

THE INDIA ECONOMY REVIEW 2010

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INCLUSIVE INDIA: DOES MARKET OFFER SOLUTIONS FOR GROWTH?

- RETHINK
- EDIFY
- DELINEATE



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AN IIPM THINK TANK

GREAT INDIAN DREAM FOUNDATION PRESENTATION

THE GREAT INDIAN DREAM



“A Society where man is at the centre of all activities, a society where exploitation of man by man has been abolished, where he is cared for as an in a family, where “to each according to his need” is practised, a society where non bureaucratic National Economic Planning is given due importance for sustainable optimum growth, where adequate social safety net is a reality and yet market’s advantages are fully taken care of for creativity and entrepreneurship, such a society can be truly described as humane society and the vision as “Humanism”.

Dr. M K Chaudhuri

The Great Indian Dream, 2003, Macmillan
India, New Delhi

“Let us together dream of a country where poor are not just merely reduced to statistics but where there are no poor. Let there be a day when small children are taken to a poverty museum like science museum where they shiver at the plight of the way people used to live in the last millennium. Let this dream take the form of a revolution and as long as our dreams keep outweighing our memories, India would remain a young and dynamic nation on this path to global equality. And for this let the wait not be for eternity. Let us together achieve this in the next 25 years.”

Prof. Arindam Chaudhuri

The Great Indian Dream, 2003, Macmillan
India, New Delhi



IIPM: THE FUTURE IS HERE

Since its incorporation (1973), IIPM has been an institution with privileged traditions, in the diversity of its fraternity, its global outlook, its world class research and its commitment to alternative national economic planning process.

It can be said, without much oversimplification that there are no 'underdeveloped economies'. There are only 'under managed' countries. Japan 140 years ago was an underdeveloped country by every material measurement. But it very quickly produced management of great competence, indeed of excellence. The policy inference is that 'management' is the prime mover and 'development' is the consequence. At IIPM, every one considers that development is a matter of human energies rather than economic wealth. And the generation and direction of these human energies is the task of 'management'. Accordingly, we formed **The Great Indian Dream**. Unlike any other dream, this is one dream which each one of us are determined to realise and that too in our own lifetimes. Each bit of cynicism and condemnation from pessimists makes us evolve even stronger and determined.

All our endeavours and initiative is towards realisation of this dream, where in we produce committed 'bare foot' managers and entrepreneurs who are needed by nation, on an insistent basis. As an educational institute, we aim at initializing a three dimensional personality in IIPMites, viz.

- ☞ Pursuit of knowledge in economics and management
- ☞ Commitment to economic, social, political and technological upliftment of masses and
- ☞ Cultivation of taste for literature, fine arts and etc.

Economists often have limited access to the practical problems facing senior managers, while senior managers often lack the time and motivation to look beyond their own industry to the larger issues of the global economy. It has set before it the twin tasks: to reorient education and research towards the needs of both the private and public sectors and to establish the link between the National Economic Planning and the development of private enterprises in Indian economy. IIPM dares to look beyond, and understands that what we teach today, other adopt tomorrow. IIPM's service output (education, research and consulting,) is a unique combination of two distinct disciplines: economics and management. Through this integration, IIPM helps guide business and policy leaders in shaping the Indian and global economy, bringing together the practical insights of industry with broader national and global perspectives.

A hall mark of IIPM is that it is armed with the comparative advantage of engaging the committed, passionate and brightest management post graduates and undergraduates, who pursued the education at IIPM and subsequently joined it, to realise the dream. IIPM alumni, spread across the globe, holding crucial decision-making positions in the corporate sector, are bonded by the one ideology of making a positive difference, turning that ideology into a movement itself.

The India Economy Review is another humble initiative towards the realisation of the same and more distinctly, engaging the broader publics and pertinent stakeholders.

SEARCH, SIEVE, SCHEME...

In economics, like in everyday existence, it is imperative to hear, perceive and consider what others have to say. Each issue of The IER brings together a selection of important contributions on a particular theme, authored by some of the brightest minds in different areas of Indian economics. The provocation for publishing these issues arises from the fact that over the years economic journals have become copious, exclusive and expensive. Most of the journals and a good many of the books have gone beyond the cerebral and financial reach of general students and other scholars. It is for them that these issues are primarily being raised and debated here.

Much about India is transparent enough. One does not require detailed criteria, cunning calibration or probing analysis to pinpoint India's problems and recognise its antecedents. There is in fact much that is perceptible about India. But not everything about India is even if simplistic is so simple. The learned reader would appreciate the fact that India is like an elephant that looms too large to be grasped within a distinct structure and paradigm the constituent parts of which would fail to reveal the entirety. Obviously and observably, no suggested solution to any protracted and complex socio-economic problem will satisfy all sides and stake-holders evenly. Consequently, there exists an enormous diversity in economic thinking and perspectives, as is also reflected in the viewpoints of different expert contributors in this issue. The intended outcome of this exercise is to facilitate the invention, improvement, deliberation and dissemination of innovation in economic thinking and national economic planning, insisting merely on well-grounded, open and unbiased debates, without predetermined outcomes. It is impossible to do justice to the entire field of Indian economics in a single issue. The topics selected for this issue are those which are of critical and immediate importance to India. Majority of them were freshly and exclusively written. Encapsulated, it is a constructive attempt aimed at helping India actualise its promises and potential. The editors hope that this issue of IER proffer the reader a flavour of dynamism and excitement and persuade her/him to participate in the journey towards realising 'The Great Indian Dream'. At the same time, it illuminates the terrible, practical problems of India and Bharat. [IER](#)

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The First Words And The Last Word

ECONOMICS UNBOUND : Ideas For An Inclusive India

Dear Reader,

Indian economy has witnessed unprecedented economic growth since the mid 1990's, but it is trailing on essential social parameters of development. Accordingly inclusive growth has become a leitmotif of the policy discourse in recent times. Addressing socio-economic issues will warrant mainstream intervention models that are implemented on a massive scale. The key to inclusive growth and social cohesion is proffering jobs in millions. Each year, for the next three decades or so, nearly sixteen million will enter Indian labour force. But without a massive increase in education and training aimed at the acquisition of skills relevant to future job markets, it will be hard to make growth inclusive. These potential job seekers will face a labour market where 94% of employment is in the low productivity informal sector. For growth to be inclusive, all Indians must be connected to the markets through suitable infrastructure. Incidentally thirteen million households in India face financial exclusion. Finally, universal access to quality basic services: education, health, financial infrastructure, water and sanitation, is imperative. The question is: How to do it?

Many economic agents and the state have played important roles in formulating and implementing solutions to some of these issues. But for a variety of reasons, significant success has eluded them so far. So, influential thinkers are proposing an alternative model. For a continent size economy like



Prasoon.S Majumdar
Managing Editor




M.N.V.V.K.Chaitanya
Deputy Editor

India, inclusive growth makes for a sound business decision. This must encourage private enterprises to meet market demand by servicing under penetrated markets with customized and cost effective offerings, leveraging the potential of untapped resources while enhancing social benefits. Truly sustainable inclusive growth requires intervention models implemented on a large scale using efficient scalable mechanisms to enhance impact. While state and the other agencies continue to work, the role of the private sector becomes even more critical given that it embodies attributes such as sustainability, efficiency, and scale that are vital to make a difference. This issue of IER features many of these research articles. Happy Reading.

Best


Prasoon.S.Majumdar


M.N.V.V.K. Chaitanya

(F)ACT SHEET



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CALL FOR PAPERS

IER is a quarterly journal featuring contents of academic and professional interest that are of utility to managers, policy makers, politicians, consultants, teachers and students in the areas of Economics and Management. It is a multidisciplinary platform for sharing and disseminating knowledge in the issues of education, health, poverty, unemployment, agriculture, industry, service, FDI, international trade, infrastructure and environment, pertaining to Indian economy. We passionately believe in the credo that we constantly seek to follow: rethink, edify and delineate. This enduring commitment has helped us foster and broaden the parameters of public policy debate and alternatives. Toward that goal, we strive to achieve greater involvement of the intelligent, concerned change agents (reform minded politicians, public servants, academicians, socially responsible firms, civil society organizations and citizens) in questions of policy and the ideation. In order to further augment value and provision a broad perspective to Indian economic problems, your knowledge and expertise in the above mentioned fields would be highly valuable to IER. We would like the possibility of receiving a write-up from you, on a topic of your expertise and interest as per the under-mentioned guidelines.

Guidelines For Contributors

Content: Articles should be in the areas of education, health, poverty, unemployment, agriculture, industry, service, FDI, international trade, infrastructure and environment, pertaining to Indian economy, which are of contemporary interest and value to the esteemed and intellectual readers. The journal seeks to present an eclectic approach supported by empirical research or practical applications as necessary. Contents that demonstrate clear and bold thinking, fresh and useful ideas and solutions, accessible and jargon-free expression, and unmistakable authority and proficiency are those most likely to meet our reader's needs.

Reviewing Process: Each article is reviewed by the Economics Research Group (ERG). If found suitable, the same may be sent for another round of review before final acceptance. With prior information and consent, the editors reserve the right to modify and improve the manuscripts to meet IER's standards of presentation and style. The editors also have full right to accept or reject an article for publication. Editorial decisions will be communicated within a period of two weeks of the receipt of the article submission.

Word Length: Articles should be of 2,500 to 3,000 words including abstract and references.

Headings And Sub-Headings: Headings should be typed in capital and underlined; sub-headings should be typed in upper and lower case and underlined.

References: References to other publications should follow the Harvard style.

Figures, Charts And Diagrams: Use of figures, charts and diagrams should be kept to the minimum and text should indicate where the same will appear. All tables, charts, graphs should be typed on separate sheets. They should be numbered as Table-1, Table 2, etc. The graphs must have the minimum amount of descriptive text and the axes should be labeled with variable written out in full, along the length of axes.

Abstract And Key Words: An abstract within 100 words and three key words should be submitted.

Author's Bio-data And Photograph: A brief bio-data with full postal and e-mail addresses and a coloured photograph should be sent along with the articles.

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RURAL BANKING STRATEGIES FOR INCLUSIVE GROWTH



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Associate Professor (Public Policy), Administrative Staff College of India, Hyderabad

Rural sector continues to play an important role in terms of contribution to GDP and employment generation in India, as about 70 percent of India's population still lives in rural areas. The slow reduction of poverty levels in rural areas against urban areas is an evidence of the sluggish development in rural areas, in spite of new opportunities coming up in rural areas in the post-liberalisation due to better rural-urban linkages and backward and forward linkages of agricultural sector with non-agricultural sector. If the rural population takes advantage of these new opportunities there is a greater scope for reduction in poverty and increase in living standards. However, to fully exploit these opportunities, there is a need to empower rural population with necessary new knowledge, capital and entrepreneurial skills. With abundant knowledge/information flow even in rural areas, the major limiting factor for development of rural poor is the access to capital for both investment and consumption to up grade living standards. As easy and timely availability of capital will act as incentive to wider adoption of productivity enhancing skills / knowledge / technologies by entrepreneurs, farmers and labourers (Reddy and Kumar 2006). To vast majority of rural people, access to capital depends on development of efficient financial service providers (which include credit provision along with other services), as many rural people are poor and having shortage of capital. Provision of services along with credit will not only facilitate borrowers in better utilization of credit but also enhance the credit worthiness of borrowers, which helps in recovery of loans and reduction in non-performing assets of banks. With this background, this paper tries to explore the alternatives, which will enhance the economic and social viability of institutional credit system in rural areas.

Rural Financial Intermediation

Currently institutional rural credit system comprising of about one lakh primary agricultural credit societies (PACS), 108 regional rural banks (RRBs) with more than 30,000 branches spread through out rural India, about 20,000 branches of commercial banks which provide about 60 percent of rural credit needs. The remaining 40 percent of rural credit needs taken care by non-institutional sources of credit like traditional moneylenders, shopkeepers and relatives. The general distinction between institutional and non-institutional credit sources is former offer credit at low interest rates but with little more

paper work as against to the latter, which offer credit at exorbitant interest rates, but credit will be provided whenever, wherever required. Historically, traditionally money-lending business is highly profitable in rural India as many of the moneylenders became rich in the business of money lending. To some extent, their profitability is due to low cost of operation in terms of identifying individuals who are credit worthy, procedures and formalities followed, accessibility, location in densely populated area, individual assessment/pricing based on risk/behavioral assessment. But, due to the high exploitation by moneylenders by levying higher interest rates government discouraged traditional money lending. Since independence, Indian government encouraged many institutions beginning with cooperative credit societies in 1950s followed by social control in 1968, then nationalization of banks in two steps once in 1969 and another in 1980. The establishment of Regional Rural Banks in 1972 is also a step in that direction. Government simultaneously initiated many rural poverty alleviation/developmental schemes such as community development programmes, service area approach, lead bank scheme, Integrated Rural Development Programme (IRDP) and more recently Swarnajayanti Gram Swarozgar Yojana (SGSY) with a major component of credit with active participation of banks. With all these efforts, the network of branches increased drastically through out rural India, as now for every six villages one-bank branch is there. In the process average population (in '000s) per bank branch came down significantly from 64 in 1969 to 15.2 in 2001. With the main focus on branch expansion and credit expansion without giving adequate attention to the profitability and efficiency, Indian banking system suffered from many typical banking problems such as high NPAs, low profitability, high subsidies and low service quality.

Financial Sector Reforms

The financial sector reforms started in early 1990s to ensure 'the financial services industry operates on the basis of operational flexibility and functional autonomy with a view to enhance efficiency, productivity and profitability'. The impact of these reforms is evident in terms of reduction of average lending rates offered by commercial banks from a peak of about 17 percent in 1996 to about 14 percent by 2002 (Reddy 2005). The increased efficiency also reflected in larger profitability among most of the commercial banks as well as regional rural banks. However, the share of rural sector has been

reduced significantly as banks want to concentrate on more profitable segments of economy to run for profit. Commercial Banks are not willingly participated in lending to rural areas, due to the uncertain character of Indian agriculture, lack of proper accounting of agricultural transactions, small amount of individual loans, inadequate security for loans, and difficulty of collection from farmers, commercial banks in India have largely confined their operations to urban areas, even after nationalization. There has been a shift in even in RRB clientele away from the poorer segments of the population and from areas with low potential to those with better off client groups. Table 1 clearly shows that in the competition for profitability, commercial banks are trying to close remote rural bank branches and opening more branches in urban centers in recent years. So the question arises why the traditional money-lenders are more profitable at least not loss making compared to all these institutional arrangements even with high technical know-how, scale and scope economies? What causes them to be successful rural moneylender for centuries? What lessons to be learned from the traditional moneylenders to make institutional credit institutions profitable and sustainable?

Need For Rural Banking to be Competitive

Generally in rural areas, demand surpasses supply of credit (as it is widely assumed that credit rationing is widely practiced both by institutional and non-institutional moneylenders), in surplus demand conditions, banks can become economically unviable only if there are high non-performing assets, controlled credit rates and high operating costs. Inefficiency of rural credit institutions was attributed to the directed and pre-approved nature of loans sanctioned under sponsored programmes, absence of any security, lack of effective follow up due to large number of accounts, legal recovery measures being considered not cost effective, riddance of repayment culture consequent to loan waiver schemes, etc. While in general the rates of interest have come down, they are available more to highly rated borrowers than to the rural sector and small and medium enterprises. Commenting on functioning of cooperatives Datt and Sundharam (2004) stated that, in many places, unscrupulous and

dishonest local large farmers take all the benefits from cooperatives, thus denying the benefits of co-operation to really needy farmers, have hopelessly wrecked the working of the co-operatives. On the other hand RRBs are suffering from losses since its inception. Some estimated that the RRBs in their present set-up incur losses of about Rs. 5,00,000/- per day - despite their lower costs of operation (Reddy 2006).

Highlighting the importance of rural credit reforms RBI (2002) stated that, there is a need to examine the issue of rural credit and its delivery systems in an objective as well as transparent manner and accord it priority in legislative actions and financial allocations.

Banks Traditional Business Segments and Economic Viability

Based on an in depth study of RRBs functioning at micro-level, the paper developed a chart showing trade-off between outreach and viability of different commonly provided credit channels. The chart is reproduced in Figure 1, based on this one can conclude that all individual based credit delivery are profitable, but credit delivery through self-help groups are making loss due to high cost involving in nurturing, maintain and sustaining group operations. The key for efficient credit delivery system in rural areas lies in reducing operation and overhead costs. Keeping in cost reduction as main focus, this study proposed an improved credit delivery

system within the existing framework of coexistence of commercial banks and RRBs simultaneously and encouraging healthy competition between them. With the reduced government support there is greater need to develop efficient credit delivery mechanism, based on the experience of past studies.

The problem with rural banking is high cost of reaching to the remote areas and small account holders. To make operations of regional rural banks more cost competitive, these banks should become lean, technologically capable and organizationally flexible to suite to local population.

Bank Branches-Lean Banks with Skilled Manpower

Large number of bank branches, will not make economic sense in cost competitive banking system. There is an urgent need to

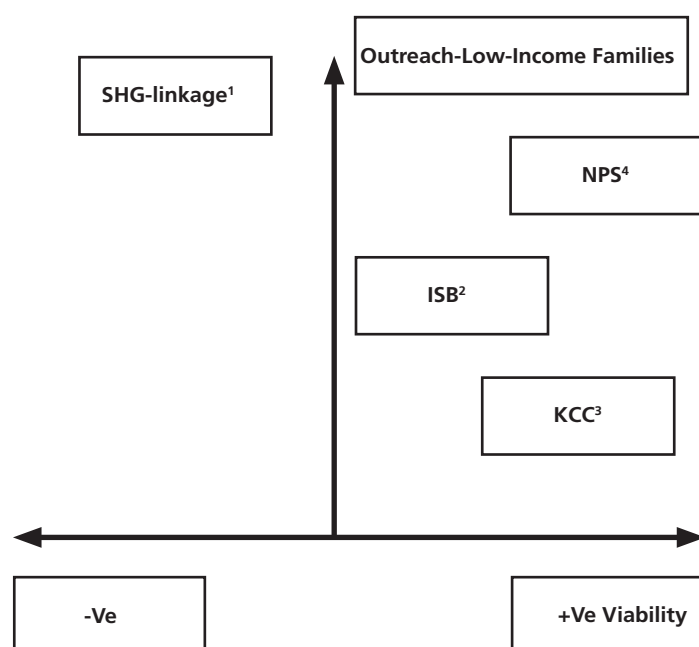
The problem with rural banking is the high cost of reaching to the remote areas and small account holders

Table 1: Population Group wise Number of Commercial Banks Closed/Opened Between 2000 & 2002
(Number of Branches)

Year	Population Group					
	Rural		Urban		Total Offices	
	Closed	Opened	Closed	Opened	Closed	Opened
1999-2000	127	65	136	647	263	712
2000-2001	206	45	384	541	590	586
2001-2002	129	46	147	514	276	560

reduce bank branches and build other alternate sources to reach out to widely spread rural population. This will reduce operating and overhead costs. Establishing one bank branch for every 40 to 50 villages according to the geographical area, population size is enough to cater to the needs of rural population. The main purpose of reducing bank branches is to have small number of banks with necessary infrastructure. The bank branch should be lean and slim in terms of number of employees, but with high level of computerization and other technical facilities and expertise.

Figure 1: RRB Product and the Outreach/Viability Trade-Off



1. SHG-linkage (Credit Delivery Through Self-Help Groups-Unsecured)
2. ISB (Industry, Service, Business Loans –Unsecured)
3. KCC (Kisan Credit Cards-Credit limit for three years based on land or other assets)
4. NPS (Non-Priority Sector Advances secured through gold etc.)

Reaching Out through Mobile-Banks and Agents/Representatives

To reach to vast majority of rural population bank branches should organize mobile banks and take help of bank agents/representatives. These banks can recruit their own field assistants/representatives to make frequent field visits to villages and help banks to acquire new customers, loans/deposits. These representatives may be village traditional moneylender/village fertilizer shop owner/general stores person or uneducated youth/LIC agent/UTI agent who does have local knowledge, know local people and having confidence by local people. The dates of these mobile-banks to be coincide with the weekly traditional melas (mandis) that will be convenient to the village people, as most of the villagers come to melas either to purchase/sell their farm inputs/outputs and also household consumables. The basic function of mobile banks is to do normal business of taking deposits/loans and other service provisions. The representatives should work on commission basis, as it makes them self-motivated and cost effective. New information technology greatly improves efficiency of even rural banking system if banks adopt them by recruiting skilled persons and installing necessary software and hardware by acquiring simple computers with minimum cost. The banks should be free to evolve and implement their own policies on personnel, including recruitment, training, and incentive systems. Proper training is to be given to representatives/agents in handling new customers. This will greatly reduce overhead costs.

Regional Banks - Flexible Multi-Service Providers

With the changing scenario of flexible operations, emphasis to be placed more on priority setting in terms of which agro-industries/crops to be encouraged rather than emphasis on

target setting at district level. This approach gives a directive based on social goals to the regional rural banks, without compromising freedom of operations. All the banks operating in a region/district are free to set their own targets. The priority setting at district level is only a kind of direction and knowledge enhancing exercise but not a compulsion to banks to follow. This kind of exercise gives an idea about the general development outlook/government priorities/policy objectives.

The basic strategic advantage of proposed rural banks lies in their local knowledge compared to other national level commercial banks. On this premise, banks should take advantage of this local knowledge by providing as many services as possible which satisfy/ provide competitively to the local people. For example, banks may provide information on weekly prices of inputs and outputs to farmers, advice on crop/ weather insurance, assist in procuring/ storing local farm inputs/outputs with the help of non-governmental organizations/government/local administration. As these will not require much overhead costs, but facilitate farmers/local traders to come to bank branches/ mobile-banks more frequently and add value to the main banking operations.

Government Support/Subsidy at the Source

The objective of encouraging rural banking by government is firstly, to reduce rural-urban and agricultural workers-industrial worker differences in poverty levels. In the post-liberalisation these differences are widening both among rural-urban and agriculture-industry (includes services). There was 60 percent credit-deposit ratio prescribed for rural branches, this was fulfilled by until 1990s at least in rural branches, however, since 1995-96 credit-deposit ratio of both rural and semi-urban branches declined to 40-45 and 34-35 percent respectively.

The share of agriculture in total bank credit had touched near 18 percent in the late 1980s thus fulfilling the target set, but recently its share decreased, like wise, the share of small-scale industries in total bank credit has steadily slipped. There were 62.55 million small borrower accounts at the end of March 1993 having credit limits of Rs.25,000 or less. Such accounts form about 22 percent of outstanding total bank

credit in late 1993. The number of such accounts with the same credit limit has steadily fallen to 37.32 million and their share to total bank credit to just 5.9 percent by the end of March 2002. To provide credit to small borrowers, small farmers and village artisans, banks incur additional costs, which have to be compensated by government in terms of subsidy. Some studies point out that, more exposure to rural areas/below poverty line population by regional rural banks will adversely affect the profitability of the banks by raising the cash-deposit ratio, operating costs (reaching of these areas are costly as these regions lack necessary infrastructure) and lowering the amount per loan account. To compensate for higher operational costs

government subsidy/support to be given, based on the region/district of operation and number of small accounts with that bank. This kind of support targets the source of market imperfection and enhances the overall efficiency of banking system at the same time.

Non-Market Distorting Government Support to Rural Banks

The government assistance should be based on some index of rural development and banking development in terms of people below poverty line and on the basis of bank credit to population ratio. Firstly emphasis on people below poverty line rather than direct credit to people below poverty line gives freedom to banks to lend money based on market principles, which will not create any market distortions. And the same will also create employment opportunities in proportion to poverty in that locality there by creating income-earning opportunities to households below poverty line. In this way probably short supply credit may go to economically viable projects in the region without distorting credit allocation mechanism.

In the current atmosphere, bank employees do not have right incentives for recovery of loans, most of the times employees may find it profitable by collusion with loan takers, facilitate the farmer in defaulting the loan. It is also important to see that the every rural bank should be responsible for all its financial affairs, without access to government funds. Subsidies are not entirely ruled out, but the subsidies should not be linked with efficiency of banks, and they should be fixed in advance on a pro-rata basis.

**The priority setting
at district level
is only a kind
of direction and
extra knowledge
enhancing
intervention**



Conclusions

The regional rural banks should adopt innovative methods to make the banks economically viable at the same time not compromising with outreach to the rural people and priority sector and less developed regions and poor people. The paper specifically suggests reduction of number of bank branches to make individual banks economically viable and reach many villages through setting up of mobile banks/bank agents/representatives. The incentive structure for agents/representatives should be based on commission of business generated. The agents may be recruited from traditional money lenders/LIC agents/UTI agents/unemployed youth and trained properly. The banks will not provide any refinance to these agents, but use their services to reach in remote areas. In this way cost incurred in setting up of many branches are avoided, operations become incentive driven and costs of operation will reduce. [ER](#)

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

FINANCIAL INCLUSION

A VIABLE OPTION FOR INCLUSIVE GROWTH



Ameet Banerjee

Dean (Academics), IBS and Ex-Banker

Background

The theme of the paper is to understand the inter- relation between financial inclusion and its overall contribution to economic growth and the impediments to financial inclusion in Indian scenario and what needs to be done to encompass all those financially excluded into the folds of inclusive class. Financial inclusion has much wider perspective not confined to bare minimum access to no frill accounts but on a larger canvas it is to deliver affordable financial services to vast section of the society, devoid of any disparities in income and other social structures. As its' a fact that one segment is deluged with assortments of banking services encircling regular banking facilities, portfolio counseling on the other end - a class of underprivileged and lower income group are totally deride of even basic financial services. Though the banking industry has grown both horizontally and vertically but the branch penetration has not been that enthusiastic with population load even after passing decades of nationalization, whose rationale was to shift the focus from class banking to mass banking. And given the demographic dynamics in Indian context the complexities are further aggravated, which calls for multi-level, multi-dimensional framework to address the issues relating to financial inclusion.

Rangarajan Committee (2008) viewed financial inclusion as “The process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost”. All efforts made to encourage financial inclusion will turn futile, unless the deprived class is brought into mainstream banking and channelizing banking services to diverse class of the society whose 37.2% population (as per Tendulkar Committee Report) reeling under poverty with majority contribution is from the rural belt will be daunting challenge which needs spirited policy adjustments, innovation in product dynamics, proficient human resource and technological circumvention at all levels to marginalize the hiatus. A conventional and unconventional measures needs to be advocated as orthodox banking practices will head nowhere in breaking the bottlenecks faced at the grass root level.

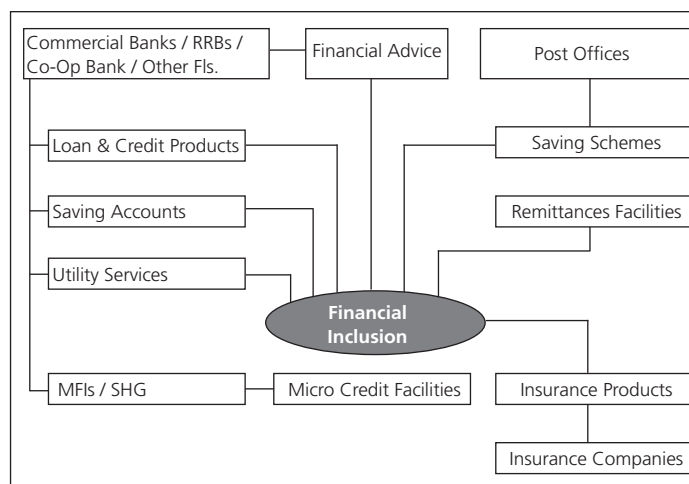
Why Speaking About Financial Inclusion

It is imperative that inclusive growth without financial inclusion will not succeed in achieving equitable objectives as financial inclusion can truly fortify the economic standards of the poor and the disadvantaged whose enrichment is foremost prerequisite for a nation encumbering growth trajectory. And the issue is aptly discussed in academic literature that there exists a correlation between financial development and economic growth. And when we are in the process of annexing second generation reforms one cannot imagine that a third of the population is under poverty level. Here financial inclusion will help in striking a balance by channelizing the surplus to deficit units and bring them under the growth metaphor. The more the development larger is the thrust on empowering the low income group. And with experiences of Grameen Bank (Bangladesh) has brought a new paradigm to the banking practices by changing the perception that poor are bankable and given a direction for the world community for diffusing of banking services and a business model which is highly rated and most valued.

Efforts Made For Financial Inclusion

Time and again Government of India and Reserve Bank of India were proactive in order to augment the banking penetration.

Chart 1: Current Institutional Structure For Financial Inclusion



Some of efforts made in this direction were facilitate the co-operative Movement; Setting up of State Bank of India ; Nationalization of banks in two phase one in 1969 and the other being 1980; initiation of Lead Bank Scheme ; establishment of RRBs (Regional Rural Banks); Service Area Approach; introducing Self Help Group – Bank Linkage programme. Moreover the government has emphasized it's explicitly the need for overall inclusion in the development process through its MGNREGS, Bharat Nirman Programme.

RBI's Contribution

Banks were given direction to make available no-Frill Accounts by RBI in November 2005 to expand outreach of such accounts to major sections of the society. Simplification of KYC norms for low income group. One of the pivotal developments being banks were permitted to avail the services of NGOs / SHG, micro finance institutions and other financial intermediaries to facilitate the banking services under BC / BF Model. Simplification of guidelines under KCC / GCC scheme in rural areas enabling customers' easy access to credit and mechanism for one time settlement of loans with principal amount up to Rs. 25,000 which have turned doubtful or non performing asset. Loans granted under Government sponsored schemes were advised to frame separate guidelines following a state specific approach evolved by the SLBC. Liberalized regime for branch expansion and setting up of ATMs. Introduction of technology products and services like Mobile Banking, Biometric ATMs, Mobile ATMs etc. Allowing RRBs' and Co-operative banks to sell Insurance and Financial Products under bank assurance channel. Promotion of financial literacy program and creation of special funds.

What Has Been Achieved?

- 431 districts identified by the SLBC convenor banks for 100 percent financial inclusion across various States/UTs and the target in 204 districts of 21 States and seven UTs has reportedly been achieved.
- Number of No-Frill Accounts – 28.23 million (as on December 31st, 2008).
- Number of rural bank branches – 31,727 constituting 39.7% of total bank branches (as on May 31st, 2009)..
- Number of ATMs – 44,857 (as on May 31st, 2009).
- Number of POS – 4,70,237 (as on May 31st, 2009).
- Number of Cards – 167.09 million (as on May 31st, 2009).
- Number of Kisan Credit cards – 87.83 million (Source:

NABARD).

- Number of Mobile phones–403 million (as on April 30th, 2009) – out of which 187 million (46%) do not have a bank account.

Shortcomings

Lack of Financial Literacy: Low literacy rate has been a great impediment for financial inclusion as ignorance caused low levels of awareness causing difficulty to communicate the necessity for banking habits and what savings can do to enrich their living standards. With little knowledge it turns out to be difficult task to make them understand the product features and second the complex legal terminologies.

Gap in Technology: Next generation of banking is era of technology, an inevitable source to improve branch infrastructure in terms of usage, increase outreach and help in scaling up activities. With growing spread in clientele and the need for servicing them once the relationship is established will call for low cost delivery alternatives and technology can be leveraged to increase delivery channels at lower cost, have better internal controls, augment the competency, safety and reliability of the payments and remittances system and develop a credit information system for future requirements. IT can reduce cost and time in processing of applications, maintaining and reconciliation of accounts and enable banks to use their staff at branches for making that critical minimum effort in sustaining relationship especially with new accountholders.

Language Barrier: One of the major hitch in financial inclusion being non availability of printed literature in regional vernaculars which is otherwise a prerequisite for reaching the masses. Thus a barrier is immediately created for communicating the need for inculcating banking practices. As most of the literature in the banking industry are in bilingual mode (Hindi / English), with large demographic spread are habitually jeopardize by the ignorance of language which creating a fear psychosis. As it's often found that language is a mode by which people try to identify and connect one self. Here every possible effort should be made to present printed literature in regional languages so that the message can be delivered in a larger vein thereby attracting people from all walks of life. Though the procedure will attract lot of man – hours, language authenticity and expensive printing expenditure but in the long run it will be highly beneficial in cutting across the myth and create a social relevance of inclusion

and contributing to nation's development.

Trained and Compassionate Manpower : Human resource has been the crux for successful endeavors. In all counts trained manpower is a versatile asset which can be harnessed to achieve visionary goals. This has been the void that needs to be plugged from the grass root level as found most of the staff are either semi skilled or trained only for performing regular banking activities, but what needed is versatile manpower with a human touch who can feel the pulse of the consumers and shifting gears as according to circumstances.

Statutory Documental Requirements: The necessity for simplifying the documentation procedures in opening a SB account is utmost prerequisite (KYC Norms) as people from both urban and rural belt with low incomes face problem when they approach banks or in turn are approached by the banks or financial service provider for opening accounts. RBI should set guidelines for alternative mode of identification as the essence of Know Your Customer is to identify a person by profession and class and second prevent any unforeseen event harming the interest of the nation. In case of rural belt the help of Gram Pradhan or Sarpanch (Village Head) can be used to identify a person if a document can be issued in his or her name stating his or her credentials it can be taken as viable document. Eccentric practices needs to be advocated otherwise the vision reaching the mass with banking services will receive a setback.

Lack of Customized Products: As people differ in their perception, opinions and thoughts so does their needs. The banking industry has to understand this basic philosophy and develop customer centric innovative products. The whole banking industry is offering generic products matching the needs of urbanized population and arsenal of other services where as the unbanked still remains to see the light of the dawn.

Infrastructural Requirements: With the liberalization branch opening under new branch authorization policy of RBI which encourages the opening of branches in under banked or unbanked areas. But they are still excluded population in all the parts of the country stretching from North- Eastern Belt, the Eastern and Central zone. Infrastructural deployments are not that enthusiastic to run even a satellite operation which requires power, telecommunication services and roads for geographical access. Though, under RIDF scheme government a corpus of 4,500 crore has been raised for partly funding the rural roads and bridges components of the Bharat Nirman Programme for the period 2009-10. But lot of grounds needs to be covered in this area and a required blue print for future endeavors.

Transaction Cost Too High: The assumption offering basic banking services to under privileged and low income group will not be viable and incur additional burden for up-scaling and capacity building is a myopic vision the experiences of banking industry world over and with award winning Nobel Laureate Md. Yunus modeling of Grameen Bank is an unparallel example delineating that economically backwards are bankable and the venture serves dual purpose one in financial inclusion second raising their financial standards. And regarding the high transaction cost, the cost can be averaged among the populace and technological innovations in IT services will help to build low cost service modules to support the backend operations.

Lack of Interest / Involvement of Big Technology Players: It is highly disappointing that big technological vendors showing meager interest in joining hands with banks to evolve business solution which has universal application. The challenge will lie in developing low cost alternatives for mass markets. With participation from biggies with superior technology can easily blend with the constraints can develop platform for mass scale operation and

Table 1: Penetration of Banking Services in India

(Per Cent)

	Offices			Deposits			Credit		
	1969	1996	2005	1969	1996	2005	1969	1996	2005
Rural	22.2	51.2	45.7	6.4	14.4	12.2	3.3	11.4	9.5
Semi Urban	40.4	21.3	22.3	21.8	19.5	16.9	13.1	13.1	11.3
Urban	19.2	15.2	17.6	26.5	22.4	21.5	21.8	17.7	16.4
Metropolitan	18.2	12.3	14.4	45.3	43.7	49.4	61.8	57.8	62.7
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source RBI.

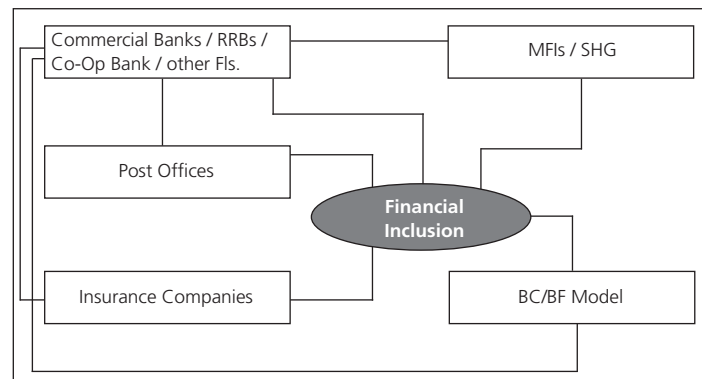
as for the cost involved for research and development which can be shared by forming a consortium where Government of India can also be participant. Strong Collaboration among Banks, Technical Service Provider is very essential in this direction.

Suggestive Line Action

Technological Intervention: Rural belts are poorly connected and customers need to be drawn into the system as underprivileged and low income groups are in the pursuits of daily employment and hence it calls banks to make extra efforts to reach them through a variety of devices like branch on wheels concept, Biometric ATMs and using mobile phones as a platform for banking transactions as the penetration in both urban and even in rural areas has surpassed expectations. Biometric voice interactive Hand held devices backed by technical support rendered by telecom service provider can be effective instrument for banking in unbanked areas for real time settlements at extreme low cost. Once the data base and track record is established then an array of financial services can be offered apart from general banking transactions like utility payments, loans and insurance products. Technology will open new frontiers for financial inclusion and offer a huge potential in terms of business and banks therefore need to take aggressive steps to use technology, as a mechanism to exploit potentials in innovative and creative manner. In fact technology is critical block for future endeavors apart from providing operational support, to building massive database for referrals, reducing the transaction cost and valuable man hours.

Efficient Delivery Mechanism: The use of intermediaries will only augment the process of financial inclusion by connecting people to banks. And the involvement SHG, community leaders and especially the state-level administration at grass-root level (PRIs) in India would bolster the concept of door step banking and enable effective penetration into under-served areas. Focus should be to synergize the local entities with the broad based goals for improving bankable activities and up-scaling this program for financing productive actions. While up-scaling the SHG-bank linkage program, care needs to be taken to identify the group, ensure their integrity and their reputation before exercising the project. Up-scaling additionally call for knowledge enhancement and capacity building. Though Khan Committee spelt out the agent related risk in the CGAP paper but on the contrary intermediaries functionaries enables risk reduction where the group is disciplined and social capital acts as credit enhancements. Banks should enter

Chart 2: Model For Delivery Mechanism



into agreement with postal authorities to use their wide area network and reach of post offices as business correspondents to outreach the masses by leveraging the proximity of the postman to the local population, his intimate knowledge of their backgrounds and the trust reposed on him.

Proactive involvement of RBI is required when such unconventional mode operandi is facilitated. RBI should set framework on use of business correspondents and facilitators as outsourcing agents and review the process in regular basis to provide solidity. The use of MFIs as indirect mode for credit disbursements to large segment of poor and needy customers can add another dimension one helping banks to minimize credit risk and the second social upliftment.

Spreading Financial Literacy: An aggressive drive is recommended to raise literacy standards to spread financial literacy “which is a mechanism by which an individual can understand the concepts and risks embedded in a financial product and develop skill to build confidence and identify the potential financial hazards and prospects to make informed choices to improve economic standards”. The context of financial education has a broader understanding which involves understanding the behavioral and psychological factors which is innate to an individual which could be major barriers. Thus promoting intensive awareness by adult education programme, enacting village stage shows, public campaigns, usage of mobile phones, using electronic media for promoting innovative advertisements, village panchayats, local school masters, and platforms like e-choupal and Srei Sahay can provide extra edge to reach the goal. Banks should avail the support of social organizations and village leaders who are well informed and undergone schooling to spread the need of joining the mainstream and remove any unnecessary fear housing

in their minds.

Product Innovation: Mere offering a no frill account may help in so called to realize to increase the number of accounts but in holistic term there will be a big void in terms of financial inclusion. Financial inclusion is not limited to only opening saving bank account with zero balance facility but it means to offer a wide array of financial services from credit counseling, offering insurance and MF products, remittances facility etc. There is dearth in innovation in developing tailored made products to appeal various classes according to their individual requirements. Product innovation will help in great way in spreading financial deepening as it will be easy to approach masses and provide easy solutions. Just imagine to package SB account with Rs. 50,000 accidental policy embedded into it extending protection against mishap or daily collection saving account with daily deposit ranging from Rs. 1 to 10 depending on financial capacity ideal for BC/BF model. Offering daily deposit SB account with added with Life insurance protection with collection of Rs. 10 per day and out of which Rs. 2 can be earmarked for policy premium. On the similar lines products for credit can also be develop to accommodate the credit requirements.

Appropriate Business Model Yet to Evolve: Appropriate strategies and business model needs to be developed as penetration in rural belts and low income urban and semi urban population is altogether a different challenge. Here traditional mode of banking will be highly unsuccessful first owing to the fear psychosis, lack of financial literacy, low propensity to save among low income group but not saving with financial institutions or practically no saving habits, seasonal employment or unemployment, lack of proper credentials to support KYC norms etc. Unconventional business modeling needs to be advocated which will require attitude, will power and support from government machineries.

Regulatory and Policy Interventions: RBI cannot just remain a regulatory body but has a huge responsibility in Indian context with respect to financial inclusion. Necessary legislation and guidelines can be enacted at any point of time but implementing those measures with other participants is where the challenge lies. RBI needs to regularly monitor whether the financial institutions are adhering to the commitments made both to Government and the public. Mere formulation of policies and half hearted efforts will not help the cause. Single minded focus, diligent efforts and

involvement of all is the prerequisite for financial inclusion. Setting standards and bench-marking for target achievement and rewarding the institutions for their excellent delivery in way motivate others to join the social and economic cause.

Conclusion

The economy is in the path of growth trajectory and with vibrancy in all round economic activities as well as creation of new activities apart from a lean period of 18 months resulting from the global turmoil the economy resilience needs to be appreciated. The main driver being the manufacturing sector which grew at 16.3% in the last quarter, mining 14% (Q4) and the overall GDP growth was 7.4% in the year 2009-10 only China surpassed with higher growth rate at 11.9% in the January – March quarter whereas rest of the word are witnessing fragile recovery aftermath the global financial crises. At present the financial depth in Indian scenario is not that encouraging against Asian countries though it has gained momentum. As deepening financial system and widening its reach is crucial in terms accelerating the growth and achieve equitable objectives. With sudden burst in entrepreneur drive across the country will require additional financial support to nurture them. With pressure for credit delivery will need to mobilize additional resources from a wider deposit base. Thus financial inclusion will help strengthen financial deepening and enable resource mobilization for extending and broadening credit leading to economic development and accelerate growth. [\[E\]](#)

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AN ANALYSIS OF FINANCIAL EXCLUSION: OPPORTUNITIES FOR COMMERCIAL BANKS IN RURAL INDIA



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An Introduction

Financial inclusion refers to making available banking services at affordable costs to the unbanked. The key word here is affordable. Despite the tremendous growth that the Indian banking industry has witnessed over the past decades, concerns remain about the exclusion of a vast majority of India's population.

The Current State of Banking in India

Currently, about 5.2 percent of India's 6,50,000 villages have bank accounts.¹ According to a study conducted by Dr. K.C. Chakraborty, one of the current deputy governors of the Reserve Bank of India, 46 percent of Indians do not have bank accounts.² Now what does this all add up to. For a business perspective, the opportunities are tremendous. A right mix of products will enable businesses to tap the fortune which lies in India's rural population (Table-1) (Table-2).

A good indicator to judge the robustness of a country's banking system is the percentage of deposit and credit accounts to the total population of the country. As shown in Chart-1, 2, 3 and 4, a good opportunity exists in increasing

Only 5.2% of India's 650,000 villages have bank accounts. About 46 % of Indians do not have bank accounts

Table-2: Purposes and Sources of Loans in India

Purposes and Sources of Loans	Million		Percentage	
	Rural	Urban	Rural	Urban
Meeting Financial Emergency	20.2	4.7	26.3%	31.0%
Medical Emergency	12.5	1.8	16.3%	11.7%
Business Needs	7.1	2.1	9.3%	14.0%
Others	36.8	6.5	47.1%	43.3%
Total	76.6	15.1	100%	100%
From Institutional Sources	52.4	9.9	68.4%	65.6%
From Non-Institutional Sources	24.2	5.2	31.6%	34.4%
Total	76.6	15.1	100%	100%

Source: Report on Currency and Finance 2006-08 (HIMS Survey, 2007)

the penetration of banking services in India. Apart from the comparison against other countries, there is a wide disparity of the penetration of services within India itself. Rural India, which is being touted as a future engine of growth, has only 19 deposit accounts per 100 people and six credit accounts per 100 people.

This disparity is not restricted to just a few states but covers most of the country. In addition to this, significant opportunities exist to enhance the deposit and credit base in rural India. This low base is one reason for banking services to be largely unviable in rural India (Chart-1) (Chart-2) (Chart-3) (Chart-4).

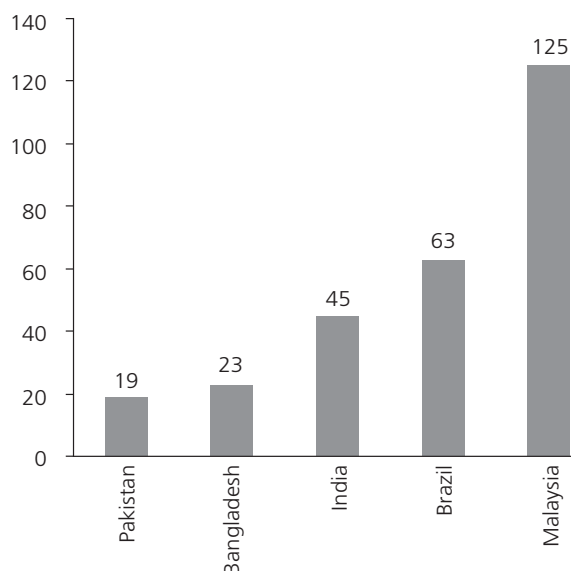
As indicated by Charts-5, 6, 7 and 8, the penetration of banking services in India is clearly skewed. This disparity can be explained by access (the availability) and usage (actual use) of services. Access is determined by the state of the rural economy, infrastructure regulatory mechanism and the basic cost of the providing these services. On the other hand, the actual usage by individuals is determined by the transaction cost of these services and the actual offerings. In addition to this socio-economic conditions and the opportunity costs of the services are two key variables which also influence the usage of these services.

As shown in the below tables, the rich states (Kerala, Punjab and Karnataka) fare reasonable on the penetration front as against states such as Orissa, Jharkhand and Madhya Pradesh, which represent the poor states (Chart- 5) (Chart-6) (Chart-7) (Chart-8).

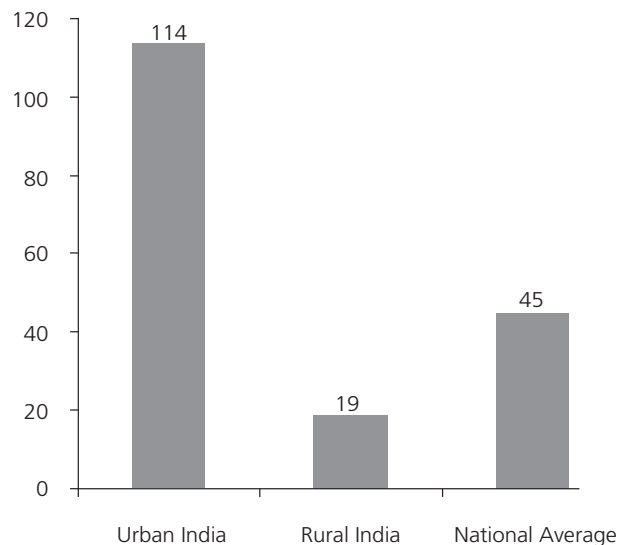
Table-1: Sources of Loans According to Income

Annual Income (INR)	Banks	Money Lenders	Other Institutional & Non-Institutional Sources	Total
< 50,000	13	34.9	52.1	100
50,000 – 1,00,000	34.5	19.6	45.9	100
1,00,000 – 2,00,000	49.3	12	38.7	100
2,00,000 – 4,00,000	51.6	11.8	36.6	100
> 400,000	62.8	5.5	31.7	100

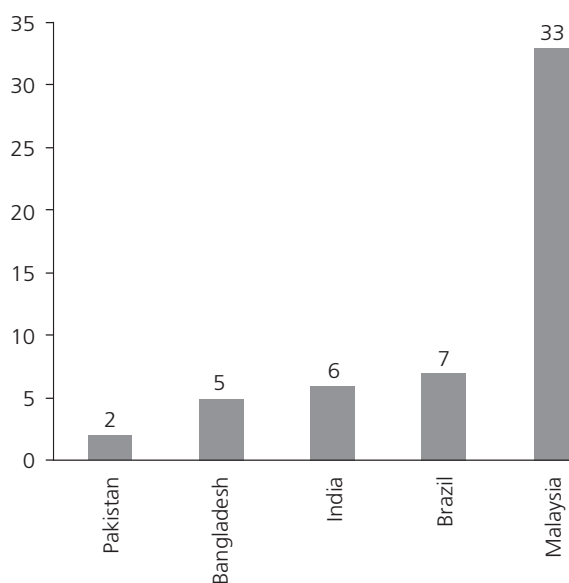
Source: Report on Currency and Finance 2006-08 (HIMS Survey, 2007)

Chart-1: Comparison of Deposit Accounts With Other Countries (%)³

Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

Chart-2: Penetration of Deposit Accounts In India (%)

Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

Chart-3: Comparison of Credit Accounts With Other Countries (%)

Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

Chart-4: Penetration of Credit Accounts In India (%)

Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

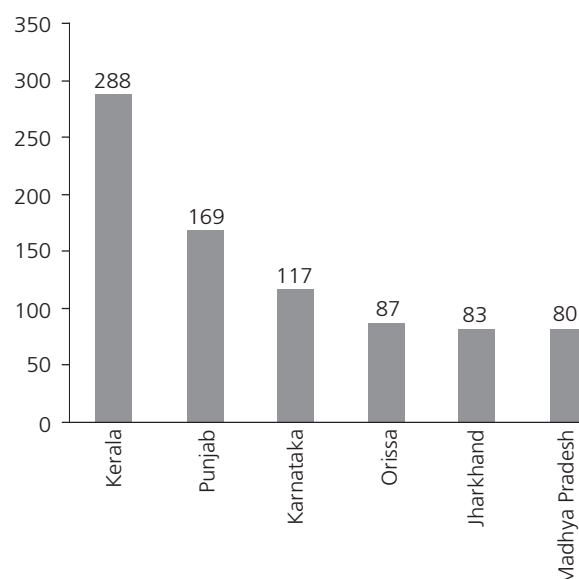
Key Reasons For Financial Exclusion In India

A number of factors such as lack of banking infrastructure, poor awareness of products and the lack of steady income have prevented a large number of individuals from joining the formal banking sector.

- **Access:** With only 5.2 percent of India's villages having

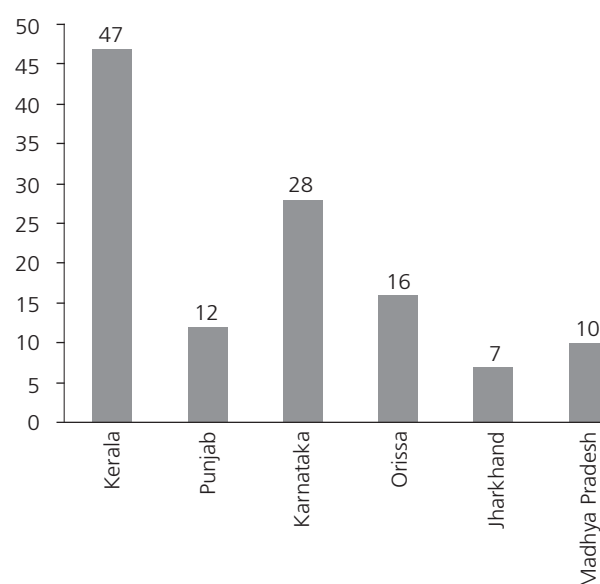
bank branches, infrastructure remains a key hindrance for the spread of viable solutions (about 23 percent of villages do not have electricity, 67 percent lack a post office). Apart from this, distance remains another challenge. In India, the average distance to a bank is about 3.8 km. While the distance might seem short, but the condi-

**Chart-5: Urban Deposit Accounts In India
(% of Population, Select States)⁴**



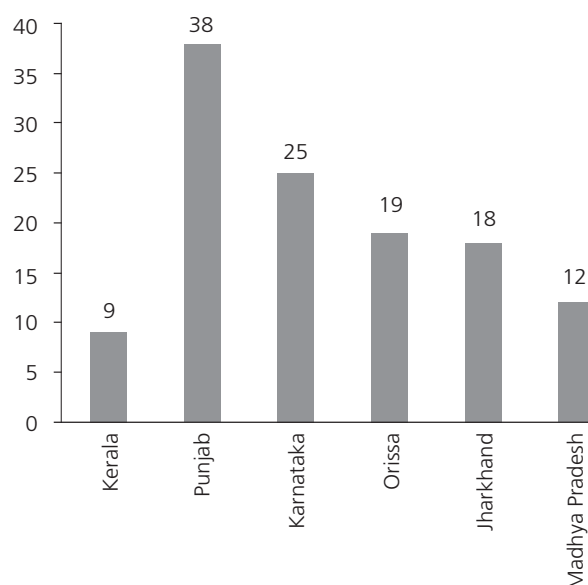
Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

**Chart-6: Urban Credit Accounts In India
(% of Population, Select States)**



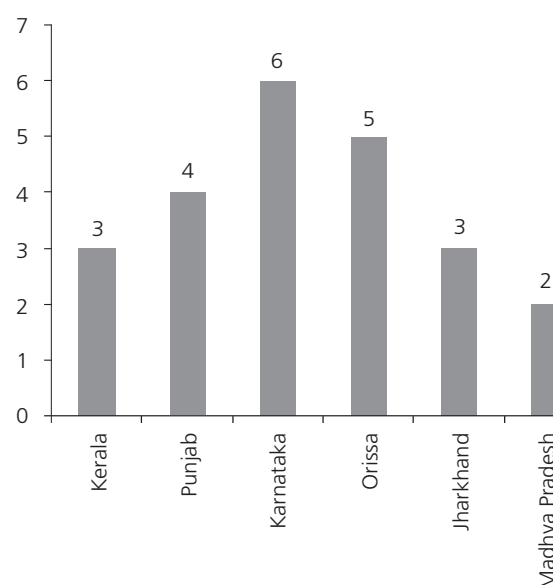
Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

**Chart-7: Rural Deposit Accounts In India
(% of Population, Select States)**



Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

**Chart-8: Rural Credit Accounts In India
(% of Population, Select States)**

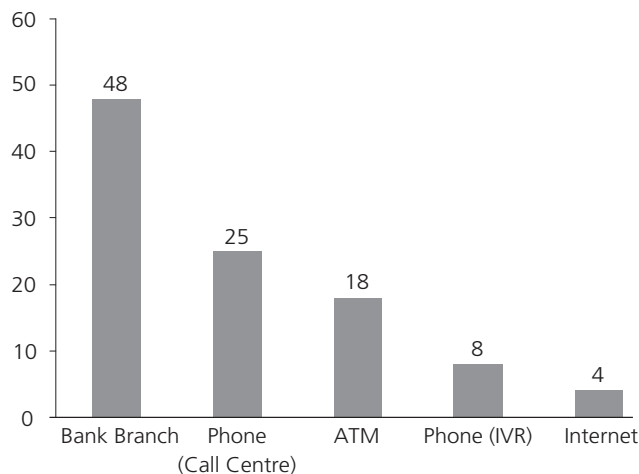


Source: Census India 2001; BSR 2005—Reserve Bank of India; World Bank—September 2005

tion of the roads and the state of transportation lead to a journey to the bank taking an entire day. Rural India would not be willing to sacrifice an entire days of wages to visit a bank.

- **High Cost of Service:** While advances in technology have substantially reduced the cost per transaction in banks,

the trickledown effect in rural India has not really taken place. The overall cost per transaction for bank branches stands at Rs. 48 per transaction, an amount which cannot be justified to owing to the small deposit and loan size in the rural market. While the cost per transaction for ATMs is only Rs. 18, key logistical and infrastructural

Chart-9: Cost Per Transaction For Banks (INR)

Source: Reserve Bank of India; CGAP, World Bank

challenges along with lack of familiarity poses the biggest challenge. However, this is one area where mobile phones can play a vital role. The cost via a call centre and IVR comes to about Rs. 25 and Rs. 8 respectively. With the overall teledensity in India at 47.89 percent, the opportunities are immense.⁵

- **Income Variability:** A key reason that banks fear lending to the poor is the variability in their earnings. Over 60 percent of India's population is employed in the agriculture sector which, however, contributed only 21 percent of India's GDP. Declining productivity, climate change and poor reach of irrigation has made the average rural Indian an extremely vulnerable market. This is a key reason that the non performing loans in rural India stand at 7.7 percent, as against an all India 3.5 percent average.
- **Absence of Suitable Products:** The lack of flexible offerings in terms of loan repayment is a major impediment for the rural poor. Local moneylenders are able to provide this offering thereby preventing the rural poor from joining the formal financial sector.
- **Lack of Financial Literacy:** Many of the rural poor are generally unaware of the formal sectors products or are uncomfortable with them. These consumers prefer products that are easy to understand and which involve

less paperwork.

The Way Forward

As previously discussed, the Indian market offers tremendous opportunities for growth. On a broad perspective, the government, the RBI and the bank themselves are the key stakeholders in boosting financial inclusion.

The governments flagship programme Bharat Nirman received an allocation of Rs 48,000 crores in the budget.⁶ The government has to ensure that outcomes match outlays and the necessary infrastructure is put in place.

The RBI too needs to revisit some of its rules and regulations which would allow banks more flexibility. With rapid advancements in technology the RBI should modify its current guidelines for banks to have rural branches to enable to receive branches for urban banks. ATMs, despite lowering the transaction cost significantly, pose a hindrance due to poor infrastructure and lack of familiarity. Banks should try to appoint agents in rural ATMs to assist customers in their transactions. Current RBI regulations state that ATMs must be left unattended. Finally, the RBI should

propose consumer alternate means for banks to be able to deliver financial services. This will be taken up in the subsequent section.

Banks too will have to modify their existing products and survives and repackage them for rural India. Flexibility in repayment terms, no minimum bank balance are some of the suggestions that banks can implement.

The share of non performing loans in rural Indian market stand at 7.7%, as against an all India average at 3.5%

The Opportunity

Currently, the rapidly expanding Indian economy has become the focus of the banking sector. Chart 3-8, indicate

Table-3: Key Rural Banking Statistics

	Rural Credit Market	Rural Deposit Market
Size (Rs. Bn.)	1,330	400
Untapped (Rs. Bn.)	1,204	215
Untapped (%)	90.5%	53.8%

Source: BSR 2005—Reserve Bank of India, RBI; World Bank 2003

However, as shown by Chart-9, rural India offers a tremendous opportunity for banks to exploit. The untapped credit market is estimated at 90.5 percent of the total market size while the corresponding figure for the deposit market stabs at 0.8 percent. The results of this is a large percentage of people either lose out on access to credit and deposit services or are forced to approach informal channels such as moneylenders which further compounds their problems. (Table 3).

Conclusion

Endnotes

- 1 Financial Inclusion in India Statistics
2 Pushing Financial Inclusion – A Report by Dr. K.C.
Chakraborty
3 The percentage data provided in Chart 1, 2, 3 and 4 has
data in which individuals may have more than one
account. This is why the percentage figure exceeds 100.
4 The percentage data provided in Chart-5, 6, 7 and 8 has
data in which individuals may have more than one
account. This is why the percentage figure exceeds 100.
5 Cellbharat
6 EXIM Policy of India 2010

- World Bank, 2005
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CHALLENGES FOR INCLUSIVE INDIA IN THE CONTEXT OF GLOBALISATION

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The term social exclusion was first used in Western Europe in the 1970's relating to poverty, inequality, deprivation, alienation and marginalisation. Social exclusion in the European context has been defined in relation to social rights of citizens to retain basic standards of living and to participation in the major social and occupational opportunities of the society. In the World Summit on Social Development, Gerry Rodgers and others have identified various forms of exclusion i.e. exclusion from goods and services, labour market, land security, security of livelihood, protection against contingencies, human rights and macro – economic development strategies. The World Bank's Annual Report 1998 has described social exclusion as a "process



through which individuals and groups are wholly or partially excluded from full economic, political and cultural participation in the society in which they live”.

According to Appaswamy and others the term social exclusion in the Indian context is related to basic needs i.e. nutrition, elementary education, and basic health care, access to housing, water supply, sanitation and social security (*R.R. Singh: 2003*).

The term social exclusion encompasses broadly social, economic, political and cultural spheres. It also means marginalisation, earlier the term social exclusion was applied to social disintegration. In the context of International Institute of labour Studies, social exclusion is a negative state of process, sense of inferiority, materially deprived. individual are denied access to goods, services, activities. It refers to exclusion from civic integration, labour market, welfare state provision, family and community.

Indian society is complex and heterogeneous, composing of different caste, class, religion, region and language. Indian society is based on hierarchy i.e. determined by birth of the individual in particular caste, the high and low caste. The concept of exclusion and inclusion will be decided as to which caste one belongs. For centuries the untouchables, were discriminated for their birth in

lower castes, and for engaging in lowly occupation, this is exclusion in past Indian society, although Indian society boast of unity in diversity, there has been discrimination against this groups over period of time, these castes were socially excluded, and severely discriminated for asking equal treatment in all areas of life. There are different kinds of atrocities committed against them. There are strong bias against certain groups such as Muslims, and the Dalits. In the context of Globalisation the artisan communities are losing their sources of livelihood etc. Therefore the term Social exclusion is multi-dimensional, and needs to be examined in the social, political and economic sphere. The changing and withdrawing role of the State, which further intensifies the process of Social exclusion. The term social exclusion is accepted more by the Western Europe, rather than developing countries.

The term social exclusion needs to be broaden if one wants to understand the larger process as to how exclusion occurs in different areas of society. But in the Indian context we generally understand social exclusion in relation to caste.

Prior to 1991 India adopted socialistic model of development wherein both public and private sector existed. Social welfare was intended through public sector and the State was able to achieve



some welfare goals there after with planned development i.e. under different five year plans with emphasis on industrialisation, urbanisation and agricultural development.

The Indian Economy witnessed several ups and downs, during the Rajiv Gandhi regime in 1985-1990, the first wave of economic reforms. Certain suggestions were made related to productivity, modern technology and utilization of capacity. The thrust of the policy was on the greater role for the private sector.

The second wave of Economic Reforms was started during the P.V. Narshimanrao Government in 1991. The entire thrust of the reforms was to increase the overall efficiency, use of sophisticated technology, and to rationalize the scope of public sector and bring about reforms in the financial sector. The major areas of second waves of reforms was fiscal policy reforms were introduced to reduce overall public sector deficit, control public expenditures, suggested higher taxes, the Central Government will encourage the State Government to streamline the working of State Enterprises, a major change was to reduce budgetary subsidiaries. All the above reforms in different areas affected the social policies i.e. concerning elementary education, rural drinking water, assistance to small and marginal farmers, programme for women and children, scheduled castes and scheduled tribe's welfare programmes, spending on employment, and budgetary cut on the health sector.

Although economic reforms intended to bring change in sphere of economy by having more production and productivity it has also encroached on other sectors i.e. banking, agriculture, health, education, industry and labour etc.

The social consequences are damaging and majority of people excluded which has been the challenge for inclusive India. No doubt that reforms has done some good in few areas and has brought a change, but the question remains how does one make the reforms more socially inclusive i.e. how the benefits of reforms will reach the poor, dalits, tribals, and working class etc. Displacement of people from their source of livelihood of the people has become a common phenomenon in the era of Globalisation. The State has announced Special Economic Zones in different parts of the country and also can be observed the people's resentment and the counter struggle to maintain their Land Rights. Therefore this paper makes an attempt to understand the challenges for inclusive

India and the failure of the market economy to take care of socially inclusive growth. The paper peeps into the different sectors of health, industry and labour.

The Health Sector Reforms

The structural adjustment policies have intensified the process of exclusion in health sector; which has severe implications for the marginalized sections. In first phase of structural reforms there was opening up of medical care to Non-Governmental and private sectors in India. The gradual dismantling of public sector, health institution, eroding resource bases, introduction of user fee in public hospitals and opening up medical care to private sector, means that interest of the poor could not be safeguarded any more, and the health of the poor will deteriorate. There are no safety nets, previously the Maharashtra State Government took decision to close down Employee's State Insurance hospitals at Vashi in Navi Mumbai and simultaneously hospital's at Mulund, Thane, in

Maharashtra and other regions in India.

