division of FCI is still in process of compilation of information in this regard.

Introduction to Zero Stock Check

a. Background Facts

The background of introduction of Zero Stock PV or Zero Stock Check has been elaborated earlier. To reiterate, the process of writing off / regularizing SL and TL has a provision of fixing responsibility on custodians and District Managers concerned for unexplained higher SL and TL; however, as the regular management tools have been made redundant it is not possible to ascertain the stock available in the depot at a point of time and the stock position which ought to be there in a depot at that point of time; as such, there are instances of sudden detection of huge shortage of stock at a later stage for which the present custodian is held responsible. This had reached such a stage that effecting changes in custodian is being resisted by new incumbents who had reasons to apprehend mismatch between actual stock in depot and book balance depicted in stock-ledgers. It is in this background that in a Monthly Progress Review meeting held at FCI HQ on 24 January 2013 that the Stock Division of FCI proposed introduction of Zero Stock Check as a management tool. After deliberations on the subject by senior stock managers of FCI, it was decided by the FCI management to introduce Zero Stock Check as an innovative management tool with immediate effect. Decision to introduce Zero Stock Check was circulated by Stock Division of FCI vide its letter dated 14 February 2013 addressed to all Executive Directors of Zones and General Managers of FCI Regions requiring them to undertake Zero Stock Check PV during the quarter ending 31 March 2013.

b. *Salient Features of Zero Stock Check PV as adopted by FCI*

i. Basic Guidelines regards Zero Stock PV has been issued by FCI vide its Circular No. STK / 37 / 1(31) / APV / 2013 dated 14 February 2013. From the stated objectives of introducing Zero stock Check PV it is clear that FCI had been facing problems in relying on standard tools of stock accounting namely, QPV, APV, SPV and ISI PV for assessing stock position in its depots and therefore, Zero Stock Check PV had been introduced to ascertain correct stock position that existed at the point of time. Further, Zero Stock Check PV essentially involves bringing stock position of food grains in a FSD to zero level by 100% liquidation of stock in a Depot. To quote-

> "Instances of large variations in the stock have been reported as a result of special PV conducted in many depots in the recent past. At present, the PV conducted on Quarterly, Annual basis and Special PV are based on peripheral counting of bags and 100% weighment of only selected / part stacks. The PV through 100% weighment of only part & baby stacks which constitute a very small percentage of the overall stock holding of the corporation, leaves occasion for misappropriation of the stocks at depot level. In order to arrest the same, it was discussed during the MPR meeting held on 24.01.13 that 100% liquidation of

stocks for making 'zero' stock level in the depots is required. It is, therefore, decided that Executive Directors (Zone) shall select one depot in each Region on quarterly basis to arrive at the actual stock holding and resultant loss by making the stock level 'zero' in the selected depots".

ii. Zero Stock Check as prescribed by FCI is required to be applied to a complete Food Storage Depot as one operational unit and involves issue of food grains by 100% weighment and stopping all kinds of receipt of new stocks of food grains until zero level of stock has been achieved. Thus, by this PV, correct stock position in the Depot which was there in the Depot at the point of time of commencement of PV can be ascertained. To quote-

> "This may involve restricting or stopping induction of stocks to and permission to liquidate the stocks in overriding priority from the identified depots / sheds."

iii. It had also been prescribed that selection of a depot in a region shall be made by Zonal Executive Director in consultation with General Manager of the FCI region, taking into consideration various operational parameters like consistent abnormal storage / transit losses / shortages detected during regular PV or by Squads etc.

iv. The report format for Zero Stock PV has been prescribed by FCI Circular No. STK / 37 / 1(31) / APV / 2013 / Vol.II, dated 10 July 2013.From the report format prescribed for this PV it is evident that a Depot as a whole is generally the unit for carrying out Zero Stock PV. In this, the book balance of stock in a depot and actual stock, both in terms of quantity are compared and any loss or gain in the depot as a whole is reported as storage loss which may be regularized as per delegation of powers.

v. Warehouse management experts of FCI have prescribed Zero Stock Check as an Over the Counter (OTC) drug like solution and therefore, ED (Zones) and GMs of FCI regions have been advised by e-mail dated 4 October 2013 to apply this solution to at least two depots every quarter in every FCI region and aim at achieving zero balance condition for all of its depots in a time-cycle of three years.

c. Critical Analysis of Management Innovation of Zero Stock Check PV

i. The management tool of Zero Stock Check is widely used in respect of bulk storage systems like silos taking a silo as unit and not the entire depot which may have multiple silos. Zero Stock Check for a silo is necessary because a silo keeps on receiving fresh doze of stock continuously even before the same is fully emptied and therefore; storage loss or gains can be quantified by Zero Stock Check only. However, in stack-based storage system a stack is the unit for stock management and fully liquidating a stack maintaining its unique identity amounts to making zero-stock check

with reference to a stack. In other words, application of Zero Stack Check for entire depot in traditional FSDs of FCI may be altogether a novel concept; as such, very little information is available regarding standard protocols for its application in such situations.

ii. The letter-communication dated 14 February 2013 introducing Zero Stock Check shows that the decision to introduce Zero Stock Check had been taken in one of the Monthly Performance Review Meetings. As there was no concept note circulated in advance by the concerned Operating Division regarding the Zero PV, there may be, in all probability, ambiguity in the minds of officers who may have participated in deliberation, regarding the protocols to be followed for selection of a target-depot for Zero- PV and steps to be followed, report formats, manner of monitoring & review etc. The ambiguity is evident as the said communication does not enunciate any of the fore-mentioned details for such an important management tool.

iii. Ideally, availability of updated stack-ledgers, shed-ledgers, master-ledgers, gunny registers; labour registers etc. must be ensured before undertaking any kind of PV of stocks. In case, stock ledgers etc. are not found updated, the last entries may be duly marked so that evidence regarding incomplete records is not destroyed by custodians of stocks afterwards. It is equally important for a PV team to ensure that the stacks are in countable condition. Any material deviation noted in respect of maintenance of depot records and stack formation must be recorded. The guidelines for Zero Stock Check are silent on these crucial points.

iv. Ground truth is that a large number of FSDs chronically suffer from lost identify of stacks and manipulation with its formation. Resultantly, depot records may not reflect the stock position at any point of time which ought to be there in the depot and due to manipulation with stacking pattern and its formation it may not be possible to reliably ascertain stock position in the godowns both in terms of bag-count as well as quantity of food grains. If Zero Stock PV has been introduced to salvage from this type of state of affairs then, it would be even more important to set out proper protocols for carrying out Zero PV. In absence of any such guidelines, It has been noticed that generally the PV team opens shadow master-ledgers and makes recordings of stocks liquidated on day to day basis under supervision of PV Team and stack ledgers and shed ledgers are generated by actual quantity of stock found in a stack / shed, for example- Zero Stock Check carried out in FSD- Whitefield (Karnataka). This method of conducting Zero Stock Check would make the process of fixing responsibility more difficult due to obliteration of stack-wise and shed-wise valuable data of food grain stocks, gunny account and labour inputs.

v. From the Report Format prescribed for Zero PV, it appears that Storage Loss is to be computed with reference to stock position depicted in Mater ledger; therefore, it may be inferred that in Zero PV introduced by FCI,

entire Depot is taken as one unit of storage. This means that for a correct Zero Stock Check, entries in Master Ledgers must be arrived at by consolidation of entries in stack and shed ledgers, which in turn must be reliable and correct. But, as per prevailing practice, in majority of FSDs, Master-Ledgers are prepared using weigh-bridge slips without receiving Daily Statements of Issue of Stock and Daily Statement of Receipt of Stock and on the other hand, weigh bridge slips may not have mention of correct number of bags loaded in a lorry, as the weigh bridge operator goes by declaration of custodian of food grain stocks in this regard; thus in absence of correct details about number of full bags only Master Ledger entries may lead us to misleading information regarding storage and transit losses. Therefore, unless the closing balance of stock as depicted in Master Ledger of Depot is confirmed through proper transaction audit the figures of storage losses computed by prescribed protocols of Zero Stock Check may lack accuracy and sanctity.

vi. As Zero Stock Check converts all sorts of shortages in stock into storage loss, it cannot be said to have potential to detect cases of pilferage, misappropriation or theft, nor can it help pin-point the culprit / custodians who may be responsible for higher storage losses or who damaged stock management in a depot.

vii. Storage loss is determined at the end of Zero Stock Check by taking the loss of stock as percentage of closing balance of stock in the depot on the reference date of PV which has the effect of diluting the concept of storage loss by change in denominator in the formula for calculation of SL. Therefore, use of zero stock check PV for camouflaging higher SL in certain sheds of a depot need to be guarded against.

viii. Cost implication of Zero Stock Check is very high as the depot operations have to be restricted to emptying the same and thus, till zero stock level is first achieved and desired level of stock through restocking is attained the depot has to be run at a very low level of capacity utilization but full fixed cost.

ix. If Zero Stock Check is essentially targeted at salvaging the situation out of a state of total mismanagement of depot operations and record then, it may not be appropriate to project it as a management innovation in FCI. Moreover, ordering Zero Stock PV in a definite number of depots every quarter as prescribed by FCI guidelines may only end up wasteful application of resources of man-power and money. It should not be prescribed like 'over the counter drug / solution; as such, there is a need to prescribe suitable protocol for selection of depots for carrying out Zero Stock Check PV. But, to the contrary, carrying out Zero Stock Check in a large number of depot has been introduced as an item in MOU signed by FCI with the Ministry of Consumer Affairs, Food & Public Distribution. Does this indicate towards a state of total collapse of regular management tools developed by FCI over last about 50 years!