This hospital's caters to the industrial working class. The workers contribute 4.25% of his salary and employer's contributes 1.75% for this schemes. Nearly 15 lakh workers and their families in Maharashtra are the beneficiaries from these schemes, out of these nine lakh workers are from Mumbai. The hospitals are located in prime business area, therefore the plan is to shut down the hospitals and sale the land to builders for

commercial purposes, these is unlike the sale of mill land to the builders in Mumbai. Many of the public hospitals grants are slashed, there are no medicines, inadequate infrastructure as a result the patient are referred to private clinics. Therefore the poor are excluded from having access to health facilities.

In 1996 – 97 public allocations for health and education in India declined, it was 4.1% of the GDP. The public share in total health expenditure of people is only about one quarter. Public expenditure on the welfare of Scheduled Castes, Scheduled Tribes and other backward castes has also declined over the last decade. The financial institutions such as the Scheduled Castes and Scheduled Tribes Development Corporations, Minorities Development Corporation have become least effective because the States have cut down the allocation of funds as a part of controlling public expenditure. The Government is planning to merge or close some

In 1997, the public sector excluded 2.17 lakh workers. Public share in total health expenditure is only one quarter

Corporations; these will affect the process of social inclusion and overall socio-economic progress of the marginalized groups. The entire role of the State in the post-reforms period has become anti-masses and pro-capitalists. The dominant role of the welfare State in 50's and 60's does not exist; rather this was the period when State was committed for social inclusion of several categories to bring welfare to the masses. After 1991 the State is withdrawing from welfare projects, the philosophy of social exclusion was practiced during on marching of the reforms to reduce participation in production and distribution, and giving space to privatization. The new economic model of development is becoming more socially exclusive. Therefore Globalisation is putting social and economic pressures on the marginalised sections.

Reforms in Industry and Labour

The new economic policy has altered the Indian economy and society to a great extent, especially the industry with impact on labour. The capitalist are demanding exit policy which would give freedom to them to hire and fire workers. There are no safety nets and strategy of the employers to shed core labour is increasing, introducing of voluntary retirement scheme, retrenchment of the workers and shift of work to the unorganised sector has brought negative consequences in different areas. The work force in the organized industry is declining, the traditional labour intensive industries have been hit hard, the permanent workers are losing jobs not to as machines but equally to cheap labour and contractual labour. Under paid labour is growing, the employment share of the organized sector in total employment is declining. In 1997 the public sector excluded 2.17 lakh workers, there is a downsizing of workers to which labour has been fiercely opposing the new economic policy, there are no strong strategies to encounter the process of exclusion through privatization.

In the first decade of post-independence period, the State took welfare view and passed several legislations like Industrial Dispute Act, Minimum Wages Act, Trade Union Act, Contract Labour Act and several other enactments in the interest of the workers. Initially the relation between the State and the workers were somewhat cordial but later the workers always had to struggle to gain their rights. After 1970 there is deep disenchantment with the State and massive workers struggles. In the recent years the sense of

negativism has increased especially after implementation of new economic policy in 1991.

Liberalization of Trade

Under the impact of World Trade Organization would lead to erosion of local market. The problem will be severe if agriculture sector is thrown open for complete reforms, then the Indian farmer have to compete with imported milk, vegetables, and fruits which will displace local production, this will have direct bearing on small and marginal farmers who will be excluded in the market. The rate of suicide of farmers is increasing, Stiff competition, lower prices for the produce, quality standards will be hurdles for Indian farmers to compete with new production system. The domestic business will decline in third world countries if globalisation and trade liberalization were reversed in high level of protectionism. Thousands of workers in export production would at one blow become unemployed. The loss of their purchasing power

could in some cases lead other local industries closing down for lack of demand and creating more unemployment if State protection is withdrawn. Today there are 31 lakhs 21 thousand small industries which employs one crore 72 lakh workers, the annual profit of this firms is six crores and they export fifty thousand crore goods. This was possible only because State gives protection from competition, where big industries were not allowed to enter in these areas that is why these growth

Stiff competition, lower prices and quality standards will become the hurdles for Indian farmers in global agricultural system

was possible.

Privatisation of Public Sector

MNC's have come to control the State owned enterprises because in the developing countries there is availability of cheap labour. Public Sector is made sick purposely to speed up privatisation, profitable companies and boards i.e. Bharat Petroleum, Bharat Aluminum, Maharashtra State Electricity Board, Mahanagar Telephone Nigam Limited, Air India, Public Hospitals, Life Insurance Corporation, etc. are on the way of privatisation, the workers in these companies are opposing privatisation. The privatisation of power, roads, hospitals, transport and communication will affect the common masses and will be excluded from access to different resources. Privatisation of power will lead to increase in the rate of electricity unit, this would be non affordable

for the small farmers, many of the villages will run out of electricity and will be in dark.

MSEB (Maharashtra State Electricity Board) has reached every village, and given electricity to poor. The theft of electricity by big industrial houses and by other private bodies have to be controlled by strict vigilance, if this scenario is improved MSEB need not be privatised. The Government also wants to privatise the State Transport (ST) which connects 90 percent of the villages in Maharashtra. With privatisation of State transport many of the routes connecting remote villages will be closed and will be non accessible for development programme. Private transport will have no interest in running their buses on the loss making routes which is generally subsidized by the State transport by plying more buses on profit making routes.

The growing informalisation of the Indian Economy, most of the work takes place outside the formal wage labour market, such as clandestine work, illegal work, and various forms of self employment. Exclusion of labour is increasing from the formal labour market, and is global phenomenon. The informal sector model was developed in the 1970's as theoretical device to account for the reality of underemployment. It assumed exclusion of the workers from the formal economy and their absorption in the informal economy of small enterprises, often employing family members. Informal economy acts as buffer zone for those who are excluded from the formal labour force. There is diverse class interest, as well as most of the lower caste also part of the informal sector. According to Manuel Castells and Alejandro Portes informal economy there is high level of exploitation, abuse, aggressive entrepreneurs and defenseless workers. As specific production relationship, the informal economy should not be read as a simple euphemism for poverty or social exclusion. A major issue in the informal sector analysis of the 1980's was of that gendered nature. According to Alison Scott's findings there is significant wage differential between male and female earnings.

Informalisation proceeds hand in hand with the feminisation of the labour force and of poverty. Globalisation are leading to an increase in informalisation along with all forms of social exclusion. Interpreting World Bank's view exclusion will shrink with development.

Labour Reforms

The trade unions are opposing labour law amendments, with these amendments the workers will be at the mercy of the employers, for example the workers drawing the salary of 6,500 and above will not

be covered by any law, and employers can dismiss them if they form unions., these is the right guaranteed under the Constitution and protected by the Trade Union Act of 1947, the industrial employment standing orders etc. The employers would not conduct any enquiry yet workers would not be reinstated, and workers will have no voice to collectively bargain to increase their wages. The Contract Labour (Regulation and Abolition Act 1972), is applied when 20 or more contract workers are employed, but there is no protection to contract workers whenever less than 20 workers are employed. Now the State Government is going to raise the limit to 50 in urban areas and 100 in rural areas. The Central Government wants contract workers in non core activities i.e. sweeping, cleaning, security and canteen etc, in this area mainly Dalits are recruited and the condition of the workers is exploitative in terms of wages, health, etc. The Government wants to amend the Factory Act as result there will be more than eight hours working day, no weakly off, no extra wages for overtime work, restriction on shift working, annual leave, and curtailment in welfare facilities like bathrooms, safe drinking water, first aid, and safety in hazardous work etc.

The condition of the workers in small scale industries and in non core activities will be miserable, the Government will withdraw its protection and control in this areas. The proposal to amend Trade Union Act is disturbing; the unit with these less than 25 workers will be denied the rights to unionise. With all these changes, the Government will bring industrial unrest which will lead to social unrest. Liberalization will destroy the workers at all levels, where the jobs will be only for few. Therefore the trade unions are demanding protection and safety nets from these amendments. Economic reform has lead to loosening of labour market regulations, the world bank argues that institutional rigidity limits labour mobility and therefore causes unemployment. There is an opposition from World Bank for establishing or maintaining benefits for long term unemployed section. The reforms in the labour policy i.e. amending the Industrial Act of 1947 would lead to serious job security of the workers. The Act gave security to the workers against dismissal from the employer. In 1976 it was mandatory to obtain prior State Government permission for retrenchment of workers in firms employing 100 people or more. Any firm changing production technique had to seek prior permission of State. The retrenchment of the workers just could not be done without the approval of the government, but also a permission from union that ensure the replacement of retired employees by sons, relatives or any nominees these had another

aspect of job security. By introducing retrenchment, voluntary retirement schemes it implies discontinuity of income to several generations. The loss of job will result in pauperization of the worker, leading worker to committing suicide, loss of education to workers children, less attention to health, increase in divorce because not able to support the family, increase in crime where the worker may join underworld activities in order to support himself. The growing size of unemployed either by retrenchment or downsizing will be increasing with privatisation of firms. The Government intends to have jobless growth without investing in human resources (Labour).

In the Industrial belt of Maharashtra, more than hundreds of small and big industries closed. It was only at the end of the last century that there was process of assimilation between Dalit trade associations and main stream trade unions, this is the joint effort of the workers to fight against closure of industry. The industries are downsizing the staffs, making the factories sick by cutting down the production, delay and non-payment of electricity bills and taxes etc, which ultimately lead to shutting the industries. The entire privatisation programme will have a strong negative impact on Dalits, Tribals and Adivasis. The problems of the Dalits are different at the level of caste. The mega projects like the Narmada dam, the Pune- Mumbai express highway. Other big Projects have already affected the Tribals and Dalits in their ecological set ups and uprooted them from their source of livelihood. There are complex questions, whether the main-stream labour movement will be in the position to understand the problems of Dalits, Tribals and Adivasis and answer their questions in a broader framework, or whether for marginalized sections have to fight their own battles through their own caste and tribal organizations. The differences are sharp but the labour movement can certainly encompass the issues raised and work on similar footings.

In Mumbai after the closures of mills and other industries created the problems of increased unemployment, crime, alcoholism, gambling and prostitution. The issue of social inclusion is becoming more challenging, the existing Dalit Organisation, trade unions do not have any systematic strategy to meet challenges of globalization, liberalization and privatisation. In the past decades the trade unions have spent their energy on petty issues and narrow demands, which has lead to loss of sharpness of labour struggle. Now it is a puzzle for the labour movement, which is fragmented as to how to apply new strategies and techniques to counter the reforms. The labour movement in the organized sector had narrow interest, and did not addressed the issues of caste systems, reserva-

tions, and contract systems, and problems of unorganised workers, rather than asking themselves more wages, bonus and other facilities. This has also brought about inequality between the organized and the unorganised sector. Majority in the unorganised sector are not in the debate of reforms which focused around the organized workers.

The Role of the State and Social Inclusion

The role of the Indian State needs to be redefined in the context of globalisation, which is more market friendly, and withdrawing its presence in different spheres of the society. The free market economy does not mean complete absence of the state, rather it requires strong effective regulation, in order to make market work in favour of marginalized section, otherwise this could certainly paralyse the market, which will not achieve the growth. Therefore timely intervention on the part of the State is must to achieve the developmental goals. [UER](#)

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)



MARKET AND DEVELOPMENT IN INDIA

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The implementation of the policies of globalization and liberalization since the last decade of the twentieth century has brought in the concept of ‘market’, and now there is increasing reliance on market-led reforms in India. Even though we have experienced two decades of globalization policy in India, it has remained a much debatable subject in Indian context. Whatever may be the effects of globalization and its consequence, ‘market’, it can be assumed that the latter has reinvigorated the society and the social condition, and in the process, has given scope to everyone, either directly or indirectly. What matters is how a person churns the benefits from the market

so as to make it an advantageous situation for himself/herself. Here lies the scope of market in bringing in an inclusive growth for everyone benefiting from it either directly or indirectly. The world is now more inter-connected and this has been made possible by the market, leading to economic opportunities and growth. Most countries in the developing world, as also in the erstwhile socialist bloc, had begun to reshape their domestic economic policies so as to integrate much more into the world economy and to enlarge the role of the market vis-à-vis the state (Nayyar, 2006; 4).

It is alleged by many commentators that the state is gradually withdrawing from a lot of spheres, thereby giving scope to the market. This withdrawal of the state is criticized on the ground of social agenda/sphere, “such as the reduction of child labor, removal of poverty, the maintenance of rich-country labor and environmental standards, the exercise of national sovereignty and

democratic rights, the maintenance of local mainstream and indigenous culture, and women's rights and welfare" (*Bhagwati, 2007; 151*). In spite of these criticisms and allegations, Jagdish Bhagwati, in his book, *In Defense of Globalization* (2007), develops and defends it by saying that it has a 'human face', and has beneficial and not malignant effects on social agendas. This can only be achieved, according to him, by an institutional and policy framework under appropriate governance.

Amartya Sen argues that it is impossible to think of a prosperous economy in the contemporary world without extensive use of markets and that market mechanism has to work in a world of many institutions with which it interrelates (2007; 123). These institutions help in the expansion of basic freedoms, and are provided by "democratic practice, civil and human rights, a free and open media, facilities for basic education and health care, economic safety nets, and of course, provisions for women's freedom and rights" (*ibid*). According to Sen, globalization is not a new phenomenon but has progressed over thousands of years offering opportunities for the benefit of the whole world and it continues to do so. The issue, rather, is fairness or inequity in the distribution of these opportunities (*Sen, 2007; 132*). He further says that market mechanism have the ability for high economic growth and overall economic progress. We have to pay particular attention to the interests of the deprived sectors of the world community and concentrate especially on those who suffer from vulnerability and various interlinked disabilities (*ibid*).

Bipan Chandra, Mridula Mukherjee & Aditya Mukherjee in their book *India since Independence* (2007) have also echoed "the urge to participate in the globalization process...where major possibilities have emerged of utilizing global capital and global markets for indigenous development" (2007; 659-60). They have quoted the former Left Dependency thinker F. H. Cardoso's argument, "how to globalize so that a better bargain is achieved for the backward countries and a proper cushion provided to the poor so that they are not made to bear the cost of the initial transition" (2007; 660). To support their arguments they have given evidence of Indian manufacturing sales increasing from 11.26 % in 1990 to 13.77% in 2001 while foreign firms increased from 9.5% to 12.63% in the corresponding period (2007; 500) and other economic parameters. However, they have also cautioned that "with the onset of liberalization of the economy and economic development on the basis of the 'animal spirits of the capitalists', inequality is likely to grow unless counter-steps are taken, even if economic development is somewhat hurt" (2007; 706).

Panchayati Raj

Interesting to note, the government of India has initiated a series of legislations and rules, specifically focusing on the social agendas, after the implementation of a market economy due to the globalization policy. The foremost among these is the Panchayati Raj Institutions Act, 1992, which came into force on 22nd April 1993, by the 73rd Constitutional Amendment Act. The twin governmental policies of liberalization and decentralization in the 1990s provides the new panchayats space to function by both reducing the role of bureaucracy and increasing grassroots participation, while at the same time maintaining the support of the state (*Pai, 1996; 79*). The panchayats gave the necessary organizational power to the rural people in the background of the globalization and the entry of the market technique. The rural people got the power of the panchayat structure to defend for their interests, in case the government retreats. Added to this, the affirmative measure of reservation for the disadvantaged sections of the populace has further strengthened the rural people and has contributed for an inclusive growth. A major step towards further democratization of the political system and greater people's participation as also greater control over their own lives has been taken with the inauguration of the freshly designed panchayati raj (*Chandra et al, 2007; 694*). With the panchayati raj act and the operation of the market principles, two divergent classes were empowered to struggle for their own sustainability, one with the democratic method and the other with the means to influence the democratic structure for their benefit. It may be debatable contentious, but it is certainly true that the panchayati raj act has empowered the rural people.

MGNREGA

The second important legislation is the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) of 2005. The MGNREGA aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage-employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work. This act provided the mechanism for sustaining the purchasing power of the rural people so as to empower them economically in the backdrop of the market principle. The market principle leads to a consumerist society and in the event of no other scope for financial gain, the MGNREGA provides an opportunity to the rural people to meet the challenge posed by the market and to sustain them. This particular act supplements the income of the

rural people and acts as a mechanism to counter any type of misdeeds on the part of the market. The unskilled labor force has certainly benefitted from this act, inspite of various allegations, and its unhindered implementation will further benefit this class.

RTI Act

The third important legislation is the Right to Information Act (RTI), 2005, which gave the individuals the right to get information on any matter. This is a revolutionary legislation that has made the governmental authorities very cautious in the issues of governance. The primary aim through this Act is to bring a check on the corrupt practices, if any, adopted by any officials. Globalization and liberalization has resulted in rolling back the state and the state's role has been considerably restricted, thereby giving unbridled scope to the market. In this context, there is every possibility of the market assuming greater proportions, and in the process may turn to exploit the people in different sectors, like labor, environment, land, infrastructural development, etc. The RTI Act is an effective legislation to check any type of corrupt practices adopted by the market through the governmental mechanism. The government is accountable to the people, while the market is not so. A state which pays little attention to the economic sufferings and marginalization of a significant proportion of its population, not only discredits itself but also the market process through which such marginalization occurs (*Bhaduri, 2006; 40*). The Act has empowered the people to get any information relating to any type of concessions given to the market, and this information may be utilized further for the benefit of the society, at large. It has resulted in a transparent and accountable government.

Together these two legislations have a considerable impact upon the people in general. While the MGNREGA provides for an economic opportunity to the unskilled labor in rural area, the RTI provides for 'good' governance, and good governance includes market ethics to be adopted by the corporate sector. This can usher in an era of corporate social responsibility whereby developmental avenues can be brought in by the corporate and the government being relieved of the financial burden to some extent. The scheme (MGNREGA) has enormous potential, for it can increase the bargaining position of the poor in rural society, and, especially if the RTI Act is used to keep a check on the possibilities of corruption, it can besides providing livelihoods, empower the poor to fight

for their rights (*Chandra et al, 2007;374*).

Right to Education Act

The fourth important legislation is the recent Right to Education Act, 2009, implemented from 1st April 2010, and a fundamental right. Education is one of the most important factors for economic growth and India lags behind in this particular sector. The market requires an educated mass to reap the benefits from time to time. Amartya Sen & Jean Dreze (1998) is of the view that the East Asian nations who have prospered under the market economy have a strong force of educated citizens. They say an essential goal of public policy has been to ensure that the bulk of the young population had the capability to read, write, communicate and interact in a way that is quite essential for modern industrial production. India, in the coming one to two decades, requires this type of social development for economic growth. The market will obviously demand for such social objective for its smooth operation, particularly due to the advanced mechanization and technique. With this as a social objective, the government of India has implemented the Right to Education Act so that every child gets an opportunity for free and compulsory elementary education, and also opts for higher education and in the process an educated citizenry may be produced in India. The market mechanism, which arouses passion in favor as well as against, is a basic arrangement through which people can interact with each other and undertake mutually advantageous activities (*Sen, 2000; 142*). Education generates awareness, consciousness and equips people with the capacity to understand and to utilize that understanding for their benefit, and there is nothing like a better way to explore this understanding in the context of market economy. Education opens up the different alternatives available to a person and is one of the best means to counter any sort of exploitative practices on the part of the market.

Civil Society

These progressive legislations in the phase of transitional market economy have also given a lead to the third sector, i.e. the civil society. The government is now increasingly looking forward for opportunities of association with the civil society for development and relief & rehabilitation purposes. The civil society is also remaining vigilant to the market and their method of operations. In any event of out-stretching the market's limits, the civil society immediately jumps into action to protect and safe-guard the interests of the people. In the present era of globalization and market

principles, the civil society has gained ascendancy due to its role as buffer system between the government and the market. “Some grassroots level popular movements emerging from within civil society were showing the way.....The issue remains of how to bring these diverse movements on to the national agenda” (Chandra *et al*, 2007; 504-5). In the context stated above, Bipan Chandra, Mridula Mukherjee & Aditya Mukherjee (2007; 665) have written:

Recent popular mobilizations leading to progressive legislations like MGNREGA and the RTI created conditions for further deepening democracy and held out much promise of reaching out to and empowering the poor and underprivileged. How far that promise gets realized will depend on what extent the progressive political forces try to occupy this democratic space available at the grassroots level.

Conclusion

The entry of the market with the globalization policy has necessitated the formulation and implementation of certain progressive legislations which has far reaching consequences for the people. These legislations have provided for a comprehensive development strategy and have facilitated the market for an inclusive growth. Market has offered employment opportunities in various avenues and also labor mobility and elasticity. It has offered the consumers a wide variety to choose and the advantage of competitive pricing with better technology. It has brought in infrastructural development in many areas. International relations tend to flourish due to the market compulsions and necessities. A successful market will always look forward for economic prosperity so as to enhance the purchasing power of the people and in the process will be able to sustain itself. Until and unless people have the necessary purchasing power, it is in no way going to benefit the market. This is an important underlining principle of market. A lot of apprehensions have been shed earlier on the market but it seems none hold to be true, atleast in the Indian context. The Indian public policy is not only sufficiently protecting but also promoting the interests of the vulnerable sections of the society and making them insular to any evil effects of the market.

Development is a process that involves every aspect of the society, engaging the efforts of everyone: markets, governments, NGOs, cooperatives, not-for-profit institutions (Stiglitz, 2007; 26). A single institution alone cannot achieve the objectives of development but requires the coordination from the multiple institutions. Again, institutions by themselves are also not

sufficient unless it has the support of the communities. According to Stiglitz (2007; 51), markets, government, individuals, and communities are the four pillars of successful development strategy. Blaming a particular institution for not delivering the desired results will be detrimental for the state and society. Market certainly has a solution for an inclusive growth and this is evident by the increasing number of countries adopting the market principle and also by the increasing number of experts expressing in favor of market principle. However, as many have cautioned, we require proper governance and enabling conditions to achieve this. Stiglitz (2007; 48) writes:

The comprehensive approach has involved strengthening markets, but equally important has been strengthening government and figuring out, for each country as it reaches each stage of development, what the right mix of government and market might be. [IER](#)

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Does Market Provide Better Solution For Growth Than The INDIAN PLANNING PROCESS?

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Introduction

There has been an interesting and mixed evidence of the feasibility of planning process in India. The most prosperous sector of Indian economy in last 20 years has been the software industry, which has mostly unregulated, unplanned, and in a way, unorganized. On the other hand, the regulated and planned sectors such as construction, infrastructure, and legal (law) sector have shown depressingly laggard growth and the unsatisfactory performance. While some years have shown a remarkable growth in these areas, the general feeling is that too much regulation has led to slower progress in construction of highways, supply of utilities such as electricity, water and public sanitation. So, the main question as the title of this paper suggests, is to find out if the economic planning is really a better way or not. This paper evaluates that question with the help of theoretical arguments for and against the market solutions for economic growth.



Following Todaro (2008), we can define economic planning as the “deliberate act on the part of the government to mobilize resources to achieve the pre-determined specific objectives”. Given this definition, economic planning was adopted in India in 1950 with some basic understanding that this was the only way to make the economy prosper. In sections that follow in this paper, we analyze the feasibility of this planning process with the help of actual results in Indian economy. Section 2 summarizes the history of India’s planning, Section 3 talks about the relative importance of market process and compares it with the planning experience in other countries. Section 4 makes the summary and conclusion.

History of Indian Planning Process:

In 1951, when the Indian planning process began the immediate need of the economy was the agriculture sector which provided 70% of GDP and kept 70% of the population occupied, if not employed, in that sector. Plus the country was coming back from the loss of resources due to the War with Pakistan, the Republic was newly established, and the planning

process was dominated by the economic planners (such as Mahalanobis) who were trained in the Keynesian tradition of socialist inclination. Therefore the first plan established three main objectives: rehabilitation of refugees, rapid agricultural development to achieve food self sufficiency and control of inflation. While it succeeded in terms of moderate growth in agriculture sector and reduction in prices, it brought in more enthusiasm to establish even more aggressive targets for Second Five Year Plan (1956-1961).

Assuming that the planning process can now turn its attention to the development of heavy and basic industries, the Second Five year plan had intentions of a Big Push towards the manufacturing sector without losing the sight of agricultural growth. Plus the 1956

expansive Industrial Policy launched by the Nehru Government made it clear that major economic growth will not be possible without the focus on the heavy and basic industries such as iron, steel, cement, chemicals and fertilizers. Accordingly, the Second Plan aimed at rapid industrialization (*Datt-Sundhar- am, page 270*). However, the increased governmental outlay necessarily meant that the country would sway towards socialism.

The Industrial Policy of 1956 made it clear that being a “Socialist Economy” is the goal of the Indian economy with no regard to the market clearing process and with little attention to the Neo-classical prescription. This was also the start of more control and ownership by the government sector to increase the bureaucracy, administration and regulation. The impetus received in Second Five Year Plan was crucial in terms of the growth of Indian economy but the growth was not that impressive. This led to even a bigger drive of industrialization with more control and more regulation, higher protectionism and increased leaning towards the socialist economy. The Third Five Year Plan therefore had all these ingredients in its implementation. Unfortunately however, the period of the Third Plan (1961-1966) was beset by Wars with China and Pakistan and a severe drought in majority of the Indian States due to unfriendly monsoon, in 1966.



Due to the changing priorities, and realization that the growth is not even close to the one expected, the first draft of Fourth Plan as prepared by Dr. Ashok Mehta (and his Commission) had to be abandoned. The Planning Process was declared to have three years of “Plan Holidays” to be replaced by Annual Plans from 1966-1969. Fourth Plan period (1969-1974) set before itself two principal objectives, “growth with stability” and “progressive achievement of self reliance”. The Plan also aimed at having a 5.5% growth rate of GDP, and removal of poverty. It realized none of those objectives.

Instead the higher inflation, started with OPEC’s oil price increase made the matters worse. The economic situation got even more dramatic, and somewhat depressing, in the Fifth Five Year plan period (1974-1979). The government faced a major political upheaval leading to the era of emergency, the inflation became a runaway inflation. The main objectives of Fifth Plan were however, a greater income distribution (with the help of heavy taxation) and removal of poverty with attainment of self reliance which also meant more isolation of the economy from international trade. While these objectives now sound to be weird and unattainable, the means to adopt them were even more dramatic and ruthless. The increase in government interference required to achieve these objective was of a degree that was unsustainable as well as harmful to the every man and woman’s life. The

excesses applied to control the population were partly responsible for India Gandhi government losing elections in 1977 leading to the abandonment of the Fifth Five Year Plan in 1978 by the Janata Party. This was replaced by Sixth Five Year Plan period (1978-1983) which had two separate and unrelated versions.

“The Janata Party Sixth Plan openly praised the achievements of Planning in India, but held the Nehru model of growth responsible for growing unemployment, for the concentration of economic power in the hands of a few powerful business and industrial families, for widening of inequalities of income and wealth, and for mounting poverty. The Janata Sixth Plan sought to reconcile the objectives of higher production with those of greater employment, so that millions of people living below poverty line could benefit there

from. The focus of the Janata Sixth Plan was enlargement of the employment potential in agriculture and allied activities, encouragement to household and small industries producing consumer goods for mass consumption and to raise the incomes of the lowest income classes through minimum needs program.” (*Datt-Sundharam, page 271*) However, the Janata party lost the elections in 1980 and the newly re-elected Indira Gandhi government not only rejected the Janata Sixth Plan, but also replaced it with the one (1980-1985) that had aims of direct attack on the problem of poverty by creating conditions of expanding economy. About this time a reasonable growth in the Indian economy was registered by favorable monsoons and agricultural growth that was pushed harder by the Green Revolution. Hence the Seventh Plan (1985-1990) emphasized policies and programs which could accelerate growth in food grain production, increase employment opportunities and raise productivity. Just about this time there was a drastic

change in the economic planners in India. While the failures of the very planned process were somewhat evident and obvious, there appeared the will and readiness to try something new in the international trade area especially about the loss of economic welfare created by heavy protectionism up to that point of time.

Hence the approach of the Eighth Plan was not only different but also was embraced by all the parties that put a

claim on the government. In fact the approach to the Eighth Plan was initially approved in September 1989 and the actual plan was to be introduced in April 1990. However changes in the government necessitated constant re-constitution of the Planning Commission. “Finally the fourth version of the Eighth Plan (1992- 1997) was approved at a time the country was going through a severe economic crisis caused by a balance of payments crisis, a rising debt burden, ever increasing budget deficits, mounting inflation and recession in the industrial sector” (*Datt-Sundharam, page 271*). This prompted the government to announce a path-breaking new plan (in June 1991) that involved not only reducing tariff rates substantially but also devaluating the Rupee by approximately by 25%. The Eighth plan also reflected these changes in its attempt to accelerate growth and improve the quality of life of

Excesses applied to population control were partly responsible for India Gandhi government losing elections in 1977

the common man. The subsequent Five Year Plans have been set in the background of the neo-classical arguments of further freeing up of international trade and also more market oriented Indian economy. The regulations, especially for the foreign direct investment have come down substantially. The Information Technology industries and alike have been regulated in a much more friendly way, and the infrastructure investment has been increased, the auto industry as well as the aviation industry is open for freer competition and similar market oriented policies were adopted from 1995 onwards. The results have been stupendous. The economy has progressed in an impressive manner. So, the main question is what went wrong in the strict planning period from 1951 to 1991? Here are some arguments to answer this question:

1) The reduction in poverty was an ambitious project, even for the 1980s era, as 33% of the Indian population still earns less than \$1/day: which is an usual measure of counting the poverty.

In 1987 Chakravarty pointed out three main failures of Planning Process until then. First, there was a gross inefficiency in production in many of the public sector enterprises. There was no apparent reason why these firms would produce below 50% of their capacity, and why there was such a low level of management practices used in the productions of steel, power, fertilizers, transport etc.

Second, the manufacturing sector has not been as labor intensive as the agricultural sector leading to growth with out employment. This put even more pressure on rising unemployment in India, leading to further inventions on the part of the government to come up with other employment schemes. Third, the planners apparently did not comprehend the logical implications of the big and unachievable goals that could not be fulfilled. They set themselves for a major failure by being over ambitious. While the low ambition was seen as unpatriotic, the high ambitions were out of the realm of possibility. The planning process, therefore, has become almost meaningless as the economy got used to the high failure rates. The negative externalities of the strong preference to planning process has led to high bureaucracy, increased controls, more licensing, inefficient use of resources, and a dense network of regulation. In economic sense the

opportunity cost of the planning in India is a huge burden on the resources. This point is made clearer by the experience of Indian economy from 1991 onwards. As the market process was given more chance to operate, and as the open international trade has made competition from external sectors more plausible, the Indian economy's performance has improved tremendously. Helped by the freer sector of computer and information technology related companies, the Indian economy has been progressing in an impressive manner ever since it was allowed to be dictated by more market oriented policies. To convince ourselves that the Indian economy's experience is no exception, we can briefly investigate the evidence from some other economies in the next section. In the meantime, one can easily observe a drastic change in Indian economy's performance in pre- and post 1991 era in the graphs listed in Appendix .

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Experience From Other Countries

Over the past half-century, there has existed a movement toward the liberalization of markets in several other centrally planned economies as well as other democratic economies. From Japan, Taiwan, South Korea and Singapore, who experienced average economic growth rates of eight percent during the 1960's and 1970's, to China's economic liberalization in 1978, which

was followed by many years of double-digit growth, to India's own economy, which has experienced growth rates as high as 9.8 percent after liberalization reforms in 1991. The data for other countries have consistently suggested that in the developing economies of Asia, the more liberal and market driven economies consistently outperform those of their centrally-planned counterparts. The question in this case is why, and to what end?

Albert Waterston studied early development planning in 55 countries, and claimed that "the great majority of countries have failed to realize even modest income and output targets in their plans except for short periods. What is even more disturbing, the situation seems to be worsening instead of improving as countries continue to plan." (*see Waterson in the Bibliography*).

This is a glaring example of one of the most obvious problems with development planning; for a planning body, observing and determining the short-run weaknesses and opportunities in a market or economy are not as difficult as possessing the flexibility and responsiveness required to adapt to continuously changing market conditions. Even at its most flexible, the planning body cannot possibly adapt with the same efficiency that a market otherwise could, on its own. The long-run strategy of maximizing economic growth requires the ability to change at the same rate that the factors of production and the demands of consumers change, which can only be optimally performed by the market itself.

With regard to the separation between short-run and long-run growth strategies, it can also be shown that government reaction to short-term weaknesses and opportunities in the economy actually amplify long-term reductions in growth. Assuming that the government is not acting as a player in the market, and not becomes a subject to market prices, then theoretically, government subsidization of the production of a certain good gives incentives for the use of resources to produce that good. Even if the economy in question possesses a relative abundance of the factors required to produce that good, the opportunity costs lay in the sacrificed development that the rest of the economy would have seen had the resources (whether subjective or tangible) not been redirected to the subsidized good. While the production of the good may be in the short-run best interests of the economy, the waste of resources that occurs as a result of their redirection generates less than optimal growth rates in other sectors of the economy. Except in the case of capital intensive production or infrastructure projects, where government facilitation is necessary, the open market directs resources most efficiently, which allows an economy to take advantage of strengths without wastefully appropriating resources.

As it pertains to those economies that have transitioned from central planning to a more market oriented economy, there is no better

evidence of the market's ability to correct for inefficiencies than that which took place in China over the last thirty years. As described by Naughton (1995), the entry of private firms to the market eliminated at least a portion of the price distortions that had been created by state firms producing inefficiently. "Competition eroded initially high profit margins for state firms, and induced the government, as owner of the firms, to become more concerned with profitability." In this case, the introduction of the "invisible hand" subjected the state-run enterprises to the same forces that are felt in the market and that drive markets toward equilibrium prices and production levels. In this case, the government did not "facilitate" the market, but instead became a part of it and subject to its demands.

And supposing the state-owned enterprises were subject to the demands of a more liberalized economy, Sachs and Woo (1997) show that even after the "dual-track" process had begun—with both state-owned and non-state sectors in operation—the non-state sectors "account for more than 70 percent of total growth during 1979-94." This suggests that even when compared side by side, and without the support of a monopolistic pricing model, the state-owned interests still lacked the adaptive abilities required to maintain competitiveness in the long run. Though this may be the result of an actual desire to promote the private interests, the state-owned enterprises made up 18 percent of all employment in

China as of 1993—the same percentage that existed in 1978—suggesting that this was not the case.

Another example of the correcting capabilities of the market came from Chile.

Though a great deal of the political and economic circumstances were different in Chile, their structural market reforms beginning in the mid-1970's moved them from almost complete isolation in the world economy to one of the higher ranking countries in free-trade policies. Bergoening, Hernando and Repetto



(2006) of the Central Bank of Chile show that these liberalization policies allowed for the entry of new participants to domestic industrial production, and showed that at the plant level since 1980, “almost 90% of total growth is explained by efficiency gains.” They go on to explain that while new entrants in the marketplace were not as efficient as incumbent units of production, the new entrants quickly became equally efficient and they replaced those market participants that were not as productive and were forced to exit the market. This conclusion is extremely important because it suggests that under a central planning or state-owned production environment, the less productive plants that would have otherwise been replaced by more efficient firms or perhaps by plants producing substitutes, are instead subsidized to meet the goals of the planning body. Without the supply-side turnover that increases net productivity, the planning body cannot possibly expect to see competitive rates of overall economic growth.

Bergoening, Hernando and Repetto (2006) also examine the role of increased access to external financing on productivity and show, once again, that the interaction between deepened capital markets and productivity is positive, and more so in those industries and firms that are credit constrained. The deepening of credit markets caused an increase in private credit by deposit banks of nearly 40 percent (relative to GDP) and resulted in growth rates over the full sample of industries of 2-2.5 percentage points. This is specifically as a result of increased access to capital that would not have existed if state-imposed restrictions of access to the financial markets were still in place.

This is not to say that all public involvement is bad. Certainly, the establishment and enforcement of property rights and commercial law provide the minimum degree of systemic integrity necessary for market operation, and the public development of infrastructure that supports increases in the mobility of goods, services and ideas can definitively serve as drivers of economic growth. But while government support of these particular necessities may establish the foundation that allows a market to function and develop efficiently, excessive central planning introduces a variable that places additional (often unnecessary) bounds and limitations on an economy.

Summary and Conclusion

The main conclusion from the above story is that economic planning has rarely been successful. It has not only been

unsuccessful, it has been harmful to the economy in terms of channeling resources to inefficient and unproductive productions. It has increased bureaucracy and corruption. It has managed to increase the controls by administrators. On the other hand, market process is not a panacea for very economic problem. It has its limitations because the real growth appears only when the aggregate supply is increased. This is achieved only by better working conditions, innovations, positive technological change, non-destructive policy changes, improved enterprise and the zeal of the population to do better for itself in future. Without these changes the economic growth is unattainable and unsustainable. Hence if markets can make mistakes too the government can make even bigger and more hurtful mistakes and coming back from the increased regulation is much harder than getting into it. [IER](#)

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Appendix: Data For India's Economy

Table 1. Exports Of Goods And Services (% Of GDP)

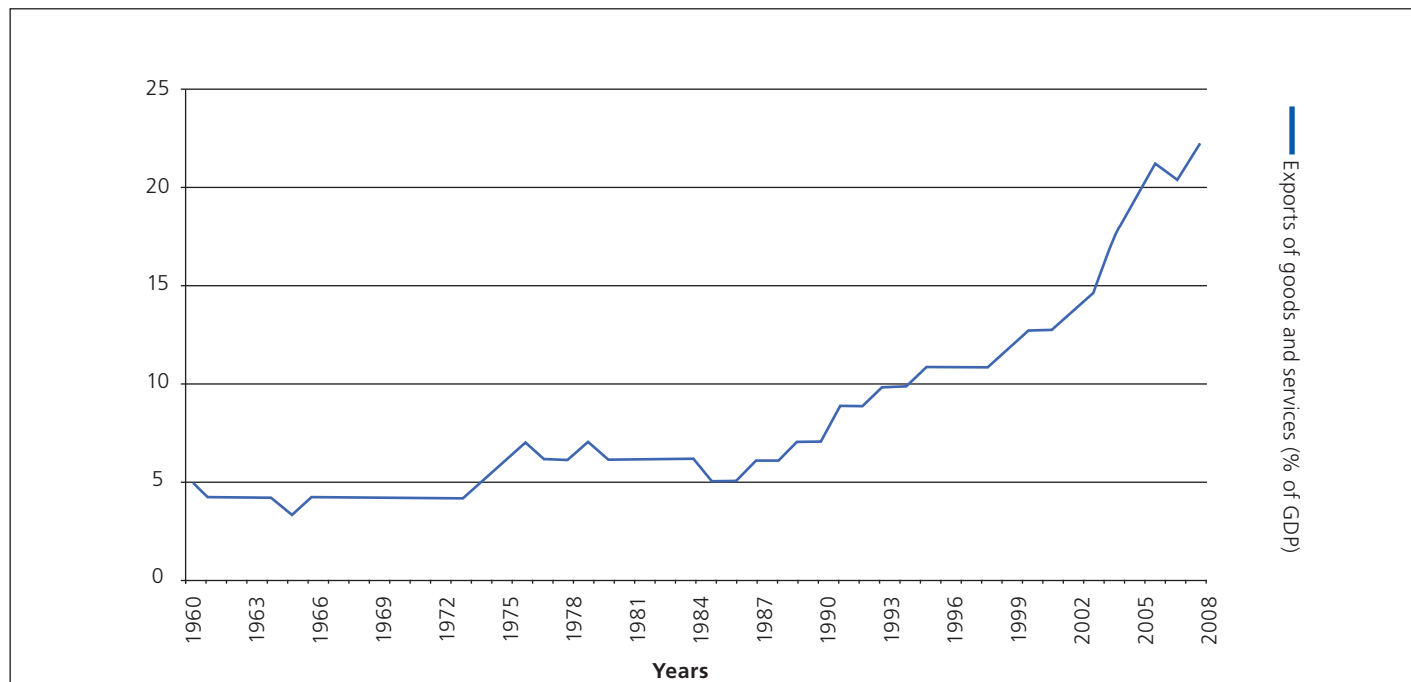


Table 2. GDP Per Capita (Constant 2000 US\$)

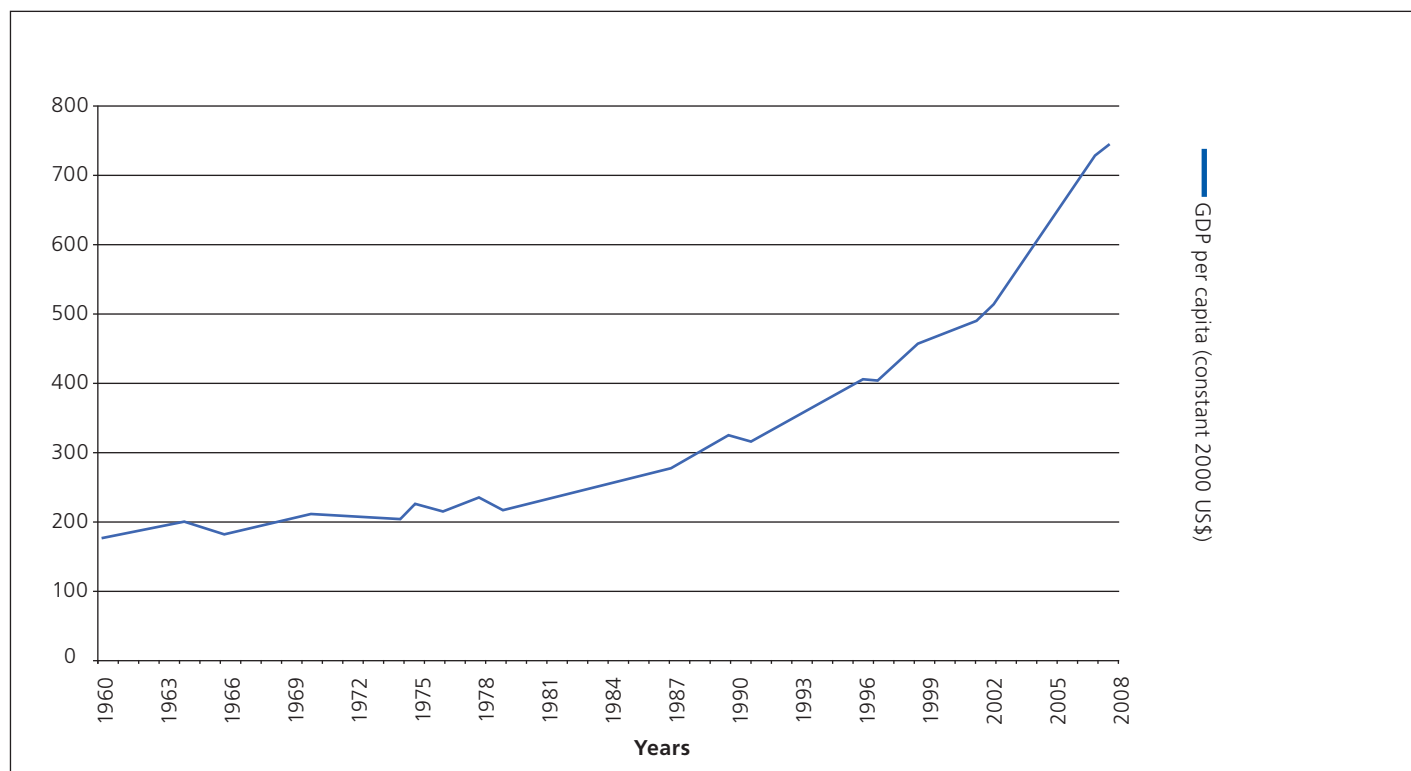
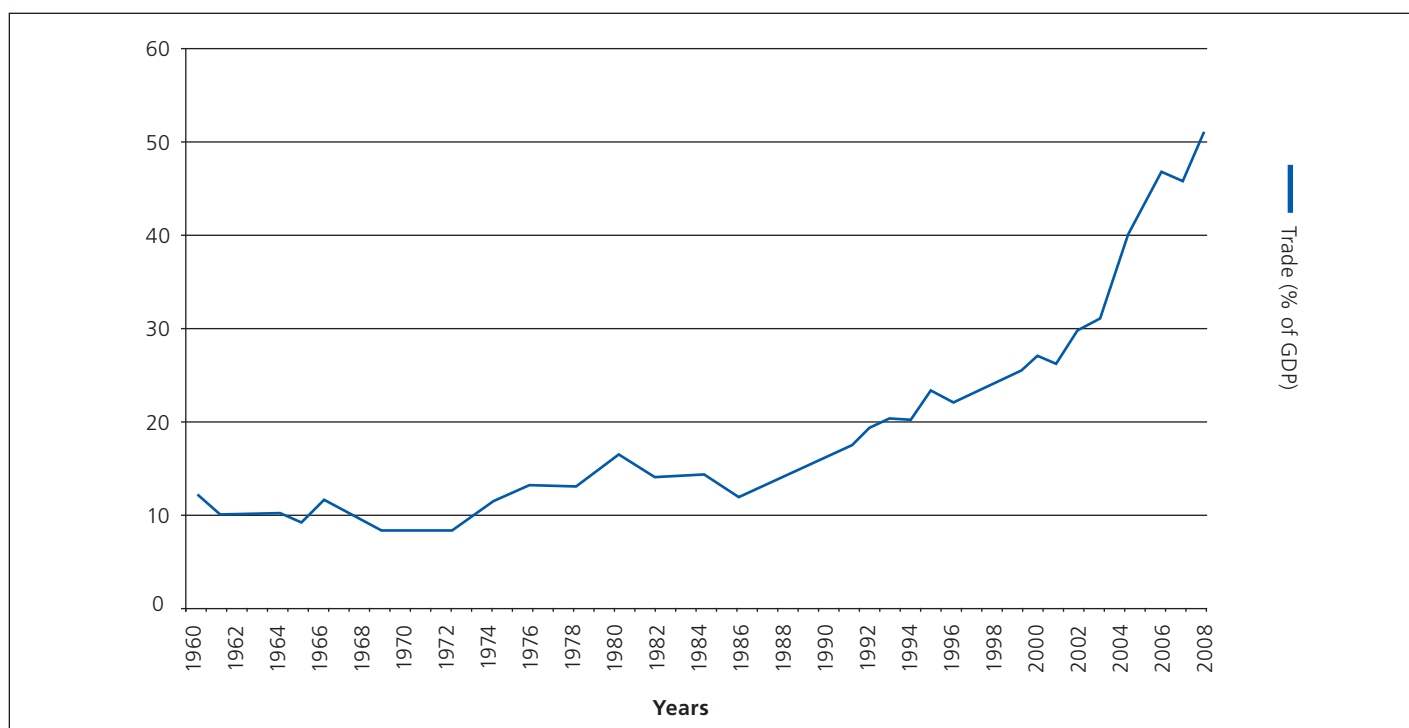
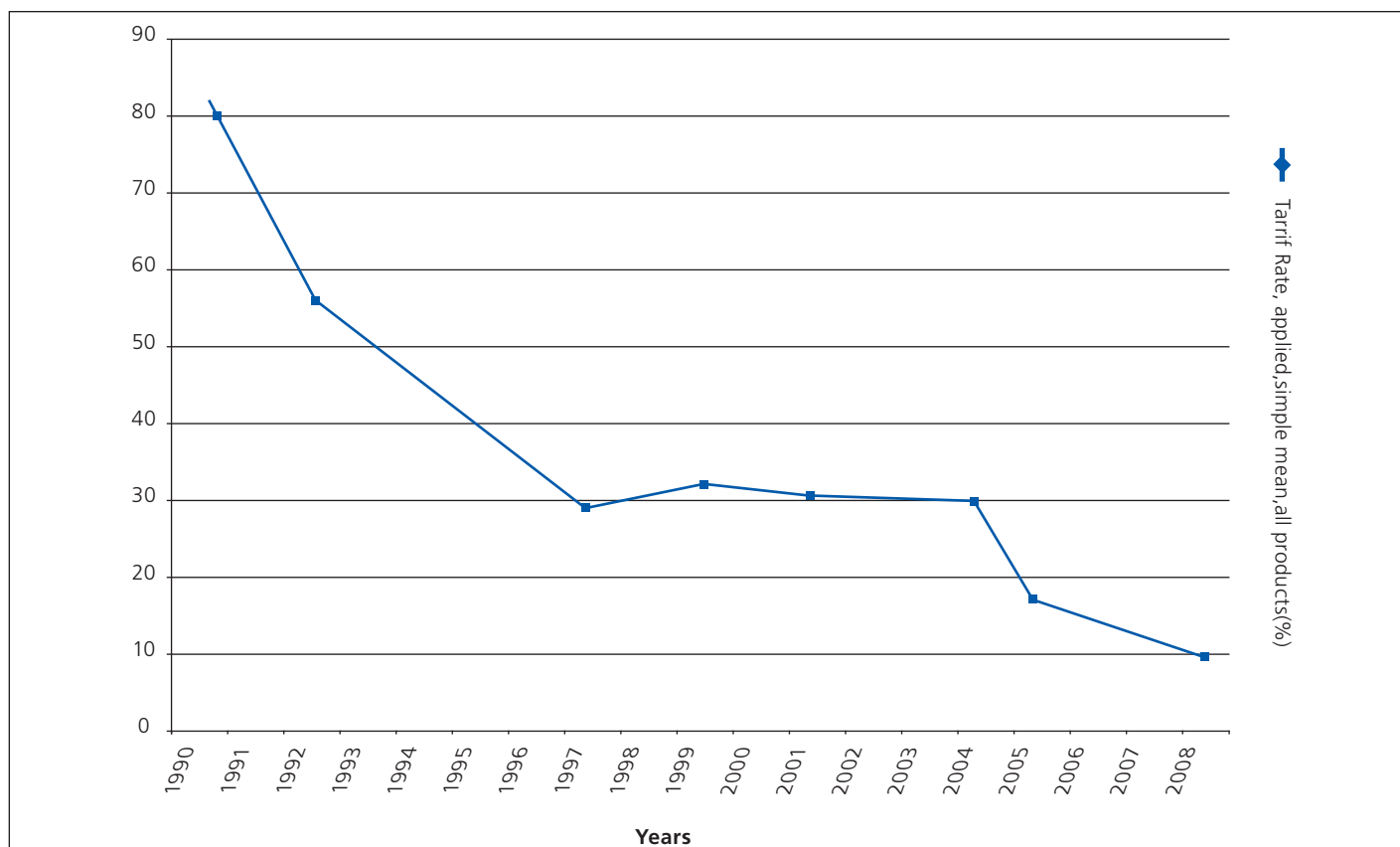


Table 3. Trade (% Of GDP)**Table 4. Tarrif Rate, India (%) (Applied, Simple Mean, All Products)**

INCLUSIVE INDIA:

DOES MARKET OFFER A SOLUTION FOR GROWTH?



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There are three hotly contested concepts in the title itself. Inclusion. Growth. Market. Uncharitable critics of a particular leaning may also include India as the fourth contested concept, but the country has proven itself as vibrant and viable entity, if not always a cohesive one, over the last sixty three years.

To cut to the chase, the answer to the question is a yes. To understand why the answer is in the affirmative, and not a no or a maybe, it is necessary to examine various dimensions of the three concepts, and their multiple and often contradictory meanings, and arrive at a definition that holds true in most circumstances for a large section of Indians -- quite a tall order in itself.

Inclusion is the Name of the Game

First up, what does the term inclusion mean? And, as a logical corollary, can the term have the same meaning for all people, groups and communities? The story goes that when Ratan Tata was going home one rainy evening after a long day in office he saw a typical Indian urban middle-class family -- husband, wife and two kids -- precariously balancing themselves on a two-wheeler, getting drenched and risking their lives, going home. That set him thinking and the result is the awe-inspiring Nano.

India is a curious amalgam of cultures and sub-cultures, each with its own sub-text and imagination, often accentuated by a vibrant oral culture, including the much maligned word-of-mouth constructs. So while the story of Ratan Tata chancing up his game changer might be apocryphal in nature, or not, the underlying truth of inclusiveness of thought that represents every Nano that rolls out cannot be disputed.

The question, then, is whether Nano represents the inclusiveness that holds true in most circumstances for a

large section of Indians? Does Nano represent a ready solution for those Indians who still do not make enough to shell out Rs. 1,20,000 and have to depend on an unreliable and fraying-at-the-edges public transportation system? The straight answer to that is a No. Nano for such an India, no doubt, is aspirational and inspirational, but is not an immediate solution.

But what Nano has unequivocally established is the Market's ability to synchronise the logic of fortune at the bottom of the pyramid¹, a C. K. Prahalad derivative, even if distant, of Adam Smith's principle of private capital, with the largely social tenets of accessibility, mobility and empowerment. Till a few years ago the market's potential for creating affordable accessibility, one of the tenets of an-encompassing inclusiveness, would be summarily dismissed without as much a dissenting voice.

But Nano, despite being a game-changer and world beater, still does not fulfill the parameters of an all-encompassing inclusiveness. For instance, the car quite obviously doesn't fulfill the survival needs of a marginal farmer owning less than an acre of land, which is over 65% of India's population. A typical farmer would rather prefer information about

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monsoon updates, procurement price in the Mandi, information about subsidised seeds and fertilisers, agricultural loan and such. Such a basket of interconnected information is empowering for the farmer and would go a long way in ensuring a certain degree of predictability for his livelihood. So the next logical question that arises is: Has the Market been able to bring about for a product or a service affordable acces-

sibility, fulfilling the parameters of an all-encompassing inclusiveness. The straight answer to that question again is a Yes.

In popular imagination Dhirubhai Ambani is your archetypal rags-to-riches story, one of bold innovativeness, diligent enterprise and big dreams. His achievements, and quite rightly so, in the petroleum and petrochemicals sector has acquired mythological status, inspiring countless young entrepreneurs with practically nothing in their pockets to dream big. That's the inspirational power of do-it-yourself billionaires; a power which cannot be measured by the

conventional yardsticks of wealth and pelf.

But in the razzle and dazzle accompanying his achievements, a disservice is often done to the man who is not recognized enough for bringing in the mobile telecommunications revolution in India. In a time and age where mobile phones were clunky and each call cost upwards of Rs. 10, Dhirubhai publicly declared his dream of making a call as affordable as a postcard -- 40 paisa or less. Of course, he was in for a fair degree of ridicule, but then history has a funny way of getting back at those who laugh out the loudest.

Today, at the last count, the total number of mobile subscriptions had surpassed 600 million, with over 400 million of these subscriptions in the rural areas. The average cost of call is less than 20 paisa and the phone has metamorphosed into an instrument of change that few, apart from Dhirubhai and select others with foresight, would have envisaged.

In my extensive travel into the rural interiors of Uttar Pradesh, unarguably one of the laggards if one were apply any parameter of governance, the mobile phone has willy-nilly become a device of empowerment and knowledge. Farmers, marginal and otherwise, routinely use it to get their produce to the best paying local Mandi, in addition to getting information on agricultural loans and subsidised seeds. In several instances the mobile phone has been used to break the information vacuum created by an indifferent bureaucracy and vested interests.

What the mobile phone has done, and has the potential to do in the coming years, is a clear-cut example of affordable accessibility, the foundation of an all-encompassing inclusiveness. Its metamorphosis from a simple instrument of a two-way communication to a device of socio-economic empowerment finally sets at rest all debates on the potential of the Market for inclusiveness at a social level.

Why is Growth Such a Sticky Topic?

Yet again, it's necessary to contextualise the issue through a question. Should the primary yardstick of growth be Gross Domestic Product (GDP)? And, as a logical extension, does GDP capture all the nuances of the lives of people and communities? In short, can GDP measure the quality of life

or the vibrancy of a local economy? These questions have over the decades acquired the contours of well entrenched battle-lines that has divided the academic and policy making community. Where you stand depends on how you answer these questions.

It doesn't really serve our purpose here to get into the various dimensions of the development paradigm debate, which are academically well documented. But what requires a critical re-look is the assumption that economic development is the only measure of growth. This is where the role of the Market in achieving a more holistic growth – better access to healthcare facilities, superior schooling infrastructure, good quality roads, skill development and overall contribution to local economy – is often ignored or marginalised under the supposedly overwhelming logic of mass production

and profit.

As Indian corporate houses transform themselves into global giants, with aspirations beyond bottom-lines, there is a large degree of awareness that growth has to be sustainable, inclusive and environmentally friendly. Just as definitions of inclusiveness and growth are changing for the better, even as we speak, the Market's interaction and engagement with these two concepts is also evolving. So much so that today Corporate Social Responsibility (CSR) seems to be too narrow a concept to capture the new social logic that is, at times, voluntarily determining the actions of Corporate India.

Take the Infosys campus in Bangalore. The last time I met Nandan it was bright Saturday afternoon, and he was still shepherding the Indian IT bell weather. After a long talk he proudly took me around the campus. Infosys has proven to the world about the quality of its intellectual resources and no one would have disputed it any brownie points if it had used its campus to just reflect its pre-eminent position in the IT sector. But it hasn't and that's what the New Indian Market is all about. The entire campus reflects the philosophy of sustainable growth – Nandan puts it down to Narayana Murthy's middle class roots.

Mohandas Pai, who is a member of the Infosys Board and Director of Human Resources, prefers to describe himself as

The total number of mobile subscriptions had surpassed 600 mn., with over 400 mn. of these in the rural areas

a “maverick who has survived only because Narayana Murthy was a bigger one”². He puts across the entire philosophy of sustainable growth in a simpler fashion. “When I remember my mother managing our house, what comes first to mind was how nothing was ever wasted,” he said. “Water used to wash vegetables always went to the kitchen garden, vegetable peels went to the compost pit, not a single plastic bag was thrown away – it was always reused, cloth bags were preferred and cobblers were respected because shoes had to be used and reused again.”

So how is Infosys walking the talk? Almost 90 percent of the water used in the campus is recycled. It must be one of the best kept secrets, for very few know about it. The entire campus is designed around a vibrant rain harvesting and water recycling ecosystem. Plastics are actively discouraged and

employees are encouraged to cycle around the campus. Of course, for those who physical fitness is slightly suspect there are electric vehicles.

The point being made here is quite straight-forward. Infosys need not have done anything of the above and it would have still remained the highly-respected company that it is today. But the new age leaders of Corporate India are bringing about a paradigm shift in the way they are conceptualising market dynamics, and as a

derivative redefining what constitutes growth. Of course, higher top-line revenues with a good bottom line still define them, but there is a change in the thought-process that is not being documented enough.

The first question that a healthy skeptic will ask at this point is whether a showcase campus is enough of a proof-of-concept to unequivocally say

that the notion of growth as dictated by the logic of market forces is being redefined in a more holistic fashion? In short, can such showcase campuses be scaled up to benefit a larger set of people? My answer to that is a yes and here’s why.

Mukesh Dhirubhai Ambani, like his father, is a victim of his own success. He is portrayed as a dynamic entrepreneur, a man who squeezes out the last ounce of value for his shareholders, the architect of mega projects -- the size and scale of which astound the world. And, quite rightly so, he is measured against all of this and more. So when someone needs to give an example of Corporate India’s ability to match, and surpass, global standards on project management, the Jamnagar Refinery is the first success story to be mentioned.

But what invariably gets left out in the kudos that Mukesh Ambani gets from the world is the larger impact that the project has brought in for the entire population of Jamnagar. What does this “larger impact” translate into at the ground level? Often economists following a strict quantitative methodology find it difficult to relate to so-called “softer” dimensions of growth. But it’s precisely in these softer dimensions – Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), calorific intake, nutritional levels, literacy rates – that the quality of life, which defines basic and innate humanness, can be accurately measured.

Jamnagar district’s value of agricultural production per hectare, at Rs. 12,259, is the highest in Gujarat

Table 1 : Proportion of Gross Irrigated Area and Value of Agricultural Production

District	% Gross Irrigated Area	Value of Agri. Production Rs. Per. ha	Value of Agri. Production Rs. Per. Capita
Ahmedabad	31.98	5,618	655
Amreli	21.58	10,779	4,428
Banaskantha	37.59	3,934	1,794
Bharuch	17.72	2,752	704
Bhavnagar	23.12	7,736	2,108
Dangs	0.53	7,247	1,301
Gandhinagar	72.61	6,980	1,026
Jamnagar	21.10	12,259	5,091
Junagadh	24.95	15,241	4,017
Kachchh	19.49	3,039	1,581
Kheda	60.68	5,861	1,036
Mehsana	53.12	6,283	1,883
Panchmahals	22.42	3,069	549
Rajkot	31.55	10,434	3,369
Sabarkantha	40.15	3,848	1,080
Surat	46.24	15,661	1,914
Surendranagar	18.91	6,230	3,365
Vadodara	33.87	6,352	1,080
Valsad	37.45	11,372	1,624
Entire State	33.88	10,188	2,506

Source: CMIE, Profile of Districts, 2008

Table-2: Human Development Matrix (HDM), Gender Development Matrix (GDM), Gender Empowerment Index (GEI)

HDM-1		
Education	Ahmadabad, Gandhinagar, Navsari, Mehsana, Anand	Banaskantha, Dahod, Kachchh, Dangs, Panchamahals
Health	Rajkot, Navsari, Jamnagar , Vadodara, Bharuch	Dahod, Banaskantha, Dangs, Panchamahals
Housing	Ahmadabad, Surat, Rajkot, Gandhinagar, Vadodara	Dahod, Dangs, Panchamahals Banaskantha
Participation	Sabarkantha, Narmada, Surendranagar, Mehsana, Kheda	Ahmadabad, Dangs, Navsari, Surat, Rajkot
Income	Kachchh, Gandhinagar, Ahmadabad, Navsari, Valsad	Banaskantha, Dangs, Panchamahals, Dahod
HDM-1	Ahmadabad, Gandhinagar, Rajkot, Navsari, Surat	Dahod, Banaskantha, Dangs, Panchamahals
GDM-1		
Education	Ahmadabad, Gandhinagar, Navsari, Surat, Bharuch	Banaskantha, Dahod, Kachchh, Dangs, Panchamahals
Health	Rajkot, Navsari, Jamnagar , Bharuch, Vadodara	Banaskantha, Dangs, Dahod, Patan, Panchamahals
Housing	Aj,adanad. Sirat. Rajkot, Gandhinagar, Vadodara	Dahod, Dangs, Panchamahals, Banaskantha, Narmada
Participation	Surendranagar, Sabarkantha, Narmada, Mehsana, Kheda	Ahmadabad, Jamnagar , Porbandar, Junagadh, Gandhinagar
Income	Porbandar, Junagadh, Rajkot, Kachchh, Amreli	Bharuch, Narmada, Surat, Sabarkantha, Dahod
GDM-1	Rajkot, Junagadh, Porbandar, Ahmadabad, Jamnagar	Dahod, Dangs, Banaskantha, Panchamahals
GEI		
	Gandhinagar, Dangs, Navsari, Valsad, Bharuch	Banaskantha, Bhavnagar, Anand, Patan, Jamnagar

Source: Gujarat Ecology Commission Annual Report, 2009

Some informed sections of the academia and the media are aware about how Reliance Industries Limited (RIL) transformed the barren landscape of Jamnagar by planting over 1,00,000 mango trees over ten years back, while converting the farm into an independent business opportunity³. Called the Dhirubhai Ambani Laxhi Baugh, it has over 37 varieties of mango and yields over 450 tonnes and, today, supplies mangoes to Harrods. But that's not the point here. What is of consequence is that over 2,50,000 households⁴ in Jamnagar have benefited directly or indirectly from the farm. What it means at the ground level is that while the preliminary per capita income estimates for Gujarat in the financial year 2009-10 is Rs. 45,773, Jamnagar is at over Rs. 10,000 higher at Rs. 54,512. Significantly, Jamnagar's per capita income 25 years earlier, in the financial year 1984-85 was 15% lesser than the state's per capita income⁵. This is not to say that the refinery has not contributed to the per capita income. In fact a closer analysis does indicate the direct and indirect employment from the refinery contributes more to the local economy in

Jamnagar's per capita income 25 years earlier, in the year 1984-85 was 15% lesser than the state's per capita income

pure fiscal terms than the mango farm, but where the mango farm scores more is in terms of creating an ecologically friendly alternative economic model that is self-sustaining in its own right.

One of the innovations at the mango farm was the extensive use of drip irrigation. Table-1 gives a district-wise comparison of the proportion of gross irrigated area and the value of agricultural

production per acre and per capita. Jamnagar paints an interesting picture. Despite having a low proportion of gross irrigated area – its 21.10 percent compares unfavourably with Kheda, Mehsana or even an Ahmedabad, which is primarily an urban conglomeration – Jamnagar's value of agricultural production per hectare, at Rs. 12,259, and agricultural production per capita, at Rs. 5091, is the highest in Gujarat. It's even higher than Rajkot, which has over 10 percent more irrigated area and is an advanced agricultural market. Gondol, which is a city in the Rajkot municipality, produces some of the best groundnuts in the country and has large oil mills⁶.

So how did Jamnagar, which less than three decades ago

was not even in the top ten agricultural markets in terms of yield per hectare and per capita income from agricultural production, rise to the top of the pile? The answer lies in what is commonly known as diffusion of innovation. Drip irrigation techniques have trickled down -- pun intended -- to most of the farmers and are today considered to be a cost effective and efficient method of water utilisation. Drip irrigation as a method also requires the adoption of several other agricultural techniques, which together have contributed to raising Jamnagar's agricultural profile despite its overall area under irrigation being one of the lowest in Gujarat.

The second "larger impact" in Jamnagar is the result of a more direct intervention from RIL. Table II shows that Jamnagar is the top district in Health both from the perspective of Human Development Matrix (HDM) and Gender Development Matrix (GDM). To put things in perspective, three decades ago that was not the case. RIL has worked directly with the central and the state governments, in several cases evolving robust public private partnership (PPP) models, to ensure that the health infrastructure was strong not only in delivering curative care, but flexible enough to deliver preventive care. The high score in the GDM is an indicator that maternal health, which is more a function of nutritive care, institutional child birth with the right care and a health education that covers both the mother and the child, is of a high priority.

The initiatives of Infosys and RIL show that growth, particularly the one that is fuelled by market forces, is being redefined in much more holistic fashion than what the academia has been able to capture and understand. But to conclude that all market-driven growth is holistic, or will become holistic in a short while, is to live in a fool's paradise. That is the challenge that the Market will have to surmount

A Transformational New Logic For Market

India has over 350 million people who are defined as middle class. Per capita purchasing power parity (PPP) adjusted Gross Domestic Product (GDP) is the single most common indicator used to quantify standard of living. In 2009, the per

capita PPP-adjusted GDP for India was US\$2,940. According to some estimates by 2025 the Indian middle class will burgeon to over 500 million and their per capita income, on a PPP basis, will rise to roughly US\$7,000 to US\$8,000⁷.

From a pure macro-economic point of view, it's a rosy picture. The Indian middle class will be powerful force to reckon, second only to the Chinese middle class, and will play a major role in the propelling the global economic spending. And that's the pie every corporate house worth its salt is vying and fiercely competing for. The logic cannot be disputed. But there is another logic that is taking root, which makes the entire mechanism of market economics empowering and, at the risk of getting brickbats, I would say democratic in nature.

This is not allude that the Indian corporate giants have suddenly developed a conscience – of course they will vehemently say that they always did have a conscience – and decided to make the dynamics of market more empowering, democratic and equitable. While the Indian middle class is a low-hanging fruit, it is the other 800-odd million Indians that

To conclude that all market-driven growth is holistic, or will become holistic in a short while, is to live in a fool's paradise

some of the corporate houses have started eyeing. And they are getting interested due to purely economic reasons like first-mover advantage, evolving micro-payment facility through mobile phones and the successful market penetration strategies of companies like Hindustan Unilever Limited (HUL), which has made the shampoo and toothpaste sachet a ubiquitous presence in the village

kiosks and shacks.

But the biggest reason why corporate India is getting interested is an increase in purchasing power of a large section of rural population, primarily dependent till now only on subsistence agriculture, from the National Rural Employment Guarantee Act (NREGA) schemes. In 2008-09, the NREGA had generated 48 days of employment per household; while the employment rose to 65 days in 2009-10. While the earning per household was Rs. 2795 in 2006-07, it almost doubled to Rs. 5500 in 2009-10⁸. With at least an average of 65 days employment – some states like Rajasthan, Tamil Nadu and Andhra Pradesh surpass the mandatory 100 days of employment by some distance – the marginal and subsist-

ence farmers have some steady income which has led to some sort of food security, livelihood enhancement and water and ecological securities.

Dr. Rita Sharma, Secretary, Ministry of Rural Development at a conference on NREGA and Water Management in the Delhi campus of Observer Research Foundation (ORF) revealed that mobile phone companies, solar energy firms and water conservation technology companies are keen to collect data from the government on the increased purchasing power of the rural population. The NREGA has resulted in financial inclusion with the opening of over eight crore new bank and post office accounts⁹. For the market forces the bottom of the pyramid suddenly makes as much sense as the burgeoning middle class.

The manner in which the Indian Tobacco Company (ITC), for instance, has been transforming itself into an agro- and food-processing based diversified company is a case in point. With its efforts to link its supply chain with the agricultural sector, where over 70% of the 800-odd million Indians are working, through initiatives like the e-choupal, the ITC is one of the first movers to try and leverage the build-up of resources at the bottom of the pyramid. Though ITC's concepts might have been slightly ahead of its time, it is well positioned today to take advantage of any build-up of capacity in the rural sector.

So, what is the new transformational logic of the market? At the risk of sounding simplistic, it's pure market economics intersecting social enterprise and rural capacity building. The academic world seems to be missing this evolution that's taking place at the ground level. This transformation has peculiar Indian characteristics, is blurring the distinction between 'commonly understood' concepts like public goods and private goods, reorienting the role of State and its institutions and is even impacting day-to-day governance.

From a policy making perspective, the transformation has to be first acknowledged, then studied and finally moulded through prescriptions and regulations to suit the larger interests of the country. Like all hybrid creatures, this one also is a mixture of DNAs -- of private profit, social good, individual greed and institutional mechanism. This evolving interplay of social needs and economic forces has the potential to transform India, but if left to fend for itself it can also turn out to be a monster that will accentuate and amplify inequalities leading to widespread social unrest.

In conclusion, the case for an inclusive market-driven growth is clear. How that potential for inclusive and holistic growth through the medium market forces is going to be achieved to its fullest possible extent is the challenge that we as nation will have surmount. [IER](#)

Endnotes and Additional Thinking

- ¹ The concept discusses business models targeted at providing goods and services to the poorest people in the world. It makes a case for the fastest growing new markets and entrepreneurial opportunities being found among the billions of poor people 'at the Bottom of the (financial) Pyramid'. The concept of micro finance can be looked at as constituting an conceptual extension of the fortune at the bottom of the pyramid as it helps the pyramid build capacity for economic activity and livelihood
- ² As quoted in the article written by the author in newspaper Daily News and Analysis (DNA) dated April 22nd, 2007 http://www.dnaindia.com/lifestyle/special_mavericks-at-work_1092311
- ³ As quoted in a Business Standard article carried by rediff.com on May 16th, 2005. <http://www.rediff.com/money/2005/may/16ril.htm>
- ⁴ Hirway, Indira. Mahadevia, Darshini. "Human Development and Gender Development in Gujarat: Some Issue." Swaminathan, R. Ed. Gujarat: Perspectives for Future, Delhi: Academic Foundation, 2007
- ⁵ Multiple sources: India Economic Survey, 2009-10, District Economic Indicators, 2008, Government of Gujarat, Personal Interviews with Prof. Y. K. Alagh, Prof. Rakesh Basant and Dr. Arvind Khudchadker
- ⁶ The oil mill owners of Gondol are considered to be so politically powerful that they are called Telia Rajas. For more information please refer to the article Power in a Nutshell written by the author published by rediff.com on December 14th, 2002
- ⁷ Planning Commission, McKinsey and World Bank reports
- ⁸ Presentation by Dr. Rita Sharma, Secretary, Ministry of Rural Development, to the Observer Research Foundation (ORF) on October 30th, 2009
- ⁹ Ibid

(The views expressed in the write-up are personal and do not reflect the official policy or position of the organisation.)



TARGETING POVERTY THROUGH **ROADMAP FOR**



EMPLOYMENT GENERATION: **THE FUTURE**

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1. Introduction

India is home to over a billion people, a vast majority of them residing in rural areas, and most of them being daily wagers, self-employed householders and landless labourers at subsistence level of livelihood means. Even though, planned development process initiated half a decade ago has substantially improved the living conditions of the country's inhabitants, a lot more are to be done further. Despite having a highly expansionist developmental agenda and a growth rate of over eight percent in the recent years, more than 826 million people in India live on less than a dollar a day. The biggest challenge for the country at this juncture is hence to improve the livelihood means of these people by pursuing an aggressive and comprehensive mixture of policies comprising of direct poverty alleviation programmes, rural development programmes, employment generation programmes and a substantial improvement in the agricultural production and productivity through enhanced investments in the sector. Employment generation strategies occupy a prominent position in this list of deliverables and careful planning is required for their successful implementation at the ground

The poverty in rural areas got reduced to 21.7 % by the year 2004-05, from about 55 % in the year, 1973-74

level. It is thus important to understand the present status of employment scenario in the country, it's the dynamics over a period of time and the possible future directions so that, the available resources can be effectively mobilised to address the employment needs of the future generation and hence to

address the perennial problem of poverty and unemployment in the country.

2. Status of Poverty in India

One of the major focuses of the development planning in India has been the alleviation of poverty. India has achieved commendable progress in poverty reduction through its multi-pronged strategies of targeting poverty

over the past half a decade through various poverty alleviation programmes, employment generation programmes and rural development programmes. A steady decline in the poverty from the mid-1960s to 1980s was strongly associated with the agricultural growth, particularly, the green revolution (*Shenggen Fan et al, 1999*). But in the later years, the effect of green revolution in arresting the poverty seemed to taper off. In the years that followed, the sources of poverty reduction appeared to be varied including developmental programmes.

Table 1: Distribution of Population Under Different Expenditure Classes

S.no	Expenditure class	In Million		
		1993-94	1999-00	2004-05
1.	Extremely Poor (up to 0.75PL)	103 (11.5)	87(8.7)	70(6.4)
2.	Poor (0.75PL to PL)	172(19.2)	174(17.3)	167(15.4)
3.	Marginally Poor (PL to 1.25 PL)	168(18.8)	200(19.9)	207(19.0)
4.	Vulnerable (1.25PL to 2PL)	290(32.4)	349(34.8)	392(36.0)
5.	Middle Income (2PL to 4PL)	139(15.5)	167(16.7)	210(19.3)
6.	High Income (>4PL)	24(2.7)	26(2.6)	44(4.0)
7.	Extremely Poor and Poor (1+2)	274(30.7)	262(26.1)	237(21.8)
8.	Marginal and Vulnerable (3+4)	458(51.7)	549(54.7)	599(55.0)
9.	Poor and Vulnerable (7+8)	732(81.8)	811(80.7)	836(76.7)
10.	Middle and High Income (5+6)	162(18.2)	193(19.3)	253(23.3)
11.	Total	894(100)	1,004(100)	1,090(100)

Notes: 1. Figures in bracket denote percentages.

2. PL refers to Poverty Line; Source: NCEUS (2007)

The realization of the fact that poverty is multi faceted and multi dimensional, for which the solution not only limits in better income generation sources but also an overall enhancement of other social indicators like literacy, sanitation, health, education etc., the government resorted to an augmented approach. More dimensions were added to the developmental process by giving greater emphasis on employment generation, health, education, gender justice, welfare and development of backward classes etc., in addition to investments in agricultural sector. As a result, the poverty in rural areas got reduced to 21.7 percent by the year 2004-05 from about 55 percent in 1973-74. In urban areas also the reduction was obvious from 49 percent in the 1973-74 to 21.8 percent (GoI, 2007a).

Even though, the reduction in poverty is substantial over the years, it should be noted that a considerable majority of the people still lie under the category of marginally poor and vulnerable. The figures in Table-1 show that, around 599 million people (55 percent) lie in this category and over a period from 1993-94 to 2004-05, the absolute numbers in this category has only increased. It is also worth mentioning that the poor and vulnerable together accounts for more than three fourth of the total population in the country and hence the real target population of any poverty reduction programme constitute a substantial majority.

3. Millennium Development Goals (MDG)

Vis-A-Vis India

The Millennium Development Goals, also known as the MDGs, are a concise set of goals, numerical targets and quantifiable indicators to assess progress in world development for the period of achievement set out in the Millennium Declaration, 2000-2015. The MDG set includes eight goals, 18 targets and over forty indicators. MDGs were declared in the United Nations Millennium declaration in September, 2000. The first and the foremost goal of the programme is to eradicate extreme poverty and hunger, the primary target being to reduce the proportion of people living less than a dollar a day by half by the year 2015. Other important goals are to achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and to develop a global partnership for development.

Table 2: India's MDG Targets

Indicators	2015	Present ¹
Infant Mortality Rate	40	58
Under-5 Mortality Rate	55	96
Maternal Mortality Rate	142.5	407
Gross Enrolment Ratio in Primary Schools		
Boys	100	86.0
Girls	100	82.8
Total	100	92.1
Female Literacy Rate/ Male Literacy Rate	1	0.71
Poverty Ratio	16	26.1

Source: Bajpai (2003).

India has a very important role in achieving the MDGs particularly because India accounted for nearly one-fourth of the worlds poor at the turn of the century. Table-2 shows India's targets for achieving the goals and its present status. It is obvious from the table that India has to strive hard to attain the goals or at least reach nearby it. The poverty reduction target is to reach to 16.0 percent by 2015 while the present figure (1999-00) is 26.1 percent. Also, as on 1999-2000, poverty gap ratio is 5.2 percent, share of poorest quintile in national consumption is 10.1 percent for rural sector and 7.9 percent for urban sector and prevalence of underweight children is of the order of 47 percent. The national development goals target the reduction of poverty by five percentage points by 2007 and 12 percentage points by 2012. The government has undertaken a number of steps and has developed various programmes to achieve the goals, ie., to enact National Rural Employment Guarantee Act (NREGA), to double the flow of rural institutional credit, strengthen the public distribution system in poorest and back ward blocks of the country, to provide Antyodaya cards for all households at risk of hunger and national programmes for minor irrigation of all lands owned by dalits and adivasis.

4. Unemployment and Poverty

Unemployment and poverty has a one-to one relationship and they always co-exist together. It is not only unemployment per se but also under employment, increasing casualisation, low productivity jobs and under utilisation of educated persons

Table 3: Work Force Participation Rates (WFPR) and Estimates (Million) of Employment

Year	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
1993-94									
WFPR	55.3	32.8	44.4	52.1	15.5	34.7	54.5	28.6	42.0
Employment	186.6	103.7	290.36	4.5	17.3	81.82	51.1	121.0	372.1
1999-00									
WFPR	53.1	29.9	41.7	51.8	13.9	33.7	52.7	25.9	39.7
Employment	196.8	104.0	300.87	7.1	18.9	96.02	73.9	122.9	396.8
2004-05									
WFPR	54.6	32.7	43.9	54.9	16.6	36.5	54.7	28.7	42.0
Employment	201.7	116.1	317.87	0.7	19.7	90.42	72.4	135.8	408.2

Source: IAMR (2007)

Table 4: Percentage Distribution of Total Employment By Rural/Urban and Industry Division

Industry division	Rural				Urban			
	1977-78	1987-88	1999-00	2004-05	1977-78	1987-88	1999-00	2004-05
Agriculture, Forestry, Fishing and Hunting	83.4	78.3	76.3	72.7	15.3	13.4	8.6	8.8
Mining and Quarrying	0.4	0.6	0.5	0.5	0.8	1.2	0.8	0.8
Manufacturing	6.2	7.2	7.3	8.1	28.3	26.0	22.7	24.6
Electricity, Gas and Water	0.1	0.2	0.2	0.2	0.8	1.0	0.7	0.7
Construction	1.3	3.3	3.3	4.9	3.8	5.4	8.0	8.0
Wholesale & Retail, Trade & Restaurants	3.3	4.0	5.1	6.1	18.8	19.0	26.9	24.6
Transport, Storage and Communication	0.8	1.3	2.1	2.5	7.9	7.8	8.7	8.6
Services	4.4	5.0	5.2	5.0	24.6	25.7	23.6	24.0
Activities not classified	0.1	0.1	-	-	0.4	0.6	-	-

Source: IAMR (2007)

which deter a country from moving out of poverty. Therefore, it is important to analyse the present status of employment in the country, the growth in employment over the years, sector wise distribution of various working classes, the trajectory of upcoming scenario and the scope for improvement so that by 2015 the country's working age group find them selves in a better position.

4.1 Present Status of Employment

Out of the total population in the country, around 44 percent in the rural areas and nearly 36 percent in the urban areas (2004-05) participate in gainful activities on a regular or occasional basis (Table 3). Both in rural and urban areas, work force participation by male members were much higher than their female counter parts. However, the gap was less in rural areas as comparison to that of urban areas. The total employment in the country grew moderately from 372.1 million in 1993-94 to 408.2 million by the year 2004-05. Within

the labour force, around 2.1 percent of male and 3.1 percent of female were estimated to be unemployed in rural areas. In urban areas, around 4.4 percent of male and 9.1 percent of female were found to be unemployed (based on usual status, 2004-05). In terms of overall numbers, there were 3.98 million unemployed in India in 1973-74 and their number had increased to 7.49 million by 1993-94 and as much as 9.15 million by 1999-00 (*Bhalla and Hazell, 2003*).

A brief perusal of the sectoral distribution of employment in India and its changes over the years suggests that employment has gradually shifted from the primary sector to the secondary and tertiary sectors. In 1977-78 the proportion of people employed in primary sector was 72.5 percent while it got reduced to 58.5 percent by the year 2004-05. At the same time, the proportion in secondary sector has increased from 12.0 percent to 18.0 percent and that of tertiary sector increased from 15.5 percent to 23.4 percent during the same period (*IAMR, 2007*). This shift is a quite expected outcome and is in conformity with the pattern of growth in other developing countries. For instance, between 1960 and 2000, as the share of agriculture in China's GDP declined from 30 percent to 15 percent, the share of agriculture in employment fell from 70 percent to 47 percent. However, these dynamics have been much slower in India (*Rangarajan, C., 2006*). The

scenario also presents an obvious fact that, rural population was found to be more dependent on the primary sector in comparison to the urban inhabitants. Also, a greater proportion of female workers find their livelihood in primary sector than that of male workers. The above discussion clearly points towards the changing dynamics of Indian employment scenario and as the country moves towards a higher growth trajectory, the dependence on primary sector becomes lesser and lesser. Therefore it is obvious that in the days to come the government machinery should be tuned to create greater job opportunities in the secondary and tertiary sectors.

Table-4 presents a brief overview of the industry-wise distribution of employment in the country between 1977-78 to 2004-05. As discussed before, agriculture, forestry, fishing and hunting continues to be the largest provider of employment to the rural population. The share of employment in other sectors like manufacturing, construction, wholesale and retail, service sector etc has been quite minimal in comparative terms. Among them, the sectors like manufacturing, construction and service sector industries are major income providers for the rest of the masses who live on occupations other than agriculture and allied activities. However, the picture is quite contrary in urban areas. Here, manufacturing, whole sale and retail, trade and restaurants and service sectors attract the

Table 5: Percentage Distribution of Rural Workers By Land Classes and Sector of Occupation, 2004-05

Employment Status	Landless and Sub-marginal	Marginal	Small	Medium-Large	Total
Agriculture					
Wage Worker	77.4	14.9	5.8	1.9	100.0
Self-employed	17.3	27.9	24.8	29.9	100.0
Agricultural Workers	38.4	23.4	18.1	20.1	100.0
Non-Agriculture					
Unorganised Sector Casual Workers	79.7	13.6	4.4	2.3	100.0
Unorganised Sector Regular Workers	74.1	12.7	7.1	6.1	100.0
Unorganised Sector Self-employed	76.0	13.2	6.1	4.7	100.0
Unorganised Sector	76.7	13.2	5.8	4.3	100.0
Organised Sector	69.4	14.6	8.0	8.1	100.0
Non-agricultural Workers	75.0	13.6	6.3	5.2	100.0

Note: Land Possessed in hectares: Landless (< 0.01), Sub-Marginal (0.01 - 0.40), Marginal (0.41 - 1.00), Small (1.01 - 2.00), Medium-Large (> 2.00).
Source: NCEUS (2007)

Table 6: Educational Profile of Rural Work Force

Educational level	1977-78		1987-88		1999-00		2004-05	
	Male	Female	Male	Female	Male	Female	Male	Female
Illiterate	55.0	88.1	48.3	82.3	39.7	73.9	33.6	66.2
primary	30.8	9.1	29.6	12.0	27.4	15.7	29.4	18.0
Middle	8.5	1.6	11.6	3.2	16.0	5.8	18.0	8.2
Secondary	4.7	1.0	8.4	2.0	13.5	3.6	9.2	3.7
Graduate and above	1.0	0.2	2.1	0.4	3.4	1.0	9.8	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: IAMR (2007)

maximum number of people.

4.2. Employment in the Unorganised Sector

A large majority of India's population work in the unorganised sector often associated with low capital intensity and labour productivity. Unorganised workers consist of those working in the unorganised enterprises or house holds excluding regular workers with social security benefits and workers in the formal sector without any employment/ social security benefits provided by the employers. It is a startling reality that around 422.6 million people comprising of 92.4 percent of the total labour force are unorganised and a majority of them belong to the unorganised sector. Between 1999-00 and 2004-05 the proportion of unorganized workers increased from 91.2 percent to 92.4 percent which is again a cause of concern. A more important point is that around 78.7 percent of the total unorganised workers come under the category of poor and vulnerable. Among those self-employed people in the unorganised working class, 74.7 percent are poor and vulnerable and the proportion of regular wage workers and casual workers are 66.7 percent and 90.0 percent respectively (*NCEUS, 2007*). Therefore an over whelming majority of the total work force in the country seems to live in extreme deprivation with very few livelihood options.

4.3. The Rural Work Force

A sizeable chunk of India's population live in the rural areas and most of them belongs to unorganised sector with low living amenities. As discussed earlier, a majority of them

depend on agricultural and allied activities for their primary source of income. The percent distribution of the rural workers based on land classes reveals a vivid picture of their present status (Table-5). It was found that the rural workers in the agricultural sector were mostly landless or sub-marginal. Around 77.4 percent of the wage workers and 38.4 percent of agricultural workers were of this category. The people who are self-employed were an exception to this rule and 29.9 percent of them belonged to the medium and large category. Around three-fourth of the non-agricultural workers were landless, and the rest quarter of them fell in the other three groups.

4.3.1. Educational Composition of Rural Work Force

Education always makes people more self-reliant and empowered. It increases the awareness of the people and that way help them to find productive, gainful and remunerative employment and inturn to earn more. The government of India, through its various programmes has been successful to a certain extend to impart better education to its burgeoning rural masses over the years. However, it is a disturbing fact that a majority of the people in rural India are still illiterate. In 2004-05, around 33.6 percent of male and 66.2 percent of female work force in the rural areas were illiterate with no formal education (Table-6). 29.4 percent and 18.0 percent respectively of male and female workers have only undergone primary education. Only 9.8 percent of men and 3.9 percent of women were either graduates or above. Throughout the

Table 7: Average Wage/Salary of Regular Employee Per Day In Rural Areas, 2004-05 (Rupees)

Industry Division	Illiterate		Literate up to Middle		Secondary & Higher Secondary		Graduate And Above		All	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Agriculture	55.4	45.6	66.3	54.4	149.4	134.6	200.3	105.3	71.2	54.5
Mining & Quarrying	174.1	84.8	217.6	212.3	323.4	83.3	341.5	-	246.4	82.7
Manufacturing	58.3	26.5	74.4	36.2	103.4	47.3	160.7	89.2	90.6	38.2
Electricity, Gas and Water	142.4	168.6	202.9	178.5	260.5	290.9	306.5	111.9	246.3	253.9
Construction	85.5	82.6	100.1	44.2	111.1	101.7	223.1	136.1	106.8	90.8
Trade	65.3	34.7	66.7	40.7	86.5	67.5	108.3	136.5	75.3	51.1
Transport & Storage	98.3	87.7	112.8	102.5	138.5	105.3	235.2	256.2	126.9	135.7
Services	101.1	34.7	133.2	50.5	197.2	105.7	256.9	174.2	203.6	113.6

Source: NSSO (2005)

Table 8: Age-specific Work Force Participation Rates In Rural India

Age Group	Male			Female		
	1993-94	1999-00	2004-05	1993-94	1999-00	2004-05
5-9	1.1	0.6	0.3	1.4	0.7	0.3
10-14	13.8	9.1	6.8	14.1	9.6	7.4
15-19	57.7	50.3	49.7	36.4	30.4	31.9
15-29	77.5	74.1	74.2	44.7	40.0	41.0
30-44	98.6	98.2	98.4	59.8	57.2	61.4
45-59	96.8	95.8	96.2	54.3	51.8	56.9
60 Above	69.9	63.9	64.4	24.1	21.8	25.3
All	69.9	63.9	64.4	24.1	21.8	25.3

Source: NSSO (2005)

years, the women employees were found to be lagging behind men in terms of educational qualifications. Therefore, the task is not only to improve the educational status of the people but also to bring in gender equality among the rural work force, so that both men and women are equal beneficiaries of the development process.

4.3.2. Earnings

The earnings of the rural workers varied significantly based

on the industry in which they are working and their educational qualifications. Gender differentials in wages/salaries were also visible. The highest earnings were observed in those employees working in the field of mining and quarrying followed by electricity, gas and water and services respectively (Table-7). The high payment in mining and quarrying industry is perhaps due to the high level of risk associated with the job. Agricultural workers attracted the lowest wage and the conditions in the manufacturing and trade sectors were also

Table 9: School Drop-out Rates By Sex and Stages of Education

Year	Boys			Girls		
	Primary (I-IV)	Middle (I-VIII)	Secondary (I-X)	Primary (I-IV)	Middle (I-VIII)	Secondary (I-X)
1980-81	56.2	68.0	79.8	62.5	79.4	86.6
1990-91	40.1	59.1	67.5	45.9	65.1	76.9
1995-96	37.9	54.9	66.4	41.3	61.7	74.1
1999-00	38.7	51.9	66.6	42.3	58.0	68.3
2004-05	31.8	50.5	60.4	25.4	51.3	63.9

Source: GoI (2006)

not better. On an average, a male agricultural worker earned Rs. 71.2 a day and a female worker earned Rs. 54.5, which is quite low as compared to that of other sectors. But the irony is that maximum numbers of people are employed in these sectors and a possible reason for the low payment is the low productivity per worker in this field. Workers employed in the construction sector were better paid than that of the manufacturing sector.

4.3.3. Age Specific Participation In Labour Force

The rural labour force seems to be a mix of all age-groups ranging from children of age below ten and elderly people above sixty. Even though the rates of labour force participation by children of age 5-9 were very low, their absolute numbers cannot be ignored. In the year 2004-05, around 6.8 percent of the boys between 10-14 and 7.4 percent of girls were also working in one field or the other (Table-8). This indicates the high level of dropout rates from the primary and secondary schools due to varied reasons, the primary one being poverty. In fact these children are forced to leave the schools or are not at all enrolled and are compelled to join the labour force at a very tender age. The proportion of working teenage children of the age 15-19 was found to be very high. The statistics reveals that around half of the boys and 32 percent of girls in this age group who are supposed to continue their studies are unable to do so and instead join the work force.

The statistics on the school drop-out rates of the children at various stages of education makes the picture clearer. The drop-out rates are worked out as a percent of the intake in the first year of the course or stage. These numbers were found to

be very high in all the stages of schooling and applied to both boys and girls enrolled equally. Nearly 32 percent of the boys and 25 percent of the girls enrolled in class one were found to drop out before reaching to the class V in the year 2004-05 (Table-9). By the time they reach class VIII half of them dropped out and the overall drop-out rate at class X was found to be 60.4 percent for boys and 63.9 percent for girls. That means only around 40 percent of all the children enrolled in various schools across the country were able to pass class X. Among the various states, the highest attrition were observed in West Bengal, Meghalaya, Bihar, Assam, Arunachal Pradesh, Nagaland, Tripura, Orissa, Andhra Pradesh etc. (GOI, 2006). This has serious implications and unless these children are given appropriate facilities to continue their formal education or are trained to undertake skilled activities, valuable man power will be left under-utilised. In the next two decades, India's greatest challenge will be to provide better opportunities for the growing labour force by enriching them with better education and skills and thus ensuring gainful employment for a better standard of living.

4.3.4. Rural Employment: Past Trends and Future Directions

To frame meaningful policies on rural employment, it is imperative to understand its behaviour in the immediate past and to have some best estimates for the future. Bhalla and Hazell (2003) reported that the sectors like electricity, transport, mining and trade experienced a spurt in rural employment during 1973-1994, followed by others sectors like construction, manufacturing, services etc. The growth was

Table 10: Employment Projections at GDP Growth Rate of Eight Percent

	2004-05 (Million)	Employment elasticity	Growth rate	Employment growth	2017 (Million)
Agriculture	240.3	0.10	4.00	0.40	252.11
Mining & Quarrying	2.24	0.00	4.70	0.00	2.24
Manufacturing	51.7	0.22	10.50	2.31	68.11
Electricity, Gas And Water Supply	1.29	0.00	8.30	0.00	1.29
Construction	21.1	0.60	8.50	5.10	38.32
Trade, Hotels & Restaurant	45.7	0.50	9.20	4.60	78.49
Transport, Storage And Communication	18.8	0.40	10.50	4.20	30.76
Financing, Insurance, Real Estate & Business Services	5.9	0.50	11.00	5.50	11.21
Community, Social And Personal Services	35.9	0.30	7.60	2.28	47.11
Total Employment	423.13	0.22	8.00	1.76	529.64

Source: Rangarajan (2006)

least in agricultural sector due to various reasons like a sharp deceleration in agricultural production, the declining efficiency of input use, technological stagnation, falling agricultural prices etc. The study also emphasised on the possible path of population growth, the knowledge of which is utmost important in developing an employment strategy. It hints a reduction in the number of children of age 5-14 years due to slowdown in birth rates. However, a big spurt in population of the age-group 15-29 is imminent by the year 2016 and onward, which is also the highly productive age-group. The total population in this age group was estimated to be 340.8 million by the year 2016 and 358.5 million by 2020. Therefore, a corresponding growth in demand for employment is a logical conclusion for which the country should focus all its efforts to. However, the proportion of urban population is set to cross the rural population due to high rate of urbanisation and migration of rural people to the urban areas.

The growth in employment depends on a variety of factors like growth in overall GDP of the country, growth in different sectors of the economy, growth in population, growth in the labour force, employment elasticities and a number of other exogenous factors and determinants. Therefore any attempt to project the growth in employment will be subject to many underlying assumptions and various studies have attempted to project the employment under different scenarios. The employment projections carried out by C. Rangarajan²

assuming an overall growth rate of the economy at the rate of eight percent per annum provides reasonable estimates of the possible scenario by the year 2017 (Table-10). He maintains that, for the economy to be free from unemployment by that year the eight percent level of growth and other underlying assumptions are to be sustained. The base year used for the projections was 2004-05. However it is to be worth noting that even by the year 2017, around fifty percent of the total population would still depend on agriculture. Trade, hotels and restaurant sector would absorb the highest number of employees after agriculture. The employment in this sector would grow at average annual growth rate of 4.6 percent. Therefore it is a potential area where new skills are required to be imparted. Manufacturing sector would also generate huge employment opportunities for the new generation. Community, social and personal services and construction are sectors which require considerable attention in terms of skill development. A rapid growth in employment is expected in financing, real estates and business services which needs specially trained man power. However, sectors like mining and quarrying, electricity, gas and water supply etc would grow marginally only. Even though, these projections are carried for the overall economy, one can always take clues about the possible directions in the rural employment as well.

From the above discussion the following major points have been identified as the immediate challenges to be addressed

Table 11. Trade wise Seating Capacity In Various Vocational Training Institutes

Trade for women	Seating Capacity			Trade Courses For Craft instructors	Seating Capacity		
	NVTI	RVTI	Total		ATI	CTI	Total
Basic Courses							
Sec. Practice	32	192	224	Carpenter	10	-	10
Hair and Skin Care	32	240	272	Cutting and Tailoring	20	-	20
Dress Making	-	272	272	Draughtsman (Civil)	10	10	20
Fruits and Veg. prac	-	16	16	Draughtsman (Mech)	40	-	40
Electronics	32	256	288	Electrician	90	10	100
C.O.P.A	80	320	432	Mechanic Electronics	16	-	16
Instrument mech.	-	32	32	Engineering Technology	30	30	60
Arch. D'man	48	272	320	Fitter	116	10	126
D.T.P	16	96	112	Forger and Heat Theater	-	-	-
Steno	-	64	64	Grinder	8	-	8
Fashion Technology	16	48		Machinist	86	10	96
Total	256	1808	2064	Mechanic	148	20	168
Advance Skills				Moulder	10	-	10
Sec. practice	20	120	140	Reading of Drawing	20	-	20
Hair and Skin Care	20	100	120	Sheet Metal Worker	10	-	10
Dress Making	120	320	440	Tool and Dye maker	16	-	16
Embroidery	40	-	40	Training Methodology	30	30	60
Electronics	20	120	140	Turner	80	8	88
Arch. Asst.	20	140	160	Welder	48	-	48
Sec. Practice (Hindi)	-	60	60	Wireman	40	-	40
Total	240	860	1100	Foundry Man	-	10	10
Post Advanced				Welder- G/E	-	8	8
P.O.T	40	120	160				
Business Services	20		20				
Total	60	120	180				
Grand Total	556	2,788	3,344		828	146	974

Notes: NVTI- National Vocational Training Institutes; RVTI – Regional Vocational Training Institutes; CTI – Central Training Institutes; ATI – Advance Training Institutes

to strengthen the future employment scenario in the country;

- To create employment opportunities to over 8 million new additions to the labour force every year (*Rangarajan, C., 2006*).
- To contain the expansion of working age group by about 45 percent by the year 2020 (*Planning commission, 2002*).
- To improve the quality of employment by enhancing per person productivity and to increase average real earnings

of the workers.

- To gradually shift the rural labour force from relatively less productive agricultural sector to more productive jobs in the secondary and tertiary sectors.
- To impart adequate skills to the young generation so that the growing demand for productive employment is adequately met in the coming years.
- To identify the upcoming sectors with high employment

potentials and to fine-tune the skill development programmes in these sectors.

- To effectively network the labour markets in such a way that the labour deficit areas and sectors are supplied with timely and adequate labour from labour surplus areas and sectors. The idea of labour banks is particularly relevant in this context and is to be taken forward.
- To promote labour intensive activities and industries so that the most abundant factor of production in the country is effectively utilised and thus to exploit India's comparative advantage.

The S.P. Gupta committee on 'India: Vision 2020' submitted to the planning commission (*Gupta, 2004*) notes that the largest number of new jobs will come from the unorganised sector as 92 percent of the country's employment falls in this sector and it generates seven times greater labour intensity per unit of production as compared to the organised sector. Although private sector would contribute significantly to the economy, its share in employment generation would be modest. The committee also notes that small and marginal enterprises are much resilient in comparison to large enterprises as they are more insulated from pressures generated by the world trade and capital markets. The report identified a list of specific sectors with largest gross employment potential per unit of output and is as given below³.

- Commercial agriculture
- Agro-industry and agri-business
- Afforestation for pulp, fuel and power
- Retail and whole sale trade
- Tourism
- Housing
- Construction
- Garment industry
- Other small scale and medium industries
- IT and IT enabled services
- Education
- Health
- Financial services
- Transport
- Communication

- Community services

Most of these sectors are important not only because of their high employment potential but also because they are capable of absorbing large masses of young rural school drop-outs.

Employment in these small and medium enterprises does not demand much higher education and if imparted with adequate skills through vocational training, it will add to the governments efforts in alleviating chronic poverty to a great extent. Rather than continuing the traditional methods of agriculture, which claims a large number of disguised unemployment, a shift towards commercial agriculture would not only provide quality employment to the rural people but also increase the productivity in agriculture. Diversification and value addition has become the buzz words in recent discussions on agriculture and creation of more processing and agro-business industries would turn out to be a potential

source of additional employment generation in agricultural sector. This would also add to India's competitiveness in agricultural exports to the international markets. The rural women and children can also take up small scale processing and marketing activities through the hugely successful initiative of self-help groups. The young and enterprising rural youth would get sufficient opportunities if they are

trained to initiate small scale industries (SSI) which ultimately can help them grow to higher levels in manufacturing sector. Textile and garment industry has huge potential in the coming years and ventures in this direction under the umbrella of small scale industries would definitely turn fruitful. However, for successful implementation, the entrepreneurs should be provided adequate financial and logistic support through government initiatives. Tourism is also an upcoming sector where large number of people can find gainful employment.

There are 1,244 polytechnics under MHRD with a capacity of over 2.95 lakh, offering diploma courses in engineering

4.3.5. Vocational Training Requirements

Considering the future growth in employment in various sectors and the huge need of skill development in the country, it is imperative to take appropriate policy initiatives to upscale the present capacity of vocational training facilities in the country. Presently in India technical trainings are imparted through two basic streams, viz., the formal stream and the

informal stream. The formal stream includes technical education imparted through professional colleges, vocational education in schools at the post-secondary stage, technical training in specialised institutions, and apprenticeship training. The National Vocational Training institutes (NVTI), Regional Vocational Training institutes (RVTI), Central Training Institutes (CTI) and Advanced Training Institutes (ATI) are the major centres of vocational training for the youth. NVTI and RVTI together constitute 3,344 and those of CTI and ATI constitute around 974. These institutes impart trainings in total 27 trades in various categories with a total seating capacity of around 3,344 (Table-11). There are 1,244 polytechnics under Ministry of Human Resource Development with a capacity of over 2.95 lakh offering three-year diploma courses in various branches of engineering. Besides this there are 415 institutions for diploma in pharmacy, 63 for hotel management and 25 for architecture. In addition to the vocational training institutes, around 5,114 ITI s in various parts of the country also provide training to nearly 7.42 lakh youth every year. The apprenticeship is provided by public and private sector establishments with an allocated seating capacity of 2.30 lakh out of which 1.72 lakhs are being utilised. The entrepreneurial and skill enhancement trainings are also provided at secondary levels through around 9,583 schools in over 150 courses covering an estimated one million students. Over 2,500 Rural Development and Self-employment Training institutes (RUDSETI) are also involved in imparting skill in various fields for encouraging self employment. Khadi and Village Industry Commission (KVIC) is another agency which imparts training to the needy people in rural areas on various skills like bee-keeping, processing, textile manufacturing, leather making, marketing, soap making and a number of other trades.

However, it is the large informal/unorganised sector which is perpetuating a self evolved process of skill development in the rural areas. In this sector, skill development occurs without any formal or institutional means, mostly through family occupations, associations with experienced craftsmen etc. It is to be noted that, the formal training system is able to impart training for only about twenty percent of the new entrants in the labour force and the rest of them are either absorbed in the informal stream or are left without any choice. It is therefore imperative to upgrade and upscale the formal system of vocational training in the country with

proper planning and vision. More than that, the number of trades and streams in which trainings are provided should be also increased to address the new skill requirements in the upcoming sectors. Special emphasis is to be given to the upliftment of scheduled caste and scheduled tribe youth to bring them to the mainstream labour market. Also, gender specific jobs will be in high demand as more and more women are joining the work force. Therefore, it is important to mention that, policies directed to skill development and employment creation should be sensitive to the concerns of all sections of people in the country and a balanced approach is particularly important. There should be equal opportunities to all classes so that they become equal beneficiaries of the development process.

On-going Efforts For Skill Development

In order to create a pool of skilled personnel with adequate skills and in required numbers, the National Skill Development Mission (NSDM) has been constituted with a target of creating around fifty crore trained persons by the year 2022. For this purpose, a National Skill Development Corporation and a National Skill Development Fund has been created. The mission has to ensure that the supply side responses are perpetually in sync with the demand side impulses both from domestic as well as global economies. The mission proposes to assess skill deficits in the country, sector-wise and region-wise and meet the gaps in the stipulated time frame. It envisages to attain the goals through a Public Private Partnership (PPP) mode by encouraging adequate participation from the private sector also. The mission also plans to establish a 'National Skill Inventory' and 'National Database for Skill Deficiency Mapping' on a national web portal for exchange of information between employers and employment seekers. Separate action plans have been designed for each ministries and related vocational institutions (*Planning Commission, 2008*). In addition to this, various state governments are also undertaking separate programmes to develop entrepreneurial abilities among the rural youth.

5. Conclusions

An important strategy in the poverty alleviation endeavour has been to provide for increasing employment opportunities to the poor and back ward, not only to meet the backlog of the unemployed but also for new addition to the labour force. In

an age when the population of the country is fast increasing, and a majority of them belonging to the working age-group, the business-as-usual approach would take us nowhere. The employment strategies advocated in the plan strategy requires special emphasis to promote public investment in rural areas for absorbing large numbers of unemployed labour force for asset creation. Large-scale employment opportunities are needed to be created in various sectors like construction sector, agro-processing and commercial agriculture, trade and restaurants, textile and manufacturing sector and other rural services sectors to cover both skilled and unskilled people. Technical and financial assistances like bank loans at low interest rates, provision of tools, training programmes etc would offcourse ensure better implementation of the programmes and also would encourage the educated youth for finding self-employment. Various skill development and employment programmes should be fine-tuned to meet the emerging employment needs of the upcoming sectors. Therefore timely and adequate action has to be ensured from all the stake holders viz, government, private enterprises, small scale industries, co-operate bodies etc to respond to the demand side impulses arising not only within the country but also from foreign entities. In addition to employment programmes, various housing development schemes, infrastructure development schemes, crop insurance schemes, education schemes and food grain distribution programmes are also to be promoted for indirectly contributing towards employment generation and thus poverty alleviation. [IER](#)

Endnotes

- ¹ Some figures were updated by the author based on the latest information available.
- ² The projection is a reassessed version of the one made by the 'Report of Task Force on Employment Opportunities', Planning Commission (2001), assuming an overall elasticity of 0.22 and corresponding sectoral elasticities. The base year was revised as 2004-05.
- ³ The sectors have been identified by the committee based on various previous studies undertaken by the planning commission.

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INCLUSIVE INDIA: TO WHAT EXTENT DOES THE MARKET OFFER SOLUTIONS FOR GROWTH?

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The relationship between market and society is highly complex – the two are so inextricably linked that we cannot consider one without the other. When we look at the high levels of poverty and inequality that plague the Indian sub-continent, we cannot conceive of ameliorating or eradicating these social ills without in some way involving and evoking market solutions. Over the past twenty five years, various market-based tools have helped to lift millions out of absolute poverty and delivered thousands of new products in India. However, at the same time, we cannot rely on market solutions alone. Markets can and do fail, but with appropriate frameworks they can function efficiently pro bono publico. It is clear that the market theoretically offers a number of answers for growth and inclusive development, what is unclear is to what extent this is the case in reality.

The market in its truest form offers opportunities to many and it is this potential that we should harness to bring the four hundred million plus¹ currently excluded from the prosperity and benefits of India's recent stellar economic growth into the fold. Markets are highly representative; they embody the various dynamics of preferences, power and influence present in real life. The market is the form society takes while transacting. Markets also matter for emancipation: they offer participants various tools for participation/inclusion, self liberation and empowerment including division of labour, specialization, developing their competitive advantages, standardization, gains in efficiency, choices of goods and services to all, ability to trade, and wealth creation. As Milton Friedman argued, "Underlying most arguments against the free market is a lack of belief in freedom itself". That is to say, the market is the very embodiment of freedom expressed through exchange.

Yet, markets do not and cannot function in a vacuum. The third essential factor - that plays an equally important role in the equation – is the state. The symbiotic relationship between the market, state and society forms the basis of development. Without all sides playing an active role, outcomes would be skewed and most likely sub-optimal. Individuals (who make up society and collectively shape society) need the opportunity to express their preferences (i.e. through the market). At the same time, governments are needed to regulate how these needs and wants are met (ideally in a manner that is socially desirable and economically viable). Society in turns acts as a group of checks and balances for the market, articulating its collective preferences to the government. This is what makes this model inclusive and sustainable.

Joan Robinson summarised the Indian situation perfectly; "Whatever you can rightly say about India, the opposite is also true." From a balanced perspective, we can see Inclusiveness in the context of its opposite, which much also necessarily exist – Exclusion. In the case of India, diversity is an all-pervasive reality, and cannot be treated as a mere intellectual cliché. When we consider India's enormous diversity, in conjunction with the social and economic inequalities, and the potential of inclusion/exclusion, we have difficulty in reconciling the contradictions. On the one hand, greater diversity incentivises more tolerance and thus by extension also encourages inclusion. On the other hand, more diversity can fragment the society and effectively increase exclusion through marginalisation. What is not clear is where this threshold or critical mass point lies on the spectrum of diversity. In this confused reality of diversity, multiculturalism and heterogeneity that we find ourselves, we need to take a similarly varied approach in tackling



the key issues pertaining to inclusive growth and development. The market being as diverse as its participants can play the role of this multifaceted tool in coordinating and matching different needs, wants and interests with the available resources. The efficiency and sustainability of the market, as any human system, depends on two key features - Freeness and Fairness, which at times can be contradictory, are both highly relevant, converge in the concept of inclusiveness. Inculcation of these values can help to ensure that access to the market is unrestricted and that outcomes and allocations of the market are not socially detrimental.

Inclusive growth is attractive for a number of reasons – amongst which we should highly prioritise social stability. William Easterly and Ross Levine (1997) hypothesise and substantiate that societies which are ethnically and socially very heterogeneous are pre-disposed to higher levels of poverty; that homogeneity in this regard is important for political and social stability, which in turn affects a number of other variables including economic growth. It is our opinion that the market is an equalizing force, one that does not see race, ethnicity, class, caste etc. Therefore, it is an enormously powerful tool for the empowerment of those who have up until

now been marginalized. Furthermore, it is widely acknowledged that inclusive growth plays a highly influential role in building a sustainable economy.

Thinking of “Inclusiveness” in the Indian context immediately brings to mind the late CK Prahalad’s concept of “the bottom of the pyramid”. The book “The Fortune at the Bottom of the Pyramid – Eradicating Poverty Through Profits” offers a direct answer to the question – “Does the (Indian) market offer solutions for (inclusive) growth?” Those at the bottom of the (socio-economic) pyramid are a huge source of entrepreneurial potential, productivity, and profit. These participants’ energies can and must be channeled and oriented towards national development – that is a sustained, concurrent, multi-pronged yet purpose-wise coherent bottom-up process of economic, social and political emancipation and development.

What we need, according to Prahalad, is for large-scale entrepreneurship and innovation to take place at the grassroots level. Although the economic and social case for expanding markets at the ‘Bottom of the Pyramid’ is eloquently conveyed in the book, we suggest that a model of Inclusive Capitalism has not been

created to date because those in power have not found the political or personal will to do so. Thus, the role of the state and the political actors in this process of developing the bottom of the pyramid will also be vitally important and this process cannot take place entirely without any involvement from the government. Even if the state does not drive this initiative (and it shouldn't), it should at least encourage grassroots level innovations and facilitate markets to fulfil local needs.

Technology and Innovation (two market driven solutions) will play the pivotal role in bridging society and the market. Technology as a facilitator, that breaks down barriers to entry and creates a more level playing field for new market entrants, is one of the most powerful tools for development. In order to ensure that this development is inclusive and sustainable, we must make technology not only affordable, but extremely affordable, that means even for the poor. The best example of such technology is the humble but powerful mobile phone. We also need to avoid planned obsolescence and create solutions that are scalable as well as easily upgraded. Technology can also provide enormous leverage to new market participants through information, which can make the market system more inclusive, more efficient, and more competitive. Moreover, technology has helped greatly in shrinking distance and to the extent that it has begun to connect the thriving metropolises and the hinterland areas in India to one another, it has started to reduce the rural-urban divide. More progress in this direction is desperately required and will have multiple positive effects in spreading growth, development and wealth more equally – both in terms of geography and in terms of society.

One key feature of successful market-driven and inclusive growth will be access to information, in particular market information. In this regard, the Indian community needs to have a holistic and a more Indian view. Information engineering is currently perceived more as a “first world” concept. Each newly active economic agent looks for information and a means to assimilate best practises from models that have proven to be successful. In the interest of conveying this valuable information to enterprising rural business aspirants, there needs to be dedicated content in local languages that can act as guidebooks.

It goes without saying that providing high-quality formal education to every Indian is the first step towards the vision of vibrant and inclusive markets. Further, the prime need is to enhance the use of Information and Communication Technology (ICT) tools such as computer systems and mobile phones to access, build and share sector-specific and general information in

Indian languages. A significant boost to market inclusiveness has come from the technologies that the combined force of ICT to empower the farming community:

- satellite based weather info facilitation (METSAT);
- risk assessment compensation systems;
- affordable cellular services;
- rural banking technologies through mobile banking;
- agricultural research agencies encouraging GFP (good farming practices)

Indeed, an obstacle to scaling up is the illiteracy. Information kiosks in every taluka, well networked within a district, would be of great help. There are currently thousands of computer-literate youth (whose massive potential often remains socially unutilized) who can be provided relevant skills training and deputed to these kiosks. This would also serve the additional purpose of livelihood creation and youth employment with skills development.

In a recent talk at the Observer Research Foundation Mumbai (a multidisciplinary public policy think-tank), renowned scientist, Dr. R.A. Mashelkar, stressed on an “MLM – More From Less For More” approach as fundamental to meeting the needs of those at the ‘Bottom of the Pyramid’ and promoting inclusive growth through the market mechanism. What’s relevant here is that markets - rather than being exogenous, temporally and technologically advanced centres of social change - must be need-based / demand-driven, locally innovated, gradually progressive, advancing and mutually networking sites of social development. We need to encourage more local, context specific and enterprising solutions to local problems, especially in rural areas. In this way, more goods and services can be provided – from less resources – for more people. The example of Grameen Phone, the leading telecommunications service provider in Bangladesh with more than 23 million subscribers as of December 2009 is interesting in this regard. The business was founded by Iqbal Quadir, a highly accomplished social entrepreneur (also, Founder and Director of the Legatum Center for Development and Entrepreneurship at the Massachusetts Institute of Technology) in 1993-94. Quadir’s vision, “to create universal access to telephone services in Bangladesh and to increase self-employment opportunities for its rural poor”, led him to start a New York-based company named Gonofone (Bengali for “phones for the masses”), which later became the launch-pad for Grameen Phone. Based on his motto, “connectivity is productivity”, he attracted investments for his campaign by advertising a practical distribution scheme whereby village entrepreneurs, backed by micro-loans, could retail telephone

services to their surrounding communities. In Quadir's words, "bottom-up development... builds on small, initial successes... Then other people can invest, and a project can become bigger. That's why the Legatum Center encourages projects that can become commercially viable. Through local innovation, if you deliver more efficiently, the opportunities are enormous."^{2,3,4} Our policy aim in this regard could be to formalize, institutionalize and authorize more informal businesses that currently serve the bottom of the pyramid but are not regulated. Extending property rights and legal status to activities like hawking could make these activities better regulated and help to improve standards for consumers, make the market function better and also provide the government with more revenues.

Rural micro entrepreneurship is thriving in India; several thousands of ideas materialise into robust solutions on a daily basis, from the most inconspicuous sites and sources. However, there continues to be a large degree of market inequity and regional imbalance across the country inducing rural-to-urban migration and the increasingly unsustainable and rapid rate of urbanisation, which further exacerbates the economic and social inequality that characterise the big metros. These big markets also act as honey-pot sites attracting all the big businesses and result in the economic neglect of the hinterlands. It therefore becomes imperative to encourage prolific local entrepreneurial initiatives. Indeed, these small innovations may not be relevant to the larger "commercial" city markets; these ventures/initiatives cater more specifically to the "local needs". Nevertheless, they should be promoted with relevant policies (for example through seed funding from the state) and ancillary businesses such as rural banking. We see balanced regional development as a crucial yardstick for measuring and evaluating market-justice.

Cooperatives have also been tremendously successful in India. The most prominent cooperative that comes to mind is AMUL – the Gujarat Cooperative Milk Marketing Federation Ltd., which is today jointly owned by some 2.8 million milk producers in Gujarat.⁵ Apart from providing good quality and affordable milk and milk products to millions of Indians and other populations abroad, AMUL is a mass employer to all sections of the society – with special emphasis on bringing self-reliance and prosperity to women and underprivileged sections such as tribals and the socio-economically backward. Through its highly efficient multi-tier management – AMUL provides the "Amul Pattern" for rural development, a concern central to inclusive growth in the

Indian context. There are huge benefits to be realised from dedicated academic discourse on developing well-classified functional and structural models, led by pioneers such as AMUL, that epitomise sustainable market culture.

It is evident that there are plenty of opportunities for micro-small and medium enterprises to act as engines for inclusive and sustainable development in India. There is clearly a tremendous potential for national development in engaging the youth and the rural populations. What are needed now are appropriate policies to promote and sustain the existing enterprising efforts, as well as to encourage new initiatives in this direction. Finally, some level of social change also needs to take place; for people to realise that if we want sustainable and successful growth and development, people must participate and do so with a sprit of equality and inclusion. [IER](#)

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- ¹ Priyadarshi Siddhanta and P. Vaidyanathan Iyer, "37.2% of India is in poverty by criterion of consumption", Indian Express, 9th December 2009 - www.indianexpress.com/news/37.2-of-india-is-in-poverty-by-criterion-of-consumption/551849/0
- The article states that as per the Tendulkar Committee's per capita consumption expenditure thresholds of Rs.446 per month in rural areas and Rs.580 per month in urban areas, there are 320 million people in rural areas and 87.1 million people in urban areas that can be classified as poor.
- According to the World Bank's 2008 estimates, there are 456 million Indians (41.6 % of the total Indian population) living under the global poverty line of \$1.25 per day (PPP).
- ² Peter Dizikes, "Medical entrepreneurship, from the bottom up; MIT students aim to bring affordable health care to India's masses", MIT News Office - <http://web.mit.edu/newsoffice/2010/indian-medicine.html>
- ³ Iqbal Quadir, 'For the poor, connectivity means economic opportunity', The Wireless Internet Opportunity for Developing Countries, by Wireless Internet Institute, United Nations, 2003 - www.infodev.org/en/Document.24.html
- ⁴ www.grameenphone.com
- ⁵ The Amul Story - General Management Review - www.amul.com

(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

DOES MARKET OFFER SOLUTIONS FOR GROWTH IN INDIA'S AGRARIAN ECONOMY ?

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Introduction

Agriculture as the leading private enterprise in India, is the backbone of the Indian economy. Agriculture provides the foundation for our food and livelihood security. An efficient agricultural marketing system is essential for the development of the agriculture sector and it supports for the economic growth and social transformation of the country. It provides outlets and incentives for increased production, and also contributes greatly to the commercialization of subsistence farmers. The share of agriculture (including allied activities) in GDP of India has registered a steady decline from 36.4 percent in 1982-83 to 15.7 percent in 2008-09. The growth rate of agricultural sector, which was around 2.5 percent during the first three decades after independence and it accelerated to 3.6 percent during 1980-90's and it again decelerated to 1.6 percent in 2008-2009 (*Economic Survey, 2008-09 & Planning Commission, 2007*).

Hence, to achieve the sustained desired growth in agriculture sector, Government has promoted organized marketing of agricultural commodities in the country through a network of regulated markets. Most of the state governments and Union territories had enacted legislations to establish and to regulate agricultural produce market. Even though regulated markets have largely helped in mitigating the problems faced by the producers / sellers at the wholesale assembling level, but the rural periodic markets in general and the tribal markets in particular, have remained out of the development ambit. Thus, the institution of regulated market has achieved a limited success. These markets however, were supposed to ensure a smooth and orderly development of agri marketing by ensuring fair trade practices and market forces. Over a period of time they have acquired the status of restrictive regulated markets, providing no help in direct and free marketing, organized retailing, and smooth raw material supplies to agro-processing, competitive trading, information exchange and adoption of innovation marketing systems and technologies.

Thanks to the green revolution, India has transformed from net importer to self sufficient in foodgrains, fruits and vegetables production. Presently, India ranks first and second in production of various fruits and vegetables in the world and accounting for around 8-15 percent of global production. India is facing problems in marketing of agricultural commodities in post harvest operations like cleaning, grading, processing, quality certification, packaging, storage, transportation, financing, wholesaling and retailing, etc of agriculture produce. The resulting post harvest losses were estimated to be around 35-40 percent in fruits and

vegetables (<http://postharvestindia.net>). Further, the value addition of fruits and vegetables is 2.2 percent only (*Annual Report, 2007-08, Ministry of Food Processing Industries*). Now, India is exporting agricultural commodities to different countries accounting for about 10.2 percent of its total exports during 2008-09 (*Economic Survey, 2008-09*). As per International Trade Statistics, 2009, published by the WTO, India's agricultural exports amounted to US\$ 21.37 billion, with a share of 1.6 percent of world trade in agriculture in 2008.

The advantages of globalization, privatization and liberalization flowing across countries and this advantage should be reaped in global and Indian markets through effective marketing of agricultural commodities by different stakeholders of India. However, effective marketing of agricultural commodities is caught up by traditional static policies and laws in agricultural marketing in India and stringent norms viz. food safety and quality issues imposed by WTO in changing international trade regime. This paper discusses about present status of agricultural marketing, constraints faced by agricultural marketing system in India. The paper also discusses the recent reforms initiatives have been taken so far by government of India and what changes would be required to improve the present policies and implementation arrangements in agricultural marketing to achieve the sustained four percent growth rate in agriculture sector through efficient agricultural marketing practices.

Present Status of Agricultural Marketing System In India

In India Agricultural Marketing being in State list, has got a lot of variations across the states. As on 2009-10, there are 7,139 Wholesale regulated markets. Additionally, there are about 20,868 rural periodical markets, 15% of which function under the ambit of regulation (*Economic Survey, 2009-10*). Organized marketing of agricultural commodities has been promoted in the country through a network of regulated markets which are owned, operated and managed by Agricultural Produce Market Committees (APMCs). Except few Union Territories and states, all the states and UTs have enacted their respective Agricultural Produce Marketing (Regulation) Act. Currently, Sixteen States/UTs have amended their APMC Acts and the remaining states are in the process of doing so.

The Ministry of Agriculture has also formulated a model Law on agricultural marketing for guidance of and adoption by State Governments. APMC Model Rules based on the Model Law are

under formulation in consultation with States. The legislation provides for establishment of private markets/yards, direct purchase centres, consumers'/farmers' markets for direct sale and promotion of public-private partnership in the management and development of agricultural markets, constitution of State Agricultural Produce Marketing Standards Bureaus for promotion of grading, standardization and quality certification of agricultural produce. This would facilitate pledge financing, direct purchasing, forward/ futures trading and exports.

Still, the Institution of regulated market has achieved a limited success. These markets, once conceived as panacea of all ills for the farmers in the marketing their produce, have simply ended up as revenue generating institutions for the state exchequer throwing the farmers' interests to the backburner.

Constraints For Agricultural Marketing System In India

1. Variations in market fees, sales taxes, and other tariffs/taxes across the states, multiplicity of standards, multiplicity of food laws/ implementing authorities have made the agricultural marketing system of the country a fragmented one.
2. **Smaller Size Land Holdings:** It is difficult to ensure economies of scale at the grass root level, more than 70% of the farmers being small and marginal. The probable solution for this is contract farming. The present legal system of many states is not congenial for contract farming, as there is risk of the farmer losing his ownership right on his land, the absence of a farmer-friendly and business-friendly disputes redressal mechanism, the absence of enforceability of contracts due to the inadequacies of the present law, i.e. Contract Act.
3. Long and multiple marketing channels.
4. Non-availability of finance.
5. Low level of processing (around two percent) and value addition.
6. Absence of proper Quality management system covering proper grading , standardization and proper certification.
7. Poor access of the farmer to quality inputs, finance, and state-of the art technology.
8. Inefficient public extension system and absence of a proper private extension system.
9. Inadequacy of infrastructure (poor tele-density, road connectivity, storage, transportation, packaging, absence of reefer vans and specialized markets etc.)
10. High post-harvest losses due to poor post-harvest practices.

11. Absence of a responsive market information system.
12. Absence of a vibrant futures market and poor linkage of the spot market with the futures market.
13. Poor quality consciousness amongst the consumers, partly due to low literacy and partly due to low income.
14. Unsystematic wholesaling and unorganized retailing with poor backward and forward linkages.
15. Poor warehousing and pledge financing.
16. Low use of the concepts of branding, positioning and promotion for agricultural produce unlike the industrial produce.
17. Absence of professionalism in the management of agricultural mandis.
18. Lack of the governmental policy to respect traders to be partners in different activities/ functions like extension, quality management, packaging, storage etc. for making the agricultural system of the country responsive in all respects.

Recent Reforms Initiatives Taken by Government of India

The government of India has taken several measures to improve agricultural marketing in India. The reforms have been listed in chronological order as follows:

- i. Restricted list of items under Essential Commodities Act was pruned.
- ii. 2001 - Restrictions on bulk handling & storage were withdrawn.
- iii. 2001- 100% Foreign investment permitted in storage & bulk handling .
- iv. 2002 - Licensing and restrictions on stocking & movement was withdrawn .
- v. 2002 - Restrictions on Access to Credit were withdrawn.
- vi. 2002 - Milk and Milk Products Order amended.
- vii. 2002 - Levy on sugar reduced to 10%.
- viii. 2003 - Lifted ban on futures trading (54) .
- ix. 2003 - Restriction on food processing - licensing & capacity withdrawn.
- x. 2005 - ECA Amendment Bill in Parliament .
- xi. 2005 - Integrated food law- Bill under consideration of Parliament.
- xii. 2005 - Warehousing Bill Introduced in Parliament .
- xiii. 2006- 51% Foreign direct investment in retail permitted for single brands .
- xiv. 2006- All Orders under Essential commodities act should be withdrawn.

Major Recommendations to Achieve Desired Growth of Four Percent In Agriculture Sector Through Agricultural Marketing

1. States need to amend their respective APMR act in the line of Model act to facilitate Contract farming, Direct marketing and Private markets in the country.
2. Ministry of agriculture formulated model rules/bye-laws (Agricultural Produce Marketing Development and Regulation rules) and it should circulate to different states for adoption.
3. Agriculture should be shifted from state list to concurrent list.
4. There should be binding of all states/UTs to
 - a. Hold regular APMC Elections
 - b. Plough back market fee
 - c. Modernization of regulated markets, rural haats and farmers markets
 - d. Liberalize licensing
 - e. Create primary value addition facilities
 - f. Allow direct purchases
 - g. Promote grading, packaging
 - h. Declare special markets
5. Promoting private investment in market infrastructure will lead to efficiency in planning, management and operation of existing and new infrastructure. (*As per the, Planning commission (2007)* estimates, total investment requirement for all the agricultural marketing infrastructure items is Rs. 64,312 crores, besides Rs. 43,000 crores for food processing sector, during the XI Five Year Plan .Out of Rs. 64,312 crores of investment requirement, Rs 12,000 crores can flow from RIDF, Rs. 5,000 crores from APMCs or SAMBs, and Rs. 30,625 from the private sector. Thus central sector outlay is proposed as Rs. 16,687 crores.).
6. The priority areas for strengthening the agricultural marketing system through private participation in the country are
 - Direct marketing (Farmers markets)
 - Terminal markets
 - Contract farming
 - Centers for Perishable cargo
 - Agri export zones
 - Special Economic zones
 - Supply chain and logistics – Cold storage, Ripening chambers, CA storage and MA storage etc.
 - Sorting , grading and Packaging and
 - Quality control labs
7. States to provide land for setting up of different infrastructural facilities.
8. Single window service needs to be given to the entrepreneurs.
9. There should be specialized markets for commodities like fruits and vegetables, flowers, medicinal and aromatic plants, spices and livestock (Expert committee recommended 241 fruits and vegetables markets, 15 specialized flower markets, 500 markets for medicinal and aromatic plants, 50 specialized markets for spices and 1000 livestock markets in the country .Planning Commission Report, 2007).
10. Develop a link between ‘Farmer-Market-Industry’ and food processing industries (Value addition) should be given more importance.
11. Tax incentives should be given to food processors.
12. Essential Commodities Bill should be passed.
13. Food Safety Bill (2006) was passed in the parliament and should be implemented effectively at ground level.
14. Warehousing Bill (2005) was passed and it should be implemented effectively at ground level.
15. Pledge financing and Ware house receipt system should be given importance.
16. Forward Contracts Regulation (Amendment) Bill should be passed.
17. There should be a Common trade language.
18. Publicity should be given to domestic market liberalization measures.
19. Promote free inter-state hassle free movement of agricultural commodities.
20. Grading and standardization need to be promoted.
21. Market Information System (MIS) should be made widespread and effective and focus should be laid on dissemination of right information to the farmers.
22. Market intelligence and Price forecasting should be given more importance.
23. HACCP, GAP and GHP need to be implemented and Food safety and Quality issues should be given more importance by setting up of Quality control labs in India.
24. Futures trading should be allowed in livestock products and steps need to be taken to integrate futures prices with spot prices.
25. For reaching the benefits of commodity futures markets to the farmers, National Electronic Spot Markets should be promoted.
26. To cover farmers’ risk, implement Farmers Income Insurance

scheme, Crop insurance, Livestock insurance and Weather insurance schemes.