Conclusion

As per the Annual Report of FCI for the financial year 2012-13, the Storage and Transit Losses put together had been to the tune of Rs. 850.37 Crores in value terms involving loss of mainly about 3.85 lakh MT of rice and 1.20lakh MT of wheat. However, in the state of shaken confidence in the sanctity of stock accounting system of the Corporation, one may apprehend that the gravity of the problem may not have got fully reflected in these reported figures. The circumstances which have rendered regular management tools developed by FCI over a period of past 50 years and compiled by it in the form of Storage Manual redundant for the purpose of effective stock management, are of grave concern. The very fact that losses of stocks due to pilferage, misappropriation and theft are camouflaged by various means and also being converted into storage and transit losses breaching supervisory control without fear of deterrent evil consequences calls for immediate due attention. The message is very clear that a departure from the policy that- 'supervisory responsibility begins and ends at the level of a District Manager' is need of the time. The concept of Zero Stock Check is not a novelty for the system of stock accounting in FCI as the same is applied to a stack of food grains as a unit. Even in the context of depots with bulk storage structures like silos, Zero Stock Check is applied to a silo as a unit and not to the entire Depot in one go. In other words, Zero Stock Check which is commonly used as a management tool in cases of bulk storage structures like silos by taking a silo as a unit, may have limited application in case of storage of food grains in the form of stacks in godowns / sheds in which case, a stack is the basic unit of stock accounting; as such, it may, at the best serve as a tool for salvaging from a state of total damage to regular stock accounting system. Introduction of Zero Stock Check PV in all the FSDs in certain order or roster where there is traditional system of storage in sheds in the form of stacks may be termed as wasteful as it would result into underutilization of storage space and unproductive expenditure on items of fixed cost which is avoidable too. Therefore, policy decision to prescribe Zero Stock Check as Over the Counter Solution for application in an arbitrary number of depots every quarter without putting in place precise protocols for selection of depot and its implementation merits immediate review. At the same time, necessity and urgency to take all required steps to prevent further collapse of regular system of stock accounting and restoring the same cannot be overlooked anymore and must be accorded top most priority. It is therefore, necessary to put in place an accountability structure and an appropriate internal control mechanism supported by a policy of zero tolerance to any material deviation from standard protocols / operating procedures prescribed in this respect by Storage Manual developed by FCI. Can this goal be realized without revisiting the bonanza of reimbursement of Operational Cost in the present manner is a million dollar question!

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Notes:

[1]Vigilance Report from Regional Office, Bihar by e-mail , Dated-20 August 2014

[2]Reported by FCI Regional Office, Panchkulaa vide letter no. IR- L / Lab / Investigation- Rohtak / 2014-15 / 5049, Dated 10 / 21 July 2014

[3]Headquarters' Circular No. P & R / 27 (1) / / 94- Feb. dated- 20. 04.1995

[4]No. S & S / 29 / 1 / (3) / 93 dated 24 September 1998

[5]Transit Insurance Policy Agreement between FCI as Insured and The Oriental Insurance Company ltd. as Insurer and M / s A & M Insurance Brokers Pvt. Ltd. dated 22 July 2005

[6]Memorandum of Understanding signed between ICAR and FCI in March 2013

[7]Shri U. K. S. Chauhan, IAS, Joint Secretary (Policy & FCI), Department of Food & Public Distribution, Government of India's letter No. D. O. Letter No. 13-4 / 2013 M.II, Dated 24 February 2014

APPENDIX-A

REPORT ON GUNNY SAVING AND CONSUMPTION AT FSD PHULWARISARIF FOR THE MONTH OF JULY, 2013 IN RESPECT OF COMMODITY- WHEAT :

Stack wise operation during the month of July 13

Stack No- 2B/9 (Stack ledger page No-67)
Commodity: Wheat
Date of receipt- 02.07.12
Original Receipt- 2650 Bags = 1307.21.600 (Qtls-Kg-Gms)
Average receipt weight= 49.329

	Date	O.B.	Receipt	Gunny consumed	Issue	Gunny saved	Closing Balance
Before July 13				0		0	1600 Bags= 781.59.230
July-13	04/07/13	1600 Bags= 781.59.230	0	0	931 Bags= 464.94.100	0	669 Bags= 316.65.130
	19/07/13	669 Bags= 316.65.130	0	0	360 Bags= 179.35.600	200	109 Bags= 137.29.530
	29/07/13	109 Bags= 137.29.530	0	0	0	0	**109 Bags= 137.29.530**
							PV signed on 30.07.13
After July 13	08/08/13	109 Bags= 137.29.530	0	155	249 Bags =124.40.000	15	00.00.000

Stack Killed on: 08.08.13
Total Quantity Issued: 2590 Bags= 1294.32.070
Average issue weight: 49.974
Storage loss- 12.89.530

Observation on stack No-2B/9:

1. The PV team signed the stack ledger on 30.07.13 for C.B. of 29.07.13.
2. The PV team certified the figure 109 Bags= 137.29.530 (Qtls-Kgs-Gms). The average weight per bag comes to 125.959 Kgs which is not possible.
3. PV was certified on 30.07.13 for the CB as on 29.07.13 where no loose grain was reported. On 08.08.13, 109 bags were handled during issue of stock. Hence

consumption of 155 gunny bags on 08.08.13 is not possible at all.

4. First 200 bags were shown as saved on 19.07.13 during stay of PV team and after PV certification on 30.07.13 for 29.07.13, 155 bags have been shown as consumed on 08.08.13 when stack was under issue and killed on 08/08/13 indicates possible shortage of approx 155 to 200 bags.
5. The wheat was issued on higher average weight than average receipt weight.
6. The gunny saving is only possible either where average receipt weight is abnormally low and huge number of bags requires refilling or huge number of cut & torn bags are received in the stack and requires replacement. In this case either of above situations is not found as average receipt weight is normal and no loose grain was reported during PV.

APPENDIX-B

TABLE 2. Comparative statement of Stocks Division and Accounts Division Regarding Storage Gain/Losses Quantity

Storage Loss (Wheat + Rice) Figures in MT

Sl.No	Region	2009-10		2010-11		2011-12		2012-13	
		Stocks Figures	A/c's Figures	Stocks Figures	A/c's Figures	Stocks Figures	A/c's Figures	Stocks Figures	A/c's Figures
1	Punjab	64266	54111	80284	80858	83864	82724	84067	84807
2	Haryana	-1584	-2280	2301	1235	11320	5649	13548	13581
3	Uttar Pradesh	-1824	-2638	6611	9568	6244	7845	9049	14013
4	Uttarakhand	2094	2107	1542	1553	1153	1154	1262	1323
5	Rajasthan	-2340	-2492	-5456	-5524	-8558	-8682	-8749	-9957
6	Jammu & Kashmir	215	206	106	136	81	102	445	214
7	Delhi	292	688	-233	257	298	311	1173	1207

8	Himachal Pradesh	-35	-96	-244	-178	-111	-95	-52	-81
9	Maharashtra	7784	8046	9136	9526	12367	15687	15346	15015
10	Gujarat	3936	3955	3869	3870	3188	3272	3690	3342
11	Madhya Pradesh	1048	2836	2349	602	-22312	-11244	-32719	-2402
12	Chattishgarh	6916	11370	6895	11222	11759	34127	14308	15864
13	Andhra Pradesh	18058	20492	19032	19738	26593	27225	28388	31468
14	Karnataka	3587	3481	3161	3160	3518	3539	4881	5284
15	Tamil Nadu	6556	6624	5542	5934	4819	4816	7358	7868
16	Kerala	-9	-50	-52	-97	446	422	1762	1772
17	West Bengal	10312	10398	9344	11249	8561	8994	11032	15304
18	Orissa	5908	5843	3984	4088	3370	3403	5361	5683
19	Bihar	2959	3863	3882	12748	5310	17911	3765	8352
20	Jharkhand	1572	1549	1781	1908	1950	2479	2648	2311
21	NEF	571	534	441	441	547	557	696	705
22	Assam	1829	2181	1946	2322	2747	4027	2808	3581
23	N & M	512	288	293	292	208	452	233	1106
24	Arunachal Pradesh	0	0	0	0	0	0	0	122
	Total	132623	131015	156514	174904	157362	204676	170300	220479

Note: (-) Minus indicates GAIN Source: Stock Division of FCI

Compulsory Licensing and the Indian Competition Law: A Tale of Uneasy Bedfellows?

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Abstract

The interface between Competition law and Intellectual Property law has been in debate for long now. More recently, in the Indian context, the question of compulsory licensing has been widely discussed ever since the decision in the Natco case. It is in this context that as an author, I decided to narrow down the area of research while discussing the possible interface with competition law. The paper is divided into eight parts wherein the author begins by defining compulsory licensing giving an International perspective and elucidating on complementary nature of IP and Competition law. The second part of the paper examines the grounds for the grant of compulsory licenses. In the third part, the author throws light on the Natco case to bring out the transition in law with respect to the application of 'Compulsory licensing' in India. The fourth part examines the interface between competition law and IPR in general. The fifth and the sixth part of the paper elaborate on the issue of compulsory licensing under the TRIPS Agreement and Indian Competition law respectively. Reference has also been made to the recent judgment of the Supreme Court in Novartis case highlighting the mandate of consumer welfare. In the eighth and final part of this paper, the author concludes by justifying the title of the paper as to whether compulsory licensing and the Indian competition law are uneasy bedfellows. The author concludes that compulsory licensing and competition law are not counterproductive; rather it engenders competition concerns only when it is subject to abuse.

Introduction

A compulsory license is an involuntary contract between a willing buyer and an unwilling seller imposed and enforced by the State[1]. These licenses are generally defined as 'authorisations permitting a third party to make, use or sell a patented invention without the patent owner's consent.[2] Across jurisdictions, the reasons for granting a compulsory license are almost similar. Either the patent holder has been charging unreasonable prices on an essential commodity or the facility in question affects the rights of public at large when the patent holder is exercising his right in an unreasonable fashion. Usually, when the Intellectual property rights (IPR)[3] holder starts abusing the exclusive rights granted to him such that it leads to exclusion of competitors from the 'relevant market', compulsory licenses acts as a remedy to an extent to control this form of abuse. As a general proposition of law, the owner of an intellectual property right is entitled to determine how it should be exploited and a compulsory license should be imposed only in exceptional

circumstances[4].

Intellectual property rights and Competition policy share a common objective of protecting the competitive markets so that they generate economic efficiency and welfare[5]. Infact, both these laws have a common aim and objectives achieved through different means. Examining IPR from the competition point of view may give us an impression that it is a means to reduce competition as it gives the IPR holder an exclusive monopoly while hindering others from offering the product in the market[6]. However, if both the laws are looked at with a 'common objective', the conflicts between them can be avoided. IP and Competition law promote dynamic efficiency by creating a system of property rights and market rules which as a consequence leads to incentives for invention, innovation and consumer welfare. Thus, Competition Law recognizes this role of IPR in promoting innovation and hence protects these rights reasonably. For instance, under the Indian Competition Act, it is the 'abuse of dominance' which is prohibited and not 'dominance' per se. This protects the overall 'consumer welfare' at the same time enhances the economic efficiency of the firm aiming to become more competitive.

Compulsory licensing has been recognized world-wide by various international organizations, treaties and conventions, viz. World Intellectual Property Organization (WIPO), Paris Convention for the protection of Industrial Property and World Trade Organisation (WTO) Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). Under Article 8, 31 and 40 of the TRIPS Agreement, several grounds have been laid down that seek to promote public health and nutrition and public sectors of vital importance to the socio-economic and technological importance of the contracting States. Compulsory licensing gives way to the interest of society while trading off the personal interest of the IPR holders. It cannot be denied that with the coming of TRIPS, the intellectual property rights have entered into all together a new field with the strengthening of the legal position of the patent holder. This extension of IPR and the enhanced power of the patent holder have raised many concerns for the developing countries. The dilemma arises while balancing the commercial interests protected by IPR vis-à-vis the concerns relating to public health and consumer protection. However, the case does not remain the same in developed countries given the fact that the strengthening of their IPR laws has happened behind a strong competition law that has been prevailing for many years in that country. Thus, whether the developing countries are well prepared to neutralize the impact of price increase due to intellectual property rights is a matter of detailed analysis. It is in this context that the author examines the possible use of compulsory licensing as one of the tools to mitigate the impact of exclusive rights granted to the patent holder.

There are many poor countries that are not able to afford costly drugs, which are crucial for patients suffering from chronic diseases. The manufacturers of these

life-saving drugs after obtaining a patent, abuse their position by charging excessive prices making it unaffordable for a great part of the population. For example: In 1997, in response to its nation's HIV epidemic, the South African Parliament proposed the Medicines and Related Substances Control Amendment Act. The Act empowered the Minister of Health to allow compulsory licensing and parallel importing in certain situations, in order to create *'conditions for the supply of more affordable medicines... so as to protect the health of the public.'* The subsequent dispute between South Africa and the United States brought to public attention international disputes over pharmaceutical patents in developing countries. The controversy centers around the appropriate responses-by pharmaceutical companies, by their home government and by the governments of poor nations facing epidemics-to intellectual property rights that price life-saving drugs beyond the reach of whole patient populations[7].

Grounds for granting Compulsory Licenses

The provisions relating to compulsory licensing has beenlaid down under the Indian Patent Law. These provisions are liberal in nature and flexible to the extent as provided for under the TRIPS agreement. It is not necessary that a compulsory license should be opted for all diseases, which does not have a significant health impact. It is also not necessary to go for compulsory licensing for all generic drugs unless there is an acute shortage of such medicines or in the event that they have been priced very high. The provisions relating to compulsory licensing has been given under Section 92 and 100 of the Indian Patents Act, 1970.

S.No	Description	Section 92	Section 100
1.	Circumstances	Under circumstances of: national emergency, extreme urgency, public non-commercial use.	Use of the invention for purposes of government.
2.	When Compulsory License can be issued	After a patent is granted	After an application is filed or after a patent has been granted.
3.	To whom the license may be issued	To any party, i.e. any company for retail supply	To any party, i.e. to any Company for supply to the government and not for retail supply.
4.	Whether commercial use permitted	Yes, commercial use by third parties is permitted.	Use is exclusively by government for its own purpose, i.e. distribution through government hospitals at a certain reasonable price[8].

After examining the grounds for the grant of compulsory license under the Indian Patent Law, it is also important to throw some light on other different modalities of compulsory licenses.

i) Refusal to deal

In *Berkey Photo Inc. v. Eastman Kodak* [9], the US courts have recognized in principle the right of the patent owner to give or not to give a license to a third party. However, the case does not remain same across all jurisdictions. Refusal to deal has been a sufficient ground for granting a compulsory license under the patent laws of India, United Kingdom, China, Argentina and Israel. Under the clause of refusal to deal, the patentee usually tries to impose unreasonable conditions on the grant of a license that leads to hindrance in development of commercial or industrial activities[10]. Such practices are anti-competitive in nature as they have a tendency to block research and further innovation in the market. Such a refusal limits the 'production of goods or provision for services in the market' or restricts the 'technical or scientific development relating to goods or services to the prejudice of consumers. This ultimately results in the 'denial of market access', all three of which amount to abusive conduct under sections 4(2)(b)(i), 4(2)(b)(ii) and 4(2)(c) of the Competition Act, respectively[11].

ii) Inadequate supply of the facility

Grant of compulsory licenses can also be linked to the insufficiency of supply. Under Section 90 of the Indian Patents Act, 1970, if the invention is not working in India at all or the invention is not able to satiate the needs of the people to fullest practicable extent, then the reasonable requirements of the public is deemed to not have been satisfied.

iii) Public Interest

The term 'public welfare' is quite wide in nature and varies across countries. For example, in United States, insufficient working, the dependency of patents or the interest of consumers in obtaining a protected product at the lowest possible price do not constitute a sufficient basis for the granting of compulsory licenses on grounds of public interest. However, in countries with limited industrial development, public interest may be deemed to include the opportunity to develop national industry[12]. Prior to the amendment of 2002, Section 97 of the Patents Act, 1970 empowered the Central Government to notify in the Official Gazette that compulsory licenses may be granted *in respect of certain patents or class of patents where it is satisfied that it is necessary or expedient in the public interest.* However to bring the law in consonance with the TRIPS agreement, this was narrowed down to 'national emergency' or 'extreme urgency' or in cases of 'public non-commercial use'[13].

Compulsory Licensing and Public welfare in the light of Bayer v. Natco[14]

Section 84 of the Patents Act, 1970 provides for the issue of compulsory licenses. It was in the case of *Natco v. Bayer* that first-ever compulsory license to a generic firm

was granted for Bayer's cancer drug *Nexavar (sorafenib)*. Bayer sells sorafenibtosylate used in the treatment of liver and kidney diseases under the brand name '*Nexavar*' which seeks to extend the life of patients who are afflicted with the last stages of kidney or liver cancer. Bayer was granted a patent for this drug (2008) by the Indian Patents Authority. This drug was being sold in the Indian market for a very high price. In consequence of which NatcoPharma (an Indian company) applied to Bayer for a voluntary license to manufacture and sell the drug which was declined by Bayer. Subsequent to which it applied for a compulsory license to the Indian Patents Authority on the expiration of three years. Under Section 84 (1) of the Patents Act, 1970, a compulsory license may be granted after the expiration of three years of the grant of patent in the event that (i) reasonable requirements of the public with respect to the patented invention have not be satisfied (ii) that the patented invention is not available to the public at a reasonable and affordable price (iii) that the patented invention has not worked in India. On being satisfied that the three grounds have adequately been met, the Patents Office granted a compulsory license under Section 84 of the Act, 1970 to Natco for the manufacture and sale of sorafenibtosylate.