27. Minimum support price purchases should be decentralized or outsourced.
28. Training should be given to farmers for Market led production instead of production oriented extension.
29. Training should be given for Organic certification and export certification procedures at farmers level.
30. An agency such as National Institute of Agricultural marketing should take responsibility for integrated system of agricultural markets data collection, data storage, and data analysis and data dissemination to different stakeholders those who involved in agricultural marketing.
31. Reform and redefine the role of State agricultural marketing boards, Commodity boards and different agricultural marketing institutions to rejuvenate the Indian agricultural marketing system.
32. Research and Development, and training centres should be set up for different stakeholders of agricultural marketing.
33. ICAR and university system should provide area specific solutions in agricultural marketing.
34. Encourage farmers associations, growers associations and Self Help Groups in agricultural marketing operations to reap economies of scale.
35. Success of alternate marketing systems like Group marketing and e-trading should be replicated in all parts of the country.
36. Marketing credit should be given at concessional rates of interest by different lending institutions to different stakeholders.
37. Existing storage and warehousing capacity should be increased at village level.
38. Create awareness regarding different agricultural marketing schemes and its subsidy components operated by different ministries and commodity boards to different stakeholders.
39. Emphasis should be given to Precision farming to promote market driven production in Horticulture sector.
40. Levy on rice and sugar should be removed.
41. Small scale reservation on Groundnut and Rice processing should be withdrawn.
42. Monopsony procurement of cotton should be withdrawn in states like Maharashtra.

Conclusion

Agriculture marketing in the country is going through a major

phase of transformation. This is a transformation from a highly regulated and controlled market to open alternative marketing channels for farmers at various levels and attract participation from private sector with its efficient management techniques and technologies in a major way. These reforms are aimed at creating an enabling environment for improving infrastructure, efficient supply chain and global competitiveness. The other major objectives of these reforms are to facilitate desired agricultural growth, sharing equitable benefits amongst all the stakeholders, catalyzing value addition and international trade.

The provision of private sector participation in establishing Terminal markets and other marketing related infrastructure such as warehouses, cold storages, refrigerated supply chains, grading and packaging facilities and cargo facilities at airports has started attracting private sector investment.

The suggested policies and implementation arrangements coupled with increased investment and participation from private players will create employment opportunities, increase agricultural output, income and increase marketing efficiency of agricultural commodities. The effective marketing of agricultural commodities increase our foreign exchange and revenues to Indian exchequer and leads to increase the National Income and Per-capita income of Indian farmers and different stakeholders those who involved in agricultural marketing. It may show the way to achieve the target of sustained four percent growth in agriculture sector and it may lead to achieve the targeted nine percent growth rate in Indian economy. [IER](#)

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INCLUSIVE GROWTH

PERFORMANCE AND FUTURE



IN INDIA PAST PROSPECTS

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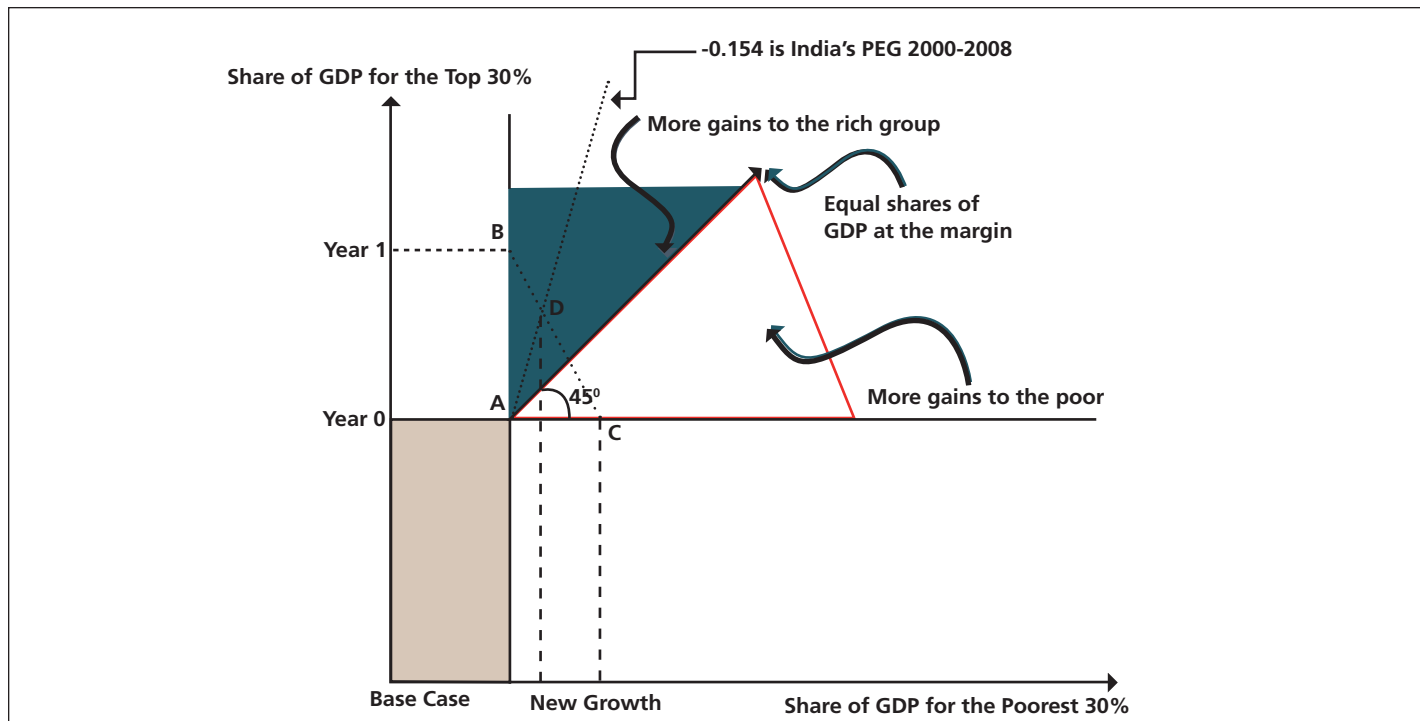
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I. Introduction

After three centuries of relative and often absolute poverty, India has in recent decades begun to return to its previous position as a global economic power, and this process has accelerated over the last few years. Growth in the Indian economy was quite low in the first 30 years of planning after Independence – from 1950 to 1980. Despite some fluctuations in the next two decades gradual but sustained improvement produced an average rate of growth of 5.7% per annum for the 20 years to 2000. Building on that base, the economy appears to have achieved take-off into a higher growth plane, with real GDP growth averaging 8.1% per annum in the three years 2003-04 to 2005-06, and the target growth rate of 8.5% over the 11th Five Year Plan period, 2007-12. While many challenges remain, the challenge of making India's economic growth more inclusive by reducing entrenched poverty is a principal challenge. The aim of this paper is to examine India's record in poverty reduction in recent years and to outline measures that might help to strengthen the channels through which the benefits of economic growth flow to the poor. The concept of inclusive or pro-poor growth is considered in section 2. A comparison of India's performance in reducing poverty with some of the Asian countries follows in section 3. How India's objective of more inclusive growth might be achieved in the future is discussed in section 4, before concluding the paper in section 5.

II. Inclusive Growth

India's government has made "inclusive growth" a key element of their policy platform, stating as a goal: "Achieving a growth process in which people in different walks in life... feel that they too benefit significantly from the process." (*Ahluwalia, 2007*).

Figure 1: Pareto Optimal and Pro-poor Growth

How a country may achieve a self-sustaining transition from traditional to industrial economies has been addressed by many contributions to development theory. Economic growth models do not establish or suggest, however, an explicit causal-effect relationship between a country's rates of economic growth and the resulting poverty reduction, although policymakers often assume an implicit connection. The current literature provides some guidelines about conditions under which economic growth might be 'inclusive' or 'pro-poor', although how these concepts should be defined remains controversial. One view is that growth is 'pro-poor' only if the incomes of poor people grow faster than those of the population as a whole, i.e., inequality declines (e.g., *Kakwani and Pernia, 2000*). An alternative position is that growth should be considered to be pro-poor as long as poor people also benefit in absolute terms, as reflected in some agreed poverty measure (*Ravallion, 2004*).

The nature of this debate can be illustrated in Figure 1, which depicts the share of GDP for the richest 30% population on the vertical axis and that for the poorest 30% of population on the horizontal axis. From a hypothetical base case scenario equilibrium represented by point A, potential benefits of a Pareto optimal growth strategy may be viewed to fall anywhere within the space bounded by the points BAC. For example, movement from

point A to point B in Year 1 represents a situation in which economic growth has raised the GDP share of the rich population, without making the poor any worse off. Alternatively, movement from point A to point C depicts the case in which the benefits of 'new growth' have raised the plight of the poor, but without making the rich any worse off. Any point situated on the 45 degree line would make the rich and the poor equally better off by dividing the benefits of growth equally between the two groups. Any point lying in the blue triangle would depict the larger share of the benefit going to the rich, just as any point in the unshaded triangle would depict the larger share of benefits accruing to the poor. Kakwani and Pernia's definition would require the impact of a pro-poor growth strategy to lie in the unshaded triangle (where the poor benefit more from growth), whereas Ravallion and Chen (2007) would accept growth to be pro-poor so long as the poor also benefit from growth (i.e., new equilibrium point lies anywhere to the North-East of point A, irrespective of which triangle). This is because by their definition, growth is still pro-poor, even if it results in greater inequalities. Indeed, that is precisely what has happened in India; the rich have benefited more than the poor from economic growth since 2000.

III. Poverty Reduction In India

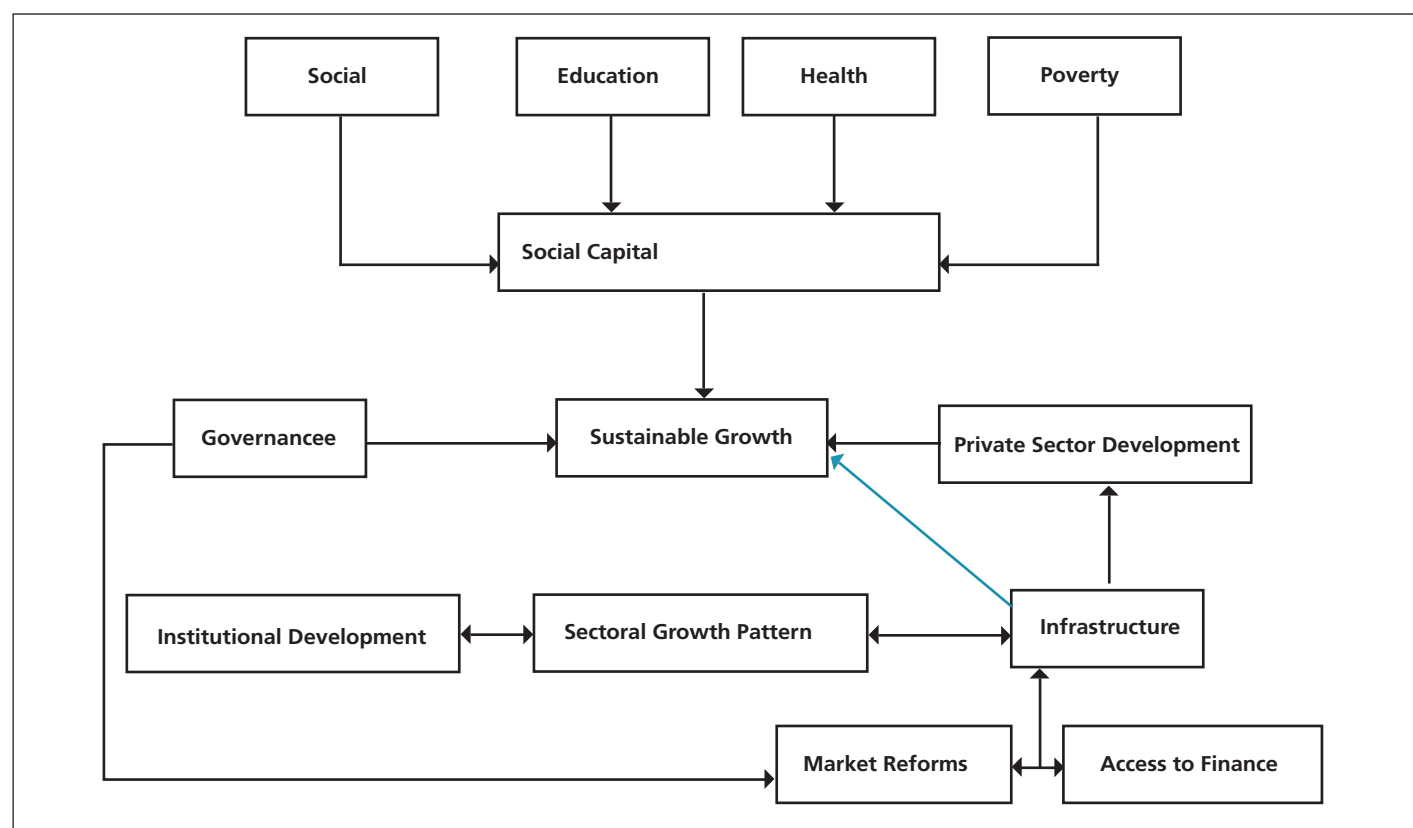
The measurement of poverty has also been not without controversy. Much of the literature on poverty relies on different measures of income-based poverty: defined in terms of national or international poverty lines (e.g., US\$ 1.00 per day or US\$ 1.25 per day). Recent studies, including the United Nations Development Program (UNDP 2008), have embraced the concept of multidimensional poverty: which includes income, consumption expenditure, malnutrition, literacy, and other indicators of welfare. Often, a country's performance in reducing poverty may turn out to be very different depending on whether multidimensional poverty or income poverty headcount ratios are used. For example, while Indonesia's performance in income poverty reduction between 2000 and 2008 was ranked at the top of the 15 countries studied by Habito (2009), that ranking dropped to fourteenth when the comparison was made using UNDP Human Poverty Index (HPI).

In India, poverty is measured in terms of household per capita consumption expenditure. Poverty lines, determined by the government for each Indian state are updated regularly. The latest poverty lines are based on the recommendations of the Tendulkar Committee Report (2009). At the national level,

poverty line for rural population is Rs. 446.68 while for urban population it is Rs. 578.8. Based on these poverty lines, 37.2% of India's total population was poor in 2004-05. In rural India, poverty was higher (41.8%) than in urban areas (25.7%). The Tendulkar Committee also updated the poverty lines for 1993-94 to allow comparisons to be made between the two periods. On the basis of these figures, it is possible to conclude that poverty headcount ratio for all India declined from 45.3% in 1993-94 to 37.2% in 2004-05. Thus, based on these figures one can safely conclude that growth in India has been pro-poor, as poverty has declined since 1993-94. Not everyone accepts this conclusion, however. The critics question the methodology used in the official estimates and argue that the actual number of poor is significantly higher than the official estimates and that poverty had actually increased between 1993-94 and 2004-05 (e.g., Patnaik 2010, and Mehrotra and Mander 2009).

In a recent study, Habito (2009) has published international comparisons of 15 Asian countries in reducing poverty. For 2000-2008, these comparisons paint a sobering picture of India's performance in achieving inclusive growth in recent years,

Figure 2: A Co-ordinated Strategy For Pro-poor Growth



because India ranks 11th, followed by Philippines, Mongolia, Singapore and Myanmar. Ahead of India in this league were (in that order) Indonesia, Pakistan, China, Malaysia, Thailand, Vietnam, Sri Lanka, Nepal, Bangladesh and Cambodia. The comparisons are made in terms of the poverty elasticity of growth (PEG), which measures percentage reduction in poverty for every one percent of growth in GDP. In Indonesia, Pakistan and China, PEG exceeded one, implying that one percent growth in GDP resulted in more than one percent reduction in poverty. For the other countries that were also ahead of India in this comparison, the values of PEG ranged from -0.806 for Malaysia to -0.469 for Bangladesh. India's PEG was -0.154, implying only modest reduction in poverty for every one percent increase in GDP. In terms of Figure 1, India's new growth could be said to have moved from point A in 2000 to point D in 2008, signifying that both the poor and the rich benefited from growth, but that the rich benefited far more than the poor.

IV. Strategy For More Inclusive Growth

The empirical evidence about the relationship between economic growth and poverty reduction suggests that no particular development model is uniquely pro-poor and that the relationship can only be considered empirically, at the case-by-case level. Nonetheless, it should be possible to draw some general conclusions regarding the major sources of pro-poor growth. The international evidence suggests that the rates of poverty reduction have been helped by rapid growth in agriculture, public expenditure on social services, particularly education and health, infrastructure and the quality of governance. For example, Ravallion (2008) concludes that China's success would not have been possible without strong state institutions implementing supportive policies and public investments: "China has had a tradition of building and maintaining the administrative capacities of governments at all levels, including the countless villages that were the frontline for implementing the crucial rural reforms that started in the late 1970s." (p.17). He further adds that promoting agriculture and rural economy is crucial to pro-poor growth, particularly in the early stages, given the potential for small-holder farming to rapidly absorb unskilled labour." Policies targeting social capital development and market reforms to address institutional and socio-cultural constraints should be adopted. The elements of the proposed strategy and the linkages among the various processes are summarised in Figure 2.

Growth in Agriculture

Recent literature suggests that while sustained economic growth must be a necessary condition for significant poverty reduction, it is not a sufficient condition: sectoral composition of economic growth also matters. Opinions differ, however, on which particular sectors are the sources of more pro-poor growth. Ravallion and Datt (1996) found that because poverty in most developing countries is concentrated in rural areas, growth in the agricultural sector and in the rural economy has been highly beneficial to reduce rural poverty. In another study of China, Ravallion and Chen (2007) found that the impact of the primary sector on headcount poverty reduction is 3.5 times higher than the impact of either the secondary sector or the tertiary sector; poverty reduction elasticity of agriculture is estimated at -7.85 as compared with the elasticity of -2.25 for non-agriculture. Virmani's study of India (2007) and Topalova (2008) confirm the importance of growth in agriculture for reducing poverty. Suryahadi et al (2009) also find that growth in agriculture has been decisive in reducing poverty in Indonesia.

This literature confirms that growth originating in agriculture generates among the highest benefits for the poorest households and the unskilled workers. Construction industry is the next best source of poverty reduction – also because of its unskilled worker intensity. De Janvry and Sadoulet (2010) find that growth originating in agriculture is nearly three times more poverty reducing than growth originating in manufacturing and nearly double that of growth originating in construction.

Hasan and Quibria (2004) reported, however, that whilst agriculture was the most effective in poverty reduction in South Asia and Sub-Saharan Africa, poverty reduction resulted in East Asia more from the industrial sector and in Latin America from the services sector. Other studies (*De Janvry and Sadoulet 2010, Habito 2009*) have also added public investment in social services, particularly education and health, and the quality of governance to conditions most likely to reduce poverty.

India's agricultural sector grew strongly in the wake of the Green Revolution. But, the contribution of agriculture to GDP has been on the decline in recent decades, dropping from 36 percent of GDP in 1980 to about 18 percent in 2007. The deceleration in agriculture has contributed to rural distress in many parts of the country and has affected both large and small farmers. The government of India has developed a strategy of accelerated growth, incorporating a near doubling of the rates of growth of agriculture, during the 11th Five Year Plan (2007-12). If it were to

materialise, rapid growth in agriculture should generate more opportunities for the poor to get employment and earn income. Agricultural growth will also generate higher demand for industrial products and assist the budgetary situation of the governments through higher growth of tax revenues, which could then be used to finance various anti-poverty programs.

Infrastructure and Energy

Infrastructure continues to occupy central stage in India's economic development strategies. The problem of energy scarcity is just one of the many infrastructure challenges facing India, as most other forms of infrastructure require substantial expansion and upgrading to meet the increasing demands of economic growth. The pressures on India's infrastructure are coming from a variety of sources, including rapid expansion of trade, a new priority for higher growth of manufacturing, the rapid pace of urbanisation, the revival and diversification of agriculture and the need to improve conditions of the rural economy.

These pressures are manifested in serious bottlenecks in moving people and goods across the country, and in sub-standard access to power, drinking water and sanitation for the vast majority of India's population. India's infrastructure facilities compare rather unfavourably with several other Asian countries. The 11th Five Year Plan proposes to raise investment in infrastructure to between seven percent and eight percent of GDP by 2012-13. Signalling a break from the traditional approach of keeping the provision of infrastructure within the public sector, the government of India has been keen to involve private sector investment in infrastructure.

The rejuvenation of agriculture noted above will also depend on ample supplies of water for irrigation, exacerbating the severe shortage of water in many parts of India, as well as the environmental risks associated with excessive extraction of underground water for irrigation. These pressures will be additional to those generated by rapid urbanisation for drinking water, sanitation and waste disposal.

Public Expenditure on Education

As noted above, several studies suggest that there is a correlation between inclusive economic growth and the level of public expenditure on social development (including education and health) (*e.g.*, *Habito* 2009). Literacy is arguably the most significant factor in poverty reduction as it enhances employability. The role played by literacy has been found to be particularly notable by

Ravallion and Datt (2002), who reported that nearly two-thirds of the difference between the elasticity of the headcount index of poverty to non-farm output for Bihar (the state with lowest absolute elasticity) and Kerala was attributable to the latter's substantially higher initial literacy rate.

In 2009, the Right to Education Act was passed, guaranteeing free and compulsory elementary education to children between six and 14 years old. The 86th Amendment to the Constitution of India makes education a fundamental right. The Act also obliges private schools to admit and educate at least 25 percent of children free of cost. Between 2003 and 2009, the number of enrollees in elementary education has increased from 57 million to 192 million (*World Bank* 2010). An estimated eight million children, who do not currently attend schools, are expected to benefit from the programme.

Literacy in India (for the age group five years and above) increased from just 18.3 percent in 1951, to 43.6 percent in 1981 and to 65.2 percent in 2005. However, the level of literacy varies significantly across states, genders and rural-urban areas. For example, Kerala has more than 90 percent literacy compared with Bihar at around 50 percent. There are large differences in urban – rural literacy rates in different age groups. It is disturbing, however, to note that literacy rate actually declined between 2001 to 2004-05 particularly in male literacy in most states including Kerala.

Public Expenditure on Health Care

India's public expenditure on health care, at 0.9 percent of the GDP, has been low even by developing country standards. The corresponding share is higher in Pakistan (1.0), Bangladesh (1.5), Nepal (1.5) Sri Lanka (1.8), and Bhutan (3.6) (UNDP 2004). India's public expenditure on health has been not only low, but has declined from 1.05 percent of GDP to 0.91 percent in the same period (GOI 2006c). Thus, the growth in GDP did not translate into corresponding increase in public spending on health. By comparison, public health expenditure in most of the OECD countries averages around five percent of their GDP (WHO 2006). India not only spends less on overall health, but public expenditure favours the rich quintile of the Indian society (NRHM 2006). One consequence of this imbalance is that skilled health personnel attend just 16.4 percent of births among the poorest 20 percent compared with 84.4 percent in the richest 20 percent.

Only 35 percent of the population has access to medicines. At

this stage of economic growth India needs to consider a new model to extend access to healthcare including medicines to its entire population. Malhotra (forthcoming) provides an equity-based healthcare model, which is affordable, implementable and sustainable.

Less than three percent of India's population has private health insurance. India's attempts in recent years to provide health insurance for the poor have not been successful. Around 25 percent of the poor do not even seek healthcare because of the costs (*World Bank 2002*). A case study by Singh (2010) shows that even in the wealthy state of Punjab, healthcare costs have led to farmers' sale of immovable assets and irrecoverable indebtedness.

A significant factor for the long term planning in healthcare is that Indians are now living substantially longer than a century ago and the population has slowly begun to age. The ageing factor plays a vital role in healthcare planning because the aged people are the major recipients of healthcare delivery. Table 1 shows that the share of the aged population increased 6.5 percent in 1981 to 7.4 percent in 2001, which is estimated to further increase to nine percent in 2016 (*GOI 2006*). Stark contrasts also exist in other health outcomes, such as infant mortality rate (IMR) and life expectancy. In Kerala for example, life expectancy for males and females is 70 years and 76 years respectively, followed by Punjab at 67.4 years for both. But in states like Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh, life expectancy is in the range of 55-60 years.

Governance Issues

All the above initiatives require a major role of government at all levels in India. Effective government interventions at all levels are crucial to minimise the leakages resulting from sloppy implementation and bureaucratic corruption.

The growth of jobs in India depends mostly on the growth of business in the private sector. A vast majority of Indians are either self-employed or are employed in the unorganised sector. Perceptions of India's business environment, especially of India's bureaucracy continue to be unfavourable, and there are many reports of serious delays in getting official approval for business related procedures. One source often used for assessing the quality of business environments in different countries is the Doing Business series of reports published by the World Bank group. According to the International Finance Corporation Report Doing Business 2009 (*IFC 2010*), India is ranked 182nd of 183 countries in enforcing contracts, 175th in dealing with con-

Table 1: Share of the Aged Population In India

Year	1981	1991	2001	2016 (est.)
Percentage	6.5	6.8	7.4	9
Total number (million)	43.5	61.4	76.6	114.2

Source: Estimates are derived from Government of India (2006a, and 2006b).

struction permits, and the second slowest country for closing a business. For starting a business, India's ranking is 133.

It is worth noting, however, that India is a federal country in which business procedures and bureaucratic performance vary significantly from one state to another. It may be misleading to form an impression on the basis of any single measure that purports to abstract from regional differences, as the above rankings do. This is because some of the states – for example Tamil Nadu, West Bengal, Karnataka and Punjab – have made considerable progress in streamlining their government regulations. On the other hand, states like Bihar, Uttar Pradesh, Madhya Pradesh and Orissa have still a long way to go before being able to attract large scale business investments. And these states are precisely the ones which have a high concentration of India's poor. These rankings are very low in a country that is aiming to increase business investment and capital inflows from abroad.

V. Conclusion

India's record of achieving inclusive growth was examined in the context of the experiences of some of the Asian countries. These comparisons show that although India's growth since 2000 has been beneficial to the poor, India's achievements are fairly modest relative to the other Asian countries. This calls for a concerted effort to make India's growth more inclusive in the future. Several measures are outlined to strengthen the sources of inclusive growth. The main thrust of inclusive growth strategies has to be on the following key areas: (i) employment and growth in agriculture; (ii) increased public expenditure on education and health; (iii) improved infrastructure; and (iv) more effective governance at all levels. [IER](#)

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INDIA'S PARADOX OF DEVELOPMENT AND UNDERDEVELOPMENT

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Surfacing Contrast

Development can be well perceived as a process of transition, which happens along a continuum of ever changing historical, socio-political and economic ideas and ethos in the life of a nation or society. Thus chasing for better living and expanding human capabilities can be termed as development and progress.¹ But our social time has thrown us with a new awareness of challenges of economic development and its growth, and many paradox and puzzles are encountered, more prominently in the developing and emerging nations. With such puzzles, the road to development has become contextual. In words of Herman Kahn 'there are many roads up each mountain and many mountains up to heaven. Modernization seems increasingly likely to take different paths in different countries.'² And David Rich rightly points out that these paths up the mountain of growth are determined by the internal conditions of each country and the wisdom of the political and economic leaders.³ Thus development possibly can no longer be seen in a universal paradigm rather each country examines development today within its own set of historical and various socio-economic parameters.

India's recent post reforms economic development landscape has utterly impressed and transformed the ideas and images of India amongst the transnational thinkers and analysts. As Kaushik Basu portrays Indian post reforms growth trajectory by saying that, since 1990s, with the dismantling of India's draconian licensing laws, the national income of India started growing at over seven percent per annum till 1997, and then for the entire decade it grew at around 6.5 percent.⁴ And in the bygone decade India's growth rate has even touched stunningly at eight percent with some hiccups during the global economic and financial meltdown phase. Thanks to such open economic policy for which India's economy has become world's agony today. India's information technology sector has substantially transformed its image and quality of its service sector and its human resource potentials. This new economy has given birth to a new rich middle class in urban India, who is upwardly mobile and have changed the perception of urban living standard in India. And going by sheer growth story, one can now hardly see any justification for our previous license-raj model of economic development. Moreover that model was never targeted for the disadvantaged, as Amartya Sen points out that 'four decades of allegedly 'interventionist' planning did little to make the country literate, provide a wide-based health service, achieve comprehensive land reforms, or end the rampant social inequalities that blight the

material progress of the underprivileged.'⁵ Modern India has emerged with an open model economic development, and this has given India a new economic identity in the world forum.

But this open model economic development of last two decades has not made any satisfactory trickle down effect and has not remained successful to end the long awaited appalling inequalities in India that Sen has mentioned above. India's stunning growth *per se* has not touched its vast impoverished population, who is still vastly deprived and marginalized and belongs to denied India. Several studies were made on growth and poverty relations, and it was very optimistically said that economic growth over a period of time reduces poverty, for example 'tertiarisation' of Indian economy after the reforms have accelerated the growth, which has a positive impact to reduce poverty.⁶ Government of India's poverty estimations also says that poverty ratio has declined in the aftermath of reforms to 27.5 percent in 2004-05 from 36 percent in 1993-94 (*Planning Commission Estimates, GOI*). But there are some other findings also, which contradict Planning Commission reports and quoting Kuldeep Nayar⁷ below, India's poverty scenario gets gloomier.

- 'Still more shocking is the report of a government panel, recommending that 50 percent of India's population should be given below poverty-line cards, which entitle its holders cheap food grain. That means 50 percent of India's population is still below the poverty line, that is, the earning is less than \$2 (Rs 90) a day. But even these figures would not have been available if the Supreme Court had not appointed its own committee, headed by Food Commissioner N.C.Saxena, to find out the veracity of the government claims. The Planning Commission still places the line of poverty at 28.5 percent. However, the recent Arjun Sen Gupta committee report says that 70 percent of the country's population does not earn more than \$2 a day.'

So if fifty percent of India's population is still poor, India has clearly emerged with divided worlds of haves and have-nots, and with progress and poverty. So in this post reforms India, it is even a worse to evaluate the conditions of the poorest and the dispossessed. The poor looks even poorer and suffers more compared to the nouveau riche class in modern India, and such enclave prosperity through microsoft or multinational or malls in urban India has actually left behind the masses at the periphery. And as rightly pointed out by Kausik Basu that on matter of basic needs and development of the most disadvantaged, India

unfortunately still has miles to go. Over the last few decades, inequality across the country has been rising, regional disparities have been growing, and unfortunately poverty and illiteracy continue to be high.⁸ Having such unmet challenges in human security front, it is probably not yet time for India to be a proud of its economic achievements. Unless such huge challenge of divided worlds of hunger and affluence is met, India's development story remains an unresolved enigma. It is clear now that India's development experiments have not shown any inclusivity, though it has turned out to be the best human resource hub in the world. This has emerged as a major challenge in India today with several manifestations of conflicts and violence.

Emerging Conflicts

'Changing India' portrays a modern urban-centric, knowledge-based economy, which but empowers only a miniscule of India's population and utterly neglects the vast stagnant India, which is eternally awaiting a resurgence. This stagnant India is the hub of our large population, who belongs to rural areas and is the tribal population who remain at the periphery of all the changes that are taking place in modern India. Despite the fact that our successive governments have crafted inclusive strategies and designed various plans, schemes, programmes, and policies, such strategies and plans have never been implemented earnestly and therefore have failed to address the infinite distress and misery of this section of population. They continue to suffer and feel increasingly threatened, marginalized and alienated in India's modernization process and are the hardest hit in times of a stagnant economy with rising commodity prices. The present UPA government is committed to transform such image of divided India. The challenge is truly enormous. The Prime Minister, had said once 'many of our citizens still live a life that I lived in my childhood.' That life is marked not only by the lack of education, healthcare, accessibility, connectivity and amenity, but also by the lack of opportunity.

The task of narrowing down such colossal disparity that has appeared at several fronts after India's economic reforms is truly gigantic. It is reflected at every level --- consumption pattern, infrastructural gap, investment scenario, and in the social sector

---health, primary education, drinking water and basic sanitation. The level of disparity is perhaps more glaring in eastern and central India – in fact in states like Bihar, Jharkhand, Chattisgarh, West Bengal and Orissa, the rural-urban landscape has assumed a core versus periphery dimension. Way back in 1994 UNDP rightly viewed that 'failed or limited human development leads to a backlog of human deprivation – poverty, hunger, disease or persisting disparities between ethnic communities or between regions. This backlog in access to power and economic opportunities can lead to violence.' Thus when people perceive threats to their immediate security, they tend to become less tolerant. Also if the basis of livelihood is eroded, political conflicts can be ensured; oppression and perception of injustice can surface violence against authoritarianism. Econom-

ic distress has given way to various militant movements and Maoist and other outfits in many of these states, seriously undermining the security scenario in this region. These security issues cannot be addressed without addressing the issue of underdevelopment. High degree of horizontal inequality over the years has led to grievance factor, surfacing several kinds of conflicts and internal wars within the country.

Conflicts and violence always leads to heavy development costs, so that promoting security becomes instrumental to it; and that inclusive pattern of development always remains desirable to avoid conflicts, so development is instrumental for achieving security, clearly making a nexus between the two.

The concept of horizontal inequality or inter-group inequality is highly relevant in explaining many civil wars across the world including that of our neighbour in Nepal. High intensity of internal conflicts in case of Nepal suggests that grievance is the prime motivating force to have Maoist insurgency in the country.⁹ Thus in the recent times economists have started paying much attention to internal conflicts, motivated by the pressing need to understand continued development failures. Such development failures at several fronts lead to grievance factor evolving due to a sense of injustice and the way in which certain social groups are discriminated and excluded in the development process. Often such discrimination has strong historical dimension and the inequality that arises from this

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process is described as horizontal inequality, which should be distinguished from vertical inequality across a relatively homogeneous community. Murshed and Gates¹⁰ have highlighted some of salient factors for which horizontal inequality mostly takes place.

1. Asset inequality, like land inequality, the dispossession of farm communities and limited poverty reduction due to economic growth are factors for highly unequal societies and leads to grievance across the deprived communities.
2. Unequal access to public employment and discrimination in allocation of public employment is also another cause for horizontal inequality and resentment.
3. Unequal access to public services and discrimination in access to schooling, health care and public sector jobs.
4. Economic mismanagement and absence of economic opportunities, associated with low growth rates and low human development indicators contribute to high grievance and resentment and risk for conflict also become high.

Such horizontal inequality which is distinctly seen across the population of India has happened due to various development policies which were either inappropriate or where implementation has remained unsatisfactory. Looking at one state in eastern India that is West Bengal, one can understand the degree of underdevelopment across its length and breadth. Despite having an unbroken chain of 33 years leadership of single political party and its stability since 1977, West Bengal has failed to perform satisfactorily in economic front. The left front came to power with an ideology and vision to change the grass root, to promote the causes of the under-privileged and the backward section of the population. Thus it aimed at inclusive development policy through redistributive mechanism with greater political, economic and social securities and justice with an empowerment at the lowest ladder and in the remotest area. Thus decentralization and people's power through Panchayat institutes, and land reform measures for better distribution of land and social infrastructure were the major thrusts of this government. But its economy today does not reflect any such achievements to a remarkable extent. Economist like Bibek Debroy argues that, 'in early 1960s, West Bengal was one of the most successful states in India, irrespective of the criterion used to measure development. In 2008, West Bengal is just below average, irrespective of the criterion used to measure under-development. Other states perform better and West Bengal falls consistently behind.'¹¹ One finds a gradual decline in economic performance in this state

and now it is one of the bottom ranking states in India, which is also at the crossroad of political chaos, and has lost various economic and investment opportunities with an utter failure in its industrial policy. Rural-urban income disparity and inter-district gap in economic performance has become a cause of serious concern, especially the growing gap between the metropolitan city of Kolkata and rest of the state. A study made by Sinha and Prasad¹² highlights that in West Bengal, 4612 revenue villages have been identified as backward, which has been redefined on the basis of extent of 'vulnerability' at the village level in terms of,

- i) The extent of its susceptibility to hunger, and
- ii) The extent of its ability to access public facilities for improving the quality of life.

Female literacy and employment opportunity were used as variables to capture the extent of poverty. Based on these broad parameters and certain criteria determined by the demographic and amenities data available from the digitized GIS (Geographical Information System) version of the 2001 census report, the study points out that a total number of 4,612 villages out of total number of 40782 villages have been identified by the Panchayat and Rural Development Department, West Bengal in 2004 as being the most backward in the state. Thus 11.31% of the state villages are most backward. All of these villages meet the following two criteria,

- Over 60% of the population belonging to the working age group are either with no work or are marginal workers.
- Over 70% of the females are illiterate.

Looking at the district level also, one finds in Table 1 that there exists a huge disparity within the state with some districts having as high as 33 percent villages as backward and some having only around 0.13 percent as backward. These backward areas demand urgent attention for all kinds of basic requirements in life, ranging from health, education, electricity, infrastructure and livelihood opportunities. So despite having a continued political stability, West Bengal has failed miserably to achieve an inclusive development for its people. The state has acute horizontal inequality, and various forms of conflicts and violence have become apparent in the state with Maoist insurgency being most prominent, affecting badly the state's overall progress and threatening its day to day security. Similar is the situation in other states in eastern and central India, where red terror now has drawn alarming attention of the policy makers on both the fronts of security and development.

Alternative Development

Rapid growth pushed by modern enterprises can not itself reduce the structural heterogeneity and contrast between modern urban enclaves and more or less backward rural economies. Thus if poor majority is excluded from the development process, then an effective and fair inclusivity becomes a central requirement for development.¹³ India's experiment with liberalized economic reforms has no wonder led to greater economic efficiency in terms of output growth and market operation, but such market operations as argued by Bhole may be efficient, but they are not be beneficent; such market outcome can be quite unjust, though there may not be a market failure. He rightly points out that the country rather needs to build a Human Social Order and not merely an Efficient Economy, thus a holistic perspective is essential.¹⁴ Therefore India's development experiment deserves a revisit and relocation along with Sen's re-approximation between ethics, economics and politics.¹⁵ Sachs views that moral inequalities usually results from social fabrics and can be overcome through responsible voluntarism, public policies, promoting necessary

institutional transformation and organising affirmative actions in favour of the weaker and voiceless segment of the country, the toiling majority deprived from opportunities for decent work and livelihood and condemned to waste their lives in the daily struggle for survival.¹⁶ To do so, the country necessarily needs to anchor an inclusive growth and inclusive market mechanism, which according to an ADB report can create and expand economic opportunities and can broaden access to those opportunities. Inclusive growth strategy necessarily takes the steps to reach the impoverished, who are excluded by circumstances of poor governance and other market resistant factors. Promoting access to opportunities requires expanding human capacities, especially to disadvantaged section of society by providing services like education, health, social protection and by providing policies and institutions and connecting poor to the market.¹⁷ On the other hand, improving rural infrastructure is essential to incorporate the rural masses in the development process through access to market and basic services and influencing rural economic growth and employment opportunities and incomes. Thus India needs to make linkages across several

Table 1: Villages and Population in Backward Districts in West Bengal: 2001

District	Total No. of Villages as per Census 2001	No. of villages identified as Backward by P & RD Department	% of Backward villages	Total Population in Rural area	Population of Back ward Villages	% of population in Backward Villages
Bankura	3,830	569	14.86	29,57,447	2,80,692	9.49
Burdwan	2,529	55	2.17	43,48,466	28,160	0.65
Birbhum	2,478	218	8.8	27,57,002	1,65,990	6.02
Dakshin Dinajpur	1,638	184	11.23	13,06,324	93,874	7.19
Darjeeling	708	85	12.01	10,88,740	90,214	8.29
Haora	734	4	0.54	21,21,109	4,560	0.21
Hugli	1,915	21	1.1	33,54,227	8,136	0.24
Jalpaiguri	756	79	10.45	27,94,291	2,30,939	8.26
Koch Bihar	1,204	26	2.16	22,53,537	18,861	0.84
Malda	1,799	602	33.46	30,49,528	7,82,132	25.65
Purba Medinipur	3,038	9	0.3	40,53,924	1,735	0.04
Paschim Medinipur	8,702	637	7.32	45,73,595	2,10,407	4.60
Murshidabad	2,210	242	10.95	5,133,835	4,59,873	8.96
Nadia	1,346	59	4.38	36,25,308	98,672	2.72
North 24 Parganas	1,584	2	0.13	40,83,339	964	0.02
Puruliya	2,683	994	37.05	22,81,090	8,52,062	37.35
South 24 parganas	2,140	66	3.08	58,20,469	78,355	1.35
Uttar Dinajpur	1,508	760	50.53	21,47,351	11,60,647	54.05
TOTAL	40,802	4,612	11.30	5,77,49,582	45,66,273	7.91

Source: BK Sinha and RR Prasad, 2010

such socio-economic factors and groups to reduce horizontal inequality and address the grievance of the people. Markets, as pointed out by Soros are among several institutes participating in the development process and they are by nature myopic and socially insensitive, amoral, therefore their regulation and re-regulation is urgently needed.¹⁸ Thus linking several markets of both rural and urban sectors of India through public intervention can gradually incorporate the marginalized section and can empower the heterogeneous communities to participate in the process of the transition. Subscribing the views of Friedman the empowerment of communities and the opening of space for direct democracy constitute the key to development policies, evolving a new paradigm through dialogue, negotiation and contractual links between development stakeholders.¹⁹ This according to Sachs will grow bottom-up initiatives.²⁰ However along the lone of argument of Sachs, one can say that national development strategy can not be built up simply by aggregating local development initiatives. Rather these initiatives need to be harmonized to seek collaborative arrangements and synergies but not by wasteful duplications. Such level of inclusive development strategy, given a certain degree of commitments at policy implementation level can actually find economic growth with equity and justice in the long run in India, and can attempt to bridge the gap between the worlds of hunger and affluence. [IER](#)

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)



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ELIMINATING CHILD LABOUR IN INDIA: STILL A MIRAGE!!!

Introduction

“The world is falling short in its promise and commitment to ensure that every child enjoys a safe and nurturing childhood. The convention on the rights of the child which came to force in 1989, provides children –in both rich and poor countries –the right to a childhood in which they can learn, play, be healthy, and develop. However, 18 years after the adoption of the convention and after more than 18 years of market lead economic growth, governments and international community is still far from fulfilling children’s rights and creating a world fit for children” (*Minujin, Enrique, Gonzalez and Davidzuik, 2005*).

Children have the right to a joyful childhood. Every child has the right to grow up in a safe and nurturing environment with protection and guidance from their guardians. Whether in the cities or in villages, at home or in schools, a child is always a child and deserves a childhood free from exploitation and abuse. Yet millions of children are being robbed of their childhoods every day.

UNICEF uses the Article 32 of the Convention on Rights of the Child (CRC), which articulates child labour as “any work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, spiritual, moral or social development”, as the foundation of its work in India. International Labour Organisation (ILO), has defined child labour as that which includes “Children prematurely leading adult lives, working for longer hours for low wages under conditions damaging

to their health and to their physical and mental development, sometimes separated from their families, frequently deprived of meaningful education and training opportunities that could open up them a better future”.

“Child labour hampers the physical, intellectual, emotional and moral development of children. Children who are in the growing process can permanently distort or disable their bodies when they are forced to carry heavy loads or adopt unnatural positions at work for long hours. Also, since children are less resistant to diseases compared to adults, they suffer more readily from chemical hazards and radiation than adults” (*Sreenath and Sreenath, 2006*). The problem of child labour continues to sham a challenge before the nation.

India is said to be having highest number of child labour in world. Even today after more than six decades of independence with various legislations and policies coming into existence, the problem of poverty still continues to hold alarming proportions in India.

Government has been taking various pro-active measures to deal with this problem. However, considering the scale and magnanimity of the problem and that it essentially being a socio-economic problem inextricably connected to poverty and illiteracy, it requires concerted efforts from all sections of the society to make a dent in the problem. The complex issue of child labour is a developmental issue worth investigating. The notion that children are being exploited and forced into labour, while not receiving education crucial to development, concerns many people. India is the most

Child labour hampers the physical, intellectual, emotional and moral development

startling example of a nation plagued by the problem of child labour.

The present paper aims to proffer a holistic or integrated approach to critically analyse the secondary data provided by NSSO on magnanimity of child labour in India. The data used in the present paper is analysed in the backdrop of current socio-economic situations which affect the lives of children and the conclusion deduced reveals a bleak

situation of child labour with the panacea lurking somewhere in the distant horizon.

Child Labour In India

Child labour is a tangible expression of violations of a variety of rights of children and is recognised as a grave and extremely composite social quandary in India. Working children are denied their right to endurance and growth, education, leisure and play, and sufficient standard of living, prospect for developing personality, talents, mental and physical abilities, and safety from cruelty and neglect. Despite the increase in the enrolment of children in elementary schools and increase in literacy rates since 1980s, child labour continues to be a blemish. In India, the problem of child labour is deeply rooted. There are varying estimates of the number of working children in the country due to differing concepts and methods of estimation. In 2004, there were 218 million children engaged in child labour, excluding child domestic labour.' Some 126 million children aged 5-17 are believed to be engaged in hazardous work. It is estimated that children represent 40-50 percent of all victims of forced labour, or 5.7

Some 126 mn. children are believed to be doing hazardous work. 5.7 mn. are trapped in forced labour

million children are trapped in forced and bonded labour. Children working in the home of a third party or 'employer' are extremely vulnerable to exploitation and abuse. ILO estimates that more girls under age 16 are in domestic service than in any other category of work.

The Table-1, shows the percentage of children in total population. As per

Table 2: NSSO Estimate of the Magnitude of Child Labour In India, 1993-2004/05 (In Millions)

Year (Round)	Boys	Girls	All
1993-94 (50 th Round)	7.35	6.51	13.86
1999-00 (55 th Round)	5.37	4.71	10.13
2004-05 (61 st Round)	4.76	4.31	9.07

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

2001 Population Census, children in the age group of 0-14 constituted about 360 million which accounted for 35.3 percent of total population. Children in the 5-14 age groups constituted about 251 million and constituted for 24.6 percent of the population. Though there is an increase in the absolute number of children, the proportion of children in the total population is declining between 1991 and 2001. By Census of India projections, the proportion of children (0 to 14) has further come down to 32.1 percent during 2006. Elementary school age children (5 to 14) in the total population constituted 241.7 million accounting for 21.7 percent of the total population. This indicates that there is decline in the proportion of children population in some states whereas in some other states it is not so, mentioning variations in children population across different states. "The reduction in the proportion of children is attributed to drastic reduction in the Total Fertility Rate (TFR) in many of the major states, especially in Kerala, Andhra Pradesh, and Tamil Nadu, Maharashtra and Gujarat. On the other hand TFR remains high in some of the major states like Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh. Thus, the segment of child population varies across states depending on the TFR. It is seen that the Proportion of children in the population has implications for the incidence of child labour. Number of empirical studies on child labour

Table 1: Percentage of Children In Total Population

Age group	1991	2001	2006*
0-4	12.0	10.7	10.4
5-9	13.2	12.5	10.7
10-14	11.9	12.1	11.0
5-14	25.1	24.6	21.7
0-14	37.2	35.3	32.1

Source: Population census 1991 & 2001 & population projections, based on 2001 census of India (2006) including Jammu & Kashmir. Population Census 1991 and 2001 and Population Projections, Based on 2001 Census of India, (2006) including J & K 2006*: Projected data

Table 3: Changes in the Magnitude of Child Labour & WPR between 1991 & 2001 (Children in the Age Group of 5-14)

States	Child Workers 1991	Child Workers 2001	Work Participation Rates		%age Share of Child Labour in the State	
			1991	2001	1991	2001
Andhra Pradesh	16,61,940	13,63,339	9.98	7.7	14.7	10.8
Arunachal Pradesh	12,395	18,482	5.65	6.06	0.1	0.1
Assam	3,27,598	3,51,416	5.46	5.07	2.9	2.8
Bihar	9,42,245	11,17,500	3.99	4.68	8.3	8.8
Chhattisgarh (new)	-	3,64,572	-	6.96	0.0	2.9
Delhi	27,351	41,899	1.27	1.35	0.2	0.3
Goa	4,656	4,138	1.95	1.82	0.0	0.0
Gujarat	5,23,585	4,85,530	5.26	4.28	4.6	3.8
Haryana	1,09,691	2,53,491	2.55	4.78	1.0	2.0
Himachal Pradesh	56,438	1,07,774	4.55	8.14	0.5	0.9
Jammu & Kashmir	-	1,75,630	-	6.62	0.0	1.4
Jharkhand (new)	-	4,07,200	-	5.47	0.0	3.2
Karnataka	9,76,247	8,22,665	8.81	6.91	8.7	6.5
Kerala	34,800	26,156	0.58	0.47	0.3	0.2
Madhya Pradesh	13,52,563	10,65,259	8.08	6.71	12.0	8.4
Maharashtra	10,68,418	7,64,075	5.73	3.54	9.5	6.0
Orissa	4,52,394	3,77,594	5.87	4.37	4.0	3.0
Punjab	1,42,868	1,77,268	3.04	3.23	1.3	1.4
Rajasthan	7,74,199	12,62,570	6.46	8.25	6.9	10.0
Sikkim	5,598	16,457	5.18	12.04	0.0	0.1
Tamil Nadu	5,78,889	4,18,801	4.83	3.61	0.5	3.3
Tripura	16,478	21,756	2.29	2.79	0.1	0.2
Uttar Pradesh	14,10,086	19,27,997	3.81	4.04	12.5	15.2
Uttaranchal (new)	-	70,183	-	3.24	0.0	0.6
West Bengal	7,11,691	8,57,087	4.16	4.5	6.3	6.8
India	1,12,85,349	1,26,66,377	5.37	5.0	100.0	100.0

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

has associated large family size with high incidence of child labour (*VVGNLI, 1999*). “The demographic approach to child work has provoked a lively debate on the causal relationship between high fertility and the utility of children for the rural household” (*Michael 1991, Dyson 1997*).

The pattern of fertility is also linked to a variety of societal and educational factors. However the outcomes of these debates have so far been unconvincing. It can also be

observed that those States that have experienced rapid decline in TFR have also witnessed fall in the amount of child labour. On the other hand the Northern states in India where the trends in fertility decline have been somewhat slow the occurrence of child labour has in fact increased between 1991 and 2001. Now if we try to perceive a third perspective for Kerala, where the fertility rate is lowest, the state has achieved maximum literacy rates in the country

Table 4: NSSO Estimates of Child Labour In Major Indian States, 2004-05 (In '000)

State	Rural	Urban	All	%age Share of Child Labour
Andhra Pradesh	1,052	140	1,201	13.2
Assam	124	08	133	1.5
Bihar	333	30	364	4.0
Chhattisgarh (new)	225	31	263	2.9
Delhi	00	10	09	0.1
Goa	03	02	06	0.1
Gujarat	220	77	302	3.3
Haryana	83	14	99	1.1
Himachal Pradesh	36	01	37	0.4
Jharkhand (new)	167	38	206	2.3
Karnataka	510	41	571	6.3
Kerala	07	04	11	0.1
Madhya Pradesh	414	68	491	5.4
Maharashtra	664	84	783	8.6
Orissa	413	22	440	4.8
Punjab	23	21	101	1.1
Rajasthan	714	110	821	9.0
Tamil Nadu	95	79	173	1.9
Uttar Pradesh	1,620	459	2,074	22.9
Uttaranchal	59	03	64	0.7
West Bengal	488	217	690	7.6
India	7,445	1,525	9,075	100.0

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

with the frequency of child labour found to be negligible. Looking at these trends one can pertinently assert that the changes in the demographic composition (read fertility rates) in many states offer an optimistic ground towards abolition of child labour. The Table- 2 presents the lavation magnitude of the problem of child labour in India.

The Table, shows the NSSO estimate of magnitude of child labour in India, 1993-2004/05 in millions. It can be noticed that as compared to 2001 Census data, the 61st round of NSSO data in 2004-05 the number of persons working in age group of 5-14 years were 9.07 million. The Census survey is conducted at the beginning of every decade whereas the NSSO is conducted twice in each decade. Therefore, the NSSO data provides the mid-decade trends of various dimensions of the economy. It is interesting to note that in the 61st round of NSSO (2004-05) there is a declining trend as compared to earlier two rounds in the magnitude of child labour. Though it is heartening to know that the magnitude is declining, but still a very large chunk of children is working as labourers.

The Table-3 details the changes in the magnitude of child labour & work participation rate between 1991 & 2001. It clearly reveals that the trend on the magnitude of child labour is not consistent across the country. It shows that there is broad decline in the incidence of child labour in the Southern and Western Indian States and UTs between 1991 and 2001. On the contrary, the Eastern and North Indian

Table 5: Child Workforce Participation Rates In India, 1993-94 To 2004-05 (In %)

Year	Male			Female			All Children		
	5-9	10-14	5-14	5-9	10-14	5-14	5-9	10-14	5-14
Combined									
1993-94	0.99	12.08	6.35	1.21	11.64	6.12	1.09	11.88	6.24
1999-00	0.52	7.90	4.14	0.55	7.67	4.01	0.54	7.79	4.08
2004-05	0.25	6.35	3.33	0.28	6.42	3.32	0.26	6.38	3.33
Rural									
1993-94	1.16	13.85	7.20	1.43	14.10	7.26	1.29	13.96	7.23
1999-00	0.59	8.85	4.58	0.65	9.05	4.66	0.62	8.94	4.61
2004-05	0.26	6.80	3.54	0.27	7.42	3.73	0.27	7.09	3.63
Urban									
1993-94	0.47	6.63	3.58	0.48	4.51	2.52	0.48	5.63	3.08
1999-00	0.28	4.88	2.65	0.21	3.40	1.85	0.25	4.18	2.27
2004-05	0.21	4.78	2.59	0.30	3.28	1.89	0.25	4.05	2.25

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

Table 6: Child Workforce Participation Rates In Major Indian States, 2004-05 (In Percent)

State	Age Group			All Population
	5-9	10-14	5-14	
Andhra Pradesh	0.56	12.38	6.61	50.48
Assam	0.19	3.44	1.82	38.55
Bihar	0.08	2.90	1.36	31.15
Chhattisgarh (new)	0.35	8.70	4.58	48.65
Delhi	0.00	0.49	0.26	33.21
Goa	0.00	5.35	2.70	35.03
Gujarat	0.14	4.83	2.53	46.79
Himachal Pradesh	0.16	4.97	2.73	52.35
Haryana	0.00	3.28	1.71	40.11
Jharkhand (new)	0.41	4.78	2.48	40.71
Karnataka	0.20	8.49	4.66	49.32
Kerala	0.00	0.39	0.20	39.33
Madhya Pradesh	0.14	5.74	2.82	43.30
Maharashtra	0.22	6.27	3.42	46.63
Orissa	0.50	9.18	4.87	43.64
Punjab	0.05	3.16	1.73	41.65
Rajasthan	0.41	9.42	4.86	43.32
Tamil Nadu	0.00	2.83	1.51	48.58
Uttar Pradesh	0.40	7.73	3.92	36.29
Uttaranchal (new)	0.00	5.07	2.61	43.90
West Bengal	0.32	6.45	3.47	38.04
India	0.26	6.38	3.33	42.02

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

States and UTs it shows an uphill move. There is an increase in the absolute degree of child labour between the time period 1991 and 2001 in the states of UP, Bihar, Rajasthan, Punjab, Haryana, Himachal Pradesh and Madhya Pradesh. If we combine the bifurcated states from MP, UP and Bihar the boost in magnitude is much high than what is seen in the alienated states. In Kerala and Tamil Nadu the intensity of child labour is relatively low. But Andhra Pradesh, that had an uncertain division of the largest child labour force in the country, shows cutback in magnitude of child labour and work participation rates along with a staged increase in the enrollment of children in school. However, the census data clearly reveals that Andhra Pradesh is the second largest state in terms of magnitude of child labour.

The Table-4 shows NSSO estimates of Child Labour in major Indian States in 2004-05. From the NSSO data it is

evident that, Uttar Pradesh accounts for a bigger share of almost one-fourth of all child workforces in India followed by Andhra Pradesh, with 13 percent. Uttar Pradesh and Andhra Pradesh have captured the first and second place in terms of magnitude of child labour as listed in NSSO (2004-05) data. On the other hand Maharashtra and West Bengal correspondingly garnered nine and eight percent of India's child employment respectively. The share of Uttar Pradesh has radically shown inoculation when compared with the 50th round of NSSO data (1993-94) from less than 13 percent to close to 23 percent in 2004-05, which is a matter of serious concern needing immediate attention for probable remedy. The share of Andhra Pradesh seems to have declined fairly considerably yet remains significantly high.

Child Workforce Participation Rates in India, 1993-94 to 2004-05 (in %) is shown Table-5. It is obvious from the NSSO data that the work participation rates of children have been waning. Relating this data to the Sarva Shiksha Abiyan, during 2004-05, the work participation rate is immaterial for the children in the age group of 5-9; it is much prominent for the children falling in the age group of 10-14. This means that enrollment of children in primary schools has improved over a period of time after inception of Sarva Shiksha Abiyan in the year 2000. But at the same time it is disappointing to know that the drop out rates from schools seems to be higher at the middle school level and

Table 7: Estimate of Trends In India's Child Labour by Rural-Urban, 1983-2004/05 (in Millions)

Year	5-9	10-14	5-14
Combined			
1993-94	1.27	12.59	13.86
1999-00	0.63	9.50	10.13
2004-05	0.35	8.72	9.07
Rural			
1993-94	1.13	11.03	12.16
1999-00	0.60	8.05	8.65
2004-05	7.18	7.18	7.44
Urban			
1993-94	0.12	1.52	1.64
1999-00	0.07	1.32	1.39
2004-05	0.08	1.44	1.52

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

Table 8: Child Workforce Participation Rates In India by Caste 1993-94 To 2004-05 (In Percent)

Age Group	STs	SCs	OBCs	Others	All
1993-94					
5-9	2.85	1.13	N.A	0.86	1.09
10-14	24.02	13.90	N.A	10.06	11.88
5-14	12.32	6.97	N.A	5.33	6.24
1999-00					
5-9	1.43	0.50	0.56	0.27	0.54
10-14	14.87	8.87	7.96	5.17	7.79
5-14	7.71	4.50	4.14	2.74	4.08
2004-05					
5-9	0.45	0.22	0.19	0.10	0.20
10-14	7.31	5.26	5.21	3.93	5.12
5-14	3.79	2.80	2.87	2.03	2.74

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

therefore directly proportional to the Work Participation Rate for children in the age group of 10- 14. It can also be noticed that the work participation rate is higher in the rural areas as compared to urban areas. It is interesting to note that the work participation rate for girl child is higher than boys in general and in rural areas. This indicates that children work participation rates are also gendered. Though this shows the picture that emerges at the all India level, yet there many are states with much higher work participation rates for children.

Table 9: Child Workforce Participation Rates by Religion In India, 1993-94 To 2004-05(In Percent)

Age Group	Hindu	Muslim	Christian	Others
1993-94				
5-9	1.20	0.74	0.28	0.26
10-14	27.12	20.35	18.21	4.90
5-14	8.88	6.36	6.03	2.58
1999-00				
5-9	0.56	0.54	0.20	0.54
10-14	7.91	7.81	5.89	7.79
5-14	4.15	4.00	3.15	4.08
2004-05				
5-9	0.25	0.40	0.04	0.26
10-14	4.71	6.58	3.12	4.90
5-14	2.48	3.47	1.63	2.58

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

NSSO data 2004-05 reveals that work participation rates for children in the age group of 5-9 is less than one percent in all the states. The data given in Table-6 is an alibi for itself that the work participation rate for children in the age group of 10-14 remains higher ranging from less than one percent in Kerala to 12.38 percent in Andhra Pradesh. There are many states A.P., Chhattisgarh, Karnataka, Maharashtra, Orissa, Rajasthan, UP and West Bengal where the work participation of children is notably high. The work participation rate for children (10-14) is higher than the National average of 6.38 percent in these states.

Social Dimension of Child Labour In India

The persistent and prevailing social framework of a country is an indicator of its social dimension. The social dimension may comprise of extended social group having a distinctive cultural & economic organisation. Within this social organisation there are different compartments of class, caste, gender, religion etc which are very much pronounced. And so the class and caste hierarchy is prominent in the social fabric. These hierarchies are determined /defined by various factors such as rural-urban divide, regionalized sub-castes, majorities vs. minorities, scheduled castes and scheduled tribes and the likes.

Determinants of Child Labour

Rural Urban Divide: Rural-urban divide, particularly in post-colonial countries, have for long been one of the causes of concern for the policymakers. This rural urban divide leads to the disparities are visible in all spheres of human life - economic and non-economic. The extent of disparities, however, differs from country to country. The long colonial rule in India had created an urban-rural divide. What causes immense worry is the sharp rise in the level of disparities after more than six decades of planning, especially because planning was conceived as an instrument to narrow down rural-urban disparities.

Data on NSSO estimates on rural-urban magnitude of child labour is shown in Table-7. It is shocking to note that about 90 percent of the working children are concentrated in the rural areas. They not only work in farm sector but also in various non-farm activities in rural areas. This shows government's narrow control of the law which focuses only on visible forms of child labour in urban areas but neglects

Table 10: Industries that Extract Child Labour

Industry	Locations
Matches, Fireworks & Explosives	Sivakasi
Glass & Bangles	Ferozabad
Beedi Making	Nizamabad, North Arcot District
Carpet Making	Bhadoi, Varanasi, Mirzapur, J&K
Lock Making	Aligarh
Brassware	Moradabad
Export oriented Garnet Industries	Tirupur
Gem Polishing export industries	Jaipur, Rajasthan
State Mines & Manufacturing Units	Markkapur
Leather Units	Agra, Kanpur, Durg, Rajasthan
Diamond Industry	Surat

Source: Derived from Individual Unit Level Records of Sarvekshana (Various Issues)

the rural areas where a large proportion of children are engaged in labour work - recognised or not recognised. Further they continue as pool of discounted labour supply to be migrated to urban areas along with their families in the event of any misery in rural areas. The 2004-05 NSSO data reflects that out of 9.07 million child labourers, 12.16 million were in rural areas. This leads to an assertion that, the problem of child labour in India is fundamentally a rural problem and phenomenon rather than urban. It may show a downhill inclination in the universal degree of child labour in India, but at the same time it is equally true that the concentration of child labourers in rural areas continues to be significantly high.

Caste: In country like India caste background of an individual is one of the major determinants of the persistence of child labour. Since ages varna and jati have been the discerning factors for work (read labour) in India and even today in spite of wholesome development in all the sectors the developmental policies have not been successful in eradicating child labour instilled by caste division.

Child workforce participation rates in India by caste 1993-94 to 2004-05 (in percent) NSSO data on caste-wise break-up of workforce participation rates shows that the children amid lower castes are more susceptible to labour

related abuse in India. It is clear from the Table-8 that there is inverse relationship between the caste and children working as labour. The children belonging to higher caste hierarchy, the lower the participation rates of children as labour and vice versa. The NSSO data 2004-05 shows that the children among scheduled tribes are twice likely to be occupied in gainful economic actions than the 'others' fundamentally strained from upper castes. Approximately three percent of children who belonged to scheduled castes were occupied in some type of employment as against two percent of 'others' castes. A close review of data further reveals that the children in the age group of 10-14, their work participation rate is highest for STs followed by SCs and other castes reflecting a kind of caste hierarchy in the society. The data in effect shows that the children belonging to ST, SC and OBC are more vulnerable and prone become child labour than the other castes.