This was because Bayer had failed to ensure that the drugs were made available at an affordable cost as it was accessible to only two percent of the Indian population. It had also failed to contribute to the transfer and dissemination of technology so as to counterbalance the exclusive rights granted by a patent with the obligations of a patentee that arise under the Patent Act[15].

The Controller of Patents P.H. Kurian noted that 'A right cannot be absolute. Whenever conferred upon a patentee, the right also carries accompanying obligations towards the public at large. These rights and obligations, if religiously enjoyed and discharged, will balance out each other. A slight imbalance may fetch highly undesirable results. It is this fine balance of rights and obligations that is in question in this case'[16]. The grant of compulsory license in this case lowered the cost of the drug to a significant extent making them affordable and accessible to those who need them the most. This decision also ended the monopoly of Bayer over Nexavar. This decision of the Board came in the backdrop of insufficient and unsustainable quantities of medicine available within India.

Competition Law and Intellectual Property Law Interface

In the recent past, there have been more conflicts than harmony between intellectual property protection and competition law in India. For example: In *Aamir Khan Productions Pvt. Ltd v. Union of India*[17], the Bombay High Court held that the CCI has the jurisdiction to deal with competition cases involving IPR. In *Kingfisher v. Competition Commission of India*[18], it was made clear that all issues that rose before the Copyright Board could also be considered before the CCI. In *FICCI Multiplex Association of India v. United Producers/Distributors Forum (UPDF)*[19], CCI found cartel-like activity in the Indian film industry. The defence in this case defended the alleged agreement between the producers and distributors of the film by arguing that it was necessary to so in order to protect the intellectual

property rights of the producers. Nevertheless, these conflicts do not undermine the goals of competition law or IPR protection. Intellectual property and competition law are complementary regimes both designed to encourage innovation within appropriate limits.[20] A literature review on the subject has recognized IP and competition law mutually re-forcing.[21] This can be explained by the increasingly important role played by IP in the world economy and the measures taken against its abuse which is quite evident in the economic policy of many countries. Martin Khor in his article[22] explains that a trade-off may exist between achieving static efficiency through competition and achieving long term efficiency through growth and innovation. In this context, the dominance of monopoly holder may appear to be anti-competitive but is an intrinsic part of intellectual property protection. Monopoly rights when granted under the intellectual property law are acceptable but to an extent that it does not hinder investment and distort competition in the market. In order to satisfy the participation constraint, it becomes necessary to have a policy governing intellectual property and competition law. Both competition and IP encourages innovation and introduction of new products in the market. Nevertheless, Intellectual property does not deprive the public of anything it possesses rather it is an inducement to supply public with desirable works which might not otherwise be available.[23] The Indian competition law sees no harm in dominance of market power as long as it is not abusive. 'Dominant position' is a position of economic strength that enables a firm to prevent effective competition in the relevant market.[24]

The intellectual property laws provide incentives for innovation and its dissemination and commercialisation by establishing enforceable property rights for the creators of new and useful products, processes that are more efficient and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without compensation. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers.[25]

IPR is a private right. As Cornish puts it, *it is a right 'to stop others from doing certain things; a right in other words to stop pirates, counterfeiters, imitators and even in some cases third parties who have independently reached the same ideas, from exploiting them without the license of the right owner.'*[26] Competition Law comes into play when the IPR holders try to exercise market power to the detriment of the consumers. IPRs are not anti-competitive in nature rather it aims at protecting the moral rights of a right-holder's work to ensure a reward for his creative work. Moral rights in the world of IP are a special set of rights that are owned by the author or creator of a work by virtue of their role as an author or creator. It lets someone control how a creative work can be used in non-economic ways such that no matter who gets to exploit the economic rights in a copyrighted work, the creator / author has a right to be named as the author. While rewarding this, competition law controls the risks of an undue extension of legal exclusivity. This is evidenced by the prohibition of exclusivity agreements only where enterprises in a vertical relationship enjoy

market power or where exclusivity arrangements are imposed by a dominant enterprise.[27] Even the High Level Committee on Competition Policy and Law (SVSRaghvan Committee) had envisaged that the interface between IP and antitrust to involve issues relating to agreements amounting to abuse of dominant position and issues arising out of mergers.

Thus, they are not in conflict with each other, rather it can be said that they do not work in complete isolation to each other. However, in short run IPRs do confer market power and may lead to restriction of production and supply. But, it is in this context that competition law comes handy and protects the consumers from unfair practices. Thus, competition is not the end goal of competition law just as IP protection is not the end goal of IPRs policy but only a means to achieve improved efficiency and better welfare in the long-run.[28] Though, the controversy persists regarding conflict between both the laws, however in light of the above arguments it is submitted that both the fields of law aim at promoting dynamic competition in the market. Further, it is recommended that healthy competition cannot be compromised at the cost of consumer welfare and discouragement of competition.

Compulsory Licensing under WTO-TRIPS Agreement

Within the broad group of Multi-lateral Agreements in the WTO is the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS). TRIPS Agreement lays down minimum standards for the protection of the Intellectual Property Rights as well as the procedures and remedies for their enforcement. It establishes a mechanism for consultations and surveillance at the International level to ensure compliance with these standards by Member countries at the National level.[29]

The TRIPS Agreement does not specifically list the reasons that might be used to justify compulsory licensing. However, the Doha Declaration on TRIPS and Public Health[30] confirms that countries are free to determine the grounds for granting compulsory licenses.

The TRIPS Agreement lists a number of conditions for issuing compulsory licenses, in Article 31. In particular:

- Normally the person or company applying for a license has to have tried to negotiate a *voluntary license* with the patent holder on reasonable commercial terms. Only if that fails can a compulsory license be issued, and
- Even when a compulsory license has been issued, the patent owner has to receive payment; the TRIPS Agreement says *"the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization", but it does not define "adequate remuneration" or "economic value"*.

Compulsory licensing must meet certain other additional requirements: it cannot be given exclusively to licensees (e.g. the patent-holder can continue to produce), and it should be subject to legal review in the country.[31]

Compulsory Licensing and Indian Competition Law

As per the recommendations of the High Level Committee on Competition Policy and Law, the Government made an express provision in the Competition Act that reasonable restrictions may be necessary for protecting the IPRs and their exercise shall not amount to anti-competitive practices. Thus, this was one of the intentions behind Section 3 (5)[32] of the Competition Act, 2002. The reason behind the enactment of this section is that the bundle of rights in the form of IPRsshould not be disturbed to the disadvantage of the creativity and intellectual power of the human mind. This encourages further innovation and research. However, this is not an absolute right. It does not permit any unreasonable condition to be bundled along with the IPR. In case, it adversely affects the prices, quantities or quality of goods and services, then it shall fall within the domain of competition law. However, the Act does not define 'reasonable restrictions' but by implication, any unreasonable conditions that attach to an IP right will constitute anti-competitive agreements.

As discussed earlier, the provision related to compulsory licensing has been provided under the Indian Patents Act, 1970 in consonance with the TRIPS Agreement. The competition law as such does not have a specific provision relating to compulsory licensing; however it provides exemption to IPRs under Section 3 (5) of the Act. It grants only limited immunity of IPR from the Act's purview. To be more specific, the section exempts agreements relating to IPR from the purview of Section 3 (1) and (2) of the Competition Act, 2002. Further, as aforementioned, competition law and IPRs are complementary to each other. They are not counterproductive in nature. The very fact that the section provides for a limited immunity, proves that it does not envisage any kind of protection to exclusionary or exploitative conduct which is either abuse of dominance or predatory in nature.

Compulsory licensing finds its base in competition law by seeing that a monopoly of public need based products is not created. Eminent jurists have developed the concept of compulsorily licensing as a remedy to settle the long prevalent discord between the two laws.[33] The discord that has as such been perceived by many academicians can be attributed to the fact that competition policy and IPR have historically evolved as two separate and distinct systems of law. The traditional role of competition law has been to only prevent market distortions. Competition authorities in foreign jurisdictions have granted compulsory licenses under their respective competition statutes. In *United States v. Microsoft*[34], it was held that 'copyright does not give its holder the immunity from laws of general applicability, including antitrust laws'. Similarly the European courts have been of a similar opinion wherein refusal to license has been considered anti-competitive[35].

However in the Indian context there is no guidance on under what circumstances would the Competition Commission of India grant compulsory licenses. There have been no CCI decisions till date dealing with refusal to license IP rights. Thus,

in this event CCI may evolve a novel approach to address the perceived consumer harm. Section 3 of the Competition Act, 2002 states that no enterprise or association of enterprises or person or association of persons shall enter into any agreement in respect of production, supply, distribution, storage, acquisition or control of goods or provision of services which causes or likely to cause an appreciable adverse effect on competition within India. Section 3 (5) provides for an exemption to an extent IPRs do not transgress what has been allowed in a manner that is counter productive to the public in general and the consumers and competitors in particular.[36] Section 3 (5) is a testimony to the fact that India as a nation is committed to protect IP vis-à-vis competition. It punishes the abuse of IP under Section 4 of the Act, 2002. Abuse may be in the form of refusal to deal, tying arrangements, exclusive licenses and excessive pricing.

A Higher Threshold for inventiveness and better consumer welfare: Novartis AG v. Union of India & Ors.[37]

In a landmark judgment on April 1, 2013, a two judge bench delivered its ruling in a dispute between the Indian government and Novartis (Swiss pharmaceutical). Novartis was seeking a patent under the Indian law for a new version of cancer drug called Gleevec, which was saving many lives all across the globe. It was granted patent for this drug across 35 countries, however the Hon'ble Apex Court upheld the decision of the Intellectual Property Appellate Board (IPAB) of refusing to grant patent to Gleevec. The Court ruled that *imatinibmesylate* (derivates of a compound) was a substance known from the Zimmermann patent (patent granted under the US Law) and hence does not qualify for an invention under Section 2(1) (j) and (ja) of the Patents Act, 1970. It interpreted the word 'efficacy' to mean 'therapeutic efficacy' and the new form of the known substance *imatinibmesylate* did not demonstrate enhanced therapeutic efficacy of the drug and also did not necessarily improved the therapeutic effect.

Many developed countries like US are quite liberal in grating patents to these drug companies. The present ruling has prevented Novartis from getting monopoly rights to manufacture, market and sell Gleevec in India. Had the patent been granted, it would have adversely affected the generic drug producers and the patients who would have to pay more prices for the branded version of the drug. This shall enhance the accessibility of medicines. Huge companies create a sort of monopoly in the market after procuring the patent. This as a result hinders competition in the market and reduces consumer welfare. The US patent system has been heavily criticized for its patent proliferation. By slightly tweaking the older version of a drug and thereafter trying to patent the same is a practice known as 'ever-greening'. Such patents have a tendency to hinder competition rather than promote innovation.

Conclusion and Recommendations

Under the old Monopolies and Restrictive Trade Practices (MRTP) regime, big was

considered bad while the present Competition Act focuses only on those companies which are dominant and tend to abuse such dominance. The old MRTP Act required large enterprises to register with the Monopolies and Restrictive Trade Commission. The new law reflects a more reasoned approach wherein 'big is not bad'[38]. It prohibits specific types of abusive conduct by dominant enterprises. This transition explains the changing economic attitude in India. As discussed earlier in Natco case, compulsory licenses under IP laws are generally granted on public interest considerations whereas compulsory licenses under competition law are based on the need to restore effective competition in the market place. Even in the *Natco* case, it resulted in enhanced competition in the cancer drug market. Though, CCI till date has not come up with any decision pertaining to refusal of license IP rights, it would be interesting to speculate the new concepts that it may come up with in future. Further, CCI may also choose to draw some lessons from the rulings of foreign courts on 'Refusal to license'. As discussed above, the US courts in the Microsoft case established that rights granted under the IP laws are subject to competition laws. The European Court of Justice in *Volo v. Veng*[39] case held that 'the refusal by the proprietor of a registered design in respect of body panels of an automobile to grant to third parties even in return for reasonable royalties, a license for the supply of parts incorporating the design cannot in itself be regarded as an abuse of a dominant position. The author is of the view that CCI can also refer any case dealing with compulsory licensing to the Intellectual Property Board of India as it is empowered to do the same under Section 21 A of the Competition Act.

It is submitted that the compulsory licensing as a remedy to anti-competitive conduct should only be used where the dominance (as defined under Explanation to Section 4 of the Competition Act, 2002) of the opposite party can be proved beyond reasonable doubt. Compulsory licensing is not an unreasonable solution, but it should be used as a cautionary tale to address the social and developmental concerns where the public demand for a life-saving drug has not been met. India can also chose to use the compulsory licensing provision in case of excessive pricing of any products including copyright and patented software. In light of the above arguments advanced, the author is of the view that Competition Law and IPR do not aim to replace each other. Compulsory licensing under the Indian Competition Law can work in complete harmony if the grounds for grant of the same are justified under the Indian Patent Law and Competition law.

The acquisition of IPR with the purpose of strengthening monopoly power in the 'relevant market'[40] should be regulated with specific Guidelines which the CCI should come up with while dealing with cases involving both competition and intellectual property. Such Guidelines improve economic efficiency and pro-competitiveness by making the policy more explicit. In the event that a case relating to refusal of license on unreasonable and unjustifiable ground comes before CCI, it should be held anti-competitive in nature. IPRs work as incentives to innovate. However, when the IPR holders abuse their rights as discussed above in the FICCI case, they tend to restrict competition in the market and cautionary

remedies like compulsory licensing need to be undertaken to tackle the unfortunate abuse of dominance and anti-competitive practices.

As discussed above intellectual property confers exclusive rights upon their owners and competition law strives to keep markets open. Thus, it is tempting to assume that there is an inherent tension between the two. However it has been increasingly recognized as wrong. For instance: Under Paragraph 7 of the European Commission's Guidelines on the Application of Article 101 Treaty on the Functioning of European Union to Technology Transfer Agreements states that:

'Indeed both bodies of law share the same basic objective of promoting consumer welfare and an efficient allocation of resources. Innovation constitutes an essential and dynamic component of an open and competitive market economy.'This brings the author to the conclusion that 'Compulsory licensing and the Indian Competition Law' does not tell us a tale about two uneasy bedfellows rather they go hand in hand and are in harmony with each other.

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Notes:

[1]P. Gorecki, 'Regulating the Price of Prescription Drugs in Canada: Compulsory Licensing, Product Selection and Government Reimbursement Programmes, (Economic Council of Canada, 1981), Canadian Public Policy, Vol. 7, No. 4 (Autumn 1981) pp. 559-568, available at www.jstor.org.

[2]F.M. Scherer & Jayashree Watal, 'Post-TRIPS options for access to patented medicines in developing countries', (Comm'n on Macroeconomics & Health, Working Paper No. WG4:1, 2001), available at http://www.cmhealth.org/docs/-wg4_paper1.pdf, last visited on March 23, 2014.

[3]Hereinafter referred to as IPR. The term 'intellectual property' includes patents, registered and unregistered designs, copyrights including computer software, trademarks and analogous rights such as plant breeders' rights. It should also be taken to include know-how, defined for the purpose of the block exemption on technology transfer agreements as 'a package of non-patented practical information resulting from experience and testing.

[4]Richard Whish & David Bailey, 'Competition Law' Seventh Edition, Oxford University Press, 2012 at p. 797.

[5]Gesner Oliveira, ' Intellectual Property and Competition as complementary policies: A Test using an ordered Probit Model', available at http://www.wipo.int/export/sites/www/ip-competition/en/studies/ study_ip_competition_oliveira.pdf, last accessed on March 22, 2014

[6]Varney Christine A, 'Promoting innovation through patent and anti-trust law and policy' US Department of Justice, 2010, available at www.justice.gov/atr/public/speeches/260101.htm#3 , as accessed on October 14, 2014.

[7]Aditi Bagchi, 'Compulsory Licensing and the Duty of Good Faith in TRIPS' Stanford Law Review, Vol. 55, No. 5 (May, 2003), pp. 1529-1555.

[8]Adapted from 'FICCI's position on Compulsory Licensing', available at http://www.ficci.com/SEdocument/20143/Compulsary-Licensing.pdf, last accessed on March 25, 2014.

[9]547 US 131, 1979.

[10]Ioannis Lianos, 'A Regulatory Theory of IP: Implications for Competition Law', CLES Working Paper Series, University College London, November 2008.

[11]Naval Satarwala Chopra, 'The Curious Case of Compulsory Licensing in India', Competition Law International, Vol.8, No.2, August 2012.

[12]Sarvesh Singh & Saurabh Mishra, 'Compulsory Licensing: Why the fall-out?', Manupatra Competition Law Reports, Vol. 10, Issue 9, 2011.

[13]These include public health crises relating to AIDS / HIV, tuberculosis, malaria, or other epidemics. The Controller of Patents shall endeavor to secure that the articles manufactured under the patent shall be available to the public at the lowest prices consistent with the patentees deriving a reasonable advantage from their patent rights.

[14]C.L.A. No. 1 of 2011, Order pronounced on March 9, 2012.

[15]Natco Pharma Limited v. Bayer Corporation, Compulsory License Application No 1 / 2011, at p. 22.

[16]Lynne Taylor, ' India's first-ever compulsory license-a game changing move', March 12, 2012, available at http: / / www.pharmatimes.com / article / 12-03-12 / India_s_first-ever_compulsory_license_-_a_game-changing_move.aspx#ixzz2wz5MJCFs , as accessed on March 24, 2014.

[17]2010 (112) Bom L R 3778.

[18]Writ petition no 1785 of 2009.

[19]Case No 1 of 2009, CCI order dated 25 May 2011.

[20]Laik K, 'Role of Intellectual Property in Economic Growth', Journal of Intellectual Property Rights, 10 (6) (2005) 469.

[21]Michael A Carrier [2009], Innovation for the 21st Century: Harnessing the Power of Intellectual Property and Antitrust law, New York OUP; J Newberg and T Willard, [1997], 'Antitrust and Intellectual Property: From Separate Spheres to Unified Fields', 66 Antitrust L J 167.

[22]Martin Khor, 'Intellectual Property, competition and development', available at www.twnside.org.sg / title2 / par / mk002.doc, as accessed on October 12, 2014.