Religion: Religion shapes domestic, economic and political institutions. The performances and act of individual are directly and indirectly inspired by religious ideals. In India Hinduism is gauge for pointing out the other religions. The religion wise break up of working children shows the work participation rate is higher among Minority religious

communities than that of the children otherwise hailing from Hindu groups and others during 2004-05. During the same period, 6.5 percent of children in the age group 10-14 among Muslim children were engaged in gainful employment as against over 4.5 percent of Hindu children. The data in Table-9 also reveals that the reluctance in work participation rates among Muslim children is slower than other groups

over a period of time. Thus, it can be said that this is reflective of long-term neglect and discrimination of minority religious groups in job market and educational opportunities.

Child Labour Prevalent In Different Industries

India has the largest number of working children in the world, with credible estimates ranging from 60 -15 million. Below, we look at some industries that enslave children -

Almost 60,000 children are employed in the glass and bangle industry, under bad working conditions

some of these are in the export business, producing the ever so attractive, yet cheap goods that attract the attention of foreign consumers, some of them cater more to the domestic market and others are in the service business – all profit oriented businesses, churning the wheels of our economy, all at the cost of innocent children. Here is a look at the various labour activities involving children, across the length and breadth of India.

Child Labour In The Agricultural Sector: According to a recent ILO report about 80% child labourers in India are employed in the agriculture sector. The children are generally sold to the rich moneylenders to whom borrowed money cannot be returned. In agricultural sector bonded labour is prominently visible.

Children Employed at Glass Factories:

According to recent estimates almost 60,000 children are employed in the glass and bangle industry and are made to work under extreme conditions of excessive heat.

Child Labour In Matchbox Factories: Of the 2, 00,000 labour force in the matchbox industry, experts claim that 35% are children below the age of 14. They are made to work over twelve hours a day, beginning work at around 4 AM, everyday.

Carpet Industry: According to a recent report by the ILO

almost 4, 20,000 children are employed in the carpet industry of India.

Gemstones: At international level India is known to exports gems worth of hundreds of millions of dollars per year. The majority of the gems are diamonds, which are processed and polished in Surat, Gujarat, and emeralds which are polished in Jaipur, Rajasthan. But the other side of it shows altogether a different and dark scenario where large masses of children work. The children are cheap source of labour are very commonly engaged as "apprentices", in the gem

polishing industry. These children are compelled to work 10 hours a day and during the initial two years they receive a peanut remuneration and the learning process takes five to seven years. After the two years, a child worker is paid 50 rupees per month. What is disappointing is the fact that most of the children who are working with such industries are suffering from incurable diseases at a tender age.

Burra (1995) in her study mentioned that more than 30 percent of the children get tuberculosis, due to unhygienic conditions, overcrowding, and malnutrition. Major health issues comprise of body aches, finger tips grazed by the polishing disc.

Child Labour In Brassware Industry:

Moradabad, Uttar Pradesh has a blossoming brass industry that exports products such as vases, figurines, planters, tableware, dinner services, and tea sets all over the world. In

Child labour is considered to be a "necessary evil" in poor countries such as India for the maintenance of the family

Table 11: Where Do These Children Work? (2006)

Activities	Children of Age Group (5-14 Yrs)					
	Number of Children (%)			Number of Children (in 100's)		
	Boys	Girls	Total	Boys	Girls	Total
Children engaged in 'economic activities'	4.18	3.86	4.02	52,967	45,618	98,392
Attended domestic duties only	0.30	3.15	1.67	3,770	37,208	40,788
Attended domestic duties plus free collection of goods, tailoring, wearing for HH only	0.25	1.92	1.06	3,178	22,693	25,897
Children at work	4.73	8.93	6.75	59,915	1,05,519	1,65,077
Attending Schools	72.98	61.45	67.44	9,25,350	7,25,964	16,51,186
Children neither at work nor at school	17.26	20.42	18.80	2,18,889	2,41,255	4,60,205

Source: As compiled by Pradeep Narayanan, (2006)

Table 12: Coverage Under National Child Labor Project

State	Districts	Sanctioned School	Coverage Children	Actual Schools	Coverage Children
Andhra Pradesh	20	807	43,550	610	36,249
Bihar	08	174	12,200	173	10,094
Gujarat	02	040	2,000	023	1,254
Karnataka	03	100	5,000	024	1,200
Madhya Pradesh	05	138	9,800	087	6,524
Maharashtra	02	074	3,700	024	1,200
Orissa	16	430	33,000	239	14,972
Rajasthan	02	060	3,000	054	2,700
Tamil Nadu	08	379	19,500	307	14,684
Uttar Pradesh	04	150	11,500	105	7,488
West Bengal	04	219	12,000	164	8,250
Total	76	2,571	1,55,250	1,810	1,04,615

Source: As compiled by Pradeep Narayanan, (2006)

this industry also a very huge proportion of children in the age group of 6-8 years are working. Approximately 50,000 children are working for long hours in this industry. Children are occupied in almost the entire process of brassware productions – removing molten metal from molds, near furnaces, directly exposed to temperatures of approximately 2000 degrees F, electroplating, polishing, applying chemicals to the wares. They are also said to be suffering from many chronic diseases like tuberculosis and other respiratory diseases, due to the constant inhalation of fumes from the furnaces and metal dust while working.

Leather Industry and Child Labour:

Another labour intensive industry that employs as many as 25,000 children in the age group 10-15 years is the footwear industry. In order to manufacture shoes and supply it to the emergent market of Europe and the US these industries are also employing large proportion of cheap child labour. What is more shocking is that around 80 percent of the children work for contractors at home. Children work on soling of leather with glue. They work in cramped poorly lit rooms and are also said to be suffering from respiratory problems, lung diseases and skin infections due to continuous skin contact with industrial adhesives and breathing vapors from glues. Children are reported to be functioning in shoe factories all through Agra, including road stalls, and in small factories unit.

Child Labour In Lock Industries:

According to researchers there are about 50,000 children employed in the lock industry.

In the perspective of globalization new faces of child labour are emerging in India. Many children are said to be enrolled with school but then majority of them are working children and hardly goes to the school. According to a UNICEF report, World's Children 2006, India has the largest number of working children and 17 percent of them are under the age of 15. Girls aged 12-13 are the preferred choice of 90 percent households. Over half of the working children (54%) are in agriculture, and most others are employed either in construction (15.5%) or in household work (18%). About five percent are in manufacturing jobs, and the remainder (about eight percent) are scattered across other forms of employment. The table below provides a gender-wise breakup of working children, and their schooling status. Please note that the data are for children in the age group 5-14 years.

Though the data provided by NSSO highlighted the plight of millions of children who are employed in various activities often as bonded labourers in India. It does not discuss the question of solving or reducing this problem of child labour.

Child labour is one of the major problems in India. The predominance of it is shown by the child work participation rates which are higher in Indian than in other developing countries. The key determinant of child labour is poverty.

Even though children are paid less than adults, but whatever income is earned by them is beneficial to their poor families. In addition to poverty, the lack of ample and available sources of credit forces poor parents to slot in their children in the harsher form of child labour -- bonded child labour. Often, child labour is considered to be a "necessary evil" in poor countries such as India for the maintenance of the family. In that context, some consider it virtuous to give a job to a child. In fact, some academics and activists campaign not for the reduction of child labour but only for a reduction in the exploitation of children.

Conclusion

Before plunging upon any conclusion it becomes necessary to find out the government action taken to deal with the problem of child labour in the country.

Measures Taken to Eliminate Child Labour

Table-12 reveals that in order to decimate child labour, around 76 child labour projects have been approved under the National Child Labor Project Scheme for covering 150,000 children. Around 105,000 children are already enrolled in the special schools. The Ministry of Labour has asked the Planning Commission for about Rs.1500 crore to cover all the 600 districts under the National Child Labour Project (NCLP) as against the 250 districts at present. Children working in 57 hazardous industries, in dhabas and homes (in the 9-14 age groups) would be covered under this project. Government schemes like the Sarva Siksha Abhiyan have been implemented. Along with the state of education in India also needs to be improved. High illiteracy and dropout rates are reflective of the insufficiency of the educational structure. Poverty plays a role in the futility of the educational system. Withdrawal rates are high because children are forced to work in order to sustain their families. The attitudes of the people also contribute to the lack of enrollment -- parents feel that work develops skills that can be used to earn an income, while education does not help in this matter. Compulsory education may help in regard to these attitudes

For a long time period child labour was not considered illegal in India except in specific hazardous occupations. Since October 2006, the Ministry of Labour has as well incorporated household work and employment in dhabas, tea stalls, and restaurants in the schedule of prohibited

occupations under the Act. This may lead to lay-off, of many working children, particularly in metropolitan cities and big towns. Along with this it will be necessary to take adequate measures to safeguard, rehabilitate, and educate these children.

National and State Commissions for the Protection of Child Rights

The National Commission for Protection of Child Rights has been notified. The process for setting up the full Commission is on track. One of the chief responsibilities of the Commission will be to check and report on implementation of child rights in India. The Eleventh Plan will ensure that similar Commissions for protection of child rights are constituted in all States and UTs at the earliest.

Child Budgeting

The Ministry of Women & Child Development has been analyzing allocations and expenditures on children since 2002-03. Government is all set to carry out this exercise of child budgeting regularly to monitor the 'outlays to outcome' and examine the adequacy of investments in relation to the situation of children in India in the Eleventh Plan.

It scripts a gigantic stride ahead in the area of women agency and child rights. It is ingrained in a rights structure that views women and children as agents, not recipients. It recognizes heterogeneity within groups, acknowledges manifold discriminations, and suggests pilots to embark upon them. Some of these pilots, it is hoped will develop into full-fledged schemes after the mid-term appraisal of the Plan.

Are There Missing Links?

Development of children is at the centre of the many government programme and five year plans. For long the government is keen to strive and create a protective environment, so as to ensure every child's right to survival, participation, and development. At the same time it is important to remember that while children have equal rights, their situations are not identical. Their requirements and entitlements are area-specific, group-specific, culture-specific, setting specific and age-specific and demand different sets of interventions. Looking at the present scenario it becomes necessary to find out and know that we are standing at

crossroads and nowhere to go. Are there missing links? Despite many efforts on the part of government India is said to be having largest number of child labour. Can we have a separate Bal Mazdoor Aayog to safeguard children from all forms of exploitation? Can Public Private Partnership (PPP) play a role to eliminate child labour? [IER](#)

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Paradox of Growth:

India's North-East In Context



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North-East and Indian Independence:

A Brief Political History

A fleeting glance at modern Indian history reveals that the past colonial rule had left a very hybrid and unnatural territorial structure before us at the dawn of independence. Precisely, we inherited 560 'Indias' which included princely states and 'Special Administrative Areas', primarily the North-Eastern states of India (Bhambhri, 2008:52-56). Since the colonial rule had followed a policy of 'separatism' / 'distinct and isolated administrative areas' to govern these North Eastern states, it became a daunting task before the Nehru-led government to frame a suitable policy of governance for these secluded North Eastern states which were completely separated from the mainstream British India. In addition, near absence of cultural and political assimilation of the tribes of North East with main-land India and limited impact of Indian freedom struggle on tribal dominated North Eastern states had made the situation more complicated (Chandra et al, 2008: 142). In Nehru's words, "the essence of our struggle for freedom was the unleashing of a liberating force in India. This force did not even affect the frontier people of in one of the most important tribal areas. Thus they never experienced a sensation of being in a country called India...their chief experience of outsiders was that of British officers and Christian missionaries who generally tried to make them anti-Indian... All this North -East boarder area deserves our special attention, not only the government's, but of the people of India. Our contacts with them will do us good and will do them good also. They add

to the strength, variety and cultural richness of India" (quoted in *ibid*: 142-143). With this conviction, Nehru with an able assistance from Verrier Elwin had laid down the following guiding principles for governance and development for the North Eastern states of India:

1. People should develop along the lines of their own genius and any imposition on the tribal people should be avoided. Their own traditional arts and culture should always be encouraged .
2. Tribal rights over land and forest should be protected.
3. Efforts have to be taken to train and build up a team of their own people to do the work of administration and development. Some technical personnel from outside will no doubt be needed, especially in the beginning. But introduction of too many outsiders into tribal territory should be avoided.
4. These areas should not be administered areas nor should these areas be overwhelmed with a multiplicity of schemes. Rivalry should be discouraged and the local social and cultural institutions need to be taken into account.
5. Results should be judged not by statistics or by the amount of money spent but by the quality of human character that is evolved.

– Jawaharlal Nehru, Extracted from the Foreword to A Philosophy for NEFA, by Verrier Elwin, 2nd Edition, 1959. Elwin, V. 1957. A Philosophy for NEFA. Directorate of Research, Government of Arunachal Pradesh, Itanagar, (1999 Reprint)

Some Basic Statistics and North-East

North Eastern India having a population of 39.04 million is basically a region consisting of eight States, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Among these eight States four States, specifically Mizoram, Nagaland, Meghalaya, and Arunachal

Table-1: Sectoral Compound Annual Rate of Growth (CARG) and Compound Annual Rate of Growth of Gross State Domestic Product (At Constant Price) Between 2000-2001 & 2006-2007

(in percentage)

STATE	CARG OF PRIMARY SECTOR	CARG OF SECOND-ARY SECTOR	CARG OF TER-TIARY SECTOR	CARG OF GSDP	RANK BASED ON GSDP GROWTH
ARUNACHAL PRADESH	1.6	17.9	6.2	7.6	3
MIZORAM	0.9	8.1	7.4	6.2	2
MANIPUR	4.9	17.9	2.6	7.8	4
NAGALAND	14.3	11.7	8.4	10.6	7
MEGHALAYA	5.3	8.5	5.3	5.8	1
TRIPURA	3.4	15.5	8.2	8.1	6
SIKKIM	6.1	14.0	5.9	7.8	5

Calculated From GSDP Data For 2000-2001 To 2006-2007(At Constant Prices), Source:www. mospi.gov.in

Table-2: Sectoral Contribution to Gross State Domestic Product (At Current Prices)

(In Percentage)

STATES	ORIGIN OF INDUSTRY	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ARUNACHAL PRADESH	PRIMARY	35.0	37.2	31.4	33.9	31.3	28.1	28.1	NA
	SECONDARY	19.1	17.2	27.5	21.9	26.3	32.3	31.9	NA
	TERTIARY	46.0	45.6	41.1	44.2	42.4	39.5	40.0	NA
MIZORAM	PRIMARY	23.0	20.3	21.5	19.9	19.5	18.6	17.6	16.3
	SECONDARY	15.6	15.5	15.3	16.2	16.4	15.7	15.9	16.0
	TERTIARY	61.4	64.2	63.1	63.9	64.1	65.7	66.5	67.7
MANIPUR	PRIMARY	26.9	29.6	28.8	29.0	29.6	26.1	24.0	22.5
	SECONDARY	22.3	21.6	21.7	23.6	25.8	35.1	37.9	40.3
	TERTIARY	50.8	48.8	49.5	47.5	44.6	38.8	38.2	37.3
NAGALAND	PRIMARY	28.1	30.3	31.4	32.1	31.5	32.8	NA	NA
	SECONDARY	13.3	12.8	13.1	14.3	14.0	13.5	NA	NA
	TERTIARY	58.5	56.8	55.5	53.6	54.4	53.7	NA	NA
MEGHALAYA	PRIMARY	33.4	33.3	35.3	33.7	34.5	32.3	32.3	31.6
	SECONDARY	14.2	15.2	13.8	14.6	14.4	15.3	15.8	15.9
	TERTIARY	52.4	51.5	50.9	51.7	51.1	52.4	51.9	52.5
TRIPURA	PRIMARY	31.1	25.9	28.2	26.3	25.9	25.0	24.2	NA
	SECONDARY	14.1	20.9	19.4	20.1	21.5	20.9	20.4	NA
	TERTIARY	54.8	53.2	52.4	53.6	52.7	54.0	55.4	NA
SIKKIM	PRIMARY	22.0	21.8	21.7	21.3	21.2	20.5	19.7	18.8
	SECONDARY	19.1	23.2	24.8	25.9	26.5	27.9	29.5	31.4
	TERTIARY	58.9	55.0	53.5	52.8	52.3	51.6	50.8	49.8

Calculated from GSDP data for 2000-2001 to 2006-2007 (at current prices), source: www.mospi.gov.in

Pradesh, are having tribal population in majority. The region had a literacy rate of 65.77 percent as against the all India average of 65.2 percent. National Committee on the Development of Backward Areas commissioned by Planning Commission in 1981 has identified three types of fundamental backwardness in the region viz. areas of tribal concentration, hill areas and chronically flood affected areas. The whole of the North-East has been categorized as an industrially backward zone.

All the North Eastern states therefore are treated as 'Special Category States' which require substantial financial and non-financial support from the Central Government. It currently gets 90 percent of its plan assistance as grants and the remaining 10 percent as loans which is 30:70 for non Special category states. Special Category States receive preferential treatment in the distribution of normal central assistance from state plans. From the total central assistance available for State plans, funds are earmarked for externally aided projects and special area programmes (hill areas, tribal sub plans, border areas, North-East Council, etc.). The Gadgil formula does not apply in the determination of the distribution between non Special Category States and Special Category States. Had the Gadgil formula applied on Special Category States, they would have been in disadvantageous position

since the formula assigns higher weights to population and deviation of per capita income from the national average.

Structural Change And North Eastern States: A Critical Review

The literatures on development economics have identified 'real economic growth' and 'growth of per-capita income' as two major indicators for ascertaining the pattern of economic development in different regions. However in the last few decades, narrowness of this concept has frequently been challenged. It has been argued that development must encompass the parameters like increase in life expectancy, access to sanitation, clean drinking water, improvement in health services, reduction of infant mortality, and increase in literacy rate of women, adults and women empowerment and so on so forth. As it is pointed out by Drèze and Sen, "... it is perhaps a mistake to see the development of education, health care and other basic achievements only or primarily as expansions of 'human resources' –the accumulation of 'human capital' ". However, several scholars have pointed out that higher per-capita income is correlated with indicators of the quality of life (Dasgupta, 1993; Mauro, 1993; Boone, 1996; Barro, 1996). It can safely be

Table-3: Share of Manufacturing and Construction to Secondary Sector and Share of Secondary Sector to Gross State Domestic Product (At Current Prices)

(in percentage)

STATES	ORIGIN OF INDUSTRY	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
ARUNACHAL PRADESH	MANUFACTURING	2.9	3.1	2.4	2.6	2.2	2.2	2.4
	CONSTRUCTION	13.9	12.1	23.2	16.6	17.2	21.4	20.8
	SECONDARY	19.1	17.2	27.5	21.9	26.3	32.3	31.9
MIZORAM	MANUFACTURING	1.6	1.5	1.4	1.3	1.3	1.4	1.5
	CONSTRUCTION	9.8	9.2	10.1	10.5	11.6	10.6	10.8
	SECONDARY	15.6	15.5	15.3	16.2	16.4	15.7	15.9
MANIPUR	MANUFACTURING	6.1	6.9	6.2	6.4	6.3	5.5	5.4
	CONSTRUCTION	12.0	10.1	11.0	13.0	14.9	25.3	27.8
	SECONDARY	22.3	21.6	21.7	23.6	25.8	35.1	37.9
NAGALAND	MANUFACTURING	1.9	1.7	1.6	1.6	1.6	1.5	NA
	CONSTRUCTION	10.0	9.8	10.3	11.4	10.9	10.5	NA
	SECONDARY	13.3	12.8	13.1	14.3	14.0	13.5	NA
MEGHALAYA	MANUFACTURING	1.8	1.7	1.5	2.2	2.3	2.8	2.8
	CONSTRUCTION	9.1	10.2	9.3	9.5	9.3	9.4	10.1
	SECONDARY	14.2	15.2	13.8	14.6	14.4	15.3	15.8
TRIPURA	MANUFACTURING	2.2	4.0	2.6	2.2	2.4	2.4	2.3
	CONSTRUCTION	9.0	14.6	13.9	14.7	16.2	15.6	15.2
	SECONDARY	14.1	20.9	19.4	20.1	21.5	20.9	20.4
SIKKIM	MANUFACTURING	3.9	3.6	3.4	3.2	3.2	3.2	3.1
	CONSTRUCTION	10.5	11.5	13.7	15.9	17.1	18.6	20.5
	SECONDARY	19.1	23.2	24.8	25.9	26.5	27.9	29.5

Calculated From GSDP Data For 2000-2001 To 2006-2007(At Current Prices), Source: www.mospi.gov.in

said that development is not all about income but it has significant role to play in achieving different socio-political and ecological and environmental attributes too. If we want to achieve Kuznets's (1966, 1971) prescribed path of development, then the process will follow a path where rapid increase in total factor productivity will bring high rates of per capita output and this in turn will put the per capita consumption at higher level and in the process it will provide an incentive to bring in changes in production process backed by suitable technological changes through a process of continuous investment on research and development. With the steady rise in per capita income demand for manufactured goods as well as services will rise faster than the demand for agricultural products and this brings the so called structural changes within the economy.

A close look at the growth figures of North Eastern States (excluding Assam[#]) reveals that the economy of these States in real terms are growing at more than seven percent per annum. For majority of the States the growth rate is even higher than all India

average. In addition, the share of primary sector to Gross State Domestic product is continuously declining and that of secondary and tertiary sectors are increasing. Among the seven States (Arunachal Pradesh, Mizoram, Manipur, Nagaland, Meghalaya, Tripura and Sikkim), Meghalaya has achieved the highest real

economic growth rate of 10 percent per annum between 2000-2001 and 2006-2007, next is Mizoram (8.1 percent) and last and second last position are acquired by Nagaland and Tripura with growth rate of 5.8 percent and 6.2 percent respectively. Interestingly, excepting Mizoram and Meghalaya, rest of the States have achieved double digit growth in secondary sector. Arunachal Pradesh, Manipur and Tripura, the growth rate of secondary sector has

surpassed 15 percent. In case of Tertiary Sector, barring from Manipur, rest of the States has been growing at five percent plus rate (Table 1). Therefore, the growth pattern so achieved is negating the so called backwardness hypothesis for these States. And sectoral contribution towards GSDP or share of primary, secondary and tertiary sector to Gross State Domestic Product also

**For majority
of the North-
Eastern States, the
economic growth
rate is even
higher than all
India average**

reveals that the share of primary sector is declining continuously and the share of secondary and tertiary sector are rising (Table 2). This also suggests that the region is following a development pattern in conformity with Kuznet's hypothesis of sectoral changes. Though for most of the States, the share of secondary sector has remained lower than the primary sector. A deeper probe is revealing some disconcerting features and corroborating the fact that the high growth rates are propelled by the sectors where government is playing a direct role (*Chakrabarti, 2009*). Second, though the share of agricultural has declined but more than 65 percent of the workforce are still deriving their livelihood from agriculture and allied activities. In secondary sector, where most of the States have shown high growth rate, there in much of the contribution to GSDP is coming from construction alone (more than 65 percent in 2005-06 for all the North Eastern States) where the role of Government is strongly felt. In contrast, the share of manufacturing, the backbone of secondary sector, is hovering around two to five percent (Table 3). This shows the absence of private sector in secondary activities and limited expansion of industrial activities among all the North Eastern States. Similarly, for tertiary sector, 50 to 60 percent contribution is coming from public administration and other services (Table 4). This implies that

the high share of tertiary sector to GSDP is also arising out of government employment and more precisely where the Government is playing the direct role. In addition, own tax revenue collection as a percentage of GSDP is abysmally low for North Eastern States. Among these seven States, own tax revenue as percentage of GSDP for the States of Mizoram, Manipur and Nagaland stood at mere 1.6 percent, 1.9 percent and 1.8 percent respectively in 2006-07. Sikkim has topped the table with a figure of 8.5 percent (Table 5). Therefore the development process is solely depending on Central assistance as grant-in-aid. Any reduction in it will make the economy of this region more vulnerable. Till date the development policy so far followed has failed to create an economy which is self sustaining and self regenerating in nature. Private sector has not been grown and as a result all these States have failed to create an economy outside agriculture and for most of these States are still dependent on primitive agricultural methods. The fruit of Government led development has failed to encompass majority of the people of this region.

Conclusion

May be the above scenario is a gloomy one but at the same time we need to bear in mind some important inherent limitations that the

Table-4: Share of Public Administration and Other Services to Tertiary Sector and Share of Tertiary Sector to Gross State Domestic Product (At Current Prices)

(in percentage)

STATES	ORIGIN OF INDUSTRY	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ARUNACHAL PRADESH	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	29.1	28.4	25.9	27.4	26.8	26.0	26.1	NA
	TERTIARY	46.0	45.6	41.1	44.2	42.4	39.5	40.0	NA
MIZORAM	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	32.4	35.0	33.8	34.2	32.6	32.6	32.1	32.1
	TERTIARY	61.4	64.2	63.1	63.9	64.1	65.7	66.5	67.7
MANIPUR	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	35.0	31.2	32.3	29.4	26.8	23.2	23.2	22.7
	TERTIARY	50.8	48.8	49.5	47.5	44.6	38.8	38.2	37.3
NAGALAND	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	25.2	22.7	22.9	22.1	21.3	20.8	NA	NA
	TERTIARY	58.5	56.8	55.5	53.6	54.4	53.7	NA	NA
MEGHALAYA	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	23.6	22.5	21.1	20.9	20.3	21.4	21.0	21.4
	TERTIARY	52.4	51.5	50.9	51.7	51.1	52.4	51.9	52.5
TRIPURA	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	30.0	28.7	29.2	29.0	29.2	30.4	31.2	NA
	TERTIARY	54.8	53.2	52.4	53.6	52.7	54.0	55.4	NA
SIKKIM	PUBLIC ADMINISTRATION PLUS OTHER SERVICES	39.0	35.4	34.0	33.3	33.0	32.8	32.2	31.5
	TERTIARY	58.9	55.0	53.5	52.8	52.3	51.6	50.8	49.8

Calculated from GSDP data for 2000-2001 to 2006-2007 (at current prices), source: www.mospi.gov.in

Table-5: Total Revenue and Own Tax revenue As Percentage of Gross State Domestic Product In 2006-07

STATE	Revenue Receipts	Tax Revenue
ARUNACHAL PRADESH	89.7	2.7
MIZORAM	49.8	1.6
MANIPUR	44.0	1.9
NAGALAND	39.8	1.7
MEGHALAYA	30.4	4.3
TRIPURA	37.5	3.8
SIKKIM	59.0	8.5

Source: Audit Report of March 2007, Comptroller and Auditor general of India, www.cag.gov.in.

North-Eastern states are continuously facing. First, its physical remoteness, hilly terrain, and limited connectivity with rest of the country can not be ignored by any means. The Government has taken measures for terracing of hillsides for permanent cultivation and the replacement of jhum fields by horticulture, and the plantation of commercial trees and crops. These efforts have failed to bring about a substantial change since majority of the people of the farming community are yet to be tuned with alternatives like settled agricultural practices and horticulture to jhum. The region also has considerable potential for hydro-electricity in view of the large numbers of rivers that crisscross the entire hilly terrain of North-East. Horticulture, floriculture, plantation agriculture, organic farming, food processing medicinal plants and eco-tourism are all areas waiting to be economically exploited in the state. Of course, to create a truly sustainable development model there is a need to use appropriate eco-friendly technologies and also keep in mind the aspirations of the lay persons. Tourism and hospitality industry is yet another sector that holds tremendous potentiality because of the states' natural beauty and bracing weather. The tourism potential remains untapped as the most of the states of North-East have failed to provide adequate infrastructure for transport and communication and security to the potential tourists. If the land rights remain inseparable from the tribal people and for government jobs, if 'son of the soil policy' is followed directly or indirectly, then the validity of inner-line permit becomes questionable. It also poses doubt on Nehru's integrationist theory. Finally, the insurgency problem in most of the North Eastern States has also been acting as major hindrance to forge economic, social and cultural connectivity with main land India and its economy. It also needs to be seen that grass root level governance in connivance with traditional institutions should be in place and linked with development initiatives. From the point of view of the Central Government, mere doling out central assistance will not make the State self

sustainable. Had it been so, all the North Eastern states should be at par with other Indian States. This implies that the money received by these North Eastern states in terms of Grant-in-aid has limited multiplier effect and diffusion effect on the economy (Chakrabarti, 2009a). The benefits of development must percolate down, otherwise only certain segments of the society will be benefited and the rest will keep on struggling with their identity and priority. [\[ER\]](#)

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(# The paper consciously leaves aside the state of Assam, for the simple reason that Assam has had a distinct pattern of growth and development peculiar to its specificities. Assam has also had the advantage of religious and cultural advantage and in a sense greater proximity to mainland Sanskrit cultures. In short Assam has been at some degree of advantage or bargaining power which the other smaller siblings have not been able to achieve for themselves. The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

SANITARY PRACTICES IN

A Performance Appraisal of School Sanitation & Hygiene Programme in Uttar Pradesh

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Good sanitary practice along with quality education provides an ideal and conducive ground for promoting human development. The sanitation coverage in our country, which should have been a way of life, has unfortunately been highly inadequate and problems like open defecation continue to remain the only form of sanitation for a majority of population in rural areas. The practice of open defecation in our country has largely been due to a combination of factors like the traditional behaviour pattern and lack of awareness of the people about associated health hazards (*Eleventh Plan, 2007-12, Vol. II & Vol. III*).

Given this background, it has become a challenge to provide sanitation facilities and safe drinking water in the country. According to the Census 2001, hardly 36 percent of the total population of the country had latrines within their households, and the situation further worsened in rural areas where only about 22 percent of population had this facility and out of this hardly seven percent of the households had latrines and water closet. However, the status has improved over the years, as shown by the various estimates, but the situation cannot still be called to be satisfactory. Further, there has also been large scale inter-state disparity in household toilet use, for instance, on one hand the coverage and use of toilet in the states like Kerala and Orissa has been about 81 percent and 60

percent respectively, it has been as low as eight percent in Orissa! (*Eleventh Plan: Ibid*)

School As A Focal Area

It has unanimously been accepted that after the family where the child is introduced for the first time; it is school, as an institution, that has a very significant and important role to play in the formation of cognitive, creative and social development of a child. India has one of the largest numbers of school going children especially in the rural areas. In fact, the primary education system of the country could be called to be one of the largest in the world with over six hundred thirty thousand (6,30,000) primary and upper rural Primary schools, employing over three million teachers and the students strength exceeding 100 million children (*Sixth All India Education Survey, 1993-94*). Likewise, there are more

than 5,00,000 Integrated Child Development Service Centres (ICDS) offering an array of services in the field of health, nutrition and non-formal pre-school services to about 18 million children between the age of six months and five years. However, there has also been a high level of divergence with respect to enrolment among the states, where in some states the enrolment of children is around 100 percent, in

other, it being hardly around 60 percent!

Another issue has been the lack of sanitation and safe drinking water facilities in all schools particularly in the rural areas. The Sixth All India Educational Survey 1993-94 points out that of 5.3 lakh primary and upper primary rural schools, hardly about 44 percent have water supply facilities, only

**Out of 5.3 lakh
primary and
upper primary
rural schools,
hardly about 44%
have water
supply facilities**

SCHOOL CURRICULUM



about 19 percent have urinals and eight percent have lavatory facility for girls. Hardly about 19 percent have separate urinals and 4 percent lavatory facility for the girls.

With such a depressing, deplorable and pitiable situation prevailing, it is the children's health that is worse affected. Diarrhoea, typhoid, dysentery, gastroenteritis, hepatitis A, intestinal worms, malaria etc. continue to kill, debilitate and also contribute to the high incidence of malnutrition. All this also has an adverse impact on their attendance level and thereby also contributing to their high drop-out rates, etc. Thus, in order to address these multiple angularities, an imperative need was felt to coordinate and regulate activities related with health and hygiene at the school level through a series of interventions that includes their regular health checkups and de-worming to ensure a better and healthy environment.

SSHE Programme In India: Genesis & Growth

Though the promotion of sanitation was very close to Mahatma Gandhi and also formed a formidable plank of his social reforms during the pre-independence period, the movement, however, it could only gain momentum after the country's independence, when water supply and sanitation were accepted part of the national agenda, however, since the first five year plan, focus largely remained on water supply relegating the issue of sanitation and in the process, whose progress thus remained slow and subdued.

The sanitation coverage got a boost and its coverage increased substantially only in 1986 when the government of India launched Central Rural Sanitation Programme (CRSP) in a supply driven mode. Earlier, SSHE was not a part of CRSP and was only included in the restructured CRSP in 1999. All this helped the CRSP to become a more demand responsive and community based programme. In fact, Total Sanitation Campaign (TSC) was launched as a part of such reform initiatives under CRSP that included school sanitation as a primary intervention to universalise sanitation facilities. Thus, TSC focuses on community led and people centred initiatives. It places greater emphasis on providing information, education and communication (IEC) for creating demand, hygiene education,

human resource development and capacity building along with providing hardware sanitary facilities to household, community, schools and Anganwadis. It solicits support and involvement of grass root institutions like the Panchayat Raj Institutions (PRIs), Parent-Teachers Associations (PTAs) and NGOs. In the evolution of SSHE in India, partnerships have also played a very significant role. In 1992, the partnership with UNICEF in Mysore helped the government to identify school sanitation as one of the key areas of collaboration that has potential to improve hygiene practices and promote the concept of clean school environment to enable them to enjoy an acceptable standard of health. The SSHE project in Karnataka now covers about 1,600 schools in eight districts. The success of SSHE later helped to try out many in social interventions that encouraged the teachers also to practice unconventional methods and modes of teaching that did not primarily depend upon text book only; thereby converting the teaching exercise as a joyful learning. All these interventions also resulted in positively enhancing the level of attendance of children in the school.

**About 81% of
households have
no access to
toilets as per 2001
Census and 60%
at present as per
updated data**

SSHE in the State of Uttar Pradesh

Though water supply and sanitation were added to the national agenda during the first five year plan, but the actual emphasis came only during the eighties, when International Decade for

Water Supply and Sanitation (IDWSS) was declared and the country's first nationwide programme of Central Rural Sanitation Programme (CRSP) was launched in 1986 with objective of improving the quality of life of rural people and also provide privacy and dignity to the female.

Initially, the programme was mainly based on supply driven approach, highly subsidised, promotion of single construction model and no clear out guidelines about involvement of PRIs, SHGs, NGOs and other community based organisations. This resulted in slow progress of the programme and whatever toilets were constructed was used very poorly due to lack of awareness, poor construction standards, high cost designs and non involvement of beneficiaries. However, after the 1999, when demand based sanitation campaign started under Restructured Centrally Sponsored Rural Sanitation Programme, there was a paradigm shift in its approach largely in

terms of subsidy, involvement of households, technological options etc. The programme now became demand responsive and school sanitation and aganwadi sanitation were also added as vital components to prepare children as the change agents for sanitation especially for promotion of sanitation in rural areas. The 73rd Constitutional Amendment gave PRI the responsibility of promoting rural sanitation. In Uttar Pradesh the Gram Panchayats (GPs) started large scale promotion of sanitation under TSC in the year 2004-05, whereby additional special incentive was given to the beneficiaries to enable them to construct their own toilets with simple brick superstructure.

The toilet coverage in rural U.P. is lower as compared to the national coverage. The health indicators like IMR, USM are also higher than the national average. Nearly 80 percent of the state population lives in rural areas and a majority of them go to the open fields for defection, thereby polluting the environment with human excreta causing health hazard with many water and faecal borne diseases. About 81 percent of households have no access to toilets as per 2001 Census and 60 percent at present as per updated data available for latrine construction under TSC. The rural sanitation coverage, as per the Census 2001, in the state, was hardly 19.23 percent that also included some of the insanitary toilets. The Panchayati raj (PRI) department, which is the nodal department for implementing TSC in U.P. conducted the base line survey and found the level of sanitation coverage to be only 17 percent in 2003. However, as per the latest progress report prepared by the department in February 2007, the sanitation coverage has now increased up to 29 percent. TSC is now being implemented in all the 70 districts of the state. At the district level, under the general supervision of Zila Panchayat, District Sanitation Committee headed by District Collector, is responsible for implementation of the programme. However, at the village level, Gram Panchayats (GPs) have been given the responsibility of implementing the programme that includes construction of facilities involving motivator and beneficiaries.

Sanitation in Schools

Of the total 1.13 lakh schools, about 0.36 lakh schools have

been provided toilet facilities under TSC and about 0.68 lakh under SSA. There were about 0.09 percent of the schools who do not have any toilet facilities. The state has planned to cover all the remaining schools with separate toilet and urinal facilities for boys and girls, with forced lift hand pumps for running water supply in toilet and urinals, overhead water storage tank and hand washing facilities. Further, all the toilet units constructed under SSA have only two WCs and no urinals for which provisions have been made in TSC project. Replicating models have been prepared in all districts for scaling up SSHE throughout the state including software component.

Further, the sanitation component in the states Aganwadis was introduced very late in the year 2005. Out of 90,474 toilets sanctioned, 5,057 units have been constructed and the remaining units were to be constructed in subsequent years in phased

manner. Hence, the biggest challenge before TSC is to change the mindset of people who have developed this habit from generations and this is to be achieved through the active participation of GP members, SHG members, mother's groups, school children, influential local leaders and elders in the community.

Out of 1.13 lakh schools, 0.36 lakh schools have been provided toilet facilities under TSC and 0.68 lakh under SSA

Study Area, Objective and Methodology

The ensuing study intends to examine how the school sanitation and hygiene education (SSHE) programme is performing in the schools of Uttar Pradesh. Further, it has been reported that now more than 80 percent of the schools in the state, have toilet facilities in schools, however, the usage of sanitation facilities has been disappointingly low and it has been estimated that hardly 50 percent of the toilets were being put to use. Among some of the factors attributed to their low usage, some could be summarised as the low level of awareness and understanding among the teachers about hygiene, low level of involvement of children, teachers and community in the management of water and sanitation facilities in schools. All these factors were proving to be hurdle in providing a conducive environment that promotes dignity, equal access and opportunity for children in the school.

Thus, keeping the scenario in the background and to

address the issue of hygiene and sanitation, the UNICEF started pilot projects in 250 schools of the state that were located in the following districts viz. Agra, Lalitpur, Moradabad, Ghaziabad, Raebareilly, Barabanki, Maharajganj, Varanasi, Mirzapur and Allahabad. The major thrust of the implementation, however, was on ensuring proper usage of water and sanitation facilities that have been created in the schools on a sustainable manner. This was to be achieved through a series of appropriate interventions that facilitate and promote the involvement of teachers and students in sanitation related issues through the formation of active child cabinet and their subsequent orientation towards hygiene. It also envisages the linkages of community through active parent teachers association to disseminate and also provide reading-learning materials on hygiene promotion.

These interventions by the UNICEF have been implemented since 2008 and have helped 250 schools to emerge as

“Model Schools” with respect to water and sanitation. The subsequent feedbacks received show that now in about 90 percent of the schools; child cabinet has become fully functional and were helping the schools in the maintenance of water and sanitation facilities in schools. This has also helped in improving the overall learning environment of the schools. Hence, there is a need to record and document the outcomes resulting out of interventions that could be shared with government and other bodies/associations to accelerate the SSHE programme with quality.

Objectives

The overall objective of the study is to ensure whether the physical infrastructure thereby created (both hardware and software) is being put to proper use on a sustainable manner. In other words, the purpose of the study is to document the progress of the programme on the following aspects:

- (i) How the interventions have succeeded in creating hygiene awareness and demand among the teachers and children in schools.
- (ii) Has an environment been created that will help to sustain the attendance of girls in the schools.
- (iii) To what extent the interventions have helped to introduce and promote changes related to hygiene and health among children.
- (iv) Whether the children and teachers have been sensitised to promote optimum use of available resources for better health and clear environment.

Table 1: Profile of the Sample Schools

Districts	Primary Schools	Upper Primary Schools	Total Sample
Agra	02	03	05
Lalitpur	02	03	05
Moradabad	03	02	05
Ghaziabad	02	03	05
Rai Bareilly	04	01	05
Barabanki	03	02	05
Maharajganj	01	04	05
Varanasi	04	01	05
Mirzapur	05	-	05
Allahabad	03	02	05
Total Sample	29	21	50

Source: Field Survey, 2010.

Table 2: Capacity Building of Nodal and Other Teachers On Hygiene Education

District	Nodal Teacher Hygiene Education (NTHE) nominated	If yes, then oriented on WASH	Other teachers who have been trained on hygiene education		Total Sample
			In January 2010	Cumulative upto January 2010	
Allahabad	05	05	-	02	05
Varanasi	05	05	-	01	05
Mirzapur	05	04	-	01	05
Mahrajganj	05	05	-	02	05
Agra	05	05	-	03	05
Lalitpur	05	05	-	-	05
Moradabad	05	05	-	02	05
Ghaziabad	05	05	-	02	05
Barabanki	05	05	-	-	05
Rai Bareilly	05	05	-	02	05
Total Sample	50	49	-	15	50

Source: Field Survey, 2010.

Table 3: Frequency and Channels of Administering Hygiene Education

District	Hygiene education is reinforced during the morning prayer	Hygiene education is reinforced during the Bal Sabha at weekly level	No. of Hygiene kit available in the school				If available than does the nodal teacher know how to use it?	If available than do the children use it properly and regularly?	Total
			One	Two	Three	Four			
Allahabad	05	05	01	03	01	-	05	04	05
Varanasi	05	05	05	-	-	-	05	05	05
Mirzapur	05	05	04	01	-	-	05	04	05
Mahrajganj	05	05	01	04	-	-	05	05	05
Agra	05	05	05	-	-	-	05	05	05
Lalitpur	05	05	04	-	-	01	05	04	05
Moradabad	05	05	02	03	-	-	05	05	05
Ghaziabad	05	05	03	02	-	-	05	05	05
Barabanki	05	05	04	01	-	-	05	05	05
Rai Bareilly	05	05	05	-	-	-	05	02	05
Total Sample	50	50	34	14	01	01	50	44	50

Source: Field Survey, 2010.

- (v) Whether an environment for attainment of children rights have been created (survival, protection, development, participation).
- (vi) Whether the incidence of diseases and warm infestation have reduced among the children.
- (vii) Has there been an environmental cleanliness in and around the school.
- (viii) Whether the level of enrolment and retention, particularly among the girl students has gone up, and
- (ix) Whether the interventions have promoted quality and joyful learning.

Methodology

For studying the impact of interventions that UNICEF has initiated in 250 schools in the ten districts of the state. It was decided to select five schools consisting of both primary as well as upper primary, per district on random basis. In the course of selections of schools, the secondary data, viz. list of model schools was provided by the Nehru Yuvak Kendras (NYK) of respective district, collaborating partners of UNICEF, who also assisted in identifying the schools. Thus, the total number of schools in the sample has been 50 of which about 58 percent were primary and remaining 42 percent upper primary. The other details have been summarised in Table 1.

Capacity Building

The term capacity building has several connotations in the modern development paradigm. While the business directory

identifies it with planned development for increase in knowledge, out-put rate, management, skills and other capabilities of an organisation through the acquisition, incentives, technology and/or training, the UNDP recognises it as a long term, continuing process, in which all stake holders participate (local authorities, non- governmental organisations and water users groups, professional associations, academies and others).

In SSHE, the relevance of capacity building is far more pronounced. Though the schools have been provided several hardware, and to put them in proper use; the children for whom it has been provided, need to be adequately sensitised and trained. The UNICEF, accordingly, has appointed a nodal teacher in the Model Cluster Schools (MCS) who has been trained in hygiene education and has also been oriented on Water Sanitation and Hygiene (WASH). Further, in case if the teacher gets transferred to some other school, the school administration has also taken adequate care to appoint another teacher who has received training and accordingly oriented on WASH issues. This initiative has helped the school to keep up the spirit of SSHE programme.

The analysis shows that in about 98 percent of the schools, a nodal teacher have been well versed in hygiene education has been nominated in nine out of ten districts. It was also observed that all the nodal teachers were working; however, in Mirzapur district it was found that in four out of five schools, the nodal teacher have been nominated. The study also shows that besides this, the schools have also trained fifteen teachers till January 2010 to meet out the contingency in case the nodal

teacher gets transferred. However, in district like Lalitpur and Barabanki, this exercise of training, the other teacher on hygiene education had not been taken so far, where as in other districts, the model cluster schools, hereafter, called the sample schools have succeeded in creating a buffer stock which is a step in the right directions (Table 2).

Frequency and Channels of Reinforcing Hygiene Education

The sustainability of a programme is achieved only if one time interventions are replaced and emphasis is placed on sensitizing the people through repeated rounds of interventions organized at regular intervals because it takes time for the people whom such interventions have been made, to internalise the values and the spirit of the programme. To what extent this practice has been followed has also been examined.

The analysis shows that in all the fifty sample schools, the hygiene education was being reinforced every day during the morning prayer time followed by its reinforcement during the bal-sabha which was held on weekly basis. Thus, it could be stated that in terms of reinforcement of hygiene education, all the sample schools were very profound in sticking to a rigid schedule which spells good for the programme. Further, the study shows that all the sample schools were having the hygiene kit however their frequency varied not only within the schools but also between the districts. For instance, in about 68 percent of the schools in the whole district, only one hygiene kit was available, in another about 20 percent of the schools two hygiene kit were available, and in about two percent

schools, three hygiene kits were available. The study shows that there were about two percent of the schools, mainly in Lalitpur district, where four hygiene kits were also available. The other positive aspect was that all the nodal teachers were knowledgeable on their usability. However, the same logic, unfortunately, did not apply for children where about 88 percent of them in the whole sample knew its properly application on day to day basis. The study also shows that in case of Raebareilly, hardly about 40 percent of the student knew its proper use, while in other districts, the situation was relatively better. The analysis also shows that in about 60 percent of the schools, all the children could use it properly and quite regularly (Table 3).

Child Cabinet

The success and sustainability of the programme or interventions made could only be ensured and strengthened if it ensures the participation of key players for whom the programme or intervention has been made. Accepting the role of children in schools as important agents of change and having capability to forge alliance with other sectors like home and other public places, UNICEF's idea of forming child cabinet in SSHE programme has been unique and also an important tool of intervention. Under this each school is supposed to form a child cabinet. The main purpose of organising such committees/organisation is to instil in them a sense of responsibility, belongingness and promote peer education. Teaching and learning materials and supplementary readers are used along with posters, games and other activities to strengthen the

Table 4: Formation of Child Cabinet In Sample Schools

District	No. of Child Cabinet formed	No. of Child Cabinet whose members have been oriented on 07 cleans	No. of Child Cabinet know about world water problem	No. of Child Cabinet in which Regular monthly meeting is taking place	No. of Schools in which Child Cabinet guide-lines is used	Total Sample
Allahabad	05	05	03	05	04	05
Varanasi	05	05	03	05	05	05
Mirzapur	05	05	01	05	05	05
Mahrajganj	05	05	05	05	05	05
Agra	05	05	03	05	05	05
Lalitpur	05	05	03	05	05	05
Moradabad	05	05	02	05	05	05
Ghaziabad	05	05	02	05	05	05
Barabanki	05	04	-	05	05	05
Rai Bareilly	05	03	-	03	04	05
Total Sample	50	47	22	48	48	50

Source: Field Survey, 2010.

Table 5: Configuration Profile of Child Cabinet In Sample Schools

District	12 members of Child Cabinet	Total Number of Members in different Groups of Child Cabinet			Total Sample
		Below 50 Members	50 Members	Above 50 Members	
Allahabad	05	01	01	03	05
Varanasi	05	-	02	03	05
Mirzapur	05	-	04	01	05
Mahrajganj	05	-	04	01	05
Agra	05	01	02	02	05
Lalitpur	05	03	02	-	05
Moradabad	05	05	-	-	05
Ghaziabad	05	05	-	-	05
Barabanki	05	-	03	02	05
Rai Bareilly	05	-	05	-	05
Total Sample	50	15	23	12	50

Source: Field Survey, 2010.

hygiene education component with the aim to improve the use and maintenance of water and sanitation facilities and inculcate good hygiene practices among children. In some of the states like Maharashtra, Rajasthan, Jharkhand and Tamil Nadu, school children have also participated in outreach activities like organizing rallies, surveys and paying family visits.

Formation and Orientation of Child Cabinet Towards Cleanliness Issues

The perusal shows that in cent percent cases, the sample schools have child cabinets, however about 94 percent of them have also been oriented on several dimensions of cleanliness viz. school cleaning, class room cleaning, toilet cleaning, hand pump plate form cleaning, checking of personal hygiene of children, health checking of children and sports activities. The study shows that only in districts like Barabanki and Rae Bareilly, the members of child cabinet were not oriented in about 20 percent and 60 percent of the schools whereas in the remaining schools; all members of child cabinet have been duly oriented towards the seven dimension of cleanliness. The study further shows that on the issue of world water problem, only about 44 percent of the child cabinet was sensitised. In districts like Barabanki and Rae Bareilly, no child cabinet in any of the sample school, has any kind of information or knowledge on world water problem. The overall level, in other district was also not very high and ranged from 60 percent for districts like Allahabad, Varanasi and Lalitpur to as low as 20 percent for Mirzapur. The analysis also shows that in 96 percent of the schools, the child cabinet meeting were held on monthly basis regular however, in case of Rae Bareilly district

the frequency of meeting was reported to be 60 percent and in the remaining sample schools, the frequency of meetings was on monthly basis. Further, it was also observed that in about 96 percent of schools the child cabinet followed the guidelines and only in case of Rae Bareilly and Allahabad this level was reported to be 80 percent thereby implying that in the remaining 20 percent schools, the child cabinet was not following the guideline (Table 4).

The child cabinet, besides having school children into their core body also have members from different groups. These groups could be from the community, parents-body, public representatives etc. The basic premise, perhaps, being to solicit and involve the support of different bodies into the school functioning and making it more transparent. Further, the arrangement also facilitated the schools to successfully undertake outreach programme to propagate and spread out the issues related with sanitation and hygiene education to the people at large.

The study of child cabinet configuration shows that all the fifty sample schools were having child cabinet of twelve members; besides this they have also succeeded in forging alliances with members of different groups. On the basis of numbers, these outside groups could, further be, classified into three groups viz. below fifty members, fifty members and above fifty members. The study further shows about 30 percent of the child cabinets were having outside memberships of less than fifty members, another 46 percent of child cabinets had membership of different group of 50 members while remaining 24 percent of the child cabinets were having group membership of more than 50 members. The inter district study

Table 6: Profile of Activities Undertaken by Child Cabinet of Sample Schools

District	During the month of January 2010, Number of Child Cabinet took part in							Children study hygiene education booklets which are provided to the schools	Total Sample
	School leaning	Class room cleaning	Toilet cleaning	H.P. Platform cleaning	Checking of personnel hygiene of children	Health checkup of children	Sport activities		
Allahabad	05	05	01	04	05	-	05	05	05
Varanasi	05	05	02	05	05	-	05	05	05
Mirzapur	05	05	01	05	05	02	03	04	05
Mahrajganj	05	05	02	05	05	-	05	05	05
Agra	05	05	04	05	05	02	04	05	05
Lalitpur	05	05	05	05	05	01	05	05	05
Moradabad	02	05	-	03	05	-	05	05	05
Ghaziabad	04	04	01	03	05	01	05	05	05
Barabanki	05	05	02	05	05	-	03	05	05
Rai Bareilly	04	04	01	03	04	-	02	04	05
Total Sample	45	48	19	43	49	06	42	48	50

Source: Field Survey, 2010.

shows that majority of the sample schools of district Allahabad and Varanasi had larger external group membership while the sample schools of districts of Lalitpur, Moradabad, Ghaziabad and Raebareilly had relatively smaller external membership viz. fifty members or less (Table 5).

The functionality of child-cabinet is reflected through the amount of sanitation and hygiene related activities it undertakes. The perusal of activities undertaken by child cabinet shows that about 90 percent of the child cabinet in the sample schools had undertaken school cleaning activity. It was interesting to see that cent-percent school cabinets of Allahabad, Varanasi, Mirzapur, Maharajganj, Agra and Barabanki

had taken up school cleaning up activity in a major way, while the child cabinet of sample schools in Moradabad district this activity was not a major issue. Likewise, about 96 percent of the child cabinet of sample schools had also taken up class room cleaning activity again as a major activity. The study further shows that toilet cleaning activity was a low priority activity as hardly 38 percent of the child cabinet of sample schools were involved in it. The inter-district analysis projects a very disturbing picture except in case of sample schools of Lalitpur district where cent percent schools had undertaken toilet cleaning, the involvement level of child cabinet in other sample schools was disappointingly low and no child cabinet in

Table 7: Children Rally Organized by Sample Schools

District	No. of Schools Where Children Rally Performed in January 2010	Children Rally Cumulative Upto January 2010				Total Sample
		None	1 to 3	4 to 5	6 & Above	
Allahabad	01	01	04	-	-	05
Varanasi	02	01	04	-	-	05
Mirzapur	-	02	02	01	-	05
Mahrajganj	01	-	04	01	-	05
Agra	03	-	02	02	01	05
Lalitpur	02	-	03	01	01	05
Moradabad	-	01	03	01	-	05
Ghaziabad	01	01	03	01	-	05
Barabanki	01	01	04	-	-	05
Rai Bareilly	05	-	05	-	-	05
Total Sample	16	07	34	07	02	50

Source: Field Survey, 2010.

Table 8: Nature and Pattern of Parents Teachers Association (PTA) in Sample Schools

District	PTA formed	Members are oriented on hygiene	No. of PTA Members Oriented			Total Sample
			Upto 3 Members	3 to 7 Members	8 Members	
Allahabad	05	05	-	01	04	05
Varanasi	05	05	-	-	05	05
Mirzapur	05	05	-	-	05	05
Mahrajganj	05	05	-	02	03	05
Agra	05	05	01	02	02	05
Lalitpur	05	05	-	04	01	05
Moradabad	05	05	04	-	01	05
Ghaziabad	05	05	01	-	04	05
Barabanki	05	05	-	-	05	05
Rai Bareilly	05	05	-	01	04	05
Total Sample	50	50	06	10	34	50

Source: Field Survey, 2010.

the schools of Moradabad had worked on toilet cleaning activity. Further, the analysis also shows the about 86 percent of the child cabinet of sample schools had also taken up hand pump platform cleaning activity. The perusal of table shows that in 60 percent of the districts viz. Varanasi, Mahrajganj, Agra, Lalitpur, Maharajganj and Baranabanki, the level of involvement of child cabinet was cent percent while in remaining districts it varied between 80 percent in Allahabad to 60 percent in Raebareilly, Ghaziabad and Moradabad. On the issue of checking up of personnel

hygiene of children, the overall level of involvement of child cabinet was reported to be 98 percent and in 90 percent of the sample districts, the involvement level of child cabinet was cent percent. However, in Raebareilly, about 80 percent of the child cabinet of the schools were seen to be involved in personnel hygiene checkups of children.

The study also shows that about 84 percent of the child cabinet of the sample schools were involved in promoting sport activities, and it could be seen that the involvement level of child cabinet in Allahabad, Varanasi, Mahrajganj, Lalitpur, Moradabad and Ghaziabad districts was cent percent and the remaining districts it varied from 80 percent (Agra) to as low as 20 percent (Raebareilly). Another major activity in which the child cabinet of sample schools was involved was undoubtedly in the distribution of hygiene education that are provided to

the schools. The study shows that about 96 percent of the child cabinet of sample schools were involved in this activity. What has been heartening to see is that except for Raebareilly, the involvement level of child cabinet in remaining nine districts was reported to be cent-percent (Table 6).

Organisation of External Activities

The child cabinet is not only supposed to take up promotional activity related to sanitation and hygiene within the school

premises but also outside the school premises. Thus, to create sanitation and hygiene awareness amongst the masses and communities; it is also supposed to take up activities like organising rallies, holding drawing competition that adequately reflect these issues, organise debate, indulge in slogan writing and make performances on special days like Children's Day, World Water Day, Global Hand Washing Day etc.

The study shows that in terms of organising rallies, hardly about 32 percent of the child cabinets of sample schools of the ten districts were seen to be involved in the month of January 2010. However, the cumulative account throws up some promise as it could be seen that about 68 percent of the child cabinets of sample schools had organised rallies between one to three times while for another 14 percent the frequency level was between four to five times. The study shows that there

In about 30% of the schools less than 50% of the children were washing their hands prior to mid-day meals

were about four percent of the schools where child cabinet had organised rallies six times or more. However, there were about 14 percent of the sample schools where the child cabinet have not been able to organise the rallies so far (Table 7).

Grass Root Institution and their Involvement

One of the novel features of SSHE programme is that it solicits support of other institutions, because it firmly believes that no programme or intervention can work, let alone sustain, in isolation. The convergence of SSHE with other grass root institutions like Parent-Teachers Association (PTA), Village Education committee (VEC) etc. not only helps it to expand and reach out to the masses but firmly establishes its credentials in the eyes of masses and brings forth an element of transparency into its overall working.

Under SSHE programme adequate care has been taken to not only enlist the grass root institution but also solicit their support on sanitation and hygiene campaign. Accordingly all sample schools have established alliances with grass root institutions of the area. The study shows that the two grass root institutions with whom the sample schools have forged alliance were the Parent Teachers Association (PTA) and the Village Education Committee (VEC). The detail analysis of their joint working has been discussed below:

Parent-Teachers Association (PTA)

The Parent Teacher Association (PTA) is one of the most important and current grass-root institutions in schools perspectives as it has a high interest for providing the children to the school. They may rightly be acknowledged as the

principal stakeholders whose involvement not only enhances the scope of schools working but also ushers many unforeseen advantages.

The study shows that in all the sample schools, it has been formed and all the members have been accordingly oriented on sanitation and hygiene matters. The analysis furthers shows that about 12 percent of schools had PTA member size upto three members, about 20 percent of the schools had PTA size between three to seven members and an overwhelming majority of sixty eight percent of schools had the PTA size of eight members. Thus, it could be said that majority of schools have larger size of parent teachers association which helps the schools to share their strategy and also invite new ideas (Table 8).

The analysis further shows that in about 28 percent of the schools, the PTA discussed the issues regarding water sanitation and hygiene (WASH), the cumulative account shows that there were about 32 percent of the schools where PTA had met up to three times to discuss issues regarding WASH. Further, in about 48 percent school the PTA had met between four to six times and in the remaining about 20 percent of the schools, the PTA meeting on WASH issues had been held seven times or more.

The study also shows that in about 66 percent of the sample schools, the PTA was willing to extend support for Operation and Maintenance (O & M) of WASH facilities in school. The inter-district analysis shows that the level of extending support of PTA varied between as high as cent percent as in the case of Varanasi, Moradabad and Ghaziabad to as low as zero percent in Raibareilly which calls for more sensitisation of the stake-

Table 9: Nature and Pattern of Village Education Committee (VEC) in Sample Schools

District	VEC functional	VEC members oriented	No. of VEC Members Oriented			Total Sample
			None	1 to 3 Members	5 Members	
Allahabad	05	04	01	02	02	05
Varanasi	05	05	-	04	01	05
Mirzapur	05	03	02	02	01	05
Mahrajganj	05	05	-	02	03	05
Agra	05	04	01	03	01	05
Lalitpur	05	04	01	-	04	05
Moradabad	05	03	02	03	-	05
Ghaziabad	05	01	04	01	-	05
Barabanki	05	-	05	-	-	05
Raibareilly	05	-	05	-	-	05
Total Sample	50	29	21	17	12	50

Source: Field Survey, 2010.

Table 10: Pattern of Infrastructural Facilities in Sample Schools

District	School has drinking water source (HP/ Tap within the campus)	Drinking water source > 10 mts. from toilets	If yes, is it functional	If not operational then the reason is		No. of occasions bleaching powder was poured in the H.P. bore well during January 2010	No. of occasions bleaching powder was poured in the H.P. bore well cumulative up to January 2010		Total Sample
				Minor Repair	Major Repair		One	Three	
Allahabad	05	03	05	-	-	-	-	-	05
Varanasi	05	05	05	-	-	-	-	-	05
Mirzapur	05	03	03	02	-	-	02	01	05
Mahrajganj	05	03	05	-	-	-	02	-	05
Agra	05	03	05	-	-	-	-	-	05
Lalitpur	05	01	05	-	-	-	-	-	05
Moradabad	05	02	05	-	-	-	-	-	05
Ghaziabad	05	02	05	-	-	-	01	-	05
Barabanki	05	02	05	-	-	-	01	-	05
Raibareilly	05	04	05	-	-	-	01	-	05
Total Sample	50	28	48	02	-	-	07	01	50

Source: Field Survey, 2010.

holders through appropriate social interventions .

Village Education Committee (VEC)

Apart from PTA, the VEC has been another important grass root institution that has a significant role to play in mobilising community participation. Under many rural educational programme like Lok Jumbish, DPEP etc. many states have been encouraging the communities to take up civil construction work in schools. The basic premise being that by invoking their participation, the community could come forward to

maintain school facilities. This endeavour not only drives out the engagement of contractors from the construction site but also invokes a sense of ownership of community in school matters and in the process subsequently strengthens the mutual bond between the school management and the communities.

Under SSHE, the participation of VECs has also been solicited. It could be seen that in all the fifty sample schools, the VECs have become functional. However, in terms of this orientation towards sanitation and hygiene, only about fifty

Table 11: Pattern of Infrastructural Facilities in Sample Schools

District	Storage facility for drinking water is available in the school	If yes then water stored in		Long handle ladle used for taking water	Total Sample
		Uncovered Vessel	Covered Vessel		
Allahabad	04	02	02	02	05
Varanasi	01	-	01	01	05
Mirzapur	05	-	05	04	05
Mahrajganj	01	-	01	01	05
Agra	05	-	05	05	05
Lalitpur	03	-	03	03	05
Moradabad	03	-	03	02	05
Ghaziabad	05	-	05	01	05
Barabanki	02	02	-	01	05
Raibareilly	03	03	-	01	05
Total Sample	32	07	25	21	50

Source: Field Survey, 2010.

Table 12: Pattern of Infrastructural Facilities in Sample Schools

District	Filters provided in the school	Water quality testing done by U.P. Jal Nigam	Schools has rain water harvesting system	If yes, then is it capable of meeting the need of					Total Sample
				Drinking	Hand washing	Cleaning of Toilets	Washing of Utensils	No. of Children getting benefit from the system	
Allahabad	-	04	-	-	-	-	-	-	05
Varanasi	-	-	-	-	-	-	-	-	05
Mirzapur	01	05	-	-	-	-	-	-	05
Mahrajganj	-	-	-	-	-	-	-	-	05
Agra	-	05	-	-	-	-	-	-	05
Lalitpur	-	05	-	-	-	-	-	-	05
Moradabad	-	05	-	-	-	-	-	-	05
Ghaziabad	-	05	-	-	-	-	-	-	05
Barabanki	-	05	-	-	-	-	-	-	05
Raibareilly	01	02	-	-	-	-	-	-	05
Total Sample	02	36	-	-	-	-	-	-	50

Source: Field Survey, 2010.

eight percent of the schools have provided orientation to VEC members which could be considered to be on the lower side. Further, the inter-district study shows that the proportionate level of orientation of VEC members in the sample schools varied between cent percent as in case of Varanasi and Mahrajganj to as low as zero percent in Barabanki and Raibareilly districts respectively. The perusal of VEC members who were oriented on WASH issues shows that in about 34 percent schools, one to three members have been oriented, and in another about 24 percent schools, five members of the VEC were oriented. However, there were about 42 percent of the schools where no orientation exercise for any member has been organized, which is a major cause of concern and calls for appropriate interventions (Table 9).

The study also shows the frequency of the level of VEC meeting to discuss the WASH related issues has not been high and therefore efforts are required to motivate and sensitise the VEC members.

Physical Infrastructural Facilities

Infrastructure, no doubt, has a significant and important place in the overall functioning of schools. Dilapidated, sterile or non functional state of infrastructure does not add up to the performance of school. Thus, functionality of infrastructure assumes utmost importance. The study of infrastructural facilities in sample school shows that all of them had drinking water source in the form of hand pump or tap within the campus and in about 56 percent of the schools they were

Table 13: Distribution of Force Lift Hand Pump in Sample Schools

District	Schools has Force Lift Hand Pump	Schools has FLHP working properly	If FLHP not operational then the reason is		Total Sample
			Minor Repair	Major Repair	
Allahabad	05	04	01	-	05
Varanasi	05	03	01	01	05
Mirzapur	04	02	01	01	05
Mahrajganj	04	01	02	01	05
Agra	03	02	-	01	05
Lalitpur	05	04	01	-	05
Moradabad	05	01	03	01	05
Ghaziabad	05	02	01	02	05
Barabanki	03	02	-	01	05
Raibareilly	03	-	03	-	05
Total Sample	42	21	13	08	50

Source: Field Survey, 2010.

located at a distance of more than 10 meters from the toilets. The inter-district analysis shows that except in Varanasi where the location of drinking water in all samples was more than 10 meters, in other districts, in a sizeable proportion of schools was less than 10 meters. About 96 percent of these water sources were in functional state and only in Mirzapur district, about 40 percent of the drinking sources required minor repair.