[23]United States v. Dublier Condenser Corp, 289 US 178, 186 (1933)

[24]Section 4 of the Indian Competition Act, 2002 specifically states that no enterprise shall abuse its dominant position. 'Dominant position' has been defined as a position of strength enjoyed by an enterprise in a relevant market which enables it to operate independent of the established competitive forces and adversely affect its competitors or the consumers in the relevant market.

[25]US Department of Justice (DOJ) & Federal Trade Commission (FTC), 'Antitrust Guidelines for the Licensing of Intellectual Property', 1995.

[26]W. R. Cornish, "Intellectual Property," 3rd Edition., Sweet & Maxwell, 1996, pp. 5-6.

[27]Supra note 11 at p. 3

[28]Pham, Alice , 'Competition Law and Intellectual Property Rights: Controlling Abuse or Abusing Control?', CUTS International, Jaipur, 2008 at p. 4.

[29]Dr. S. Chakravarthy, 'Intellectual Property Right and Anti-competitive practices', Manupatra Competition Law Reports, January 2008.

[30]World Trade Organisation, 'The separate Doha Declaration explained', available at http: / / www.wto.org / english / tratop_e / trips_e / healthdeclexpln_e.htm, as accessed on March 24, 2014.

[31]World Trade Organisation, 'Compulsory Licensing of pharmaceuticals and TRIPS', available at http: / / www.wto.org / english / tratop_e / trips_e / public_health_faq_e.htm, as accessed on March 22, 2014.

[32]In the Competition Act, 2002, Section 3(5) thereof in the Chapter relating to Prohibition of Agreements (Anti-Competitive Agreements) declares that : Nothing contained in this section shall restrict :

(i) the right of any person to restrain any infringement of, or to impose reasonable conditions, as may be necessary for protecting any of his rights which have been or may be conferred upon him under :

(a) the Copyright Act, 1957 (14 of 1957) (b) the Patents Act, 1970 (39 of 1970)

(c) the Trade and Merchandise Marks Act, 1958 (43 of 1958) or the Trade Marks Act, 1999 (47 of 1999)

(d) the Geographical Indications of Goods (Registration and Protection) Act, 1999 (48 of 1999)

(e) the Designs Act, 2000 (16 of 2000)

(f) the Semi-conductor Integrated Circuits Layout-Design Act, 2000 (37 of 2000).

[33]Manendra Singh & Anisha Chand, 'The Conundrum of Competition Law and IPR: An Insight into the Global Phenomenon', Manupatra Competition Law Reports, March 2012.

[34]38 1998 WL 614485 (DDC, 14 September 1998)

[35]Magill TV Guide / ITP, BBC and RTE [1989] 4 CMLR 757

[36]Shashank Jain, 'Intellectual Property and Competition Laws: Jural Correlatives', Journal of Intellectual Property Rights, Vol. 12, March 2007, pp. 224-235.

[37]Civil Appeal Nos. 2706-2716 of 2013 (Arising out of SLP (C) Nos. 20539-20549 of 2009), accessed from www.manupatra.com.

[38]Supra Note 1 at p. 4.

[39][1988] EU ECJ C-238 / 87

[40]Section 2 (r) of the Competition Act, 2002 defines 'relevant market' as the market which may be determined by the Commission with reference to the relevant product market or the relevant geographic market or with reference to both the markets.

Management of National Security – Some Concerns

NN Vohra
Governor, Jammu and Kashmir

I feel privileged to have been asked to deliver the First Air Cmde Jasjit Singh Memorial Lecture to remember Jasjit Singh who, after a long and distinguished tenure as Director General, Institute of Defence Studies and Analysis, served as the Director of the Centre for Air Power Studies form the day it was established till he passed away last year.

I compliment the Chief of Air Staff, the Chairman and Members of the Board of Trustees and Director of the Centre for Air Power Studies for establishing an annual lecture in the memory of Jasjit Singh. My very long association with this scholar air-warrior commenced in the mid 1980s when the Air Head Quarters released him for joining the Institute of Defence Studies and Analysis. For nearly three decades, till he passed away last year, I had known Jasjit closely and was associated with several of his initiatives to enlarge awareness about security related issues.

Jasjit Singh had a very distinguished career in the Indian Air Force. During the 1971 War he led a Fighter Squadron and was awarded the Vir Chakra for gallantry in the face of the enemy. He later commanded a MIG-21 Squadron, served as Director of Flight Safety and Director of Operations at Air Hqrs before he retired from the Air Force to join the IDSA, which he steered for nearly a decade and a half. A prolific writer, he authored and edited several dozen books. Among the many important tasks handled by him, Jasjit served as the Convenor of the Task Force which was set up by the Central Government of 1998 to pave the way for the establishment of the National Security Council. He also served as a member of the first Nation Security Advisory Board (1999-2001). For his long and outstanding contribution in the arena of strategic studies, Jasjit was awarded Padma Bhushan by the President of India.

My association with Jasjit was founded in our deeply shared concern about the progressively enlarging challenges to internal and external security and the need for evolving a holistic national security policy. Some years ago, we had planned to bring out a volume on the varied complex aspects of national security, in which Jasjit would write on issues of external security and I would deal with the challenges on internal security front. As it happened, soon thereafter, I had to leave for Jammu & Kashmir and this project could not proceed further. However, many of Jasjit's old friends and admirers present here today would be happy to know that the very last book which he wrote, "India's Security in a Turbulent World", came out a few days after his sudden passing away! Earlier this year, the publishers of this book, the National Book Trust, brought out a reprint of this volume.

* * *

In today's Lecture, I shall speak about the most urgent need for the Central Government to secure appropriate understandings with the States for finalizing an appropriate national security policy and putting in place a modern, fully coordinated security management system which can effectively negate any arising challenge to the territorial security, unity and integrity of India.

It would be useful, at the very outset, to state that, in simple language, the term "national security" could be defined to comprise external security, which relates to safeguarding the country against war and external aggression, and internal security which relates to the maintenance of public order and normalcy within the country.

The first generation of India's security analysts, who focused attention almost entirely on issues relating to external security, had found it convenient to distinguish issues relating to external and internal security. However, such a segregated approach is no longer feasible, particularly after the advent of terrorism which has introduced extremely frightening dimensions to the internal security environment. I would go further to say that issues of internal and external security management have been inextricably intertwined ever since Pakistan launched a proxy war in Jammu and Kashmir in early 1990 and Pak based Jihadi terrorists started establishing networks in our country.

Our national security interests have continued to be influenced and affected by geo-political developments in our region and far beyond. In the context of the experience gained, it is extremely important that, besides all necessary steps being taken for safeguarding India's territorial security and establishing a very strong machinery to counter terrorism, close attention is also paid for effectively securing other important arenas, particularly those relating to food, water, environment and ecology, science and technology, energy, nuclear power, economy, cyber security, et al.

While evolving a holistic approach towards national security management, it would be relevant to keep in mind that our country comprises an immense cultural and geographical diversity and our people, nearly a billion and a quarter today, represent multi-religious, multi-lingual and multi-cultural societies whose traditions, customs and socio-religious sensitivities are rooted in thousands of years of recorded history. It is equally important to remember that in our vast and unfettered democracy the unhindered interplay of socio-cultural traditions and religious practices carries the potential of generating discords and disagreements which may lead to serious communal disturbances, particularly when adversary elements from across our borders join the fray.

While it may appear somewhat trite to cite school level statistics, our security management apparatus shall need to reckon that we have over 15,000 kms of land borders, a coast line of about 7500 kms, over 600 island territories and an Exclusive Economic Zone of about 25 lakh sq km. These awesome parameters and, besides,

the extremely difficult geographical and climatic conditions which obtain in the various regions of our vast country present serious challenges to our Security Forces who maintain a constant vigil on our land, sea and air frontiers.

* * *

While it would not be feasible to recount the varied security challenges which India has faced in the decades gone by, it could be stated that the more serious problems in the recent years have emanated from Pakistan's continuing proxy war in Jammu and Kashmir; Jihadi terrorism, which has been progressively spreading its reach; the destructive activities which the Left Wing extremist groups have been carrying out for decades now; the serious unrest created by the still active insurgencies in the North East region; and incidents of serious communal violence which have been erupting in the various States, from time to time. Mention must also be made of the steadily growing activities of the Indian Mujahidin, a terror group which has its roots in Pakistan. Another phenomenon, relatively more recent, relates to the emergence of certain radical counter-groups which have been organised with the primary objective of countering the Jihadi terror networks. It needs being noted that the activities of such counter groups have be potential of spreading disharmony and divisiveness which could generate wide spread communal violence and result in irreparably damaging the secular fabric of our democracy.

The Pak ISI has also been striving to resurrect Sikh militancy in Punjab by supporting the establishment of terror modules from among militants in the Sikh diaspora. The ISI is also reported to have been pressurizing Sikh militant groups to join hands with the Kashmir-centric militant outfits.

The activities of the Left Wing extremist groups, which have been continuing their armed struggle for the past several decades to capture political power, are posing an extremely serious internal security challenge. While there may have been a marginal decline in the scale of incidents and the number of killings in the past few years, there has been a marked increase in the gruesome attacks by Naxalite groups on the Security Forces.

India's hinterland continues to remain the prime focus of Pakistan based terror groups, particularly LeT and IM. In the recent past, indigenous groups comprising elements of SIMI and AL-UMMAH have perpetrated serious violent incidents in the country and, not withstanding its frequent denials, Pakistan remains steadfastly committed to harbouring anti-India terror groups on its soil.

* * *

Having referred to some of the more worrying concerns on the homeland front it would be useful to examine whether we have framed an appropriate national security policy and established the required institutions which are capable of effectively meeting the arising threats.

Before commenting further on this important issue it would be relevant to keep in

view that, as per the provisions in our Constitution, it is the duty of the Union to protect every State against external aggression and internal disturbance.

In the decades past, the country has had to encounter external aggression on several occasions and no significant issues have arisen about the Union's role and responsibility to protect the States against war. However, insofar as the Union's duty to protect every State against internal disturbance is concerned, all the States have not so far accepted the Central Government's authority to enact and enforce federal laws for dealing with terror acts, cyber offences, and other major crimes which have all India ramifications. The States have also been opposing the Central Government's authority to establish new security management agencies with pan India jurisdictions. In this context, an argument which has been repeatedly raised is that it is the constitutional prerogative of the States to manage law and order within their territories and that the Centre has no basis for interfering in this arena!

* * *

Undoubtedly, the States are constitutionally mandated to make all required laws in regard to *Police and Public Order*, take all necessary executive decisions, establish adequate police organizations and manage appropriate security management systems for effectively maintaining law and order within their territories. However, looking back over the serious law and order failures which occurred in various parts of the country in the past six and a half decades, it cannot be asserted that there have been no failures and that all the States have a sustained record of ensuring against any breach in the maintenance of peace and security within their jurisdictions.

It may not be practical to detail the varied reasons on account of which the States have failed to timely and adequately deal with arising disturbances in their jurisdictions in the past years. However, it could be briefly said that, among the more significant contributory factors, the defaults of the States have arisen from their failure to maintain adequate Intelligence organizations and well trained Police Forces in the required strength for effectively maintaining internal security within their territories. On many occasions the States have also displayed the lack of political will to deal with an arising situation on their own. Instead, the general practice which has evolved over the past many years has been for the affected State to rush to the Union Home Ministry for the urgent deployment of Central Armed Police Forces for restoring normalcy in the disturbed area.

Another factor which has adversely affected internal security management relates to the progressive erosion of the professionalism of the State Police Forces. This regrettable decline has taken place because of the day to day political interference in the functioning of the constabularies. Such interference has, over the years, caused untold damage and most adversely affected the accountability, morale and the very integrity of the State Police Forces.

In the annual all India Internal Security Conferences organised by the Union Home Ministry, many Chief Ministers have been taking the position that internal security cannot be managed effectively because the States do not have the resources for

enlarging and modernizing their Police and security related organizations.

For the past over two decades now the Union Home Ministry has been providing annual allocations for the modernization of the State Police Forces. However, it is a matter for serious concern that, over the years past, the Central Government has failed to evolve a national security management policy which clearly delineates the respective role and responsibility of the Central and State Governments. Nonetheless, whenever called upon to do so, the Central Government has been consistently assisting the States by deploying Central Police Forces, and even the Army, for restoring normalcy in the disturbed area.

* * *

Considering the gravity of the progressively increasing security threats and also bearing in mind the constitutional prescription that it is the duty of the Union to protect every State against internal disturbance, it is important that the Central Government takes the most urgent steps for finalizing the National Security Policy and the machinery for its administration, in suitable consultations with the States. The National Security Policy must leave no doubt or uncertainty whatsoever about the Central Government's authority for taking all necessary steps for pre-empting or preventing arising disturbances in any part of the country. In this context, it is regrettable that in the past years the Central Government has not invariably been able to deploy its Forces for protecting even its own assets which are located in the various States. The circumstances which led to the demolition of the Babri Masjid, the grave consequences thereof suffered by the nation, are still far too fresh in our memories to call for any retelling.

Under Article 256 of the Constitution, the executive power of the Union extends to giving of such directions to a State as may appear to the Government of India to be necessary for that purpose. However, over the years, the Union Home Ministry's general approach has been to merely issue cautionary notes and not any directives in regard to an emerging situation. This approach, of sending out advisories, has not proved effective and, over the years, varied internal disturbances have taken place in different parts of the country, some of which have caused large human, economic and other losses.

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After the National Security Policy has been finalized, the Central Government shall need to undertake, in collaboration with the States, a country wide review of the entire existing security management apparatus and draw up a plan for restructuring and revamping it within a stipulated time frame. While playing their part in such an exercise, the States would need to accept the important role which they are required to play in national security management and demonstrate their unconditional commitment to work closely with each other and the Central Government for ensuring against any assault on the unity and integrity of the country.

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For the past nearly two decades now, there have been repeated pronouncements that the Central Government is promulgating a law for dealing with identified federal offences and establishing a central agency which would have the authority of taking cognizance and investigating crimes which have serious inter-State or nationwide ramifications for national security. In this context, the proposal of setting up the National Counter Terrorism Centre (NCTC) has continued to be debated for the past several years. A number of States, which have been opposed to the establishment of NCTC in its present form, have suggested that the proposed framework of this body should be entirely revised in consultation with the States. Some other States have urged that NCTC should not be established through an executive order but through a law enacted by the Parliament and that it should function under the administrative control of the Union Home Ministry instead of under the Intelligence Bureau. As terror acts and other federal offences cannot be dealt with by the existing security management apparatus, it is necessary that the Central Government undertakes urgent discussions with the Chief Ministers to resolve all the doubts and issues raised by the States.

For commencing a purposeful dialogue with the States, with one objective of securing the requisite Centre-States understandings in the arena of national security management, the Union Home Ministry could beneficially utilize the aegis of the Inter State Council (ISC), of which the Prime Minister is the chairperson.

For progressively enhancing meaningful Centre-States relations in regard to national security management it would be useful for the Central Government to also consider various possible initiatives for promoting trust and mutual understandings between New Delhi and the State capitals. Towards this objective, to begin with, the Central Government could consider inducting representatives of the States in the National Security Advisory Board and the National Security Council, even if this is to be done on a rotational basis. The Central Government could also consider setting up an Empowered Committee of Home Ministers of States to discuss and arrive at pragmatic solutions to various important security related issues, including the long pending proposal to set up the National Counter Terrorism Centre (NCTC). In this context, it would be relevant to note that the nation-wide consensus for introducing the Goods and Services Tax (GST) regime in the country, a crucial tax reform which involves a constitutional amendment for replacing the current indirect taxes, has been achieved by an Empowered Committee of Finance Ministers. It is reported that GST is likely to be enforced in the very near future.

Some of the doubts voiced by the States about the management of security related issues arise from the style of functioning of institutions which are exclusively controlled by the Central Government. In this background, perhaps a more productive approach may lie in moving towards certain important institutions being jointly run by the Centre and the States. An excellent example in this regard is the Joint Terrorism Task Force (JTTF), established by USA in the aftermath of 9 / 11. The Joint Terrorism Task Forces located in various cities across the USA include

representatives from the Federal, State and Municipal enforcement agencies and perform several important roles, including the clearing of all terrorism related information. Over time, functioning through joint institutions will enable the States to gain a well informed all India perspective about the complex and sensitive issues which concern national security management and, in this process, also defuse their perennial complaint about the Central Government "interfering with the powers of the States in the arena of internal security management".

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Needless to stress, if national security is to be satisfactorily managed, the States must effectively maintain internal security within their territories. Towards this end, they must urgently get work for enlarging and upgrading their Intelligence and Police organizations and security administration systems. In this context, it is a matter for serious concern that the annual allocations for Police comprise an extremely low percentage of the total budgeted expenditure of all the States and Union Territories in the country. The scale of these allocations shall require to be significantly enhanced, particularly keeping in mind that about 80% of the annual State Police budgets go towards meeting the salaries and pensions of the constabularies and virtually no funds remain for undertaking the expansion or modernization of the State Police Forces. Time bound action would also require to be taken to ensure that the sanctioned posts of Police personnel, lakhs of which remain vacant for years in the State and Union Territory Police Forces, are filled up on a time bound basis.

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It also needs being recognized that the ailments from which the State Police Forces have been suffering, for decades now, shall not get cured merely by providing larger budgetary allocations for their expansion and modernization. It is extremely important to ensure that Police Reforms, which have been pending for decades, are carried through without any further delay. It is a matter for utter shame that after nearly seven decades since Independence the Police organizations in many States are still functioning under the colonial Police Act of 1861. Most States have also not taken the required steps to implement the Supreme Court's orders regarding the establishment of Police Complaint Authorities and State Security Commissions; segregation of Law and Order and Investigation Functions; setting up of separate Intelligence and Anti Terrorist Units and taking varied other required actions for establishing modern and accountable Police Forces which would enable the effective functioning of the security management apparatus.

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It is also necessary to recognize that national security cannot be safeguarded unless the entire apparatus of the criminal justice system discharges its duties with competence, speed, fairness and complete honesty. Last year, nearly two crore criminal cases under the Indian Penal Code and Special Laws were awaiting trial. This sad state of neglect, accompanied by progressively declining conviction rates,

has rightly generated the perception that crime is a low risk and high profit business in India.