The study also shows that no bleaching powder has been poured in the H.P. bore wells during the month of January 2010 by any of the sample schools; however the cumulative account shows that hardly about 14 percent of the schools had used bleaching power once and about two percent of the schools had utilised on three occasions (Table 10).

Besides the hand pump devices that have been installed in the school premises, the schools have also provided storage facility for drinking water in classes generally through buckets or earthen pitchers. These are placed near the class rooms, to enable the student to get water near their work place and minimize teaching time loss. The perusal of the table shows that in about 64 percent of the schools, the storage facility was available of which in about 22 percent, it remained uncovered and thus became unsafe for drinking purpose, however, in the remaining about 78 percent, it was well covered. Further, about 66 percent of the schools were using long handle ladle for taking out water which is considered to be safe device. The inter-district analysis shows large amount of variation in the use of long handle laddle; while cent percent sample schools in

Agra were using long handle devices, the schools in the districts like Varanasi, Maharajganj Ghaziabad, Barabanki and Raebareilly their use was abysmally low. (Table 11).

Under the SSHE programme, not only the functionality of the sources is ensured but even their quality is also tested to establish their safety level. The study shows that in about 72 percent of the schools, the drinking water sources were tested for water quality. The study further shows that large variation exists between the level of testing of sources between districts and in about 60 percent of the districts, cent percent sources were tested for water quality while in districts like Varanasi and Maharajganj, this exercise was not yet taken up. It could also be seen that of the 36 water sources that had been tested for water quality, about 81 percent have been declared to be safe and remaining about 19 percent were not considered to be safe. Over 86 percent of the unsafe sources were chemically contaminated and remaining about 14 percent sources were contaminated bacteriologically. The analysis also shows that in about 33 percent of the sources that were chemically contaminated, corrective measures have been taken by the school management.

Besides providing chemical treatment to drinking water sources, the schools have also been provided with filters that hold back the contaminated content and ensures safety of drinking water. The study shows that hardly four percent of the sample schools had provided filters in their school and about 72 percent had got the water quality testing done by U.P. Jal Nigam - the nodal agency for providing safe drinking water in rural

Table 14: Availability of Sanitary Facilities in Sample Schools

District	Schools has separate toilet with urinal for boys and girls	Schools has running water facility in the toilets	Toilets have child friendly paintings on the walls	Toilets have ramp/handles to address the needs of physically challenged Children	Usage of Toilet					Total Sample
					Only by teachers	Only by GIRL students	Only by BOYS	Only by Students	Both teachers and students use it	
Allahabad	05	05	03	-	-	-	-	-	05	05
Varanasi	05	05	03	-	-	-	-	-	05	05
Mirzapur	05	02	04	-	-	-	-	01	04	05
Maharajganj	05	02	04	-	-	-	-	-	05	05
Agra	03	01	02	-	-	-	-	01	04	05
Lalitpur	05	04	02	-	-	-	-	-	05	05
Moradabad	05	-	03	-	-	-	-	-	05	05
Ghaziabad	05	02	-	-	-	-	-	03	02	05
Barabanki	05	02	01	-	-	-	-	-	05	05
Raibareilly	04	-	-	-	-	-	-	01	04	05
Total Sample	47	23	22	-	-	-	-	06	44	50

Source: Field Survey, 2010.

Table 15: Environment Related Interventions In Sample Schools

District	No. of schools has hygiene monitoring board	No. of schools has up-dated hygiene monitoring board regularly	Classes have dust bins	Kitchen garden in the school	Waste water used into the kitchen garden	Total Sample
Allahabad	02	02	05	05	02	05
Varanasi	03	-	05	05	-	05
Mirzapur	05	03	04	05	03	05
Mahrajganj	-	-	04	04	01	05
Agra	03	03	04	04	04	05
Lalitpur	04	03	03	04	01	05
Moradabad	02	01	04	02	02	05
Ghaziabad	03	03	05	04	01	05
Barabanki	01	-	03	05	02	05
Raibareilly	01	01	01	03	02	05
Total Sample	24	16	38	41	18	50

Source: Field Survey, 2010.

areas. Similarly, the schools have been asked to make rain harvesting system installed in their school premises, for checking the fast depleting ground water table and recharging it. However, the study shows that none of the sample schools have so far made provision for rain water harvesting, which, perhaps, could be called to be one of the weak areas of the programme (Table 12).

In order to save the water from wastage, a new device that, if attached to the hand pump, propels the excess amount of water discharge in the tank that is attached/located either on the roof the toilet or at any other higher nearby place. This device has become very popular for economising water on all fronts. The study of table shows that about 84 percent of the schools have installed Force Lift Hand Pump devices. The inter-district study reveals that its distribution has been quite uneven, while some of the schools in districts like Allahabad, Varanasi, Lalitpur, Moradabad and Ghaziabad has cent percent installation in their schools, other districts like Barabanki, Agra, Raebareilly have lagged behind. Further, what has been a matter of concern is that hardly about 50 percent of these devices installed in the sample schools were found to be in proper working condition. The incidence of malfunctioning FLHP devices was pronounced uniformly in all districts. The perusal shows that about 62 percent of the FLHP devices, which have been malfunctioning, required minor repairs while remaining about 38 percent

had major break downs (Table 13).

Hand washing and availability of soap for hand washing is considered to be a good sanitary practices that goes a long way to keep the children hygienically healthy and fit. Under SSHE, the schools are supposed to make adequate provision to restore these facility. An attempt to study many of these sample schools have provided space for such provisions. The study shows that in about 60 percent of the schools, hand washing facility was available and 98 percent of them had also provided soap for hand washing. The detail study of hand

washing practices in sample schools shows that the overall level of good sanitary practices has not been too high. It could be seen that in about 32 percent of the schools, the student - washed hands after using urinal/toilets, in another about 68 percent schools, the students washed the hands both time one after defecation and also before handling the food. The study also shows that in about 30 percent of the schools less than 50 percent of the children were

In the sample survey, about 94 percent of the schools had separate toilet with urinal for boys and girls

seen to be washing their hands prior to taking their Mid Day Meal, while in hardly about two percent of the schools, all children were reported to be washing their hand before taking the mid day meal. The study also shows that there exists large amount of variation among the schools in different districts which reflects the lower level of sanitary practices in the sample schools.

Likewise, it could also be stated that installation of hardware

Table 16: Pattern of Monitoring and Facility by Volunteers of Nehru Yuva Kendra

District	No. of facilitation visit conducted by NYKS youth volunteers during January 2010				Total Sample	No. of facilitation visit conducted by NYKS youth volunteers cumulative upto January 2010				Total Sample
	None	One	Two	Three		Below 10 visit	11 to 15 visit	16 to 20 visit	21 visit & above	
Allahabad	-	-	03	02	05	-	-	03	02	05
Varanasi	-	03	01	01	05	04	01	-	-	05
Mirzapur	-	01	-	04	05	-	-	01	04	05
Mahrajganj	-	03	02	-	05	-	03	02	-	05
Agra	01	01	01	02	05	-	-	02	03	05
Lalitpur	-	-	-	05	05	-	-	-	05	05
Moradabad	-	01	02	02	05	-	01	01	03	05
Ghaziabad	-	01	-	04	05	01	-	-	04	05
Barabanki	-	-	05	-	05	-	-	05	-	05
Raibareilly	01	04	-	-	05	01	04	-	-	05
Total Sample	02	14	14	20	50	06	09	14	21	50

Source: Field Survey, 2010.

related to sanitation does not have any validity unless its functionality is not ensured. Because the non functionality of infrastructural facilities thereby created ultimately leads to their non utilisation which is a colossal wastage of time and resources. The study of sanitary hardware facilities in the sample schools shows that about 94 percent of the schools had separate toilet with urinal for boys and girls. Except in case of Raebareilly and Agra, all the sample schools had this facility. The perusal of table also shows that in about 46 percent of the sample schools also had running water facility in the toilets and another about 44 percent schools had child friendly paintings on the walls of the paintings. None of the schools have provided ramp or handle facilities to address the needs of the physically challenged children. The study also shows that about 12 percent

of the toilets in the schools were being used only by the students while remaining 88 percent of the toilets were being used by both teachers as well as the students. The inter-district perusal shows that there has been large variation when it comes to the their use by students only while it relatively better in case of schools that used toilet for both teachers as well as students. However, it could be said that lower amount of use of these facilities only points out towards the weaker side of the programme that needs to be addressed through appropriate interventions (Table 14).

School Environment

The concept of school environment extends much beyond its physical characteristics. Among the factors affecting school

Table 17: Pattern of Monitoring and Facility by Coordinators of Nehru Yuva Kendra

District	by NYKS district coordinator during January 2010		Total Sample	by NYKS district coordinator cumulative upto January 2010					Total Sample
	No visit	One visit		No visit	One isit	Two isit	Three visit	Four visit	
Allahabad	04	01	05	02	02	01	-	-	05
Varanasi	05	-	05	-	04	01	-	-	05
Mirzapur	04	01	05	-	-	01	04	-	05
Mahrajganj	05	-	05	01	02	02	-	-	05
Agra	05	-	05	-	-	03	02	-	05
Lalitpur	05	-	05	03	-	-	01	01	05
Moradabad	04	01	05	-	-	01	01	03	05
Ghaziabad	03	02	05	01	02	01	01	-	05
Barabanki	03	02	05	03	01	01	-	-	05
Raibareilly	05	-	05	04	01	-	-	-	05
Total Sample	43	07	50	14	12	11	09	04	50

Source: Field Survey, 2010.

environment are the schools' philosophy, students, communications, teachers, discipline, parents, support services, issuance of awards, and special programmes. A positive school environment can be fostered by establishing schools philosophy that places child at the centre of activity, emphasise low, pride and encourages pluralism.

The study shows in about 48 percent of the sample schools, hygiene monitoring board has been put up of which 32 percent schools were updating the information regarding the hygiene condition regularly. The study further shows that large variation existed at the inter district level: while all sample schools of Mirzapur districts had kept hygiene monitoring board, none of the sample school in Mahrajganj maintained any hygiene board. The situation of regular updates on hygiene board was not at all satisfactory. Likewise, it could be stated that 72 percent of the sample schools had dustbins in the classes, another 82 percent of the schools maintained kitchen garden in the school of which 36 percent also used waste water for the kitchen garden. The analysis shows that the situation at the inter-district level cannot be called to be impressive as a large amount of variation existed (Table 15).

Likewise, the analyses also shows that about 24 percent of the sample schools had soak pit - a facility for waste water disposal, another about 29 percent had open drainage and about nine percent also had underground drainage. The inter-district distribution of these facilities among the sample schools was highly skewed and also not of a high order.

However, on the question of the schools possessing a bound-

ary wall, the situation was drastically better as about 94 percent of them had boundary walls with the exception of Raebareilly, all the sample schools of the districts had it, however, in case of Raebareilly, about 80 percent of the schools had it.

It was also observed that about 86 percent of the sample schools provided MDM, it was found to be cooked at the hygiene place. The inter-district study shows except in Ghaziabad where none of the schools provided cooked food, the other districts provided it. Further, it was also observed that all the cooks who provided food in the sample schools also washed their hands prior to cooking, and the food was served on the neat plates to the students. The analysis also shows that no health check up has been organised in any of the sample school, in all the ten districts which was a major disappointment and calls for fresh intervention in this area.

Monitoring and Facilitation

Monitoring & Facilitation is an important component under SSHE. This exercise enables the programme functionaries to identify weak and vulnerable spot and provide appropriate and relevant rear guard action to address them. In this course, Nehru Yuva Kendra (NYK) is a collaborating partner. The study shows there were four percent of the sample schools who have not been visited by NYK volunteers during January 2010 while in remaining 28 percent of the schools the NYK volunteers had visited once in another 28 percent schools the frequency of visit was two times and in another about 40 percent of the schools the NYK volunteers visited three times.

Table 18: Pattern of Monitoring and Facility by Nyay Panchayat Resource Coordinators (NPRCs)

District	by NPRC during January 2010				Total Sample	by NPRC cumulative upto January 2010				Total Sample
	No visit	One visit	Two Visit	Three visit		No visit	Below 5 visit	6 to 10 visit	11 to 15 visit	
Allahabad	03	02	-	-	05	02	02	01	-	05
Varanasi	-	04	01	-	05	-	01	03	01	05
Mirzapur	02	01	-	02	05	02	-	01	02	05
Mahrajganj	-	02	03	-	05	-	-	02	03	05
Agra	04	-	-	01	05	02	-	03	-	05
Lalitpur	01	02	01	01	05	01	-	04	-	05
Moradabad	03	02	-	-	05	01	01	02	01	05
Ghaziabad	05	-	-	-	05	03	01	01	-	05
Barabanki	04	01	-	-	05	04	01	-	-	05
Raibareilly	05	-	-	-	05	02	03	-	-	05
Total Sample	27	14	05	04	50	17	09	17	07	50

Source: Field Survey, 2010.

Table 19: Pattern of Monitoring and Facility by Block Resource Coordinators (BRCs)

District	by BRC during January 2010			Total Sample	by BRC cumulative upto January 2010			Total Sample
	No visit	One visit	Two Visit		No visit	Below 5 visit	6 to 10 visit	
Allahabad	03	02	-	05	02	03	-	05
Varanasi	04	01	-	05	-	03	02	05
Mirzapur	05	-	-	05	02	03	-	05
Mahrajganj	01	03	01	05	-	02	03	05
Agra	05	-	-	05	03	02	-	05
Lalitpur	04	01	-	05	02	03	-	05
Moradabad	05	-	-	05	01	04	-	05
Ghaziabad	04	01	-	05	03	02	-	05
Barabanki	05	-	-	05	05	-	-	05
Raibareilly	03	02	-	05	03	02	-	05
Total Sample	39	10	01	50	21	24	05	50

Source: Field Survey, 2010.

Table 20: Pattern of Monitoring and Facility by State Coordinator of Nehru Yuva Kendra

District	by NYKS State Coordinator during January 2010		Total Sample	by NYKS State Coordinator cumulative upto January 2010				Total Sample
	No visit	One visit		No visit	One visit	Two Visit	Three visit	
Allahabad	05	-	05	05	-	-	-	05
Varanasi	05	-	05	04	01	-	-	05
Mirzapur	05	-	05	03	-	-	02	05
Mahrajganj	05	-	05	03	02	-	-	05
Agra	05	-	05	04	-	01	-	05
Lalitpur	05	-	05	04	01	-	-	05
Moradabad	05	-	05	03	02	-	-	05
Ghaziabad	04	01	05	01	02	02	-	05
Barabanki	05	-	05	02	-	03	-	05
Raibareilly	05	-	05	05	-	-	-	05
Total Sample	49	01	50	34	08	06	02	50

Source: Field Survey, 2010.

The inter-district pattern of visit was not even, which should be properly adjusted and regulated. The cumulative account of the NYKs volunteer's visit to the sample schools up to January 2010 shows that there were about 12 percent of the schools where the frequency of visit by NYK volunteers was less than 10 times, in another 18 percent of the schools the frequency of visit was reported to be between 11 to 15 times. The study also shows that in about 28 percent schools, the NYK's visit was between 16 to 20 times and in the remaining about 42 percent of the schools, the frequency of NYK volunteer's visit was reported to be 21 times or over. Thus, it could be said that most of the sample schools have been visited by NYK volunteers more than once, which could be called to be a good move (Table 16).

Supervision by NYK Coordinators

Regarding the NYK coordinators' visit, the study shows that in more than 86 percent of the schools, no visit had been paid by them during January 2010 and in the remaining 14 percent of the schools, the frequency of visit was reported to be only one. Thus, it could be said that the frequency of visit by NYK district coordinator was quite less. The cumulative account of the district coordinators visit upto January 2010 does not provide an encouraging picture either, as still there were about 28 percent of sample schools, which have not been visited by them, in another about 24 percent of schools, the frequency of visit was reported to be only once, in another 22 percent it was two times; in another about 18 percent, the coordinator's had visited the schools on three occasion and in the remaining

Table 21: Pattern of Monitoring and Facility by ABSA/BSA

District	by ABSA/BSA during January 2010			Total Sample	by ABSA/BSA cumulative upto January 2010			Total Sample
	No visit	One visit	Two Visit		No visit	Below 5 visit	6 to 10 visit	
Allahabad	04	01	-	05	02	03	-	05
Varanasi	05	-	-	05	-	05	-	05
Mirzapur	05	-	-	05	-	05	-	05
Mahrajganj	03	02	-	05	01	04	-	05
Agra	03	01	01	05	01	02	02	05
Lalitpur	03	02	-	05	02	01	02	05
Moradabad	05	-	-	05	01	04	-	05
Ghaziabad	05	-	-	05	01	04	-	05
Barabanki	04	-	01	05	03	02	-	05
Raibareilly	04	01	-	05	04	01	-	05
Total Sample	41	07	02	50	15	31	04	50

Source: Field Survey, 2010.

Table 22: Pattern of Monitoring and Facility by UNICEF

District	by UNICEF during January 2010		Total Sample	by UNICEF cumulative upto January 2010			Total Sample
	No visit	One visit		No visit	Below 5 visit	6 to 10 visit	
Allahabad	05	-	05	01	04	-	05
Varanasi	05	-	05	-	05	-	05
Mirzapur	05	-	05	-	05	-	05
Mahrajganj	03	02	05	-	05	-	05
Agra	04	01	05	-	05	-	05
Lalitpur	04	01	05	02	02	01	05
Moradabad	05	-	05	03	02	-	05
Ghaziabad	05	-	05	02	03	-	05
Barabanki	05	-	05	01	04	-	05
Raibareilly	05	-	05	01	04	-	05
Total Sample	46	04	50	10	39	01	50

Source: Field Survey, 2010.

about eight percent the frequency of visit was reported to be four times. Thus, it could be said that the level of district coordinators visit to schools was relatively less and there remained a sizeable proportion of schools which have not been visited by them so far (Table 17).

Supervision by Nyaya Panchayat Resource Centres Officials (NPRCs)

Besides Nehru Yuva Kendra, the NPRCs officials also made supervision. However, the perusal of their visit does not provide an encouraging account either. The perusal of their visits account shows that there were about 54 percent of the schools which have not been visited by NPRC functionaries during January 2010; however there were about 28 percent of the schools where these functionaries have visited only once, while in another about 10 percent of the schools their frequency of visit was reported to be two times and in the remaining

about eight percent of the schools NPRCs had paid the visit three times. Likewise, the cumulative account of their visit upto January 2010 shows that their remained about 34 percent of the schools which have not been visited by NPRC functionaries, in another about 18 percent of the schools, the level of visit was reported to be below five times; in another 34 percent of the schools, the frequency of visit was between six times to 10 times and in the remaining 14 percent of the schools, the NPRC functionaries had paid the visit between 11 to 15 times. The inter-district profile of visit shows that it was highly uneven (Table 18).

Supervision by Block Resource Centre (BRC)

The perusal of the profile of visit by BRC officials shows that in about 78 percent of the schools, the BRC official had paid no visit, in another 20 percent schools the frequency of visit was reported to be once and in the remaining about two

percent, the frequency of visit was two. Likewise, the cumulative account of their visit upto January 2010 shows that there will still about 42 percent of the schools which have remained unvisited, in another about 48 percent of the schools, the frequency of visit was less than five times, and in remaining 10 percent schools, the level of BRC officials visit was between six and 10 times. The inter-district perusal of visit reveals their uneven pattern (Table 19).

Supervision by NYK State Coordinators

The study of frequency of NYK State coordinators visit to sample schools also provides a disappointing account of itself. It could be seen that in an overwhelmingly 98 percent of the schools, the NYK State coordinators had paid no visit and hardly in remaining two percent cases, the frequency of visit to schools was only once. Likewise, the cumulative account of their visit shows that in about 68 percent of the schools, no visit had been paid by the NYKs State coordinator, in another 16 percent of the school the frequency of visit was reported to be only one, in another 12 percent schools, the level of visit was twice and in remaining about four percent of the schools, the frequency of visit was three. The inter-district comparison shows the uneven nature of their visit which was not a good account of itself (Table 20).

Supervision by ABSA/BSA

The supervision pattern by ABSA/BSA of sample schools with ten districts also paints a very dismal account as about 82 percent of them have remained unvisited/unsupervised till January 2010 while in another about 14 percent, the frequency of visit was only once and in the remaining four percent of the schools, the level of supervision was two times. The inter-district comparison once again showed the skewed pattern of their visit. Likewise, the cumulative account of their visit upto January 2010 shows that there were still about 30 percent of the schools which have remained unsupervised, in another about 62 percent of the schools, the frequency of ABSA, BSA's visit was below five times while in remaining eight percent schools, the level of visit was between 6-10 times (Table 21).

Supervision by UNICEF

The study of the profile of visit by UNICEF officials shows that there were about 92 percent of the schools which have remained unvisited/unsupervised by them during January 2010, however in the remaining about eight percent, the frequency of visit was reported to be one. The cumulative account of their visit upto January 2010 reveals that there were still about 20 percent of the schools which have not been supervised by them, in another about 78 percent of the schools the frequency of visit was observed to be below five times and in remaining two percent of the schools the UNICEF officials had paid visit between 6-10 times, once again, the inter district study of their visit provides a skewed pattern of the supervision where some districts have been periodically been visited while some had remained unvisited for long (Table 22).

The inter-district comparison shows the uneven nature of their visit, which was not a good account of itself

Summary and Conclusions

The study of SSHE programme in the ten districts of Uttar Pradesh on fifty sample schools provides an interesting account of itself. The UNICEF has been initiating certain interventions on some two hundred fifty schools across ten districts of the state of Uttar Pradesh. These schools have been developed as model sample/cluster schools where interventions have succeeded in creating

an environment that promotes sanitation and hygiene issues. In order to understand how the programme has been working, a total of fifty schools, five from each district have been randomly selected. The analysis shows that the programme has achieved remarkable success in some of the areas of the project and has been struggling in others as well. However, one also has to bear in mind that these social interventions have only been introduced in 2008 and it may, perhaps take a little more time to make an impact on people of the concern areas as internalization of social inputs takes a relatively longer time. The detail analysis has been summarised below:

Capacity Building

- Adequate measures have been taken in the schools towards nominating nodal teachers on hygiene education and a good majority of them have also been oriented on issues related with WASH.

- Besides this the school authorities have also taken necessary step to train other teachers on hygiene education in order to meet contingency arising out of the transfer of nodal teacher.
- The reinforcement of hygiene education through different channels viz. daily morning prayer, weekly bal-sabha was a very progressive and positive move that will go a long way to help the children to internalise good sanitary values.

Child Cabinet

- All the sample schools have succeeded in forming the child cabinet and a good majority of them have also been oriented towards all critical dimensions of cleanliness.
- A sizeable proportion of them have also become functional and were meeting quite regularly.
- These cabinets have also succeeded in soliciting supports from members of different community groups.
- The activities undertaken by them ranged from class room cleaning, school cleaning, toilet cleaning to organising sports activities, rallies, debates, drawing competition etc. However, the level of participation varied between activities to activities from being high in some to being low in others.

Parent Teachers Association

- All the sample schools have not only succeeded in forming PTAs but also have provided orientation to its members on hygiene and sanitation issues.
- A sizeable proportion of these associations have also been meeting regularly to discuss the issues related with WASH.
- A good proportion of them have also agreed to support Operation and Maintenance (O&M) and WASH facilities, only points out towards their willingness to participate and also their vibrant status.

Village Education Committees

- Likewise, all the sample schools have VECs which have become functional. However, the level of orientation of their members towards sanitary hygiene issues has remained not very high so far and needs to be addressed on priority basis.
- The level of frequency of meeting of VECs in the school to discuss WASH issues was also of a satisfactory level which could go further high up once the orientation level of members picks up.

Drinking Water

- On the issue of providing drinking water, the analysis shows that the sample schools certainly have certain positives and all of them have safe sources and a majority of them were functional. Likewise, a sizeable proportion of them also have storage facility in schools which needs to be enhanced.
- Similarly, a sizeable proportion of them also provide covered vessel to store water and use long handles for taking out water. However, the overall situation needs to be improved as in quite a few proportions of schools; the sanitary hygiene practices were not being properly implemented.
- The study also shows that though in a large proportion of schools, the drinking water sources are safe, however, a lot needs to be done to provide safety cover to remaining proportion of schools. Similarly, the analysis shows that though water quality testing has been done by Jal Nigam - the nodal agency for providing drinking water in rural areas, however a lot needs to be done in the remaining schools where no such exercise has so far been carried out.

Hand Washing and Sanitation

- The situation regarding the availability of safe sources for sanitation hygiene could be called to be safe as quite a large proportion of them have force left hand pump device, however, a good majority of them have also developed minor repair problem and therefore were not in use.
- The study also shows that, in terms of awareness towards good sanitary practices, the level of children cannot be called to be high. The lesser use of soap and other toiletry material related with sanitary hygiene only substantiate the findings.
- Similarly many of the hardware sanitary facility have lower use because of non availability of running water, absence of ramp facilities for physically challenged students etc. Thus, there is a need for relevant interventions that sensitises the communities, school management, the students and all the stake holders.

School Environment

- The status of school environment in a good majority of schools cannot be called to be high. The non availability of equipments like hygiene monitory board, their regular updating, non availability of dustbin in classes, lesser

amount of soak pits, drainage system for waste water disposal certainly call for relevant and appropriate action on priority basis.

- However, despite these handicaps, in a majority of schools the food was being cooked in hygiene places, the cooks were also reported to be practicing safe hygiene practices in cooking and the food was also served was neat/clean plates in a majority of sample schools.

Health Check Up

- The study also shows that no health check up camps have been organised in any of the sample schools which has been a major disappointment so far and calls for taking up appropriate interventions at the earliest.

Monitoring and Facilitation

- The analysis also shows that SSHE programme has multiple layers of supervision procedure viz. by the NYK voluntary, their coordinators, then by NPRC, by BRCs/BSA and finally by the UNICEF. However, the perusal of their working shows that this area has rather been weak and needs to be tone up as a sizeable proportion of schools have either remained un-supervised or much less visited. Further, it should be remembered that supervision is an effective mechanism to facilitate the movement of to and fro information (from functionary's level to the beneficiaries level) and helps the concern authorities to take up appropriate rear guard and corrective action, should the situation warrants.

Suggestions

On the basis of analysis it could be said that the intervention by UNICEF in SSHE programme that were being implemented in schools of ten districts of U.P. have succeeded in positively affecting some of the core areas of sanitary practices in the majority of the sample schools like in terms of building the capacity of teachers and students, re-inforcing hygiene education involving children, parents and communities through the formation of appropriate bodies and seeking their convergence, undertaking many activities at public places to motivate and sensitise the communities on sanitation and hygiene issues.

However, there were also some other crucial areas where the performance of the programme has not been high or

impressive and therefore, needs more interventions, like the availability of storage facility for drinking water in schools, the distance of drinking water resource, lower awareness level of school authorities in providing safe guard measure to safe average of drinking water or relatively lesser use of long handle ladle for taking out drinking water, non functional status of FLHP because of minor repair problems etc. Similarly, the lesser use of sanitary practices by school children after using toilet, after defecation and before handling food are some of the glaring omissions that needs to be addressed on priority basis.

The complete absence of health checkups camps in the schools is a major disappointing feature of the programme and appropriate steps needs to be taken to address the issue on priority basis. Likewise, the analysis shows that there is also a need to improve the school environment to enhance the use of hygiene monitoring boards or for their regular up dating through appropriate social intervention strategies.

Similarly, it could be said that the monitoring and facilitating aspect of the programme also needs to be toned up. Though there were several layers of supervision, however the perusal of their working shows that sizeable proportion of schools have still remained where visits is yet to commensurate. It should be understood that monitoring and supervision is not a fault finding mechanism, it is rather an effective ploy that helps the programme implementing authorities to constantly update themselves on the working of different organs of the programme. The flow of two way information gives them adequate time to deploy appropriate tools should the case arise. [IER](#)

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

Ethnic Conflict and Inter-community Relations:

THE MANIPUR EXPERIENCE



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Introduction

Manipur, one of the North-Eastern states in India, is a state of diversities. The state has a total area of 22,327 sq. km. with a population of 23,93,896. Geographically speaking, the state has two distinct regions – the valley at the heart of the state and the hills surrounding the valley. The entire area of the state is divided into nine districts. Of these four are in the valley. They are Imphal West, Imphal East, Thoubal and Bishnupur Districts. The remaining five are in the hills. They are Ukhrul, Chandel, Senapati, Tamenglong and Churachandpur Districts. The valley is inhabited by the Meiteis who constitute an overwhelming majority of the people there, along with the Pangals or Manipuri Muslims, who constitute the single largest minority community in the state. The valley also has a number of localities where different tribes reside.

The hills of the state, on the other hand, are more or less exclusively inhabited by 33 officially recognized tribes. Of these, Aimol, Anal, Angami, Chiru, Chothe, Kabui, Kacha Naga, Koirao, Koireng, Kom, Lamkang, Maring, Maram, Mao, Monsang, Moyon, Sema, Tangkhul, Poumai, Purum, Tarao, and Kharam are Naga tribes. Regarding the Kuki-Chin-Mizo group or the Kukis, they are Gangte, Hmar, Lushai, Paite, Ralte, Simte, Sahte, Thadou, Vaiphei, Zou and Any Kuki Tribes. Regarding the geographical dispersal of the different tribes in the hills of the state, Ukhrul and Tamenglong Districts are overwhelmingly dominated by the

Nagas whereas Churachandpur District is overwhelmingly dominated by the Kukis. In the other two remaining districts, Chandel and Senapati, both Nagas and Kukis constitute two more or less equally effective communities there. Speaking in terms of their representation in the state legislative assembly, the six Assembly Constituencies (ACs) in Ukhrul and Tamenglong Districts (three each) always return Naga MLAs whereas the six ACs of Churachandpur district always return Kuki MLAs. In case of Senapati District, out of a total of six ACs, both groups have won three each, and the two ACs in Chandel District are also divided into one each between the Nagas and the Kukis. At present the two groups have ten MLAs each in the state legislative assembly having 60 members.

It is important, however, to note that none of the five hill districts are exclusively inhabited by one particular tribe or group of tribes. In fact, there are many Kuki villages in Ukhrul and Tamenglong district, more so in case of the latter. There are also many Naga villages, particularly of those Nagas belonging to the Zeliangrong group of the Naga people (a group within the Naga community) in Churachandpur District. In case of Chandel and Senapati Districts, as already mentioned, both constitute two more or less equally effective communities there. Indeed, there was one Kuki candidate each in as many as five Naga dominated ACs (all the three ACs of Tamenglong District, Ukhrul AC of Ukhrul District and Karong AC

of Senapati District) during the last State Assembly Elections held in 2007.

The Kuki-Naga Clashes of the 1990s

The Kuki-Naga clashes which started around the middle of 1992 continued till the middle of the 1990s. Though it was popularly described as the Kuki-Naga clashes, it was mainly between the Nagas and the Thadou speaking Kukis of the state. Nonetheless, many other tribes of the Kuki-Chin-Mizo group were also affected during the clashes.

In fact, the Kuki-Paite clash in Churachandpur District during 1997-98 was also a ramification of the Kuki-Naga clashes.¹

Various factors, both historical and contemporary, have contributed to the outbreak of the clashes. Elements of rivalry were there in the traditional relationship between the two. Raids and reprisals often took place among the villages of different ethnic communities. The usual practice of divide and rule was also fully operative in course of the consolidation of the British rule over the different ethnic groups of Manipur. Among the contemporary factors, the most important one was that of the claim for exclusive ownership rights over land. While the Nagas demand for unification of the Naga inhabited areas into a single political unit, sovereign or

otherwise, irrevocably assumes their absolute ownership of all the hill districts of the state except Churachandpur, the Kukis insist that they have been living in the state for centuries, that they live in the territory of the Indian Union as free citizens, that there is nothing like Kukis usurping Naga areas or vice-versa and that the villages of both communities have their own respective well defined and long established boundaries. The existence of numerous militant ethnic outfits as protagonists of such claims and counterclaims; extortion of homeland taxes; quit notices served by one group to another; fight for control over resources; disagreements on sharing of the development opportunities; inefficient administration; lack of effective policing; poor governance; etc. also have contributed to the outbreak of the clashes.



The relationship between the Nagas and other tribes of the Kuki-Chin-Mizo group of people also got seriously strained

Once started, the clashes spread like wild fire and within no time the entire state was in the grip of unprecedented ethnic violence. It affected all the five hill districts of the state. Of these five, Chandel was the most troubled and affected district² while Ukhrul and Senapati Districts were the less affected districts.³ Tamenglong was also very much affected. Churachandpur District was a different case in the sense that the clash in the district was not so much of a Kuki-Naga clash but a case of Kuki-Paite clashes, two tribes belonging to the same Kuki-Chin-Mizo group of tribes.

While the clashes in Ukhrul and Senapati Districts were mainly between the Tangkhul Nagas and the Thadou Kukis, the clashes in Tamenglong District were mainly between the Zeliangrong Nagas and the Thadou Kukis. In case of Chandel District, though it was mainly between the Naga tribes and the Thadou Kukis, a number of other intermediate tribes were also drawn into the whirlpool of the clashes in the district. It may also be noted here that while the Kuki Naga clashes showed a steady decline during the second half of the 1990s, fresh and intense ethnic clashes took place in Churachandpur during the period from 1997-98. Overall, the violent clashes have claimed about 2,000 lives and many more were injured. Many were also maimed for the rest of their lives.

More than 500 villages were attacked and about 7,000 houses were burnt down to ashes. It also led to the displacement of about 15,000 families and more than one lakh people.

Impact of the clashes on the inter-community relations among the people in the hills:

The ethnic clashes were a grim reminder of the threats posed by the contest over land, demand for exclusive ethnic homelands and erosion of ideals of peaceful coexistence to the unity and integrity of the people inside a plural society. It has adversely affected the sense of unity and integrity among the various communities in the hills thereby seriously disturbing the inter-community relationship among the various ethnos inside the state. First of all it inflicted deep wounds in the relationship between the Nagas and the Thadou speaking

Kukis. The relationship between the Nagas and other tribes of the Kuki-Chin-Mizo group of people also got seriously strained as various other tribes belonging to the later group of people were also sucked into the whirlpool of the clashes. Besides, the relationship between the Thadou speaking Kukis and other non-Thadou speaking Kukis also got strained as anyone who was not on one's side became a potential enemy or collaborator with the enemy, and was viewed with suspicion. The most tragic manifestation of this was that of the Kuki-Paite clashes during the late 1990s.

While the clashes have not affected the ethnic affiliations of the major tribes inside the state, the same cannot be said about the small and vulnerable tribes. As violent clashes spread, the efforts of the latter to keep themselves away from the clashes went in vain. The dominant groups tried to drag these tribes within their fold in their efforts to strengthen themselves and expand their group identity vis-à-vis the position of their opponents. In the process, many of them found themselves helpless even though they wanted to maintain their unaffiliated position. Many of the small tribes were also either surrounded by or in proximity with different dominant groups and in the quest for the all-important security during the clashes many of these villages had to identify themselves with different dominant groups. As a result, villages of the same tribe were found claiming themselves as belonging to either the Naga or the Kuki group in accordance with the dominant community surrounding them or with whom they had proximity. This, in fact, became an important factor afterwards in these tribes' moving closer to either of the two major groups involved in the clashes.

There also has emerged a tendency among many tribes within the Kuki-Chin-Mizo group to assert themselves by their individual tribes. This may be because of the fact that it was mainly the Thadou speaking Kukis who were initially involved in the clashes. The Thadou is also the most prominent tribe among the Kuki-Chin-Mizo group of tribes. There were already resentments among the other tribes within this group

about the dominance of the Thadous and after the harrowing experiences of the clashes they started distancing themselves all the more from the Thadous. However, this has not happened among the Naga group of tribes.

The demands for more or less ethnically exclusive homelands have also created a fear on the part of the smaller tribes of being swamped by bigger tribes. One may cite the plight of the KOMREM people of the state here. The word Komrem is the united banner of six small tribes of Manipur viz. Aimol,

Chiru, Kharam, Koireng, Kom and Purum.

At present, the Komrem people in the state are reported to be about 32,000.⁴ They aspire to preserve their own distinct identity as different from other groups. Yet pressure from other more powerful groups to come within their respective folds is there. Their situation is rendered all the more vulnerable due to their not living in a compact area.

The clashes also have resulted in increased polarization among the groups. Prior to the clashes the people used to exercise their franchise without any consideration of ethnic groups to which a candidate may belong. Now after the clashes they tend to cast their vote on ethnic lines. With the people giving more and more emphasis on their respective ethnic affiliations, people are divided on ethnic lines all the more.



Earlier, the Kukis voted and campaigned for Naga candidates but the clashes have changed it completely

Earlier, the Kukis voted and campaigned for Naga candidates but the clashes have changed it all. Now casting their votes, both in state and Lok Sabha elections, on ethnic lines is the norm. In other words polarization on ethnic lines has taken place to a very great extent.

It is true that in most of the affected villages, nowadays there is no longer restriction on entering and free movement of different communities inside the villages. But in many villages, inter-marriage got less frequent though inter-dining still continues. Besides, even after the clashes have subsided, there are places where inter-village as well as inter-tribal relationship continue to be strained on account of finding ones former village being occupied by another after they returned from their places of displacement and their being

refused the return of their villages to them. For example, the Aimols of Aimol Louchilbung Village, Churachandpur District have found their land occupied by the Kabuis after they returned to their original site. Often the villages where clashes took place remained deserted for long times and many were abandoned permanently. Many also decided not to return even though majority their fellow villagers have decided to return. Many have also established new villages.

The last significant gesture for reconciliation was made on 14th November 2003 when Baptist Church leaders of the state, along with Dr. Dentan Lotz and Mr. Zac Patnaik, General

Secretary and Vice President of Baptist World Alliance (New York), made a Peace Declaration and planted a sapling (called peace tree by many) in the presence of some Kuki and Naga church leaders. The Declaration was a firm pledge to send out beams of bonhomie to fetch ways and means to do all the good one can do to all the people instead of “driving a wedge between Christian groups with the sole motive to have an edge over some” in the interest of leaving a legacy of “physical safety, spiritual security and social harmony” for the people.⁵ Yet the grim reality of the clashes between ethnic outfits persists. In fact there was a serious clash on 3rd September 2007 between the NSCN (IM) and the Kuki Liberation Army (KLA) which led to the killing ten KLA cadres.⁶ Indeed, as the Declaration itself says, the state of things remains as one of “potentially reversible amity”.⁷

Concluding Observations

A number of things have to be taken into account if one is to find a lasting solution to the whole problem. For one, there is no denying the fact that the clashes were the handiwork of the militants. They were responsible not only for the outbreak of the clashes but also with the continuation of the clashes. This was evident from the fact that whenever there was an attack on a village there were militants welding sophisticated weapons like AK-47 and others. The entire episode also shows how militant outfits can perpetrate violence and seriously

damage communal harmony. Dealing with these under-grounds outfits has proven to be an uphill task. Village chiefs and church leaders tried their best to bring a peaceful life. Yet, they have failed more often than not to convince various militant groups.

Lack of timely intervention also has led to the loss many precious lives. Had it been made, much of the problems of the people would have been avoided. The state government lacked the political will, strength of resolution, persistent efforts and sensitivity to intervene in time. It was rather a case of the clashes subsiding by themselves simply because they

cannot continue forever. For the police and security personnel also, it was most of the time a story of rushing to the site after the clashes have already taken place. It is so tragic to note that though there were vigils from the security personnel to the villages from time to time they were never on hand when the attacks took place. At most they will come only after the damage has

already been inflicted in the form of houses burnt, properties destroyed and people killed. Many of the administrative officials were also not free from criminal negligence. They failed to realize the magnitude of the sufferings of the victims. Complaints of the security forces taking sides and supporting one group against the other were also too many for comfort. It is true that the security personnel have to flush out militants from villages whenever they

are there. But while doing so they should not make use of innocent villagers. Otherwise, this will invite the wrath of the militants on the villagers and make them soft targets of their retaliation.

One also cannot overlook the effect which the ongoing peace talks between the Government of India and the NSCN (IM) will have in securing peace and communal harmony among the various sections of the people inside the state. Coming on the heels of the prolonged ethnic clashes of the 1990s, Kukis have many misgivings about the ongoing GOI-NSCN (IM) peace talks. They are naturally sensitive to any possible impact it could have on them. The claim for a



Undisputed and exclusive claim over land was the single most basic reason for the violent clashes

sovereign Nagaland covered various areas presently inhabited by them. It was also obvious to them that the underground Naga outfits had a hand in the clashes and in addition to that they have received quit notices from the Nagas on more than one occasion already. Undisputed and exclusive claim over land was the single most basic reason for the clashes. So they insist: “The present ongoing talks between the GOI and NSCN (IM) poise intense doubt and total mystery to the good citizens of India’s North East in general and the Kukis in particular.”⁸ It cautioned the peace negotiations between the two saying that the Government’s peace initiative with the NSCN (IM) alone may endanger the prospects of peace in the region and would blow the lid off the Pandora’s Box.⁹ Therefore, they insist that the Prime Minister must take the Kukis into account before an amicable solution is tabulated by him with the NSCN (IM).¹⁰ The Kuki Students’ Organization (KSO) also insists that the GOI should take Kukis into confidence before making any deal with the Nagas. It says that the Government of India “has no right to negotiate Nagas without participation of the Kukis” and that their slogan is “Do not give away our lands to bargain the Nagas”.¹¹

There is one more thing which has to be always kept in sight while dealing with the entire problem of the ethnic clashes. At the core of the problem there are the claims and counter claims of exclusive ethnic territories which are in one way or the other bound to have adverse effects on the territorial integrity of the state. For the Meiteis in the valley, the hills and plains of Manipur constitute one organic whole never to be severed from one another. Indeed the threat which the problem poses to the territorial integrity of the state was time and again raised by the politicians and public leaders. However, so far political parties inside the state and the state legislative assembly have been unanimous about their stand to protect the territorial integrity of the state. Overlooking this fact is bound to seriously endanger the already disturbed inter-community relations inside the state.



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not been done**

The following suggestions may be made in order to better promote the interests of communal harmony among the various groups inside the state:

1. To develop administrative efficiency and security preparedness.
2. To station neutral/non-communal officers so that equal justice could be dispensed to all.
3. To assure equal treatment to all the different ethnic groups by the government.
4. To create avenues for mutual interaction on common platforms so that both may come together and indulge in healthy socio-cultural exchanges and exercises together.

5. To encourage inter-community prayers.
6. To find ways and means to encourage the people to cherish and nurture the pluralistic identity of the society and develop a greater spirit of accommodation among them.
7. Government should be non-partisan while dealing with militants of different ethnic groups.
8. Development is necessary. It is true that absence of peace stands in the way to development. However, it is also true that neglect of development leads to discontent and it leads to disturbance of peace. The government must also work towards development in an even manner.

9. The grievances of the displaced people should be justly redressed. So far this has not been done. The people have been demanding this all the while. However their demands have fallen to deaf ears so far.
10. Both the central and state governments must take up all the necessary steps to find a meaningful, just and lasting solution to the problem of ethnic conflict among the different tribes of the state. Half hearted measures won't solve the problem. The interests and identity of the smaller tribes must also be justly protected. Otherwise there is fear on the part of the smaller tribes of being swamped by the bigger tribes and in the simmering conflict, the arming of the groups can lead to various configurations and conflict

situations with different political objectives.

11. It is also high time that the Government of India answers the questions of the Kukis that are they not Indians and are they not living inside the Indian Territory or are they living in the land of the Nagas.
12. Peace cannot be there as long as insurgent ethnic armies who champion exclusive ethnic homelands continue to be there. Both the state and the central government should justify their own existence by securing good governance to the people.
13. Demands for ethnically exclusive homelands should be given up in the interest of all. [IER](#)

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The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

APPLICATION OF GIS

*As A Tool To Prevent, Control,
And Manage HIV/AIDS Pandemic*



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Nature and Magnitude of the Problem

India's population crossed one billion in 2001; out of which 67% population lives in rural areas and 33% in urban areas. HIV/AIDS epidemic was recognized in 1986 in India and by 1992; it spread all over the country. It is estimated that 5.13 million people in India are infected with the deadly HIV virus, which makes India a home of second largest population of people living with HIV/AIDS (hereafter called PLHAs) next to South Africa. This scourge is threatening our recent economic achievements and has raised several human rights issues concerning PLHAs. According to National AIDS Control Organization (NACO), (2004) the population of PLHAs has increased from 3.86 million in 2000 to 5.13 million currently living all across India; out of which 38% are women and 58% lives in rural areas where delivery of health services is poor and in some areas almost nonexistent. In many studies, it is reported that majority of the infected population are young (<30 years). The number of PLHAs in four southern states namely Andhra Pradesh, Tamilnadu, Karnataka, and Maharashtra are the highest to that of any other region or states of the country. The prevalence of disease continues to be the highest amongst the high risk groups such as Men having Sex with Men (MSM), Female Sex Workers (FSWs), Intravenous Drug Users (IVDUs), and STD clinic attendees (NACO, 2006). The other routes of transmission of virus, by order of proportion, are perinatal, infected needles and syringes, and unsafe blood and blood products. Predominant mode of transmission of the virus (85%) still remains the unsafe heterosexual contacts except the northeastern states, where predominant transmission route is through injecting intravenous drugs. It is also a fact to know that in India, many cases of the HIV infection go unreported because of stigma and discrimination prevalent in our society against PLHAs. HIV infection in the country has been described as of moderate level, when compared to other countries in the world. The population of 5.3 million PLHAs is distributed in a unique pattern. There are 111 districts in India in 18 states, which are considered high prevalence districts.

It is essential for the policy makers and civil society to understand unique pattern of distribution of the PLHAs to be able to take appropriate decision concerning to the area and group (s)

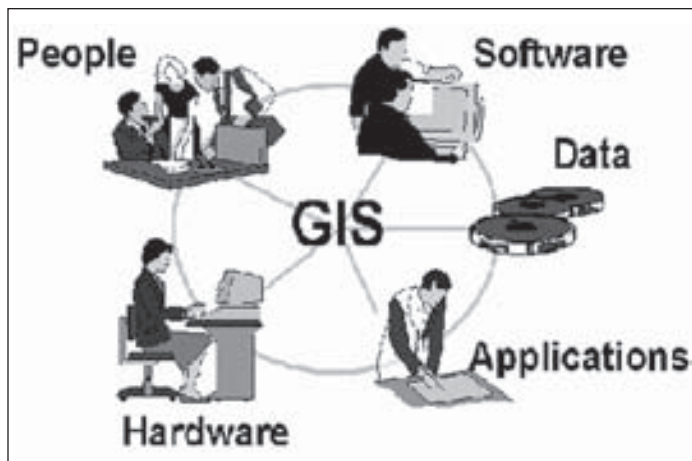
involved. The public also need to understand the presence and the intensity of the infection so that the plans and programs to bring about a change in the attitude and behavior can be made (M. Bhattacharya and S., Chandra, 2005).

Recent advances in geographical and mapping technologies have created new opportunities for public health administrators to enhance planning, analysis, monitoring, and management of health related events or states. Geographic Information System (GIS) is particularly useful to health professionals and administrators in developing day to day management of health plans, programs, and facilities (Colledge, et, al., 1996). One of the most basic functions of the GIS is that it performs almost without thinking, a provision of the map. An early example of rudimentary GIS dates back to 1854, when John Snow a Physicist, who produced a map of distribution of deaths due to Cholera outbreak in the district of Soho, London. In today's standard, this was a simple "dots' map", which he could do as he had access to addresses of individual cases. This map showed some evidence of spatial clustering of cases of disease, following a hunch, Snow overlaid a second map of water pumps in the area over the dots' map. By doing so, he was able to demonstrate that many cases were concentrated around a single source of infected water. On his advice authorities closed the pumps and the epidemic was halted. This discovery of the link between water source and Cholera led to a movement for safe drinking water supply in the UK in the second half of the nineteenth century (O' Sullivan and Unwin, 2003). A dots' map of deaths due to Cholera outbreak in London produced by Snow is depicted below.



Source: iRevolution

GIS can be defined by various ways depending on its specific usage. Basically, it is a computer-based system, which enables its users to store, retrieve, modify, analyze, and represent geographic data as useful information so as to facilitate management, decision making and problem solving (Fyke, J., 2009). A picture below demonstrates the same.



Source: Enterprise GIS in Health And Social Service Agencies, an ESRI White Paper, 1999

Each piece of information is related in the system through specific geographical coordinates (for example, latitude and longitude) to a geographical entity (for example, health center, school, village, dam, drainage, etc.). This information can be displayed in the form of maps, charts, and tables.

Despite tremendous potential of GIS, the health sector in India is yet to explore it fully. Majority of the health departments and research organizations in India do not have the hardware and software, or trained staff that would enable them to apply GIS technology (Johnson and Jasmine, 2001). In this paper an attempt is made to explain potential uses of the GIS as a tool in preventing, controlling, and managing HIV/AIDS and other diseases and health events.

Application of GIS in Public Health

GIS as a tool has numerous blessings for the public health such as geographical distribution and determinants of diseases, analysis of spatial and temporal trends, identifying gaps in immunization, and mapping the population at risk, and stratification of risk factors, etc. It also enables health professionals to document health care needs of a community, to assess resource allocations, forecast epidemics, and plan and target intervention in the affected community. Monitoring health plans, and utilization of

health facilities over a period of time is a challenging task and GIS offers an effective solution to this problem. Furthermore, GIS is equally enabling for the health administrators to route health workers, equipments and supplies to the area (s), where they are needed the most, and to create publicity materials such as maps. To summarize in brief, its applications in public health can be categorized as follows;

- Determination of (prevalence, incidence) geographical distribution and variation of diseases
- Analysis of Spatial and longitudinal trends
- Mapping of population at risk
- Stratification of risk factors
- Rationalizing resource allocation and relocation (health facilities, human resource, supplies)
- Planned and targeted interventions
- Forecasting of diseases (epidemics, pandemics)
- Monitoring diseases and interventions over a period of time

GIS and Epidemiology

The word epidemiology is derived from the Greek word where “epi” refers to on or upon; “demos” refers to people and “logos” meaning the study of. According to Dictionary of Epidemiology (1988) “Epidemiology is a study of the distribution and determinants of health related states or events in specified populations, and the application of this study to the control of health problems”. Understanding determinants of a disease and its spread person to person and community to community has become increasingly global (ESRI White Paper, 1999). GIS plays a vital tool in strengthening the whole process of epidemiological surveillance or syndrome surveillance (such as HIV/AIDS), information management, and analysis. It provides excellent means for visualizing and analyzing epidemiological data, revealing trends, dependencies, interrelationship, and prediction of health related states or events that would be more difficult to discover through traditional methods. Location of the public health facilities, specific diseases, and other events can be mapped in relation to their geographical existence, and existing health and social facilities. Such information, if mapped together creates a powerful medium for monitoring and management of diseases and public health programs. Epidemiology researchers can find clues to the spread of a disease as they study outbreaks of the disease through time, location, and groupings of people. In many cases, people with an illness belong to several groups such as family, school, church, and work. These groups are also identified by location. By

mapping the location of various groups and looking at the presence of illness overtime, it is easier to identify the source of a disease and how it spreads. Understanding of these aspects of an epidemic or health events can help health administrators develop a plan to stop the spread of the disease.

Useful GIS Functions to Prevent, Control and Manage HIV/AIDS

GIS has several advantages over conventional methods used in health planning, management, and research. Some of these functions are described below;

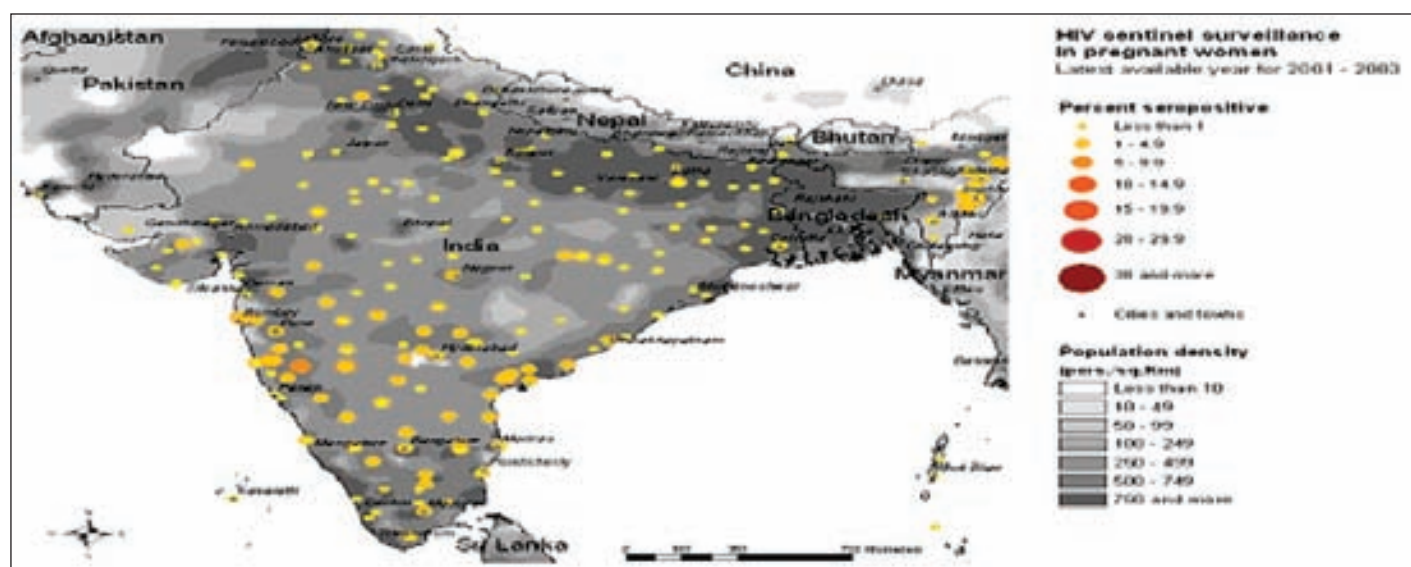
Data Management

GIS can be used to capture, store, analyze, and geographically integrate large amount of information pertaining to cases with HIV/AIDS from different sources, programs, and sectors; including epidemiological surveillance, census, environment, and others. Surveillance of the disease requires continuous and systematic collection and analysis of data. GIS can eliminate duplication of efforts involved in data collection across region and countries; hence can reduce the cost substantially involved in it. It can serve as a common platform for convergence and multi disease surveillance activities. Each data record had to be geo-referenced to a desired level of accuracy. Standardized geo-referencing of epidemiological data facilitates structured approach to data management (*Weekly Epidemiological Record, 1999*). Once the basic structure is ready, it is easy to convert it

to the surveillance system for any other disease or health events, by replacing data of one disease with data of another disease (*Srivastava and Nagpal, 2000*). GIS provides access to additional information from a wide variety of sources. Global Positioning System (GPS) can be used to obtain locations of point features on a map such as health clinics, diagnostic facilities precisely; it can process aerial or satellite imageries to allow information such as temperature, soil types, and land use to be easily integrated, and spatial correlations between potential risk factors and the occurrence of diseases to be determined (*Weekly Epidemiological Record, 1999*). High resolution satellite imageries and aerial photographs can be used to obtain accurate and up to date maps of any region. Latest, accurate, and low cost maps are essential for epidemiological surveillance. Surveillance of HIV/AIDS will enhance efforts to prevent occurrence of new incidences, rationalize allocation of resources for treatment services, and assist in evaluating impact of public health interventions.

Visualization

GIS offers powerful tools to present spatial information to the level of individual occurrences, and to conduct predictive modeling. It determines geographical distribution and variation of diseases and their prevalence and incidence rates. For example, in studying the surveillance of HIV/AIDS in India, it is important to find out which are the areas where the incidence rates of the disease is the highest. This will have implications in developing

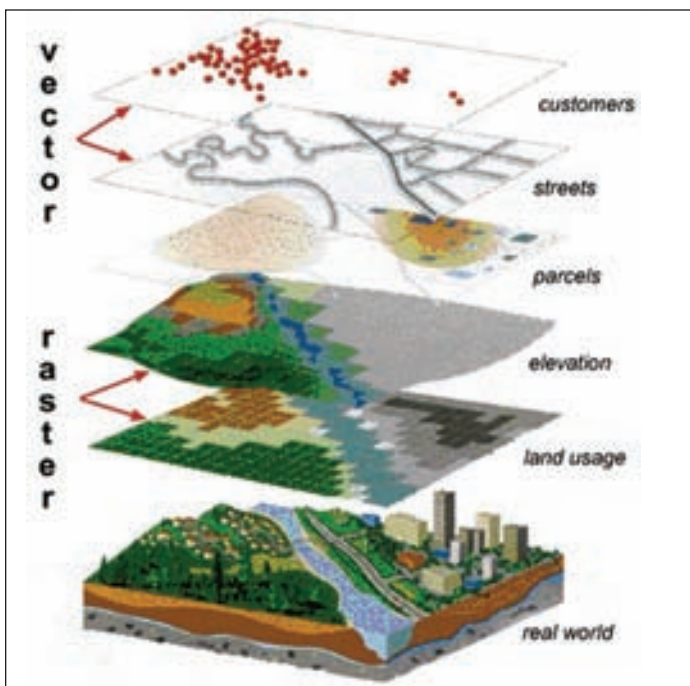


Source: World Health Organization

strategies, plans, and programs to eradicate the disease (Balaji, 2000). GIS can help in generating thematic maps, ranged color maps or proportional symbol maps to denote the intensity of the disease or a vector. In comparison with the traditional use of charts and tables, GIS generated maps are extremely effective in communicating messages even to those who are not familiar with the technology. GIS can keep track of geographical location of service providers, customers, resources, and health plans and programs. It allows policy makers to easily understand and visualize the problems in relation to the resources and to allocate resources to those communities, who need them the most. GIS permits dynamic link between databases and maps so that data are automatically reflected on the maps. An example of visualization in which people needing Antiretroviral Therapy are shown here.

Overlay Analysis

GIS can overlay different thematic layers. This helps in decision making and medical research through multi criteria modeling (for example, in understanding the association between prevalence of certain diseases and specific geographic features). A research study based on overlay functions was conducted in Kerala in (2006) by the IES Geospatial Systems Pvt. Ltd using overlays of thematic layers of HIV/AIDS patients from high risk groups as

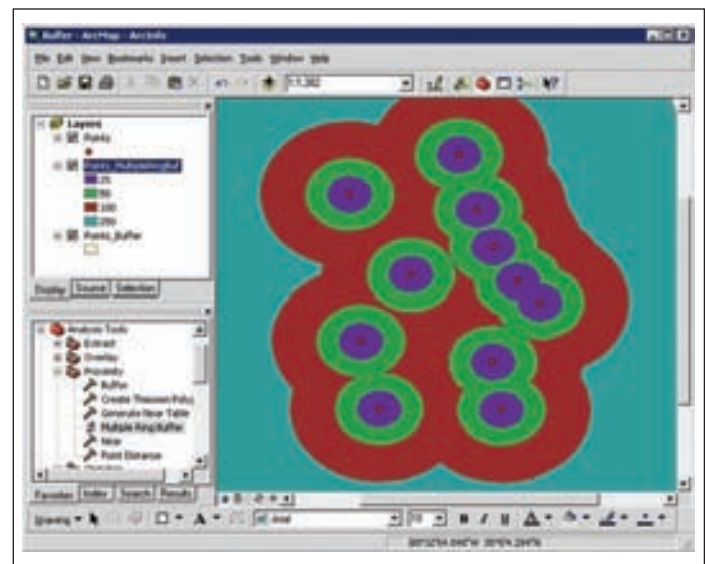


Source: Geographic Information System

discussed above. The study found out the two areas Aluva (39 cases) and Mukundpuram (48 cases) having highest numbers of infected CWCs in Cochin and Trichi districts of Kerala respectively. A classic example of overlay analysis is shown here.

Buffer Analysis

GIS can be a useful tool in rationalizing allocation and relocation of resources to manage and control diseases and other health events. It can create buffer zones around selected features. By doing so, it can estimate how many HIV/AIDS cases are covered by a health facility inside the buffer zone or how many cases are located away from the health facility. The user can specify the size of the buffer and then can combine this information with the disease incidence data to determine how many cases fall within the buffer. Buffer or proximity analysis can be used to map the impact zones of high risk groups, where control activity needs to be strengthened (Srivastava and Nagpal, 2000). An example of buffer analysis is depicted below;

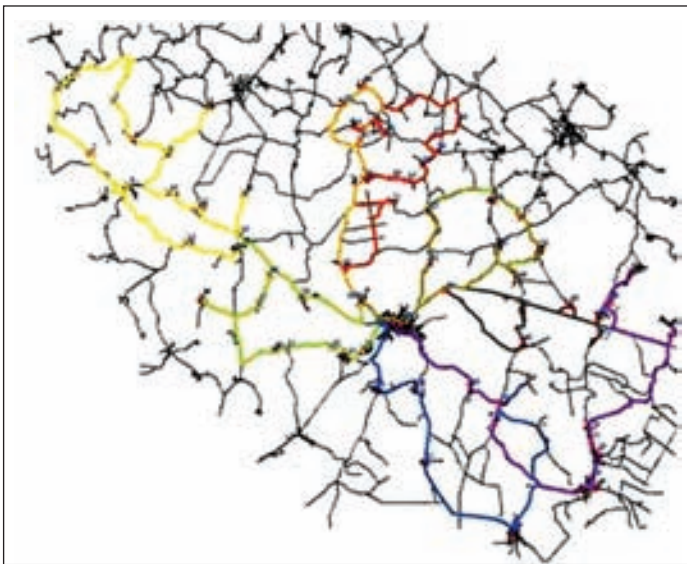


Source: GIS Pathways

Network Analysis

It is used in identification of the most efficient routes or paths for allocation and relocation of services or resources, which involves locating the shortest or least-cost consuming route (s) in a network. The cost in network analysis usually refers to distance or travel time. Three common types of networks are roads, streams, and rails. Network used for different applications have different types of network systems. It can identify

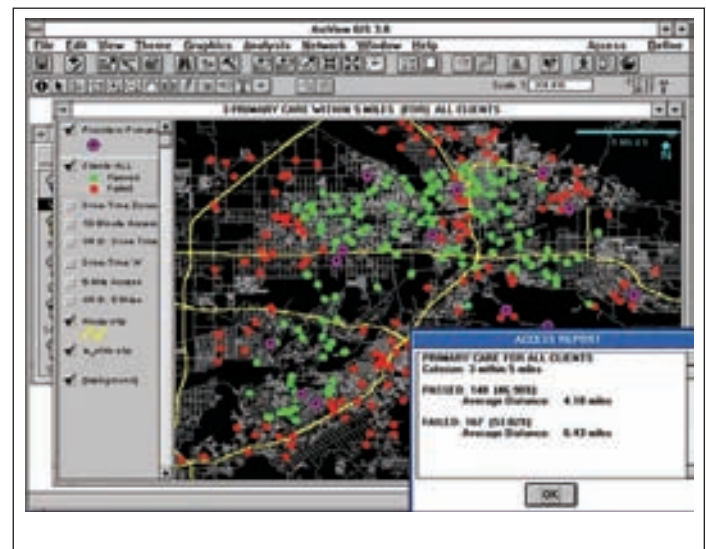
catchment areas of health centers and also locate suitable site for a new health facility. Health services delivered at home (for example, distribution of condoms, contraceptive pills or other medical supplies) can be scheduled in a more efficient manner by analyzing transportation factors and street patterns, and recommending the most efficient route. It can provide accurate and timely information about where health services are located, directions, and maps how to get there. A picture shown below depicts network analysis.



Source: Image-Geo. Info

Geo Statistical Analysis

GIS can carry out specific calculations, for example, proportion of population with HIV/AIDS falling within a certain radius of a health center. It can also estimate distances and areas, for example, distance of a community from a health center, and area covered by a targeted intervention for HIV/AIDS. It can estimate trends and patterns of diseases, density of HIV/AIDS cases in a particular region. Further, it can make prediction by using extrapolation of points' data. Set of analysis patterns tools such as Average Nearest Neighbor Distance, High/Low concentration, and Spatial Autocorrelation, can help us to understand trends and patterns in HIV/AIDS transmission. The tools like Central Feature, Directional Distribution, Linear Directional Mean, Mean Center, and Standard Distance Tools may provide information on the areas where HIV/AIDS incidences are the highest, their mean and SD value (s). Furthermore, tools like Hot Spot Analysis and Cluster and Outlier Analysis can



Source: City University, London

provide useful statistics for the health administrators. A picture above is showing Geo-Statistical Analysis.