The functioning of the judicial apparatus, particularly at the lower and middle levels, suffers from serious logistical deficiencies – grossly insufficient number of courts and judges, prolonged delays in filling up long continuing vacancies, lack of the required staff and essential facilities in the courts and so on. Questions are also being recurringly raised about the competence and integrity of those mannning the judicial system and, in the recent years, allegations of shameful delinquencies have been made even against those who man the highest echelons in the judicial system, up to the august level of the Chief Justice of India!

Needless to stress, the most urgent measures are required to be implemented for enforcing complete objectivity and fairness in the selection and appointment of judicial officers and judges at all levels and stringent steps taken for enforcing the highest judicial standards and accountability for establishing a clean and strong judicial system which restores fear and respect among one and all for the Constitution and the Rule of Law.

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Alongside the cleaning-up and re-vitalisation of the judicial system it is necessary to weed out all obsolete laws and update and amend other statues, many of which were enacted during the colonial era or in the early years after Independence, to ensure their relevance in the contemporary context. For instance, the Indian Evidence Act needs to be urgently reviewed to, interalia, provide for the permissibility of electronic evidence.

It is also necessary to ensure prompt and professional investigations, competent and time-bound trials, and award of deterrent punishments to all those found guilty of unlawful acts. Towards the end, it shall be necessary to create cadres of competent Investigating Officers and Criminal Law Prosecutors and urgently enact a well considered federal law for dealing with the rapidly increasing economic offences. Drawn up in appropriate consultation with the States, such a comprehensive law should cover the enlarging spectrum of economic and other major offences, some of which are closely linked with the funding of terror and organised crime networks.

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It would be incorrect to assume that serious threats to national security emanate only from the activities of Naxalites, terror groups and the mafia networks. Corruption at various levels, with which the entire governance apparatus is permeated, is another factor which adversely impacts our national security interests. Year in and year out, for the past several decades, now major scams and scandals have been getting exposed and India continues to hold a shamefully high position in the global Corruption Index.

It needs to be stressed that corruption vitiates and disrupts the Rule of Law and destroys the very foundations of the administrative and legal apparatus. The

prevalence of corrupt practices and various levels generates anger, despair and helplessness among the people at large, compelling them to lose trust in the functioning of the governmental machinery. Cynicism and the loss of hope engenders an environment which leads to the alienation of the common man, paving the way for attraction to the gun culture and extremist ideologies.

Past experience has also shown that corrupt and unseemly elements in the governmental apparatus sabotage national security interests from within and grave threats are generated when they act in nexus with organised crime and mafia networks.

As regards the subversion of the governmental machinery from within, it may be recalled that, consequent to the serial bomb blasts in Mumbai in March 1993, the Government of India had set up a Committee to ascertain how Dawood Ibrahim and other mafia elements had been able to establish such powerful networks. The Report of this Committee (generally referred to as "Vohra Committee Report" or the "Criminal Nexus Report") had concluded that, in several parts of the country where crime syndicates / mafia groups have developed significant muscle and money power and established linkages with government functionaries, political leaders and others, the unlawful elements have been able to carry out their criminal activities with ease and impunity.

Over two decades have elapsed since the Criminal Nexus Report was furnished. While I am unaware of the action which must have been taken on this Report, there is little doubt that the criminal nexus has since spread its tentacles far and wide and poses a serious threat to national security.

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The national security apparatus cannot function effectively unless it is manned by appropriately qualified, highly trained and experienced functionaries. It is, therefore, extremely important that well planned steps are taken for very early establishing a cadre of officers drawn from various required disciplines, selected on an all India basis, who are provided the best available training in identified areas of expertise and deployed in the security management apparatus all over the country.

A proposal to set up a dedicated pool of trained officers, drawn from various streams, who would spend their entire careers in the security management arena, was made by me in the Report of the Task Force on Internal Security, which had been set up by the NDA Government in early 2000. The Task Force Report (September 2000) had recommended the broad framework for establishing a pool of trained officers for manning the security management agencies run by the Government of India. This recommendation was approved in 2001 by a Group of Ministers (GoM) chaired by the then Union Home Minister and Deputy Prime Minister. Thirteen years have since elapsed. The decision of the Group of Ministers has not been implemented, possibly for no better reason than that this matter has not been considered important enough!

The security environment, in India's neighbourhood and far beyond, has been progressively deteriorating. Grave consequences may have to be faced if there is any delay in revamping and tightening the security management apparatus which cannot continue to be run by functionaries of varied grounds who are drawn from one or the other service. To make up for the very considerable time which has already been lost, it would be enormously beneficial if the Central Government taken the bold step of establishing a National Security Administrative Service whose members, selected from among the best available in the country, are imparted intensive training in specialized areas before being deployed to run the security management institutions all over the country.

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After the November 2008 terror attack in Mumbai, the Government of India had hurriedly enacted a law to set up a | National Investigation Agency (NIA) on the pattern of the Federal Bureau of Investigation of USA, to investigate and prosecute terror offenses. As per its legal framework, the NIA has the authority to investigate and prosecute only certain specified offenses which are committed within the country and which affect national security.

The NIA has no extra-territorial jurisdiction and no powers to probe incidents which occur outside India, as for example the very recent militant attack on the Consulate of India in Hearat. The Director NIA does not have the powers, enjoyed by the Directors General of Police of States, to permit an Investigating Officer dealing with a terror crime to seize or attach property. Also, unlike as in the case of the CBI, the NIA is not empowered to depute its Investigating Officers abroad for direct interactions with a foreign agency which is investigating a major terror act which directly or indirectly affects our national security interests.

The NIA's functioning in the past six years also shows that the Police authorities in the States are reluctant and take their own time in handling over to the NIA even major crime cases which may have serious inter-State or nationwide ramifications. Many offenses, including major IPC crimes which may be directly linked to terror activities, have still to be brought under the NIA's jurisdiction. Thus, briefly, the NIA, as presently constituted, does not have the legal authority for taking the required action to pre-empt or prevent a terror crime, even when it functions in coordination with the concerned States. Needless to stress, the NIA needs to be fully empowered, on the most immediate basis, if it is to serve the purpose for which it was established.

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In the context of the problems and issues about which I have briefly spoken this morning, it would be seen that, even after the gruesome terror attack in Mumbai, in November 2008, our country has still to evolve a National Security Policy and put in place effective mechanisms for implementing it. Also, the ground has still not been cleared to promulgate a well considered federal law under which a fully empowered central agency can take immediate cognizance and promptly proceed

to investigate any federal offence, within the country and abroad, without having to lose precious time in seeking varied clearances and going through time consuming consultative processes. Any delay, which is inherent in working within a consultative system, would have the grave danger of virtually ensuring the failure of investigations, particularly as the terror groups strike their targets and get away with lightning speed.

In the background of the brief overview of the more worrying national security management concerns which I have represented to you this morning, I would like to conclude by briefly reiterating that:

i. India is facing progressively increasing security threats from across its frontiers, as well as from within.

ii. The absence of a bipartisan approach has led to several States questioning the Central Government's leadership role in national security management. Insofar as the discharge of their own constitutional responsibilities is concerned, most States cannot claim a sustained record of maintaining peace and tranquility within their own territories.

iii. As a general practice, which is now long continuing, instead of progressively improving the capability of their police and security maintenance apparatus for effectively dealing with arising disturbances, the States have been perennially seeking assistance from Union Home Ministry, whenever a problem is arising in their territories.

iv. While the Central Government has been, without any exception, providing assistance to the States by deploying Central Police Forces, and even the Army, restoring normalcy in the disturbed areas, the States have never been questioned about the reasons for their failure to maintain internal security, nor about their failures to deal with the root causes of the recurring disturbances in their territories.

v. The Constitution of India prescribes that the States shall be responsible for the maintenance of public order and that the Union Government has the duty to protect the States against internal disturbances. A holistic National Security Policy and the mechanisms for its administration must be urgently finalized in suitable consultation with the States. The Central Government must not lose any more time in evolving the required Centre-States understandings for effective national security management.

vi. Besides finalizing the National Security Policy, the Central Government shall also need to take time bound steps for:

    a. Establishing appropriate institutions / agencies for effective security management across the length and breadth of the country;

    b. Enacting laws and establishing all required processes and procedures for the prompt investigation and trial of federal offences;

c. Establishing a National Security Administrative Service for manning and operating the security management apparatus in the entire country.

To conclude, I shall yet again re-iterate that if the security, unity and integrity of India is to be preserved and protected then there is no more time to be lost. The Central and the State Governments must immediately forge all required understandings and take every necessary step for ensuring that there is not the slightest chink in the enforcement of national security.

Sh. N.N Vohra is a retired IAS officer of the 1959 batch of the Punjab Cadre. He has served as Secretary Defence Production, Defence Secretary, Home Secretary and Principal Secretary to the Prime Minister. Since 2013 he is serving as Governor of Jammu and Kashmir.

Notes:

*First Air Cmde Jasjit Singh Memorial Lecture organized by Centre for Air Power Studies, New Delhi and delivered on Friday 18th July, 2014 by Sh. N.N. Vohra, currently Governor of Jammu and Kashmir.