Query

GIS allows interactive queries for extracting information from the map, table or graph. Queries can be made either by attribute or by location, for example, finding HIV/AIDS cases in a particular location or number of diagnostic facilities in a particular district.

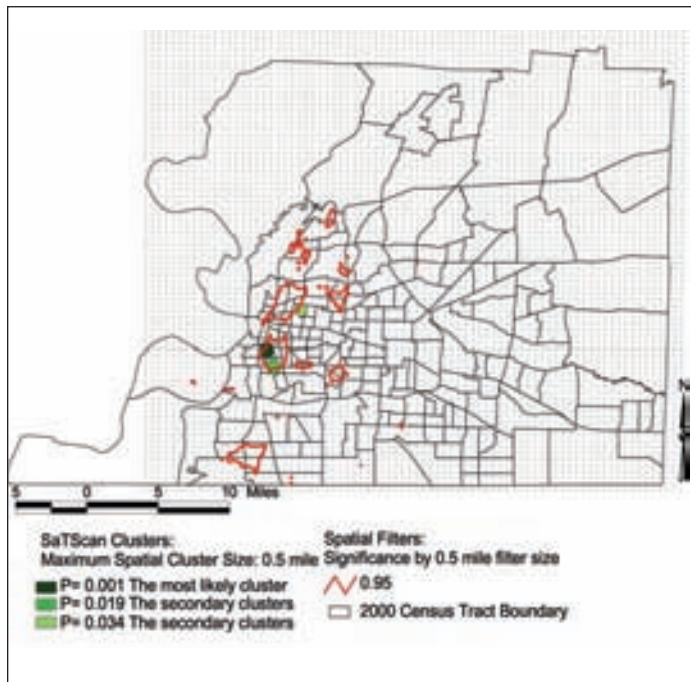
Extrapolation

GIS provides range of extrapolation techniques. Using these



Source: What is GIS? Questions

techniques, the distribution of the HIV/AIDS cases in inaccessible and un-sampled areas can be mapped. The tools such as Kernel estimation, Spatial Filtering methods can be used in testing the hypothesis, to provide level of significance for judging the observed relationships. Spatial filtering shown below is a kind of a map, which present phenomena under study concisely. Spatial Filter technique can be used to find out the concentration of PLHAs or any other health event in a given population.



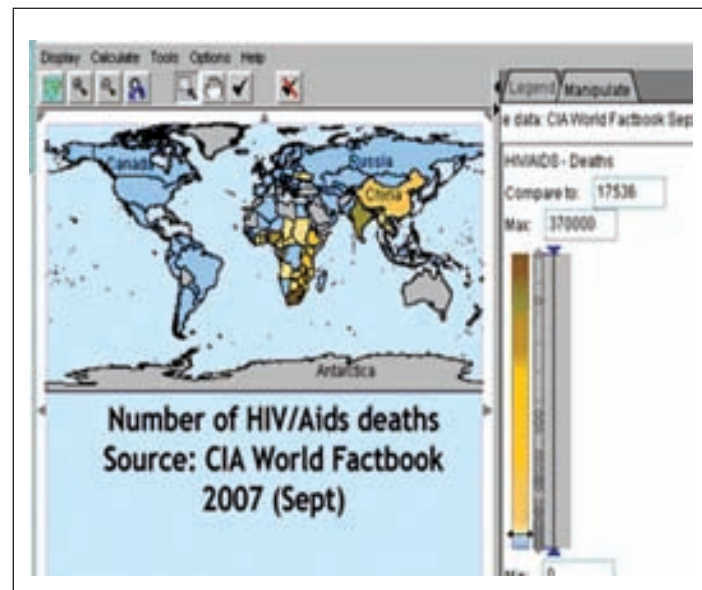
Source: International Journal of Health Geographics

Web GIS

Seeing is believing. GIS based web can store public health related data in a central server, which can be accessed from various terminals connected to the server through internet or intranet. But, it poses a threat to confidentiality while accessing data (Richards *et al.*, 1999). Internet based GIS technology eliminates the traditional method of flow of information and the information is instantly available across the globe. Dynamic maps published on the web allow patients to locate the most convenient services to their home or work places easily. An example of interactive GIS based website is shown above.

Conclusions

Though GIS is not a panacea, but a useful tool and has



Source: ESDS International

tremendous potential uses in public health. It can help us to mitigate the effect of HIV/AIDS scourge as it provides better and faster health mapping and analysis than the conventional methods. It enables health professionals quick and easy access to large volumes of data instantly; provides a variety of dynamic analysis tools and display techniques for monitoring and management of diseases. The possibilities that can be explored are limitless depending upon the skills, imaginative and creative use by the researchers and willingness of the health sector management and government to resource its implementation. Health administrators, professionals, and researchers need training and user support in GIS technology, data and epidemiological methods, then they can make use of GIS properly and effectively. [IEE](#)

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(The views expressed in the article are personal and do not reflect the official policy or position of the organisation.)

Democratic Governance At Local Level:

Evidences Of Grassroots Institutions' Functioning From Indian States

Overview

After independence persistent efforts have been made to make rural local self-government viable and self-sustainable on the lines portrayed by Mahatma Gandhi. Unfortunately the response of the state governments was of very different nature and as a result the pace and pattern of establishment of rural local political institutions was not very enthusiastic in the initial phase. The state governments showed very little interest to empower these institutions and transfer of power to the representative institutions was almost negligible. However, the political leadership of some Indian states like Kerala, Karnataka, Maharashtra and West Bengal came forward to establish panchayats at local level but on the whole the pace of development was restricted that left much to be desired. Champions of local self-government debated and argued that the development planning was faulty, that the results did not reach the people concerned despite plethora of schemes and massive investments in rural sector. It was also realised that the infrastructure at the local level was in a very bad state and one of the obvious reasons was poor delivery system through local bureaucracy. People's participation was rarely seen and the development model was of 'top down approach'. Accountability of the delivery mechanism was nominal as it rested with the bureaucratic hierarchy that looked at rural mass(s) as mere recipient.

Almost after forty-five years, the Central Government realised this hard truth that the delivery system was not

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effectively operational; it realised at last that without making people's direct and responsible participation through local self-government purposeful development in the desired manner was not possible. As a result the introduction of 73rd Constitutional Amendment Act was made in 1993. The execution of the Act was made mandatory for all the Indian states and panchayats have been provided a constitutional status. A special chapter has been added to the Indian Constitution on panchayats. The 73rd Amendment Act has provided uniformity and formal structure to these traditional institutions of self-governance for the sake of their effective

functioning. The 73rd Amendment Act has initiated a fundamental restructuring of governance and administrative system of the country, based on the philosophy of decentralisation and power to the people. Policy planners have realised by now that the new panchayat raj institutions have the potential to usher in a new era of change and development in accordance with people's needs and priorities, and to revitalise a deeply troubled system of democracy (*Behar & Kumar: 2002*).

The idea that produced the 73rd Amendment Act was not a response to pressure from the grassroots but to an increasing recognition that the institutional initiatives of the preceding



decades had not delivered, that the extent of rural poverty was still much too large and thus the existing structure of government needed to be reformed. It is interesting to note that this idea evolved from the Centre and the State Governments. It was a political drive to see PRIs as a solution to the governmental crises that India was experiencing (*World Bank: 2000*). The Institution of panchayat raj in its rejuvenated form seeks to achieve the objectives of democratic decentralisation to accelerate socio-economic development and usher in equity and social justice.

The enactments of the 73rd Constitutional Amendment Act and the subsequent state wise panchayat raj acts in India have brought to frontline the significance of grassroots democratic processes. This change in the Indian political system is the result of a growing conviction that the big government cannot achieve growth and development in a society without people's direct participation and initiative. This experience has

brought the lesson that the success of the new panchayat raj system largely depends on the congruence of perception and commitment of people, their leaders and the officials, about the role to be played by them in the new system.

Contextually and theoretically too, the new panchayat raj system has been created as a model of self-governance (*Sisodia: 2005*). The objectives of decentralisation are to execute and

implement schemes and programmes to meet the local needs, to mobilise people, to channelise their energies towards socio-economic reconstruction and to involve them in all the activities of the communities through the new institutions. Its objectives include also to reduce the size of work of the higher level government and leaving the responsibility to the people to decide their destiny as per the new dispensation. Decentralisation is a much-debated issue in India and other countries with federal system of governance. Though there are various arguments for and against decentralisation, arguments in favour of decentralisation far outweigh those against it because of the inherent potential of democratisation in the decentralised federal system through proper empowerment of people at the grassroots level.

A decade and a half of panchayat raj in India has been a matter of debate and speculation about its performance and

impact. All the major states have completed at least one round of panchayat elections and in majority of cases at least two-three successive rounds. Almost three million people including one million women and a sizeable number of SCs/STs took part in these elections. The sizeable presence of under privileged and poor as representatives through reservations in the grassroots political institutions is a landmark development in the rural politics of the country. This significant development has special meaning because a decade and half earlier in most parts of rural India these groups were excluded from public life and political participation. This is also a matter of serious debate as how this excluded lot after their inclusion in active politics at grassroots would effectively tackle local power equation and set the agenda for development. Yet the fact remains that these backward and so far ignored classes have heralded their arrival on the political stage of the country in the country side.

Contextually and theoretically too, new panchayat raj system has been created as a model of self-governance

The responses of state governments to the implementation of panchayat raj varied significantly and it is very difficult to generalize about this issue on the basis of their functioning for the last one decade or so. Only a few states like Maharashtra, Gujarat, Kerala, Karnataka, West Bengal have had a track record of panchayats since 1950s and the exemplary lead taken by the state of Madhya Pradesh after 1993

brings together a total of six states only that took steps to strengthen panchayat raj institutions. On the other hand states of Bihar and Jammu & Kashmir are considered prominent examples among states where little or no progress had taken place over the last one decade; even regular panchayat elections were inordinately delayed in these states.

A perusal of state profiles would show that panchayat raj reforms have certainly taken place with vigour and zeal in some western and southern parts of the country, which are relatively sound from the point of view of economy, are vibrant socially, and have active civil societies. On the contrary, the northern states with the greatest degree of poverty and inequality and deep schisms of caste and low pace of governance resulted in weak panchayats (*Robinson: 2005*).

In this mixed scenario of development exemplary reforms

have taken place in Kerala and Madhya Pradesh due to the strong political will of the political leadership of these states after the implementation of the 73rd Amendment Act. In Kerala, the people's planning campaign was predicted on a high level of popular mobilization that was made possible by high level of literacy and professional support with a mass base social movement (*Issac: 2000*). In Madhya Pradesh, the then Chief Minister Digvijay Singh had introduced a series of reforms and amendments in panchayat raj to strengthen the grassroots institutions, especially the Gram Sabha. The example of West Bengal is well known where the CPM government used the PRIs as a political support base in rural areas with a significant degree of success. The land reforms in West Bengal could take place due to panchayat raj (*Webster: 1993*).

Evidences From The Field

State Governments (evidences are from the states of Madhya Pradesh, Chattisgarh, Rajasthan, Gujarat and Maharashtra) have been doing remarkable work for the strengthening of panchayat raj system since its inception. The state governments have responded with innovativeness and remarkable commitment to making the system sustainable and successful. The efforts of states to institutionalise the system are evident in the number of amendments that have been made to the State Panchayat Acts as a dynamic response to the problems at the ground level. During the implementation of panchayat raj system, Indian States have faced several opportunities and difficulties. The experiences of the States are extremely rich and provide vital insights into the process of institutionalising panchayat Raj. On the one hand, the story is of bureaucratic resistance, functional problems, political and institutional challenges, financial inadequacy and mismatch of capacities and roles. On the other hand, it involves the grassroots level in a democratic and participative governance system, and therefore potentially unleashes its considerable energy. Looking in to the relevance of new system, an attempt is made to evaluate the ground reality and potentiality of the panchayat raj system in Indian States. The paper is dealing with the issues of gram sabha (village assembly), reservation, women

representatives, working of panchayats, panchayats and bureaucracy, devolution of powers and finance in separate sub-headings.

People's Participation Through Gram Sabha

The legislative empowerment of the gram sabha in India is a political development of utmost importance, because it marks the clearest break from the most dominant political orthodoxy of this century (*Mander: 1999*). This recent faith in gram sabha is based on the belief that the objective conditions of the poor are directly involved in the process of formulation and implementation of decisions affecting their lives.

It is important to recognise that this faith in the gram sabha is based on several extremely important but largely untested assumptions. It is assumed firstly that even in a village society with deep schisms of caste, class and gender, an organic community still exists and that given appropriate legal and

institutional spaces, it can act cogently and responsibly as a community. The second assumption is that the collective of the gram sabha would be a more reliable vehicle of good governance than a relatively unencumbered bureaucracy or local elected representatives.

The experience of panchayat raj in various states indicates that the State Acts have been amended from time to time to make it more effective in

**Rajni Kothari
visualises
gram sabha
as 'watchdogs'
coming between
the politician-
bureaucratic nexus**

establishing gram sabha as genuine structure of grassroots democracy. It is evident from the experience of panchayat raj that the level of participation of people at grassroots level was very low and gram sabhas were almost a formal institution with no role in various assigned works related to rural development. Limited and confine role of people in gram sabha has been a significant reason for the increased status of village head at local level.

Gram Sabha or people's forum has always been an integral part of the concept of a gram panchayat. Rajni Kothari visualises gram sabha as 'watchdogs' coming between the politician-bureaucratic nexus (*Kothari: 1998*). It is unfortunate that both grassroots leadership and grassroots bureaucracy could not strengthen the gram sabha as expected. The institution of gram sabha is dysfunctional due to the lack of leverage of local leaders to initiate meaningful participation

in the sabha and their incapability to persuade people to support local initiatives (*Fernandes: 1999*). It has been evident that meetings called were mostly without prior and adequate notice. In most places, only a formality was observed; proxy meetings, at time were convened and proceedings were written even without the knowledge of those who attended. Meeting, if arranged, either proved to be abortive or unsuccessful because of thin attendance with the panchayat or discussion (*Mander: 1999*). It is certain that unless we have a vibrant gram sabha, we cannot have empowered and accountable panchayats (*Nambiar: 2001*).

Legislation by itself is not adequate for correcting a wrong. The experience of the last one decade and a half has revealed a general indifference towards the functions of gram sabha and its meetings. The significance of gram sabha has not as yet rubbed upon the villagers. Their eyes are still focused on the gram panchayat as the hub of all activity. Not only this, even panchayat officials and the local elite have evinced little interest in the functioning of the gram sabha.

Gram Sabhas are to be made effective, active and creative so that the expected result could be accessible to the rural society. It is foremost responsibility of the panchayat raj representatives to convey to the people the real nature, function and the real spirit of gram sabha. Meeting of gram sabha can be a good platform for the solution of various day-to-day problems pertaining to the village society. This platform can also be used for the initiation of community work. Most of the basic rural problems, which have hardly any cost effect, can be solved through motivation among the villagers and the gram sabha is the right forum to discuss all such issues. The vibrancy and efficacy of gram sabha will remain dismal if it does not possess the capacity to perform assigned roles and responsibility. This question becomes more pertinent in a socio-cultural milieu where human resource development is low and society is deeply fragmented and hierarchical. And therefore, it is urgently needed that marginalised sections of society, which have been remained out from the process of decision making, have to be taken in mainstream through sensitisation and capacity building.

The institutional structures within the Scheduled Areas were to be in consonance with the tribal needs and ethos

Representation of Marginalized Sections of Society

The state legislations have made provisions for the reservation of Scheduled Castes, Scheduled Tribes and Other Backward Castes. All these groups had negligible presence in the rural politics before this statutory provision. It is definitely a very important step through which largest political recruitment has become possible.

The Scheduled Castes have been provided reservation in proportion to their population. A basic difference between the SC and the ST is that while the latter reside in specific habitats, the former live along with the people of the general category. As a result, they face more difficulties because of social deprivations. Acute poverty, illiteracy and predominant position of rural elite have incapacitated them in discharging their duties effectively. Panchayats, which are 'institutions of self-governance', cannot function in a society that is ridden

with caste, feudalism and poverty.

Therefore PRIs should be made effective instruments of social transformation through a vibrant democratic political process at the local level (*Methew: 1996*). The initial dissent and non-cooperative attitude towards SC leadership is gradually changing.

The tribals have also been given reservation in proportion to their population. When one examines the degree of their participation in the

panchayat raj system, it emerges that much needs to be done to equip them for facing the new task. Many reasons can be pointed out for this situation: illiteracy, poverty, lack of awareness, socio-cultural deprivations, lack of experience and training etc. The new Acts, provided respectable space to the tribal people in the working of the panchayat raj system, such legislation could not make the tribal communities the sole masters of their socio-political destinies in their homelands. The need was always felt that the institutional structures within the Scheduled Areas were to be in consonance with the tribal needs, ethos and tribal institutions with which these people were familiar for ages (*Purohit: 2002*). Accepting the felt needs Union Government passed an amendment known as Panchayat (Extension to the Scheduled Areas), 1996 and accordingly the State Governments have also made Amendments in respective state legislations. A perusal of catalogue

of powers of scheduled area panchayats convinces that they have been equipped with special powers for the preservation of tribal identities. The gram panchayat in scheduled areas shall work under the general superintendence, control and direction of the gram sabha.

Panchayat raj system in Scheduled Areas of Indian States has empowered gram sabhas with all such powers and duties to become the real unit of self-governance. As a result, there has been a growing concern for the speedy development of tribal areas. The state governments transferred nearly all powers previously exercised by gram panchayats to gram sabha. It has thus gone from representative democracy at the grassroots to direct democracy but the fact remains that despite this endeavour, there is a clear cut gap between macro level decisions and grassroots reality.

At the micro level, the gram sabha is a peoples' institution and has been made a statutory body through a Constitutional Amendment. Panchayat raj system in scheduled areas has provided all powers and duties to gram sabha. The resource flow to gram sabha and its ever-increasing powers and authority has generated a lot of interest in people. It is expected that this interest is likely to be translated into a more broad based and participative leadership at grassroots level. However, a gradual process of change can be discerned. The tribal leadership is getting increasingly involved in understanding the system and coming to grips with it (*Sisodia: 2002*).

OBC hold a position different from that of the SCs and the STs. Even before reservation they had representation in the panchayats as well as in other Institution. Their social position in the traditional social set-up was also more respectable. The same can be said about their economic standing. As a result of these factors they have made use of the new panchayat raj system more effectively.

It is, therefore, essential that while the position of the OBCs needs further consolidation that of the SCs and the STs should be ameliorated a great deal. In this endeavour though legislation is important, much more important is attitudinal change on part of the administration and also of the society at large. The weaker sections need more training and experience

in the exercise of their powers. Equally important are concrete measures to remove illiteracy and poverty from amongst them.

Only political recruitment of all the sections of society will never attain the desired goal. The basic idea behind the reservation was to provide an opportunity to the depressed classes to come forward and be a part of the total development process. In spite of all bottlenecks, gradually the changes are taking place. It happens so in a new system where representatives are not familiar with the working of the system. Even than slowly and steadily changes are visible. Taking lessons from the working of the panchayats, the leadership is getting skilled. At the same time the other person of the society are sharing several experiences as well. This process of decentralised governance will provide opportunity to rural people, particularly the persons of

backward classes, to involve in development activities and several other works for the betterment of their life. The common man of the society will gradually become aware about day-to-day functioning and that way the coming generations will be well acquainted with the processes of development. This will certainly enthuse younger people to participate in the political process in the larger interests of the community.

Gram sabha is a peoples' institution and has been made a statutory body through a Constitutional Amendment

Women's Participation in Panchayats

Women representation through 73rd Constitutional Amendment Act is a landmark decision through which 33 percent of the seats (now 50 percent) are reserved for women. Women are being considered as a backward class because of their negligible representation in political process. As a result of this statutory provision for reservation for women, situations have dramatically changed. It is generally believed of the rural women that their responsibilities were confined merely up to kitchen and farms. This prolonged myth is changing and big number of women is joining the panchayat elections.

To ensure adequate and effective participation of women in the panchayat raj system, the Panchayat Raj Acts, reserves half of the seats for women in all the three tiers. Most of these women representatives have entered in the political process

for the first time. However, many of them in general and the OBC category belonged to the families, which had traditional political base. Yet the situation of women leadership and its working is not very encouraging. The reasons of their poor performance are more or less because of their overall backwardness. Other important bottlenecks among women representatives are interference of male members of their families' viz. of the husband, brother, father, son etc. However, in many cases now such interferences are gradually declining. The reasons behind involvement of male members are very clear: first, rural women do not have the required exposure; secondly, lack of experience of working in panchayats; thirdly, there is a non co-operative attitude of other panchayat raj representatives and government officials.

If an evaluation of their functioning is done, it becomes clear that with the passage of time the women leadership is becoming more assertive and independent as well as aware of the systemic processes. However, to strengthen this segment it is necessary to do away with illiteracy, socio-economic deprivations and many other complexes. It is equally important that to equip these women properly sufficient training programmes should be organised for them. There should also be a change in the attitude of their men-folk and the administration. If women's empowerment has to be successful then the existing feudal patriarchal structure in most parts of the country has to be dismantled. Moreover, women's empowerment through the panchayats requires a sustained campaign and vigorous efforts for creating awareness about their rights and duties (*Datta: 1997*).

It cannot, however, be denied that as a result of reservation for women their participation in the political process has been ensured and they are playing a constructive role in development and welfare activities now. This will lead to positive changes in the entire social system. These problems are, of course, initial hurdles. With the passage of time and gaining of experience; it is believed; women leadership will become more mature and effective. Regular training of this class, co-operative attitude of males and government officials will definitely provide strength to the leadership to work with perfection.

Working of Panchayats

The panchayat raj institutions have been made the units of self-governance and they have been empowered to perform various powers and duties. However, certain issues are very important in respect to the working of panchayats.

The panchayat raj institutions have been established as units of self-governance. There are many dimensions to the functions performed by the panchayats. The meetings have pre-determined agenda; however for discussion new subjects can be taken up with the permission of the chair. It has been evidences that personal issues, which are directly related to some members, are often debated at length. On many occasions themes, which pertain to comprehensive rural development, are overlooked due to involvement of vested interests. In decisions taken by the panchayats, the acceptance or approval of people's representatives or those in power is a must. This process of decision-making fails to fix correct

priorities. Although mostly elected on a non-party basis, the functionaries are influenced by political affiliations in debates and in the decision making process. It would be more meaningful if party politics brings about greater politicisation and participation rather than socio-political fragmentation. The influence of factors such as caste, class, community, religion cannot be wholly denied as these do have a role to play.

However, occasions have not been few where panchayats have in fact played a cementing role.

As the panchayats have been saddled with a plethora of activities, a lot of paper work obviously becomes necessary. While these records are maintained properly at the

Intermediate Panchayat and the Zilla Panchayat levels, the situation is not so rosy at the Gram Panchayat level due to inexperience of the panchayat raj representatives and lack of staff support. There is also an increasing need to inform the people about the meetings of panchayats, their decisions and policies. The panchayat functionaries are also not too keen about ensuring transparency and informing people about their activities. Efforts should therefore be made to make the people more vigilant.

Panchayat raj institutions have been given the responsibility of implementing different governmental schemes. For this the

There is also an increasing need to inform about the meetings of panchayats, their decisions and policies

gram sabhas select the beneficiaries and also examine panchayats as well as control the objectives of such schemes. The beneficiaries are selected through the gram sabha. The gram sabha has to try to select people on economic basis so that the genuinely needy person should get the benefits on a priority basis.

Thus, the functioning of the different panchayat bodies, though it is improving, still needs further streamlining. It has, however, to be understood that it is still their infancy period. Things will definitely get better with more training, experience and increasing awareness about powers and duties. Their efficiency and effectiveness will surely infuse greater confidence among the people at large in their activities. Active participation of the members, co-operative response of the community and a spirit of selfless dedication to panchayat work are necessary for the successful working of panchayat raj institutions.

Panchayats and Bureaucracy

In the period prior to the implementation of the Panchayat Raj Acts, the control of bureaucracy over rural development was complete. However, now all the responsibilities relating to rural development have been handed over to the panchayats. This has necessitated fundamental changes at the bureaucratic or technocratic level also.

There is thus a widespread feeling of fear, mistrust and insecurity among the panchayat representatives regarding their staff. A clear-cut need exists for greater understanding between the two sets of functionaries to remove misperceptions and apprehensions regarding each other. The bureaucracy has to understand its position and responsibilities in a democratic system. A system has to be developed where accountability informs the upper echelons of administration and our understanding shows that authority resides with the lower levels.

The panchayats at all the three levels must be provided with a separate and autonomous cadre, which should be de-linked from the states. Responsibilities relating to recruitment, promotion, transfer etc. should be handled by the panchayats themselves or through some relevant agency. Posting at local levels should be permitted on permanent basis. This would

solve the problem of transfer and official will have wide knowledge of his area. Misuse of power should be checked through a system of checks and balances. There is also a need of simplification of procedures so that usual and routine matters do not cause confusion, delay and deadlocks. A Panchayat Manual should be prepared as an authentic and ultimate source of eliminating all confusion or possible misunderstanding. Multiple and periodically recurring orientation programmes should be organised for both the groups.

Devolution of Powers

The Constitution of India vide Schedule 11 has laid down 29 subjects related to social justice and economic development. These have been devolved upon the panchayats for planning and implementation. It is on the basis of this Schedule that important powers of all departments have been handed over

to panchayats. Importantly, these departments are: social welfare, agriculture, mineral resources, food and civil supplies, sports and youth welfare, rural development, village industries, livestock, dairy and poultry development, revenue, public health and engineering, forest, school education, labour etc. All these departments have been vested with different types of powers and responsibilities to the three

tiers of panchayat. However, most panchayat representatives do not possess adequate knowledge about the functions and responsibilities entrusted to them by the various departments. As a result, their role as regard to number of such departments is negligible. Such devolution, therefore, would be fruitful only when the representatives are made aware of their role and encouraged to perform such roles.

The elected representatives have been provided with many administrative powers, which relate to recruitment, supervision and control. However, many of them have no experience of such jobs and find it difficult to handle them judiciously. As a result in the exercise of these powers, the importance of administrative officials and influential people has increased. For proper use of these functions, the panchayat representatives should be given proper training.

Members of Parliament and State legislators are ex-officio

The Constitution of India has laid down 29 subjects related to social justice and economic development

members of different tiers of the panchayat raj. They take part in the meetings. Though denied by the Act, in practice they exercise undue influence in the functioning of these bodies due to their political clout and access to centres of power. Even the panchayat representatives become subservient to them to seek favours from them. The MPs and MLAs have often shown disinterestedness in successful functioning of the panchayat raj institutions as in their perception this would limit their own area of influence. The feeling is growing that if direct elections were held to all positions in the PRIs, the influence of representatives would get augmented. It has also been suggested that the development fund available to MPs and MLAs should be spent in consultation with the panchayat raj functionaries. Separate development funds should be provided to the panchayat representatives enabling them to spend it in accordance with the felt needs of the people. To streamline the division of functions between the three tiers, a suggestion has been made to establish State Commission to distribute the 29 subjects judiciously and also provide a 'local list' in the Constitution along with the Union, State and Concurrent lists.

Financial Status of Panchayats

Finance is the first and foremost necessity of any institution for its successful working. It is important to make panchayat raj institutions financially sound and self-sufficient. Panchayats of Indian States have two resources - funds from government and local tax collection. It is observed that majority of the panchayats depend on funding from state governments but do not levy local taxes for political reasons. The state governments allocate the money to the three tiers meant for rural development. These bodies are provided finances to implement government schemes.

The state governments have been attentive to the need of financial efficacy of the panchayat raj institutions. These have been empowered by the Act to levy many new taxes i.e. market fee, property tax, land tax, private toilet tax etc. The governments also constituted State Finance Commissions from time to time and many of their recommendations were accepted with regard to distribution of financial powers to the panchayats. Yet, the panchayat raj institutions cannot be

regarded as financially self-reliant. Their dependence on the state governments for grants is not conducive to their successful functioning. Not many panchayats have utilised the powers given to them to levy local taxes. The functionaries have expressed the view that most of the people living in rural areas are poor and it would be improper to levy more taxes on them. Moreover, such new taxes would make them politically unpopular among the people. As such the taxes should be levied only on those who are able to pay. The rural leadership should also realise the significance of tax collection, as these constitute the major source of their income. They have to establish examples of devoted and transparent work so that people do not mistrust them when new taxes are levied. Greater participation of the people in the whole process should be ensured.

Despite all these efforts one would not be in a position to state that the panchayats are financially self-sufficient.

The State governments have been attentive to the need of financial efficacy of the panchayat raj institutions

Dependence of panchayats on state government for funds is not good for the health of the new system. The leadership will have to come forward to meet the financial needs locally. Various provisions are available to generate resources. This way alone, the scheme of decentralisation will bear fruits.

Decentralised Planning

Indian states are continuously devolving powers and authority to the panchayats and initiated innovative measures to empower, strengthen and institutionalise the PRIs. It is based on the premise that in a village people can assemble and sit collectively, and decide the local priority issues. The new system intends to give power to the people and therefore all the powers previously exercised by gram panchayats are transferred to gram sabhas. The approach of decentralised planning is 'bottom up'. The planning starts from village itself. These local plans are sent to Intermediate Panchayat through Gram Panchayat. After scrutiny and compilation, it goes to Zilla Panchayat. A consolidated plan for the district is prepared here and percolation of resource flow to downward panchayats is done from here.

The decentralised planning is need of the hour. The development and desired goals can only be achieved through it but it seems that at village level the plans lack the vision for

the multifaceted and balanced development due to variety of reasons. It is therefore important to initiate special orientation, sensitisation and training of the local people for better decentralised planning.

Conclusion

The establishment of panchayat raj system in various states is indifference to the provision of the 73rd Constitution Amendment Act. The State Acts have been amended from time to time to make it more effective in establishing PRI as genuine structure of grassroots democracy. Through a system of reservation, participation of the weaker sections has also been ensured. The three tiers have been empowered significantly to enable them to discharge their duties properly and fulfil the expectations of the people. However, much needs to be done as yet. Gram sabhas are yet to perform their desired role in the panchayat raj system. Reservation has provided an opportunity to all backward classes to come out and play significant role but the process of political socialisation is slow among these classes. Women representation in panchayats is a matter of some satisfaction but their performance is poor as compared to other classes of the society. The bureaucracy has to be made more responsive to the needs of the PRIs. Greater financial autonomy must be provided to the panchayats. Better coordination has to be established among the three tiers of panchayat. Greater clarity of roles and tier-wise division of functions is essential. Of no less importance is optimal direct participation of people in the developmental process. To generate this, what is of crucial significance is the principle of accountability and continual social auditing of the performance and transparency pertaining to all activities? Concrete efforts should also be made to reduce governmental interference in the day-to-day functioning of local self-government bodies and the process of their dissolution needs to be made more politics proof. Such measures will go a long way in establishing the panchayats as 'Village Republics'. [\[E\]](#)

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)





WATER

SECURITY IN INDIA:

THE COMING CHALLENGE

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In the latter part of 20th century, oil was directly and indirectly responsible for most of the conflicts in the world. That trend continued into the beginning of the 21st century as well. However, one thing is certain, where oil was 'casus belli' for the last 60 years, in the coming decades, water will very quickly take its place. In Asia, booming populations, extreme poverty, rampant industrialization and urbanization, inefficient water use and increasingly, climate change have all had a negative impact on the overall water situation. India and China, with their enormous populace, are already facing several water related problems, and these problems are set to worsen considerably in the next 15-20 years.

In June of 2010, Strategic Foresight Group published its paper 'The Himalayan Challenge: Water Security in Emerging Asia'. In the paper, India's impending water scarcity is highlighted in stark detail. In the decades since its independence, India has been mostly cavalier with

its precious water resources. Marked by inefficient use, and lack of storage facilities, India's relationship with its water resources has always been unsteady. As a result, in 2010, India finds itself in a precarious position, water-wise. And this situation has already impacted several other facets of Indian life, from agriculture and food security to the economy and livelihood. India's per capita water availability was 1,730 cubic metres per person per year in 2006, dangerously close to the 1,700 mark declared by the World Bank to be 'water stressed'. By 2030, the per capita water availability is expected to decline to 1240 cubic metres per person per year. This means that by 2030, India will be extremely close to becoming 'water scarce', a condition that is defined by the World Bank to be when a country's per capita water availability reaches 1000 cubic metres. India's water utilization rate is 59%, already far ahead of the 40% mark that is set as the standard. A utilization rate above 40% means that the natural mechanisms in

place do not have the capacity to recharge adequately. Basically, water is being used at a rate that is unsustainable.

India's water resources are a combination of groundwater resources and surface water resources. While rivers form the lifeblood of most of the cities, towns and villages across the country, groundwater is also vital to India's people. As a majority of the rivers in the country are not perennial, groundwater actually sustains much of the population during lean months. However, surface water resources are present in the country in much greater volume when compared to the groundwater resources.

India's Rivers

Of the different types of surface water resources, rivers constitute the most valuable and voluminous part. In India, rivers are classified as large, medium and minor. There are 15 large rivers, 45 medium ones and more than 120 minor rivers. India's rivers are usually described according to their origin – either as Himalayan and Peninsular or, East and West flowing. The majority of India's rivers are rain-fed, with the exception of those originating in the Himalayas. The Himalayan Rivers are perennial rivers, owing to the glacier melt that feeds them throughout the year. This makes them vital to India's fortunes year round. While other rivers in the country are seasonal in nature, due to their dependence on rainfall, the Himalayan Rivers flow all year round. Of these glacier-fed rivers, the Ganges and the Brahmaputra are the largest and most important. Between the two, their basins are home to roughly 400 million Indians, thus linking the rivers to the futures of more than a third of the country's population.

Moreover, given that the total water resources of India is 1900 Billion Cubic Metres (BCM), the fact that the Ganges (525 BCM) and the Brahmaputra (585 BCM) contribute 1110 BCM, or 58.5% of the total water of India, makes them all the more valuable to the country. When viewed purely from the prism of utility and value, the Ganges and the Brahmaputra are the most important rivers in the country.

Groundwater in India

While rivers, particularly the Himalayan ones, are vital to the

survival of India's population, its groundwater resources too are vital for a different reason. Since most rivers in India are not perennial, in several parts of the country, groundwater is the only constant source of supply. Since a majority of the population is engaged in agriculture as a profession, groundwater is often the primary source of irrigation. The volume of groundwater in India is inadequate to sustain a huge population, especially one that is industrializing and urbanizing at such a rapid pace. The groundwater resources in the entire country total to roughly 433 BCM.

Excessive groundwater abstraction in India has become unsustainable. There are approximately 20 million tubewells in India, and over 50% of agricultural land in the country is sustained by groundwater. The Ministry of Water Resources in India estimates that nearly 60% of the groundwater has been developed. In urban areas, groundwater is the principal

source of water, and tubewells are often dug several feet unto the ground in order to keep up the high level of use. Increasingly, rainfall does not penetrate into the groundwater tables due to factors such as urbanization and climate change. In a country so heavily dependent on groundwater, underground aquifers that are not replenished on an annual basis could be disastrous.

India's water utilization rate is 59 percent, already far ahead of the 40 percent mark that is set as the standard

Climate Change and Water

The effects of climate change are now apparent all over the world. Impacts are being witnessed in every aspect of human security. In India, climate change is expected to impact the Himalayan Rivers in two distinct ways. One, the rising temperatures will likely affect the glaciers at the mouth of rivers like the Ganges and the Brahmaputra, accelerating the rate at which they melt. Two, global warming will impact monsoon patterns in such a way that rainfall is more intense and heavy, but concentrated on fewer rainy days. A combination of these two factors has already started to seriously impact the two rivers that sustain themselves on rainfall and glacial melt.

The rate at which the glaciers in the Himalayas are melting has become a controversial topic over the last year. Due to differences in opinion between scientists, there has been an intense debate raging between all parties as to exactly what

the effects of the glacial melting will be, as well as the exact speed at which they are melting. Most scientists agree that the glaciers are melting at a rate much higher than before due to the ill effects of global warming. The lack of meteorological data and comprehensive mapping of the glaciers has hampered most efforts to gather information.

As to the rivers they feed, the effect of the glacial melt is hard to pin down with accuracy. It is expected that as the rate of melting increases, the flow of the rivers will actually correspondingly increase. However, this will likely not be a long term impact. As the glaciers melt quicker and they start to shrink at a rapid pace, in the long term, the volume of water contributed by them to the rivers will reduce. If this continues unabated, rivers like the Brahmaputra and the Ganges could become seasonal rivers.

At the same time, the rainfall patterns changing will compound the effect of climate change on the rivers. Any minor change in the monsoon pattern has an immediate and discernible effect on rivers. While glaciers allow the rivers to have flow throughout the year, rainfall is the major contributor the annual runoff or volume of the rivers. During the months from June to September, the high season for the Ganges and the Brahmaputra, the rivers experience over 80% of their total annual runoff. Due to climate change, monsoon patterns are expected to become increasingly erratic, arriving unpredictably and withdrawing in a similar manner. Rainfall is also expected to become more intense and concentrated on fewer days, which will lead to adverse situations such as flash floods. At the same time, due to the fewer days of rain, adequate amounts of water will not percolate down to the groundwater tables, further jeopardizing the precarious water situation. Increased temperatures will also increase the rate of evapotranspiration, the simultaneous movement of water from the soil and vegetation into atmosphere through evaporation and transpiration. This will actually reduce the actual amount of water that is available for human use.

Cumulative Long Term Impact

By 2030, the Ganges and the Brahmaputra will become an unreliable source of water for those that depend on it. This

status quo is already somewhat evident, but will become increasingly apparent in the next two decades. While on paper, the two rivers' water quantity is not said to decline significantly, the situation on ground is different. Even as climate change factors jeopardize the long term future of the rivers, human neglect and inefficiency contribute to their decline. The Ganges is often counted amongst the most polluted rivers in the world. Due to industrial effluents, untreated sewage and other types of human waste being deposited directly into the river, in its present state, the Ganges' water is not only unfit for drinking and bathing purposes, but also for agriculture, along several parts of its banks. While the Brahmaputra is not considered to be too polluted due to the relatively low level of industrialization along its basin, it is expected that unchecked development in the region could change that.

Rainfall is also expected to become intense and concentrated on fewer days, which will lead to flash floods

Ripple Effect: Food Security and Agriculture

As in any agrarian society, a change in water security has a direct and immediate impact on agriculture. A majority of India's population, almost 58%, is employed either directly or indirectly by the agriculture sector. About one-third of India's GDP is contributed by this sector. India's primary crops, rice,

wheat and maize are all water intensive crops, especially rice. Already, across India, weak and delayed monsoons have caused havoc to India's farming prospects, reducing yield significantly each year. Farmers in India are hit with a two-fold problem with regards to agriculture. Most crops are directly dependent on the monsoon. A delay in the monsoon or a truncated monsoon causes havoc with the natural cycle of the crops. In order to reduce this dependency and create more food security, farmers turn to irrigation, which is in turn dependent on both the river and the underground aquifers, which are also fed by the monsoon. Moreover, irrigation places a major strain on the water resources of India, depleting them at a rate faster than they can be replenished. This means that farmers are stuck in a 'damned if you do, damned if you don't' scenario, without any realistic way out. Farmers in drought-ridden states have been committing suicide at an increasing rate for the last decade or so, with no relief in sight.

The government and the scientific community have spent several crores on finding new varieties of the main cash crops that can resist drought.

Apart from the immediate impact of lack of water on crops, there is also the problem of growing desertification due to depleting water resources. Lack of adequate water resources in once water rich lands will inevitably lead to desertification. While this trend has not yet reached a critical point in India, it is not inconceivable that this could happen in the near future. Both Nepal and China, who also have prominent Himalayan Rivers within their boundaries, have serious issues with desertification caused by rapidly diminishing water resources. This phenomenon has led to the loss of arable land, further exacerbating an existing threat to food security. If left uncontained, the water shortage in India could lead to arid lands being created through desertification, and the loss of agricultural land, that could be catastrophic to the economy.

Ripple Effect: Economy and Livelihood

Undoubtedly, the threat to food security will directly manifest itself in India's economy, especially considering the size of the contribution that the agriculture sector makes to the country's GDP. The rate of farmer suicides is likely to increase, not only placing an additional burden on the families of those farmers, but also on the community and state. Moreover, any new ventures or industries that wish to set up in India will strongly consider the availability of water for the functioning of their plants before they decide to invest in India. Apart from agriculture, there will also be an impact on the fisheries and aquaculture sector in India. All totalled, the lack of future food security will have an immediate and irreversible impact on the economy of the nation, as well as on the livelihood of hundreds of millions of Indian workers, and their families, who depend wholly on the agriculture and fisheries sectors for their livelihood.

Health security

Water-borne diseases contribute to as many as 80% of all disease in South Asia, and are caused largely due to a lack of access to clean water and sanitation. They take a heavy toll particularly on the health young children, who often do not fully recover from the effects of water borne-diseases. With significant sections of the Himalayan river basins lying in the tropical or subtropical region, this region is an easy prey to

water-borne diseases due to the warm climate and annual monsoons. Hundreds of cases of water-borne diseases like cholera are reported every year. Vector-borne diseases like malaria will thrive when temperatures increase as a result of global warming. As temperatures increase and rainfall becomes more erratic and intense over fewer days, India is fast becoming breeding grounds for the disease-causing vector, the mosquito. The mosquito is also a vector in the case of dengue, one of the fastest spreading vector-borne diseases. Apart from the risks caused by increased temperatures, there are also the risks caused by a more intense rainfall, which could result in floods and water-logging in several places. Water-logged areas are potential breeding grounds for mosquitoes.

In India, polluted water sources are also a leading cause of water-related diseases. Especially in the Ganges basin, the poorest among the population often have no choice but to drink and cook with seriously polluted water, causing numerous diseases and stomach infections, like diarrhoea and dysentery. As these trends become more entrenched into the national cycle, in the future, they could cause epidemic like situations. Water shortages have an enormously devastating impact on human health, including malnutrition, pathogen or chemical loading, infectious diseases from water contamination, and uncontrolled water reuse. With the water supply slowly becoming inadequate to meet the growing demand for water, the availability of safe drinking water will decrease. Lack of safe drinking water could result in people using whatever water is available to them, including water tainted with sewage and agricultural runoff or even, contaminated water. People living in rural areas and urban slums will be more vulnerable to disease and infections since they do not have access to piped water and cannot afford to buy clean water. In the future, this cycle of diseases will place an enormous burden on the government, who will have to scramble to provide health care for all those affected, as well as prevent the situation from worsening.

Migration and Conflict

With several parts of the country becoming increasingly water scarce, especially in North India, millions of people will be forced to move away from their homes in search of work and water supply. In the next two decades, more and more rural residents will be forced to abandon their hometowns due to



the lack of water resources, and the increase in extreme weather events such as floods. Lack of job security in the agriculture sector due to water shortages will also force many farmers to leave their villages and move towards urban areas. This phenomenon, known as environmental migration, will not be restricted to the Indian territories. Migrants from countries like Nepal and Bangladesh will likely move into India due to a serious shortage of water within their own countries, creating a serious human security problem.

This trend will worsen the tensions that are already prevalent in parts of the country over migrant workers. In urban areas, especially, towards where most rural migrants will likely gravitate, these tensions will exacerbate existing ethnic and social divides and increase crime rates. With an increased number of people competing for scarce resources and jobs, an anti-outsider mentality will start to take over, and create a backlash against migrant workers. This tension could manifest itself violently, given the appropriate circumstances

and external pushes. While this ‘locals versus outsiders’ conflict is already prevalent in certain parts of the country, and to a large extent in most urban centres, future water shortages will push these conflicts to the forefront of national dialogue.

The Future

Strategic Foresight Group’s paper ‘The Himalayan Challenge: Water Security in Emerging Asia’ focuses on all these issues, from the primary problem of water security, to all its secondary impacts on food, health and human security. The need of the hour is not only to recognize these problems as already being apparent, instead of a potential threat in the future, but also to act upon that recognition. Unless solutions are found at the micro and macro levels simultaneously, in a country the size of India, it is unlikely that this serious and looming threat will be resolved. Apart from the crisis in the Himalayan River basins in India, there is a parallel threat in the countries of China, Nepal, Bangladesh and even Pakistan. Lack of water will mean food shortages in these countries, which India will have to contend with on a regional level. Workers who have lost their farmland in Bangladesh or Nepal will likely migrate to India, causing a serious security threat to the country. Any instability in these countries will lead to further instability in the region, of which India is the most prominent entity. Most importantly, since all the Indian Himalayan Rivers are transboundary in nature, the problem will not be truly solved unless the solution is also transboundary. Long term solutions will be found only through joint action and collaboration. Even if the water crisis in somehow staved off in India, unless it is resolved in Nepal or Bangladesh as well, it is not likely to matter. When discussing water problems in India, policy makers often speak in nebulous terms, implying that the problem is not immediate or already in our midst. This mindset will first and foremost have to change, as the problems are already here, and their consequences have already started to affect Indians across the country. [IER](#)

References and Additional Thinking

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(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

POST-WAR SRI LANKA

A RESURGENT NATION

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South Asia comprises of eight countries – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Except for India and to an extent, Pakistan given our obsession with it, we know very little about other countries of South Asia. In dealing with some of the general topics of common interest like Terrorism, drug trade, human trafficking, AIDS and human rights violations which will continue to engage our attention, we often fail to notice and explore the immense potential and opportunities each one of these countries has. This is also the reason for the failure of the South Asia Association for Regional Cooperation (SAARC). In this paper, I choose to focus on Sri Lanka – a country whose identity and existence became dependent on the presence of the LTTE for almost 26 years. Of late, it has become essential to take notice of a country like Sri Lanka whose post-war energy and enthusiasm is worthy of awe and appreciation.

Sri Lanka – An Introduction

Sri Lanka is a country of about 20 million people with about 90% of literacy rate. There are four major religions practiced in Sri Lanka – Buddhism, Hinduism, Islam and Christianity. Majority population is of the Buddhists Sinhalas (70 percent) followed by the Tamils (12%), Muslims (8%) and Christians (8%). Discriminatory practices against the largest Tamil minority by the Sinhala majority have plunged the country into a vortex of violence and bloodbath which lasted for more than 25 years and resulted in the loss of about 100,000 innocent lives of the citizens of Sri Lanka. In May 2009, the ethnic civil war came to an end with the death of a formidable leader of the rebel group LTTE Vellupillai Prabhakaran. His death brought Sri Lanka into the realm of opportunities which, if properly utilise, could revive its economic fortunes in and around South Asia.

To begin with, a democratic Sri Lanka is one of the first countries to liberalise its statist and import-substitution policies in favour of market and export-oriented policies in 1977 under the premiership of the late President Julius Jayawardhene. Despite such a promising start, the country and its economy suffered badly





due to the ethnic conflict from 1983 to 2009. Notwithstanding the negative effects of war, the country's Gross Domestic Product (GDP) continues to grow at five percent annually during the last 10 years before plummeting down to 3.3 percent in 2009 due specifically to global financial downturn.

Tea, Cotton textiles and apparels, rubber and tourism form the backbone of Sri Lanka's export economy. In 2009, post-war exports of Sri Lanka were to the tune of US \$ 8.1 billion. Imports far exceed Sri Lanka's exports at US \$ 14 billion during the same year. US, UK and India form the major markets for Sri Lanka and India, Singapore, Hong Kong, China and others which includes UK and US as well, are its major suppliers.

Political Impact over the Economy

With Mahinda Rajapaksa, a second time President of Sri Lanka and the chairman of the ruling United People's Freedom Alliance (UPFA), the Sri Lankan economy is once again tilting towards a more statist approach. It seeks to divert the funds and development assistance towards the disadvantaged sections and areas of the country. This is actually a positive step in restoring the confidence and faith of the thousands of displaced and impoverished people in the political system of the country.

For the purpose of cutting off of the government expenditure, the President Rajapaksa has sworn in a smaller cabinet with selected key portfolios. In a cabinet of 37 ministers from 51 in its previous version, President Mahinda Rajapaksa has retained a number of key portfolios to himself which include finance, defence, ports, aviation and highways. Mercifully, this time round he desisted from repeating his earlier experiment of reducing a security cover for the government ministers and important officials in order to save public money. The experiment caused the untimely deaths of some of the important ministers holding key portfolios in the Rajapaksa administration in 2009.

With Finance and Defence portfolios vested in a single authority of the President, they are expected to function smoothly without any coalition pressures. Besides, political stability that comes after the twin polls (parliamentary and presidential) in Sri Lanka is likely to result in unanimous policies and decision-making

in all the important sectors affecting the country.

Post-war Budget Dilemma

The purpose behind introducing severe measures to cut down on the government expenditure is to attract more foreign aid and assistance to rebuild the war-torn nation. As the Ministry of Finance said in its 2010 budget circular to various government ministries and departments, "improving living conditions and restoration of economic activities through accelerated resettlement, rehabilitation and reconstruction programmes" will remain the priority areas of the 2010 budget.

However, the government declaration of priority spending to rebuild the war-ravaged areas of the North and East of Sri Lanka has not gone down too well with its foreign lenders, especially the IMF. In March 2009, International Monetary Fund has signed the agreement with Sri Lanka under which the Fund has agreed to give a grant of US \$ 2.6 billion in three

instalments depending upon Sri Lanka's ability to meet certain pre-conditions.

The grant was given to tide over Sri Lanka's Balance of Payment crisis after its foreign exchange reserves fell to an eight-year low in the midst of the ethnic war, much to the displeasure of the traditional western donor nations. The Government's resolve to increase its spending in the North and East would mean that Sri Lanka will not be able to lower down its budget deficit in the year

2010 to six percent from seven percent in 2009 as agreed under the agreement signed with the International Monetary Fund (IMF)¹. Nonetheless, Sri Lanka's Central Bank Governor Mr. Cabraal is hopeful that the IMF agreement might exclude development spending in the North from its budget deficit calculations.

The first post-war budget of Sri Lanka is expected to be released in July 2010. For the purpose of meeting financial requirements of the various ministries and departments, the government has voted for an interim budget for the first four months of 2010. Delay in budget could postpone the third tranche of the US \$2.6 billion IMF loan.

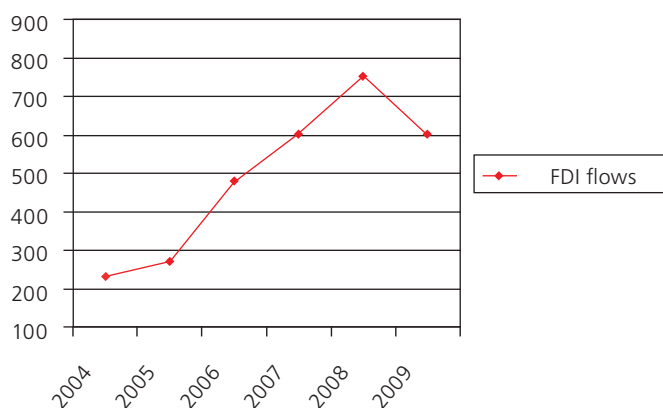
Mounting Defence Expenditure – With A Purpose

Even after defeating Tamil rebels in mid-2009, Sri Lanka's

**Sri Lanka ranks
sixty six among
153 countries
in its defence
spending which
is third highest in
South Asia**

Figure 1: Foreign Direct Investment In Sri Lanka Since 2004

Figures in million dollars (US \$)



Source: World Bank, World Development Indicators

defence expenditure continued to remain at all time high this year too. In 2010, Sri Lanka's parliament has approved an additional sum of Sri Lankan Rupees 33 billion (US \$287 million dollars) to pay for hardware and beef up security in former conflict zones. It is widely believed that Government's intention is to add 100,000 more defence personnel to the already bloating Sri Lankan armed forces. Such a massive recruitment drive will definitely put an additional burden on the public exchequer but this move is necessary to ward off the possibility of any future regrouping of the LTTE like separatist forces.

According to the list based on the Stockholm International Peace Research Institute, Sri Lanka ranks 66 among 153 countries in its defence spending which is third highest in South Asia. Barring India and Pakistan, Sri Lanka's defence expenditure is comparatively higher than most of the countries double its size like Bangladesh, Nepal and Afghanistan. Sri Lanka has continuously been increasing its defence expenditure in the last 2-3 years. In 2009 at the height of the conflict, Sri Lanka has allocated a record 1.6 billion dollars for defence which is, more from its earlier defence allocation of about US \$ 1.5 billion in 2008.

Undoubtedly, it makes Sri Lanka one of the most militarised country of South Asia. The advantage which accrues from such a high level of defence spending is the security of Foreign Direct Investment projects (FDI) in the country. Stricter security measures have not only helped in ensuring protection to the developmental works going on in the North and East but also restore the investor's belief and confidence in the country's internal security management.

Rising Foreign Direct Investments

Sri Lanka is the third smallest country in South Asia followed by Bhutan and Maldives. It is slightly larger than West Virginia and smaller than Ireland². Being small in size with a tiny population does not make a country unattractive to foreign investors and Sri Lanka is not an exception.

Figure 1 shows that Foreign Direct Investment in Sri Lanka considerably rises from the year 2004 onwards even during the period of intense fighting in 2008-09. Although there are many critics who don't agree with these statistics, the actual numbers coming from such prestigious institutions like World Bank signifying the rising levels of FDI in Sri Lanka speaks otherwise. Nevertheless, the graph shows FDI levels sliding during the year 2009 but it has more to do with the global financial downturn instead of an ethnic civil war. The FDI situation improved during the first quarter of the year 2010 as US \$250 million has already come to the country for investment purposes, according to the figure released by the Board of Investment in Sri Lanka. The government now expects FDI inflows to quadruple to US \$4 billion by 2012 as the end of the civil war has opened up immense possibilities in Sri Lanka.

Sri Lanka's strategic location astride the major trading routes in the Indian Ocean, its nearness to the large Indian market, enhanced security ensuring the protection of the investor's property, high standards of its working force, open economy, high literacy levels³ and the various free trade agreements it signed with different countries are some of the reasons which makes the island nation attractive to the foreign investors. Besides, Sri Lanka moved up to 29th position in 2008 from 47th position in 2007 in terms of ease with which to start a business in the country, according to the World Bank. Also, the country places absolutely no restrictions on repatriation of earnings and allows 100 percent ownership to foreign investors in all businesses, said Dhammika Perera, Chairman Board of Investment (BOI) in Sri Lanka.

The telecommunication sector followed by the power sector is the highest contributor in terms of FDI value securing almost 68 percent in 2008. Infrastructure and manufacturing sector have been contributing 13 percent and eight percent respectively to the Sri Lanka economy in terms of FDI⁴. The leisure sector is expected to attract more foreign investment in the years to come as Sri Lanka has been rated as one of the 'must visit' travel destinations in 2010 by various international news agencies like New York Times and National Geographic.

At present, the sectoral distribution of FDI in Sri Lanka's economy is agriculture (16.5%), industry (26.9%) and services (56.5%). Globally, the ideal range of sectoral FDI distribution is agriculture (6.0%), industry (30.6%) and services (63.4%)⁵. It is thus, clear that the gap between the global sectoral distribution of the FDI and in Sri Lanka is only marginal. To bridge the margin, the current dispensation is shifting emphasis more towards inviting foreign exchange in the service sector like telecom, power and tourism. However, agriculture and fishing being the main sources of livelihood in the devastated North and East should not be overlooked by the policy makers. Similarly, textiles and apparels which has always been one of the top foreign exchange grosser should be paid more attention in terms of attracting more FDI, especially after the proposed withdrawal of the Generalised System of Trade Preferences (GSP) by the European Union in the wake of the deteriorating human rights situation in the post-war Sri Lanka.

Malaysia emerges as the biggest foreign investor in Sri Lanka with the total investment of US \$150 million. India ranked second with US \$126 million with the advent of the Bharti Airtel Ltd. in Sri Lanka's telecommunication sector. Contrary to the popular belief pertaining to China as being the No.1 investor in Sri Lanka, its total investment in the island nation is to the tune of US \$27 million securing for it a ninth place in the list of Foreign Direct Investors in Sri Lanka.

Colombo Stock Exchange

When on 18th May 2009 Sri Lankan armed forces annihilated the LTTE, the mood was upbeat in Colombo Stock Exchange (CSE). It was evident when the Colombo Stock Exchange climbed 16 points in 2009.

It has gone up to 47 points in the first quarter of this year.

A milestone was achieved on 2nd May 2010 when the prestigious CSE opened its branch in Jaffna peninsula. Better known as the cultural capital of Sri Lankan Tamils, Jaffna for the most part of the ethnic conflict, remained cut off from the rest of the island nation. The bourse is open with the objective to share peace dividends with the business community of the North, CSE Chairman Nihar Fonseka said. It is not only that they have opened up the branch in the Northern Jaffna but provisions are also made to impart financial education to equip potential

investors to participate actively and prudently in stock trading.

In 2009, Colombo Stock Exchange was named as the Asia's best performing bourse and the second-best performing stock market in the world after Russia. The prevalence of a positive atmosphere throughout the country has prompted Central Bank of Sri Lanka to revise and upgrade its earlier pessimist growth targets. The revised growth estimates for the year 2010 now falls between 5-6 percent for a US \$42 billion Sri Lankan economy⁶.

Why Invest In Sri Lanka?

The end of a 26-year old civil war in Sri Lanka has placed the country on the radar of many global companies. Sri Lanka with its strategic location and warm and friendly people has the potential to be a 'Singapore of South Asia'. Barring India whose domestic sensitivities towards Sri Lankan Tamils have clouded their relationship at the height of the ethnic conflict, Sri Lanka has no issues with any other country of South Asia. Post-war too, the art of winning like-minded friends and supporters remain one of the highlights of Sri Lanka's pragmatic foreign policy.

In a post-war phase, Sri Lanka's relations with its traditional western donors have not considerably improved which will hit their apparel industries hard, although its strategic importance

has been recognised by the United States. A recently released United States Foreign Relations Committee Report on Sri Lanka labelled 'Sri Lanka as the strategic ally which the US cannot afford to loose'. The report, famously known as the Kerry-Lugar Report, advised the Obama administration "to take a broader and more robust approach to Sri Lanka that appreciates new political and economic realities in Sri Lanka and U.S. geo-strategic interests."

In 2009, Colombo Stock Exchange was named as the Asia's best performing bourse and second best in the world

Sri Lanka has also been able to develop friendly ties and close relations with ideologically diverse set of countries like India, Pakistan and China. Pakistan is one of the two countries, the other being India, with which Sri Lanka has signed a Free Trade Agreement (FTA). Both the sides have agreed to raise the bilateral trade figures to US \$1 billion by 2010-11. Although with India, Sri Lanka's trade has reached US \$2 billion, the balance of trade is heavily tilted towards the latter. With a stable government firmly in place in Sri Lanka, India is trying to revive Comprehensive Economic Partnership Agreement (CEPA) for

further enriching its economic ties with Sri Lanka. Bollywood too, has shown its interest in the picturesque island when it recently organized International Indian Film Academy Awards (IIFA) in Sri Lanka, despite protests and boycott by the Tamil film industry in Tamil Nadu. As many as 10 Indian industries have expressed interests in setting up their factories in the North in food processing, plastics and glass recycling, garments and ready-mix concrete. It is also being said that Sri Lanka could profit from its proximity to India just as Hong Kong is profiting from being a trade hub to China.

Post-war, Sri Lanka has gifted development projects worth US \$ 6.9 billion to China. It includes among others, a Special Economic Zone, a 1000-acre Tapioca farm, Hambantota port, 900-MW coal-fired Norochcholai power plant, Colombo-Katunayake expressway, Pallai-Kankasanthurai railway line and Jaffna housing complex for army. China was the fourth largest trading partner for Sri Lanka with a surging imports (US \$1.4 billion) but stagnant exports (US \$46.08 million) in 2009.

Another feather has been added to the tear-drop island when Sri Lanka graduated to a middle income emerging market status by the IMF in January 2010. Sri Lanka's elevation from a low income status depends upon various factors. One of them is the country's continuous strong economic performance for the last five years signalling resilience to shocks including the expiration of the Multi-fibre Agreement. Secondly, exports have been showing signs of recovery with Gross Domestic Product (GDP) growth returning to the pre-crisis levels. Thirdly, the country's public debt is declining gradually. Finally, Sri Lanka's ability to access international markets and oversubscription of its recently – issued five-year sovereign bonds have further made it eligible for the status upgradation.

The World Bank report released in May 2010 said that despite a weak global economy, Sri Lankan economy grew by 3.3 percent in the latter half of 2009 which was fastest rate recorded since 2002 showing signs of stability. Although inflation moved up gradually from 0.7 percent in September 2009 to 6.3 percent in March 2010, it is likely to remain low throughout the year 2010. It is in part attributed to the increase in the agricultural production in the North after the defeat of the LTTE in these areas. Besides, an increased foreign exchange reserves pegged at US \$5 billion and 32 percent growth in hotel industry after the end of the conflict along with a rise in the employment opportunities and large-scale reconstruction projects in the North, are expected to sustain and accelerate economic growth in Sri Lanka

throughout 2010, the World Bank report said.

Futuristic Scenario

According to the report released by the World Bank, the short term prospects for the Sri Lankan economy are positive. The civil war is over and nation-(re)building processes are on the anvil which will take some time to materialise. It is not fair to put pressure on the country which has just liberated itself from the tentacles of terrorism/separatism to meet the targets which are considered impossible even by the international standards. Sri Lanka is the country which has resettled millions of Internally Displaced Persons (barring some thousands who are still in camps) in a record time of eight months. Also, it cannot be denied that despite a weak global economy and strain on domestic resources due to a prolonged civil war, the country has managed to achieve high standards in economic management. It has made a remarkable progress in almost every field ranging from agriculture to service-oriented telecommunication and tourism.

In South Asia, transitions are not always positive and peaceful as can be seen in the countries of Pakistan, Afghanistan, Bangladesh and now, Nepal. Sri Lanka has proved itself an exception. It has not only successfully annihilated the forces of terror which is proving an uphill task even for the world superpower, but has also manage to portray a picture of a united nation with strong leadership, flourishing economy and hope for a bright future. [IER](#)

Endnotes and Additional Thinking

- ¹ Under the IMF Agreement, Sri Lanka is required to cut down its budget deficit to five percent by 2011.
- ² Area of Sri Lanka is 65,610 sq km. and Area of Ireland is 70,273 sq km.
- ³ Sri Lanka's literacy rate is about 90 percent which is one of the highest in South Asia
- ⁴ 'Government targets US \$1 bn FDI', Irangika Range, Daily Mirror, 28th January 2009
- ⁵ 'Foreign Direct Investment and Sri Lanka' S. Sivathasan, The Island, 1st March 2010
- ⁶ 'Sri Lanka sees foreign investment quadrupling as the civil war ends', Cherian Thomas, www.bloomeberg.com, 1st June 2009, accessed on 15th May 2010

(The views expressed in the write-up are personal and do not reflect the official policy or position of the organization.)

SINGAPORE ECO *BOOMING, BUSTLING AND*



NOMY: BURSTING



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Introduction

Brief History Of Singapore

Singapore – an island country in the Malayan peninsula. It was formerly a British Colonial port, and became internally self-governing in 1959. In 1963 Singapore joined the Federation of Malaysia, only to break away and become a fully independent country in 1965. It is a member of the Association of South-East Asian Nations (ASEAN).

Political Structure

The People's Action Party (PAP) has been re-elected continuously since 1959. It won the 2006 elections with a overwhelming majority of 82 out of 84 seats. When the PAP won the elections in 1959, many companies shifted their head-quarters from Singapore to Kuala-Lumpur as PAP was perceived as a communist regime. Despite the PAP's dealings with communists in the early days, its governing philosophy for the last several decades can best be described as Socialist Democracy. Singapore, under the leadership of the PAP, possesses a distinct political culture: authoritarian, pragmatic, rational and legalistic setup. Singapore's power structure is highly centralized, characterized by a top-down style. It features appointment rather than election to most offices. Economic growth and political stability were maintained by the paternal guidance of the PAP. Thus, Singapore is not administered by politicians, but by bureaucrats, in meritocracy where power is gained through skill, performance, and loyalty to the nation and its policies.

Pre-liberalized Singapore

When Singapore gained independence in 1965 it was barely noticeable with a paltry US\$ 528 GNP per capita. With the British colonies wrapping up operations about 20% of the work-force became unemployed. Major issues like chronic illness, unemployment, rapidly growing population, illiteracy, and low savings of 11.2% lack of basic facilities were issues that government had to tackle. Unemployment and housing issues were the primary issues required to be addressed. With no natural resources and about 1.6% of total land under arable

cultivation, Singapore had a major task in its hand.

Challenges to economic growth included:

- Small manufacturing base
- Little industrial knowledge and domestic capital
- Highly dependent on entrepôt trade

Liberalization and the Path to Growth

Economic liberalization may be described as the freedom to engage in economic activity at home and/or abroad, a freedom subject to institutional and policy constraints needed to guarantee public interests at large.

Steps Towards Liberalization – Phase I (1960-1975)

The PAP setup two statutory boards to address the two primary issues described above.

- Housing Development Board (HDB) in 1960

- Economic Development Board (EDB) in 1961

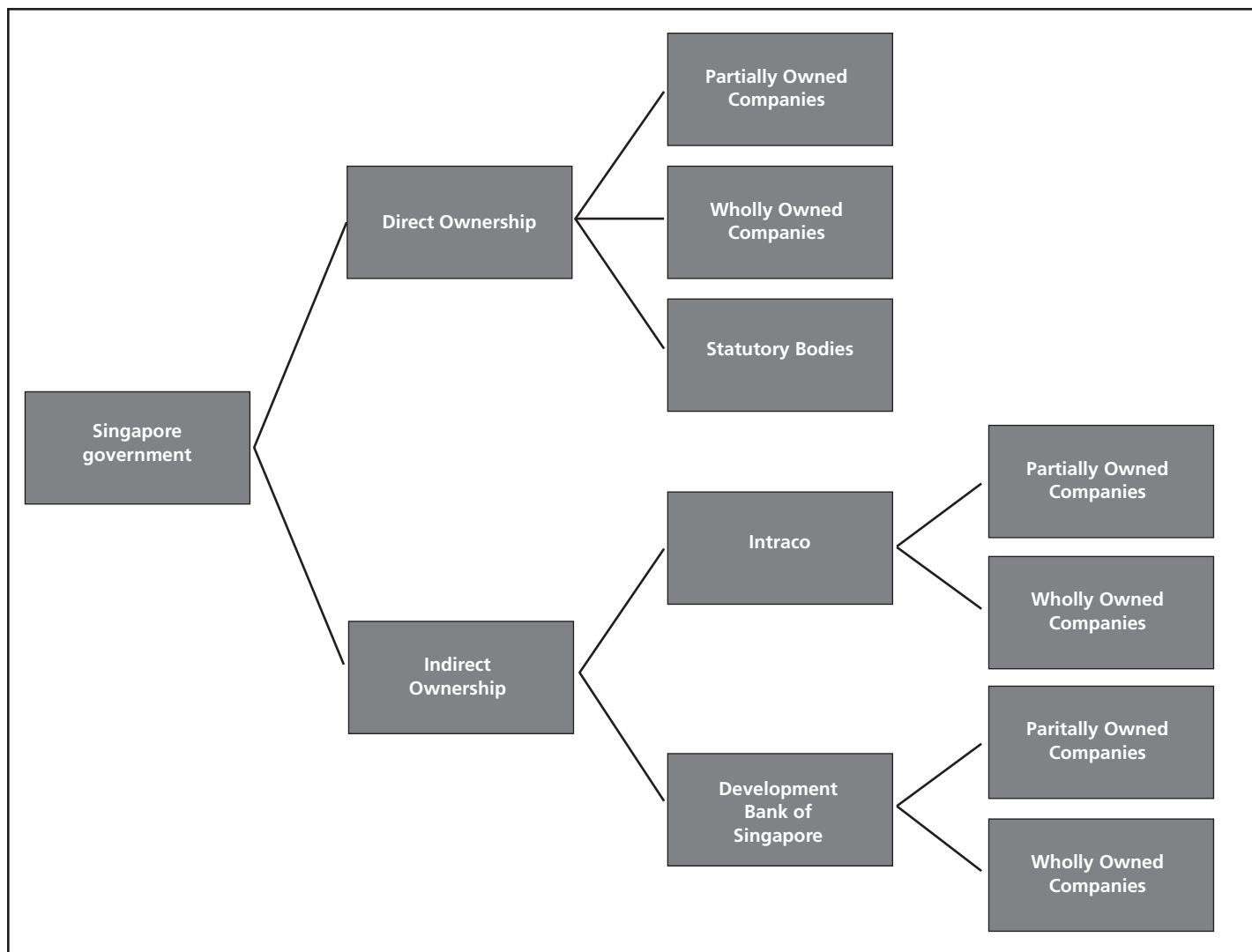
Statutory Bodies

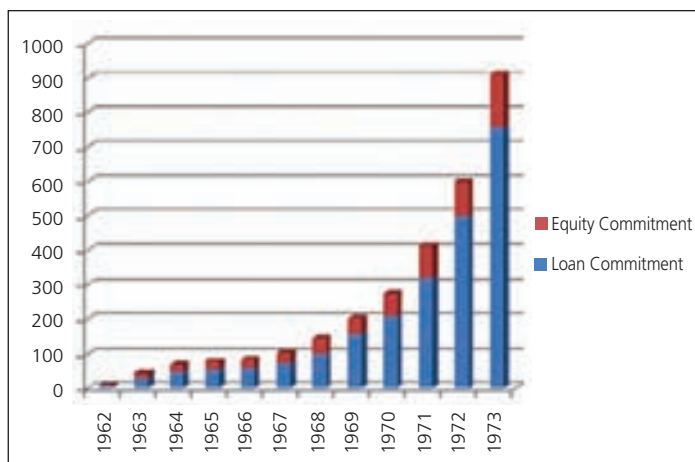
The Housing Development Board began an extensive development program for construction of houses for the low income groups. Many other statutory bodies such as the Public Utilities Board (PUB), Singapore Telephone Board (STB), Monetary Authority of Singapore (MSA) to regulate financial activity, Port of Singapore Authority (PSA) to develop port activities were setup.

Impact of HDB:

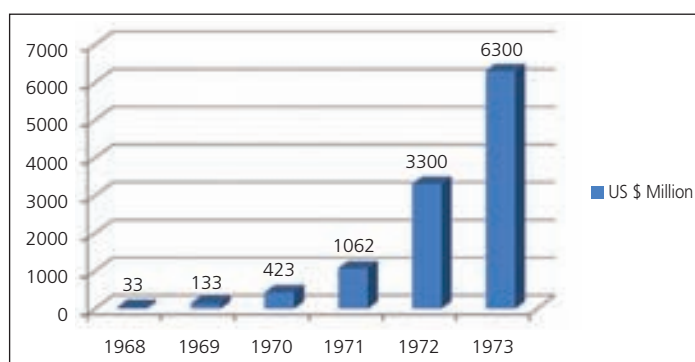
- Raised the standard of living of citizens by giving cheap housing facilities
- Partially solved unemployment by stimulating the construction industry.

The EDB prepared industrial sites, building infrastructures





Equity/Loans of Investors In DBS, 1962-1973
Deposits of Singapore In Asia Market



and providing financial incentives to stimulate industrial development. It was given the ownership of Jurong Industrial Complex which was supposed to be a tax-haven for private investment along with 13 other industrial-sites. Select industries were given tax-holidays of five years as part of Pioneer Industries Ordinance of 1959 and Economic Expansion Incentives of 1967.

Impact of EDB and Sisters Associations of Jurong Industrial Estate

- Rise in number of factories from two in 1963 to 370 in 1972 providing employment to 45,000.
- Attracted many other industries that followed suit and set bases in response to the inflow of foreign capital.
- Reduced dependency on entrepôt trade

Public Enterprise System In Singapore In 1965

Port of Singapore Authority, formed in 1964 provided efficient harboring and warehousing services, access to road and railways 24x7. It also promoted services of the Keppel Harbor. PSA later diversified into many other companies related to

transportation, ware-housing and wharf-maintenance. Demand for telecommunications increased and STB came into the picture.

Equity/Loans of investors in Development bank of Singapore (DBS) 1962-1973

Partnerships and Joint Ventures

Government went into joint-ventures with private investors – local and foreign to setup industries. By Aug 1973, there were 33 partially owned government companies involving SGP\$ 200 million government equity capital and 26 wholly-owned companies with an authorized capital of SG\$ 670 million. The Development Bank of Singapore Ltd, which was 49% government owned, had seven wholly-owned and 50 partially owned subsidiaries.

Government was the most important entrepreneur in the Singapore economy and the conglomerate diversified into different industries, ranging from ship-building to tourism, lotteries to country-clubs. Development could be attributed to stimulation and incentives of these enterprises.

Trade Reforms Stage - 1

Entrepôt Trade

Primarily involved in trans-shipment, local export and import, commodities trading and regional distributor services

Main challenges under this policy were

- Inability to create sufficient employment
- Over-dependence on few commodities
- Common markets with Malaysia

Import Substitution

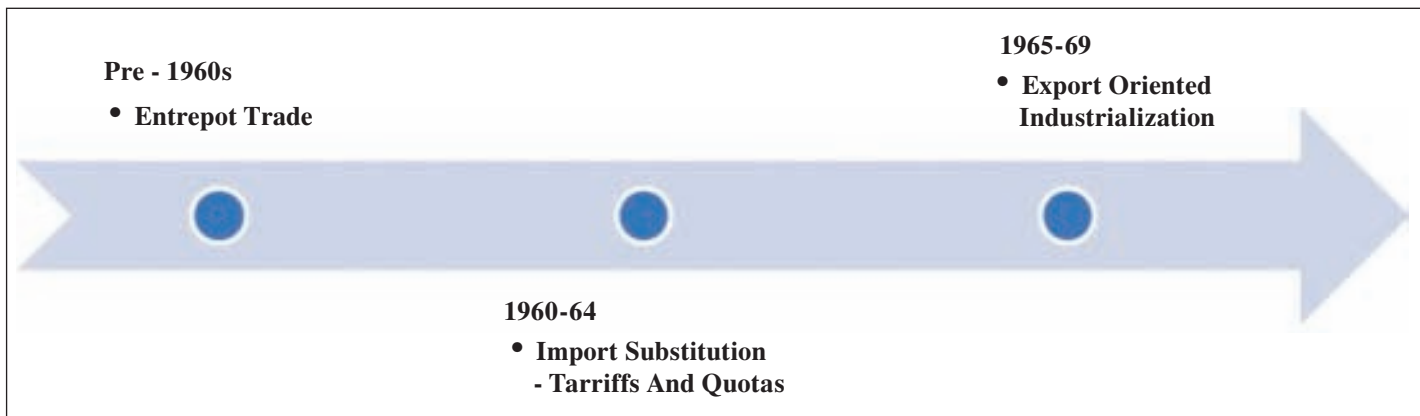
This strategy helped abolish dependencies relating to entrepôt trade by help of bodies such as EDB, PSA and Singapore Tourism Promotion Board (STPB) in 1964. 183 commodities were brought under import tariffs that included goods such as rubber tires & products, plastics, leather, building materials and household appliances. About 230 commodities were subject to import quotas.

Achievements

- GDP growth of 5.3% between 1960-64
- Manufacturing sector's share of GDP grew from 12%-14%

Failures

- Did not solve balance of payment problems
- Unskilled jobs and low wage policy created union problems



Export Oriented Industrialization

The manufacturing capabilities were increased with public-private partnerships by having liberal foreign investment policy. Government nurtured local entrepreneurs and lured MNCs by showing them ready markets. Trade infrastructure was upgraded and state trading enterprise, INTRACO was established to assist SMEs. Trade finance and export credit was made available. To safeguard interests of stakeholders Export Credit Insurance Corporation was established.

Achievements:

- Growth average 10% p.a. from 1965-79
- Unemployment fell to 3.3% in 1979
- Manufacturing sector's share increased from 15% in 1965 to 27% in 1979

Steps Toward Liberalization – Phase II (1976-1995)

Wage Reforms – National Wages Council

Following the rapid economic growth of the late 1960s and early 1970s, signs of a tight labor market emerged along with a concern that wages might escalate. In response, the government in 1972 established the National Wages Council, a tripartite forum with representation from the employers' federations, trade unions, and the government. As a government advisory body, the council recommended annual wage increases for the entire economy; ensured orderly wage development so as to promote economic and social progress; and assisted in the development of incentive schemes to improve national productivity.

The wage guidelines were not mandatory but were followed

by the public sector (by far the largest employer) and widely implemented in the private sector. The influence of these recommendations generally was not applicable to private-sector professional and managerial workers, whose wages were determined more by international forces, but was more important for non-professional white-collar workers. For blue-collar workers, who constituted about 40 percent of the labor force in both the public and private sector, union influence was more crucial than the National Wages Council's recommendations, but market forces were even more important.

Between 1973 and 1979, actual wage increases followed the council recommended wage increases closely. In 1979 the "wage correction policy," in which there were three years of high-wage recommendations, was designed to force an increase of the productivity of higher value-added operations, to reduce the reliance on cheap unskilled foreign labor, and

to raise labor productivity. From 1980 to 1984, however, actual wage increases exceeded the recommendations by an average of 2.4 percentage points per year, as the increasingly heavy demands for labor apparently outstripped its supply.

Recession Of 1985 – Wage System

High wages were a major contributor to Singapore's 1985 recession. Consequent-

ly, in 1986 and 1987 the government instituted a wage restraint policy: wages were frozen and the employer's contribution to the fund substantially reduced. The policy's relative success could be attributed to close government-labor ties and to the tripartite forum of the National Wages Council.

The wage restraint policy's relative success could be majorly attributed to close government-labor relations

Government Response

Proposals for wage reform--a "flexi-wage policy"--were announced in mid-November 1986. Under this plan, the basic wage remained relatively stable with adjustments for good or bad years made by increasing or reducing the annual bonus. Profit-sharing, productivity incentive, and employee share plans were encouraged to ensure that high wage payments awarded in fat years were not perpetuated in lean years and that individual as well as company productivity, growth, profitability, competitiveness, and prospects for the industry were taken into account. The government was anxious that wages not increase precipitously. This concern was shared by management, which worried about shrinking profit margins resulting from higher operating costs. Emphasis was laid on High Value-added technology based manufacturing and skills-development.

Lessons From 1985 Recession

- Capacity Expansion & Diversifying economically
- Developing an external economy
- Upgrade trade-infrastructure
- Export of services
- Promote Singapore and Global Trade-hub

Education Reforms

A main thrust in the quest for creativity and innovation has been the growing market of education since the mid-1980s.

The main manifestations of this trend have been increased school autonomy and increased interschool competition.

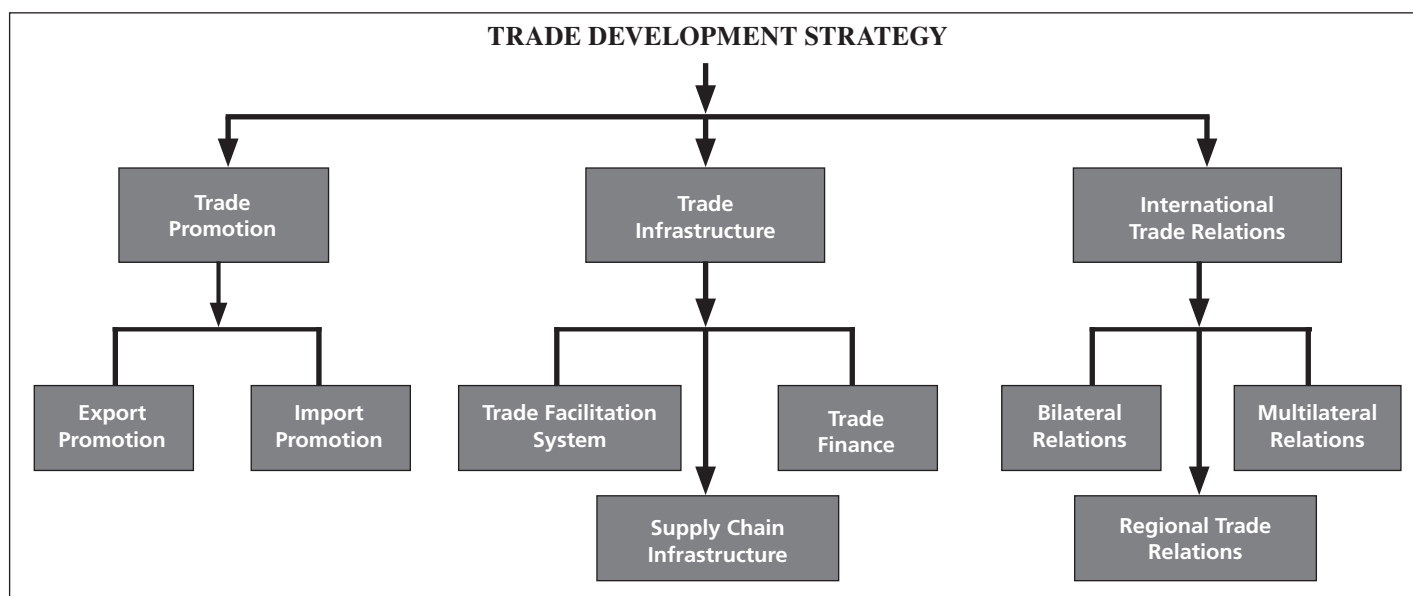
Having achieved universal primary education and a national system of education, Singapore began in the 1980's to develop a differentiated approach in which students with different abilities progress at different rates. The simple streaming system of the 1980's has now evolved to one with subject-based streaming and specialized schools that groom different types of talents.

As Singapore developed a knowledge economy, education focused on thinking skills, as captured by its vision of "Thinking Schools, Learning Nation", adopted in 1997. The Government subsidized 75-84% of The importance of thinking permeated both academic and technical education; for the latter, this is imaginatively illustrated in ITE's "thinking hands" campaign in the late 2000's.

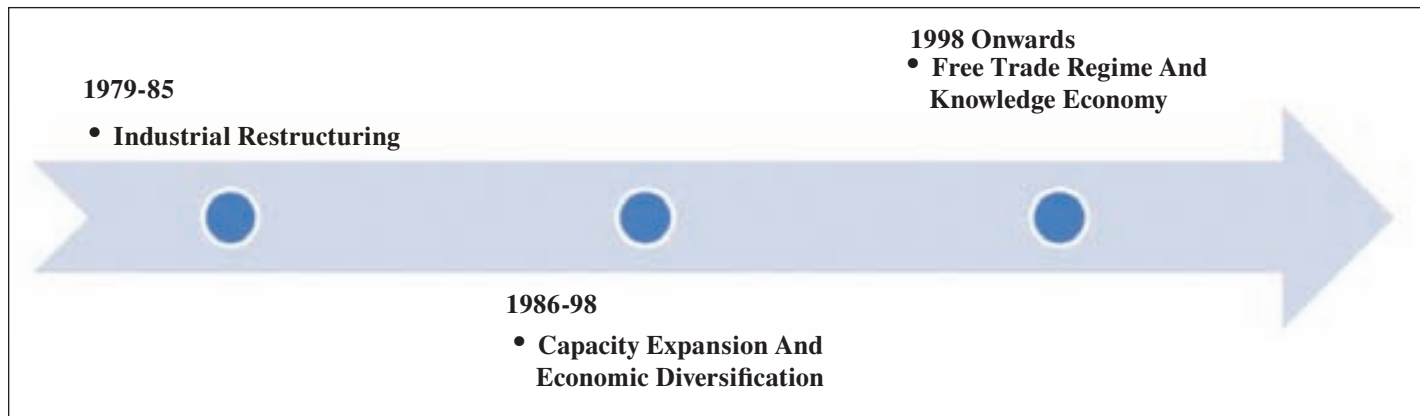
Trade was one the most important modes of revenue generation. The trade development strategy was holistic, integrated and had a systematic approach.

Restructuring

As part of wage-corrections, three-year wage correction policy was enforced to counter the higher operating expenses of company and efficient labor usage. Renewed emphasis on man-power development and trading was implemented. Automation, computerization and mechanization was also encouraged. Thus the Aggregate labor-demand was reduced



Source: International Trade Institute of Singapore (ITIS)



which reduced the marginal product of labor. There was a shift towards skill-based economy.

Economic Diversification & Capacity Expansion

Efforts were put to build technology know-how by tying up with countries like US and UK. Manufacturing and services were promoted as twin-pillars of economy through labor skills development and incorporating industry best practices. Trade infrastructure was IT enabled that resulted in Singapore boasting of:

- World's busiest port since 1982 overthrowing London
- Busiest airport for Air-Cargo in Asia since 1985
- Service infrastructure extended to 240 companies which included commercial, investment banks, financial and insurance companies

Achievements

- Growth in GDP averaged at 8.5% between 1986-98

- Share of financial services and business service sectors in total GDP grew from 20 to 26% between 1980-86
- Hi-tech domestic exports grew from US\$ 24 m to 64m between 1986-98

Asian Economic Crisis -1998

Devaluation of Thai Baht because of a fixed exchange-rate caused the Asian economic meltdown. Singapore was impacted due to its interdependencies on regionalized economies for trade. Singapore survived due to strong regulation of its currency by MAS.

Impact On Singapore

- Financial volatility in the region
- Decline in exports and plummeting exchange rates
- Service goods were severely affected than merchandise-goods – transportation and other services were affected the most



Source: International Trade Institute of Singapore

Government Response

A cost cutting package was introduced to reduce wage costs, benefits and tax benefits and relief. Corporations were given access to working capital to survive aftermath of crises. Diversifying trade partners was prioritized by having a stronger external relations wing and accelerating investment promotion.

Strong financial systems were created and associations with various institutions were made to provide immediate working capital in times of need to strengthen economic framework. Local SMEs were nurtured through programs to become world-class enterprises. This helped sustain domestic and international investor confidence.

Free Trade Regime & Knowledge Economy – 1998 - Present

The shift to a knowledge-based economy resulted from acceleration of globalization and technology developments which brought about the increase in value-creation to application of knowledge.

Free-trade regime was a product of efforts made to strengthen external diversification post-Asian economic crises.

Free Trade Zones

Singapore has seven Free Trade Zones (FTZs); six for seaborne cargo and one for air cargo (Singapore Changi Airport), within which a wide range of facilities and services are provided for storage and re-export of dutiable and controlled goods.

The FTZ's at the port facilitate entry point trade and promote the handling of transshipment cargo. They offer free 72-hour storage for import/export of conventional and containerized cargo and 14-day free storage for transshipment/re-export cargo.

Usage

Depositing and Storage of Goods

- Non-dutiable goods can be deposited in FTZs. They can only be stored in FTZs if they are being trans-shipped or re-exported.
- Dutiable goods can be stored in FTZs, except for intoxicating liquors and tobacco products, which must be stored in Licensed Warehouses.

Repacking, Sorting and Re-conditioning

- Repacking, sorting and re-conditioning can be done in the FTZ, but you need to obtain permission from Singapore Customs first.
- This is useful to traders who are consolidating goods from different shipments or different countries to make up a shipment bound for a new destination.
- It also benefits companies who need to re-condition goods.

Benefits:

- They benefit all traders, particularly re-exporters and trans-shippers.
- Less paperwork and simplified customs procedures for movement of goods within FTZs. For instance, no customs permits are required for the transshipment of non-controlled goods.
- Suspension of duty within FTZ benefits traders dealing in dutiable goods. Dutiable goods are intoxicating liquors, petroleum products, tobacco products and motor vehicles. All dutiable goods can be stored in the FTZs except for liquors and cigarettes.
- Suspension of Goods & Services Tax (GST) within FTZ benefits importers. Otherwise, GST is payable on all goods imported into Singapore.

Free Trade Agreements (FTAs)

An FTA is a legal binding agreement between two or more countries to reduce or eliminate barriers to trade in and facilitate cross border movement of goods and services between the territories of the parties.

For Singapore, FTAs are superhighways that connect Singapore to major economies and new markets. With FTAs, Singapore-based exporters and investors stand to enjoy a myriad of benefits like tariff concessions, preferential access to certain sectors, faster entry into markets and Intellectual Property (IP) protection.

As an integral part of Singapore's trade architecture, the network of 23 FTAs is designed to position Singapore as an integrated manufacturing center in this region; promote research & development in a knowledge-based economy and drive the services hub. The 23 FTAs have helped Singapore establish 14 trading partners. The major FTAs are:

Benefits For Singapore

- Trade in goods: Tariff concessions for eligible exporters
- Trade in services: Improved market access and remove quantitative restrictions for committed sectors
- Investment protection: Removal of discriminatory pre-investment conditions and free transfer of capital and funds and greater foreign investment opportunities
- Intellectual property protection: Reinforcement of partner country's commitment of protection of intellectual property rights
- Movement of business persons: Increase business travel convenience
- Mutual recognition of standards and qualification: Reduction of duplicate testing and mutual acceptance of professional qualifications

Analysis of Monetary Policy

Singapore has adopted a unique monetary framework centered on managing the exchange rate, aimed primarily at promoting price stability as the basis for sustainable economic growth.

Singapore's monetary policy has largely centered on containing inflation over the last few decades. By managing the expected inflation properly the Central Bank - Monetary Authority of Singapore (MAS) has managed to maintain a specific level of output which somewhat conforms to the framework of new Phillips curve.

Actionable Objectives of Singapore's Monetary Policy

- Implementation of exchange rate policy
- Conduct of money market operations for banking system
- liquidity management
- Management / issuance of Singapore Government Securities (SGS) in support of government initiatives in bond market
- Development of provision of banking and financial services to the government

The MAS believes that a large devaluation of Singapore dollar to increase Singapore's competitiveness in exports will jeopardize all the above objectives.

The Singapore dollar has been under managed float regime guided by currency's trade weighted index. The long term objective of MAS is to manage a "trade weighted appreciation of the currency" to balance the aggregate demand and prevent inflation because of money from abroad.

These Are Few of the Instruments Used By MAS To Target Specific Areas:

INSTRUMENTS

Interest Rates
Money Supply
Exchange Rates

TARGETS

Price Stability – Inflation
GDP Growth
Full Employment
Balance and foreign reserves

To achieve its objectives of growth from a small fishing village of 1950s to a strong economy of the new millennium Singapore decided intermediate term and long term monetary targets:

Why Inflation Can Be Contained By Appreciating Currency?

By appreciating the currency the effective money supply in the system will reduce and this will contain the inflation.

Rationale For Having A Floating Exchange Rate

- Small size of economy initially with very few resources
- Impractical for small economy to peg currency to a value for long term
- Open to trade, Singapore wanted to increase international trade and having a floating rate would help it achieve its objective
- Open to capital inflows, Singapore wanted to encourage external capital for growth and having a floating rate unlike other Asian economies at that time would help it get more capital

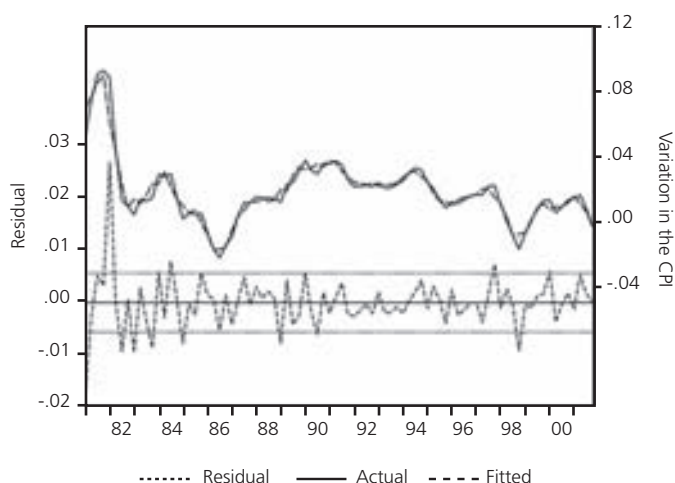
Results Of Floating Exchange Rate Policy

- The high degree of financial openness and sensitivity of capital flows to interest rate differentials makes it difficult to target either money supply or interest rate in Singapore
- Net funds from abroad account for most of the money supply changes in Singapore
- Domestic interest rates are largely determined by international exchange rates and the expected strength of the Singapore dollar
- It is not possible for MAS with such an open policy to change exchange rates or money supply, any such attempt will be negated by flow of funds in and out of Singapore

How Singapore Achieved It?

Since 1981, the MAS have managed the Singapore dollar exchange rate against an undisclosed trade-weighted basket of currencies of Singapore's major trading partners and competitors.

New Philips Curve Versus Actual Inflation



The composition of this basket is reviewed and revised periodically to take into account changes in Singapore's trade patterns, but details concerning the index and the boundaries of the target band are not disclosed. The MAS guides the exchange rate to appreciate or depreciate depending mainly on whether expected inflationary pressures are strong or weak, respectively. Recognizing the lags in monetary policy, the MAS gauge the appropriate policy stance and operate in a forward-looking manner by taking into account trends and anticipated developments in the domestic economy and external environment.

The MAS implements its exchange rate policy through direct sales or purchases of the U.S. dollar in the foreign exchange market. Supplementing its foreign exchange intervention operations, money market operations serve to offset short-term fluctuations in banking liquidity.

Taking advantage of Singapore's high saving rate, prudent fiscal policy and substantial foreign reserves, monetary policy has offset inflation pressures by guiding the exchange rate along an appreciating path.

EXAMPLES

A)1980 Oil Shock: In the early 1980s a combination of oil price shocks and high capital flows intensified inflation pressures in the economy. However, by appreciating the trade-weighted exchange rate index (TWI) by 30 percent during 1981-1985 (averaging about five percent per year), inflationary pressures

were contained.

B)2000 Boom: In early 2000, against the backdrop of a favorable external environment and a strong rebound of the Singapore economy, monetary policy was tightened by inducing a gradual appreciation of the Singapore dollar on a trade-weighted basis. MAS announced in January 2001 that it would maintain this policy stance to limit inflation pressures, but economic conditions subsequently deteriorated by more than expected.

Analysis of Fiscal Policy

Singapore's fiscal policy is expansionary with focus on micro-economic justification and supply side issues. It is consistent with above mentioned monetary policy of keeping inflation low with gradual increase in exchange rates. The government has refrained from artificially boosting demand through fiscal stimulus and generous programs relating to welfare and pursues job creation instead.

Actionable objectives of Singapore's Fiscal Policy

- Ensuring balanced budget over the medium-term
- Creating a fiscal environment that supports investment, entrepreneurship and job creation
- Building capabilities of long-term competitiveness

To meet its objectives, the Singapore government has used the following principles in its conduct of fiscal policy in Singapore:

- The private sector is the engine of growth, and the government's role is to provide a stable and conducive environment for the private sector to thrive
- Tax and expenditure policies should be justified on micro-economic grounds and focus on supply-side issues, i.e. incentives for saving, investment and enterprise
- The counter-cyclical role of fiscal policy is limited, due to high import leakages.

The success of Singapore's fiscal policy over the years lies in the government's expenditure patterns and taxation policies that have complemented monetary policy in promoting sustained and non-inflationary economic growth. The main focus of the Government's expenditure is on the delivery of essential public goods and services. Key areas of expenditure are on education, public housing, health care and national

**The government's
role is to provide
a stable and
conducive
environment for
the private sector
to thrive**

security. The Government has shown interest in building and maintaining world-class economic infrastructure and services. The development expenditure accounted for around 1/3rd of government expenditure on average in last 30 years.

This combination of fair tax policies and expenditure programs, augmented by high economic growth has enabled Singapore to enjoy consistent budget surpluses over the years. The fiscal policy has also contributed to Singapore's high savings rate and allows it to achieve one of the highest investment rates in the world without having to incur foreign debt.

High domestic savings have contributed to Singapore's high level of foreign reserves, which has served to provide a buffer against adverse economic shocks.

Analyzing Singapore Economy –

Mundell Fleming Model

Assumptions

As we know, Singapore's economy is a perfect example of a small open economy. The world interest rate r^* is also exogenously fixed as the rate of interest of its borrowing will not affect the world rate.

$$r = r^*$$

It also assumes that price level at home and abroad are fixed, and thus real exchange rate is proportional to nominal exchange rate.

$$E = e(P/P^*)$$

E = nominal exchange rate

e = real exchange rate

P = domestic price-level

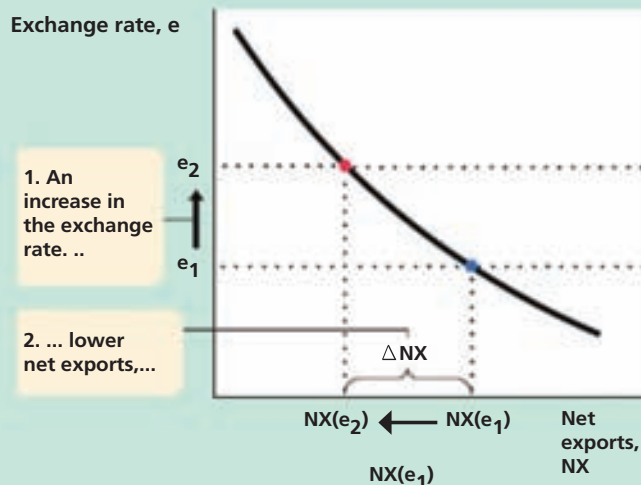
P^* = real price-level

The Singapore economy thrived on an innovative exchange rate policy of trading on a basket of undisclosed currencies in an undisclosed band.

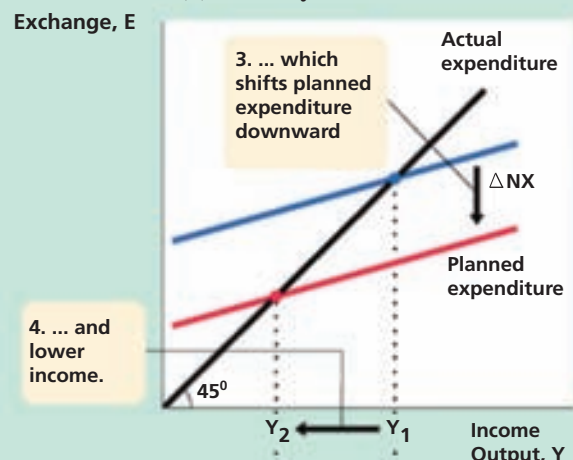
Thus the sovereign risk of exchange rate was eliminated. The exchange rate was also manipulated to ensure Net exports remained high and thus the Output and Expenditure were high. This was evident from the increased Govt. expenditure that Singapore was able to make in socio-economic areas which touched 35% of their total GDP at times.

The IS^* and LM^* curves are in conformance with Singapore Economy.

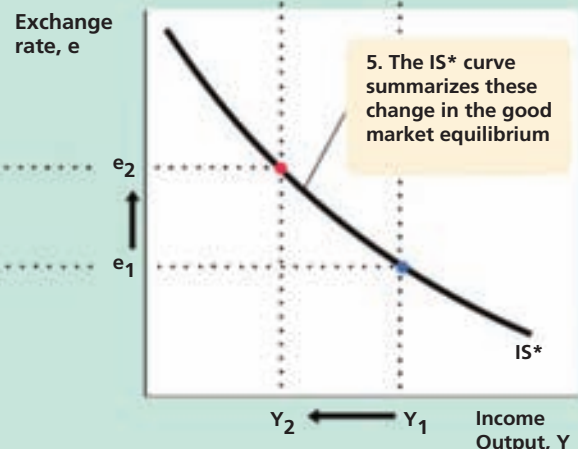
(a) The Net-Exports Schedule

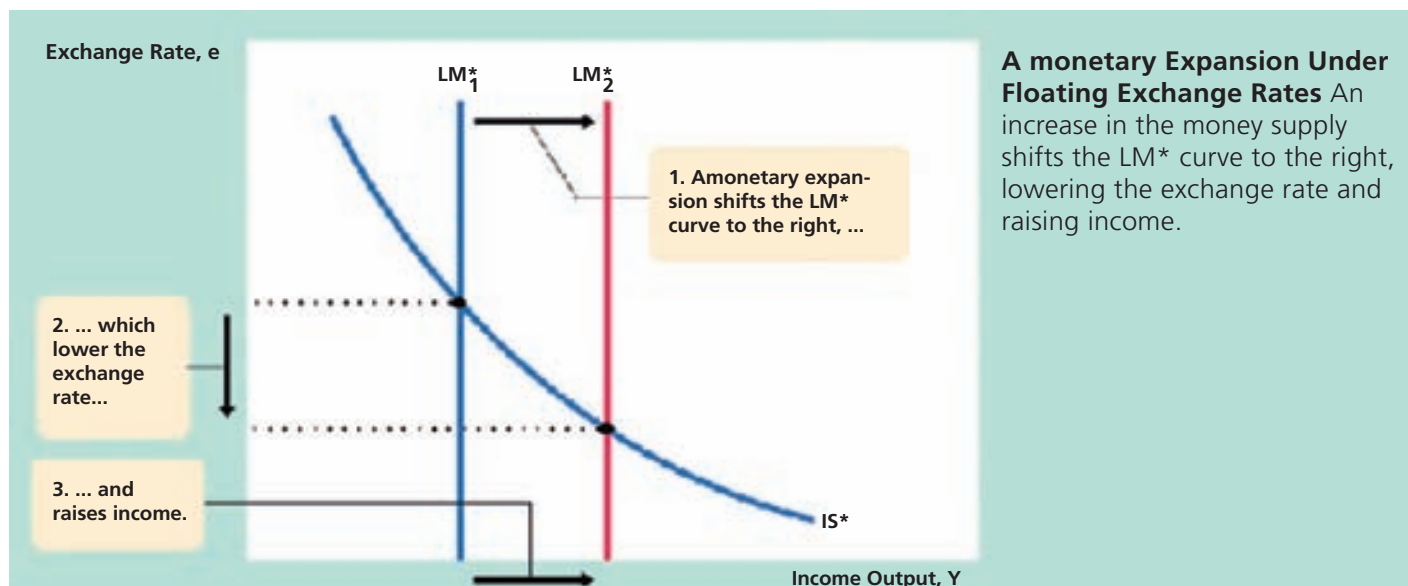


(b) The Keynesian Cross



(c) The IS^* Curve





Thus goods market equilibrium equation is:

$$Y = C(Y-T) + I(r^*) + G + NX(e)$$

$$M/P = L(r^*, Y)$$

IS* Curve & LM* Curve

The MAS through the monetary policy ensured that the exchange rate e was maintained in a certain range so that their budgets for planned expenditure did not alter significantly. This was directly tied to the output and thus it would have a two-pronged impact by just altering the exchange rate.

Singapore also adopted a floating exchange regime, and at the same time maintained their money supply and exchange rates through MAS very actively. The MAS increased the money supply constantly by increasing M_2 supply by up to 19% (2007-08 YoY) in the boom years and reducing it to 10% (2008-09 YoY) in lean years there by keeping a check on Money supply.

This has effectively kept the inflation in check and also increased the income by lowering exchange rate.

Tying Back To Mundell-Fleming Model

This again is in conformance to the Mundell-Fleming Model because under floating monetary regime, monetary policy is the agent that brings about an increase in the output. The price levels are fixed and the increase in money-supply increases real money balances thereby increasing the output.

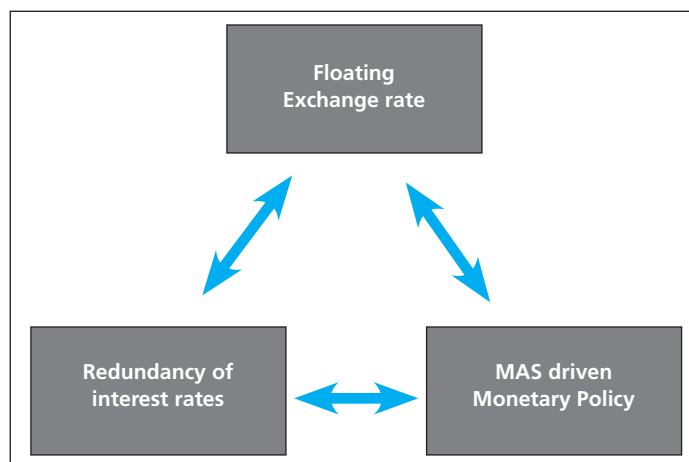
Why Does Singapore Not Care About Interest-rates?

As Singapore maintains floating exchange rate and MAS

driven monetary policy, we know that if there is an increase In Money supply, the interest rates will be pushed down and foreign investment will be driven out. But this will decline will stop at the world interest rates r^* . Now investment elsewhere will require the conversion of SGP \$ to some other currency which increases supply of SGP\$ in the forex-market. Since MAS trades SGP\$ on multiple-currencies this will not be biased towards any-one currency but it will be lucrative for the most-traded currencies. Therefore the SGP will depreciate in the forex market and it will be attractive for the investors to not leave the Singapore economy. Thus capital flows are controlled by moderating exchange rates and not interest rates.

Differential Factors In Singapore Economy

Interest rate differentials when incorporated in the open economy,



$$r = r^* + D$$

D = Risk premium over the world rate.

During the 1960s, due to factors and challenges mentioned the country-risk premium was large for Singapore. Now the interest-rate differentials are self-fulfilling, but that is where the PAP Government and EDB came into the picture. It radically changed the investor perception and faith to minimize D from the equation by formulating and executing development plans as explained earlier.

Corollary - Mundell-Fleming Model In Trade Reforms of 1960-64

When tariffs and quotas were implemented, we observed that the GDP grew by 5.5% in a period of five years; however the Mundell-Fleming Model for a small open economy advocates that the output will not increase. The cause was that Singapore had not fully opened up its economy for the outside world to experience the impact quotas and other trade restrictions.

Conclusion From the Analyses

- It is evident that EDB and MAS have collectively managed to

follow the right steps to get Singapore to growth track

- They have adopted appropriate trade-reforms according to the need of the hour

Factors Contributing To Success of Liberalization

1. Small size of economy

2. Honest bureaucracy with minimum corruption

Small Size: With a total area of 462 sq. km, Singapore had the geographical advantage of being a port island and at the same time no threats from neighbours. Thus implementation of the macro-economic policies was effective with lesser lags.

Honest Bureaucracy with minimum corruption: Since its independence, Singapore government and administration have striven hard to uproot corrup-

tion which was rampant during the British regime. The efforts have turned Singapore into one of the cleanest, corruption free countries in the world. The agency that handles corruption in Singapore is Corruption Practices Investigation Bureau (CPIB)

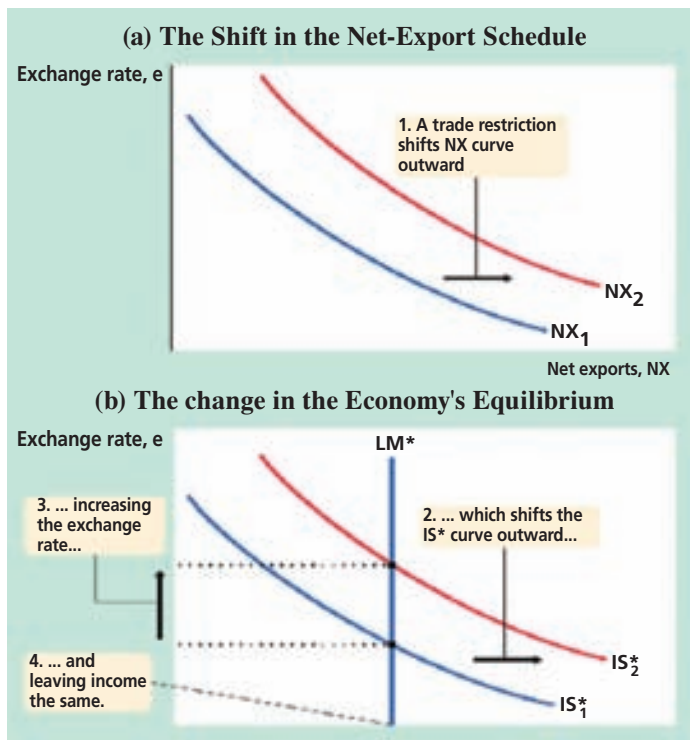
Singapore had the geographical advantage of being a port island and no threats from neighbours

Major Steps Taken Are

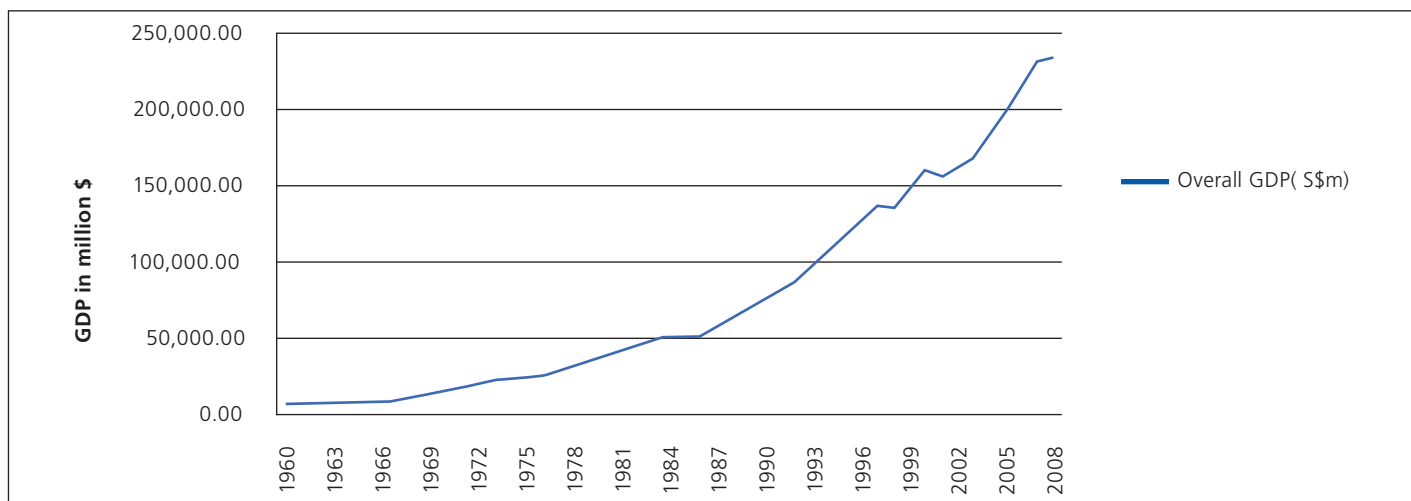
- **Legislative Measures against Corruption:** The law was revamped to give more powers to anti-corruption officers and punishments for corruption offences were enhanced. The law is reviewed regularly to ensure that offenders do not escape from legal punishment and that corruption does not pay.
- **Administrative Measures:** Administrative measures were also taken to reduce the chances of public officers from getting involved in corruption and wrongdoings and making the CPIB more effective.
- **Preventive Guidelines:** Strict guidelines in the form of instructions have been laid down in the government instruction manual to prevent public officers from getting involved in corruption or wrongdoings.
- **Action against corrupt government officers:** Depending on the availability of evidence, a public officer is either charged in court if there is sufficient evidence for court prosecution or otherwise he is charged at the department level.

Impact On Singapore's Economy

Today Singapore can be described as a highly developed State



GDP At 2000 Market Prices and Real Economic Growth



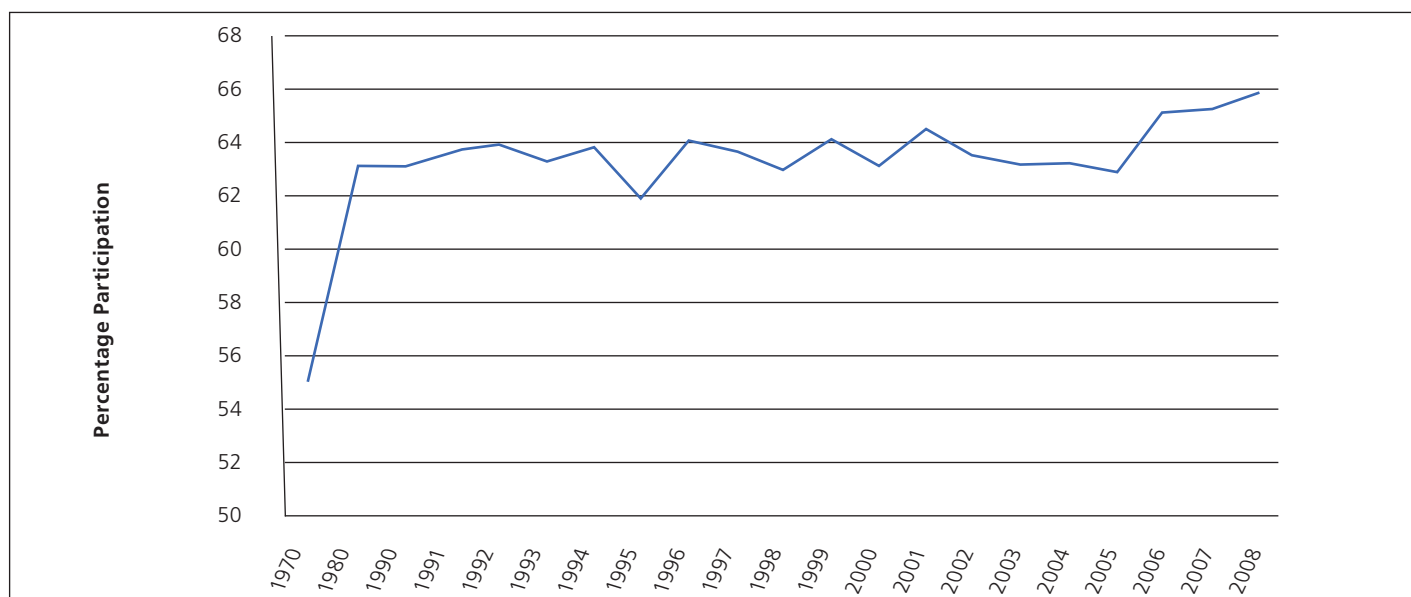
Capitalist Mixed Economy. Though government intervention is kept to a bare minimum, the state controls and owns firms that comprise around 60% of the GDP through entities like sovereign fund – Temasek. and robust economic planning with free-market has given it the nickname of Singapore Model.

Exports, particularly in electronic goods and chemicals are the main revenue for the economy. Singapore's economy always depended on international trade and on the sale of services. The spectacular growth of manufacturing in the 1970s and 1980s had a major impact on the economy and the society.

Productivity

With a labor force of 2.9 million and 2.2% unemployment rate as of 2008, Singapore boasts of a highly skilled-based workforce. Gross national income per capita was SGP\$51,739 which is the highest per capita income in ASEAN and making its citizen income on par with the developed nations. In fact, the city state is the only developed country in ASEAN. The services-producing industries made up 68.8% of the overall economy and manufacturing weighted at 19.4%. Financial services and business services have become more and more important and made up 13.1 and 14.0% respectively of the

Participation of Labour Force



overall economy. The government spends a lot of effort to attract foreign professionals and talented individuals to work and migrate to Singapore to support the local business in addition foreign direct investment (FDI).

This initiative has boosted the heavy petrochemical industries in the country and has attracted foreign direct investment like the Exxon-Mobile Refinery. The limitation will be the pollution to the environment which will increase the social cost like health care services.

Exchange Rates

The currency-rate stands in the band of US\$1.00 – 1.50 currently. Due to high exchange rate with its neighbors Malaysia (SGP\$ 1 = RM 2.4 approx.), consumption moves across borders to Malaysia over the weekend. Due to cheaper petrol prices, people fill up tanks across borders, affecting

petrol retailers and domestic businesses in Singapore. Government has imposed a rule of keeping the tank filled 3/4th filled while going outbound.

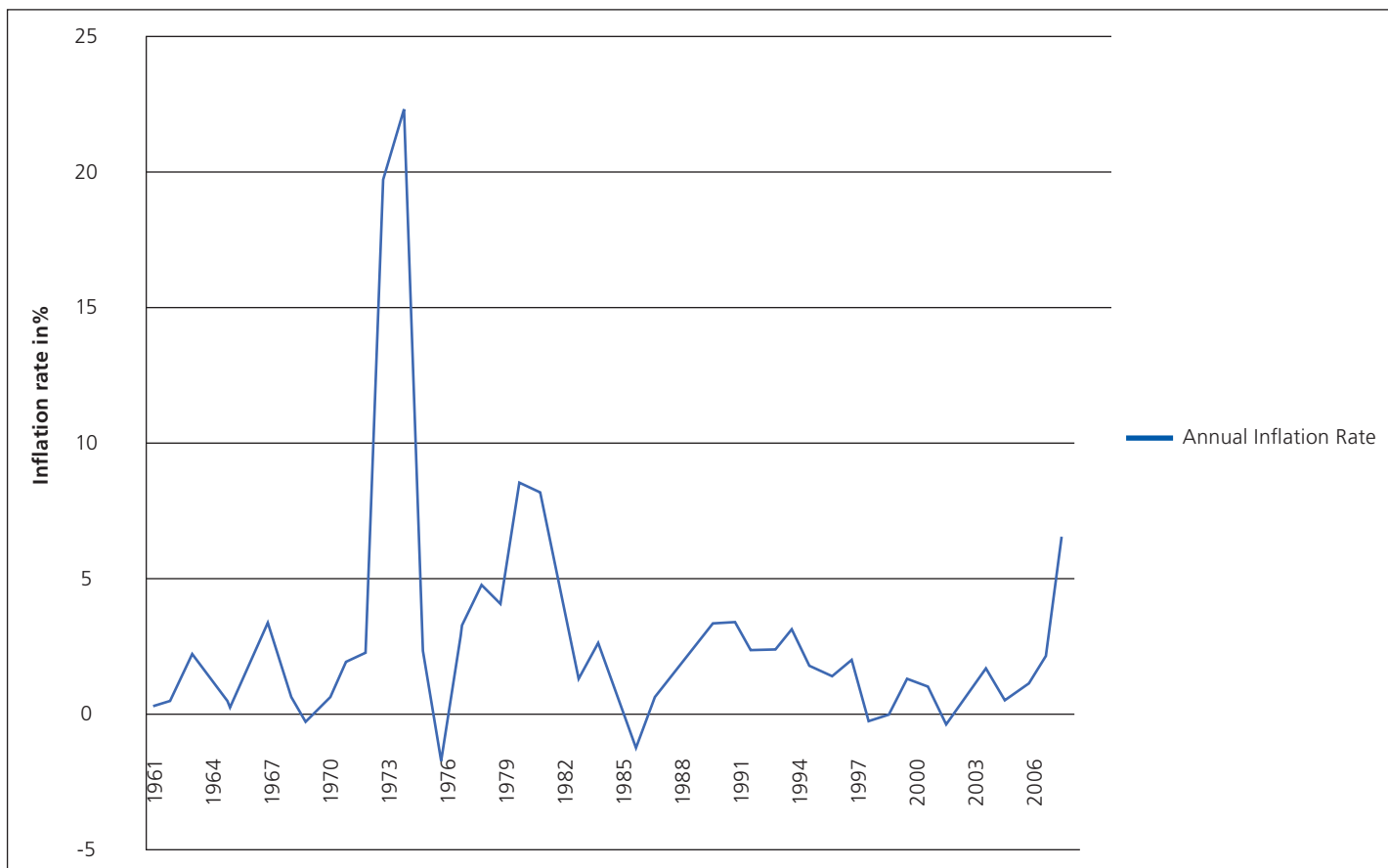
High-exchange rate attracts talent in form of white and blue-collared job workers from Indonesia and Malaysia

The upside of high-exchange rate is that it attracts talent in form of white and blue-collared job workers from Indonesia and Malaysia. Especially the high numbers of skilled workers from Malaysia has contributed to Singapore's GDP growth but on the other hand remarking loss in foreign exchange.

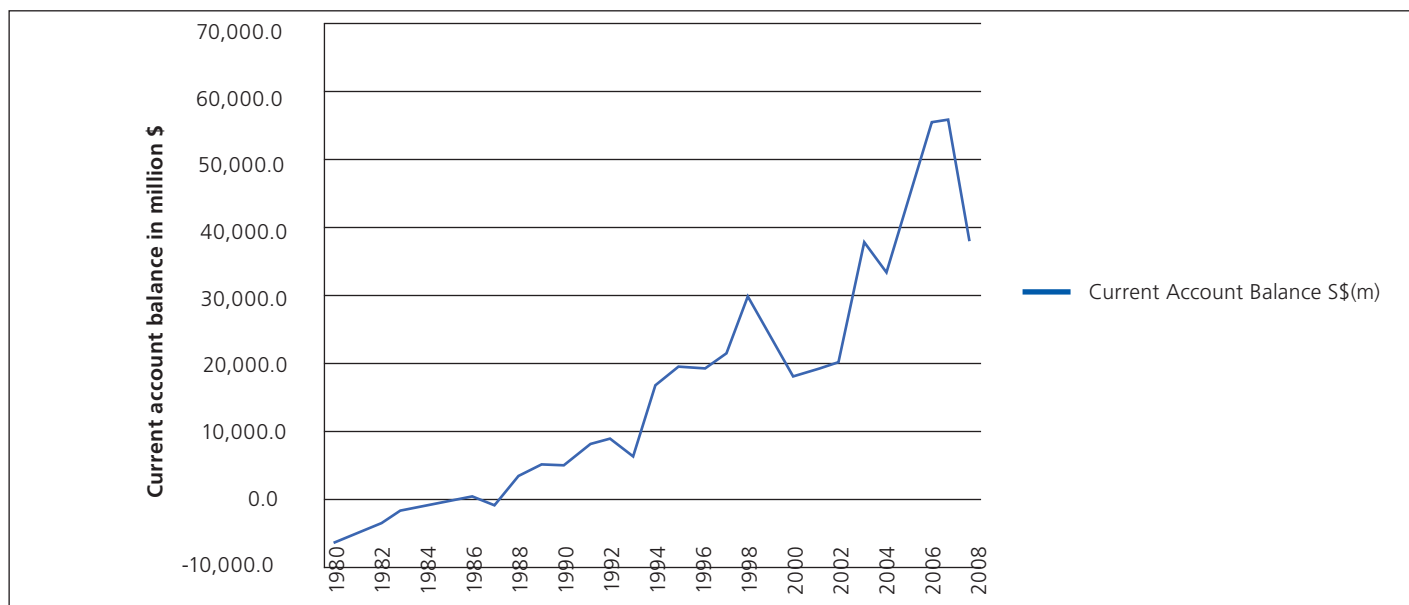
Tax Revenue

This combination of fair tax policies and prudent expenditure programs, augmented by high economic growth has enabled Singapore to enjoy consistent budget surpluses over the years. Singapore is one of the very few countries who enjoy surplus in its economy. Tax revenues range between 80-85% of total operating revenue.

Annual Inflation Rate With CPI At 2004=100



Current Account Balance S\$(m)



Government Expenditure and Deficit

In 2008, as part of the government's move to share the nation's surpluses with its citizens, the government has allocated S\$1.06 billion as growth dividend for this purpose which benefited about 2.4 million Singaporean, especially those of the lower income. This allocation has helped the lower income group to cope with the higher living cost and in turn has stimulated the buying power in the market. The Official Foreign Reserves at February 2009 is US\$163,549.4 million and Singapore government does not bear any foreign debt. This again proves that Singapore economic and financial performance is well managed and the local business can enjoy strong support and enterprise friendly policies from the government.

In its Budget 2009, the Singapore government has announced the Resilience Package totaling S\$20.5 billion to help Singaporeans preserving their jobs and helping viable company stay afloat. The government spent S\$5.8 billion to stimulate bank lending. It also would spend S\$2.6 billion to enhance business cash flow and competitiveness. Further, it also allocated S\$4.4 billion to develop Singapore as a global city and best home for Singaporean. Thus bulk of the saving goes to social and economic sectors.

International Trade

International Enterprise (IE) Singapore is the lead agency under the Ministry of Trade and Industry spearheading the development of Singapore's external economic wing. Its mission is to promote the overseas growth of Singapore based enterprises and international trade. At the same time, IE works to position Singapore as a base for foreign businesses to expand into the region in partnership with Singapore-based companies. Singapore's Global Trader Programme (GTP) which provides incentives to attract international trading

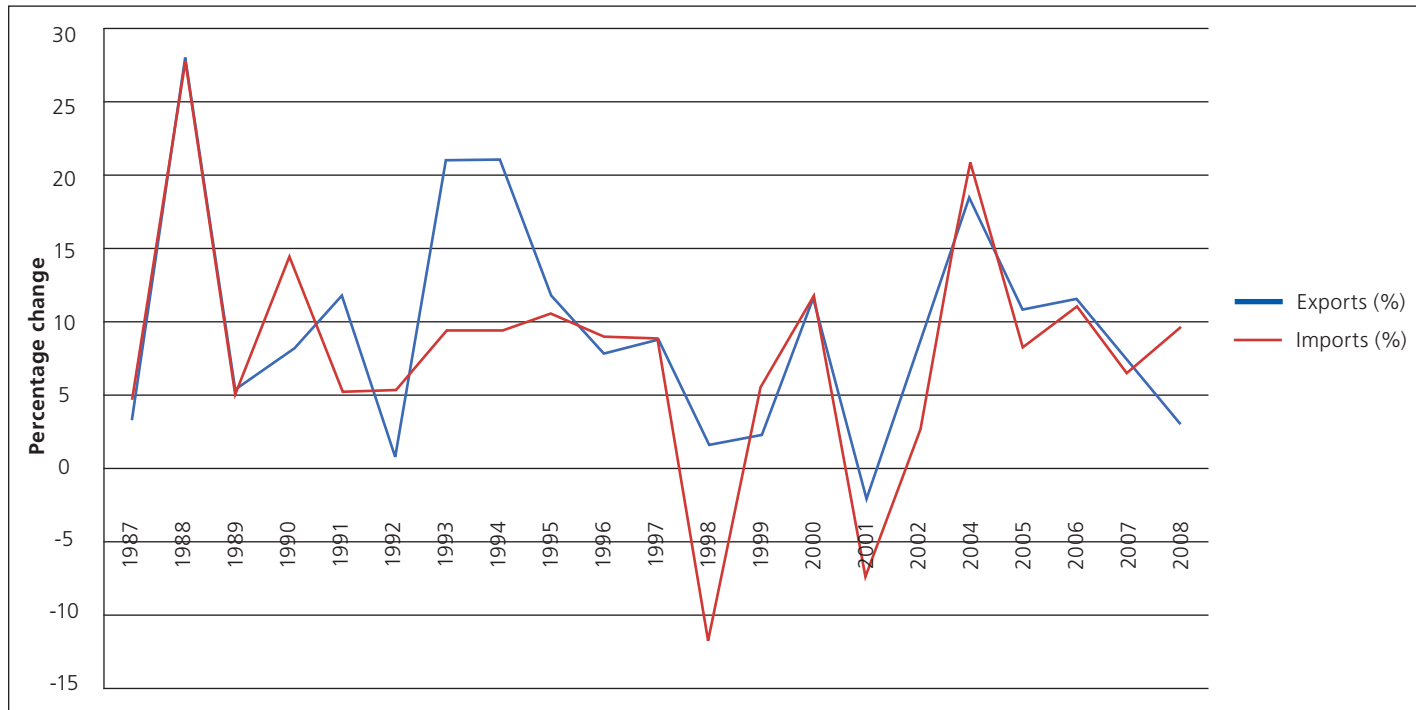
IE Singapore is the lead agency under the Ministry of Trade and Industry spearheading the external economic development

companies to set up their base in Singapore. In 2007, Singapore was ranked the 14th largest trading nation in the world, amounting to total of \$846.6 billion of external trade, with Malaysia remained as the biggest trade partner, followed by EU.

Port of Singapore

The Port of Singapore is the world's busiest port in terms of total shipping Tonnage. It is also the world's busiest container port and trans-shipment port. With many more ports coming up, more competition is expected. It is also the single largest owner of warehouse space in Singapore.

Annual Growth Rate In External Trade At 2006 Prices



Tourism

The Singapore Tourism Board aims to triple tourism receipts to \$30 billion and double visitor arrivals to 17 million visitors by 2015. It is working closely with international investors to develop new world-class attractions and attract strategic business and leisure events to Singapore.

Socio-Cultural Aspects

Singapore is an East-Asian country subscribing to Western-values by the younger generation.

Demographic Profile

The current population is about 4.8 million. Singapore ethnic mix is Chinese (75.2%), Malays (13.6%) and Indians 8.8%. Most of the Singaporean dislikes blue collar works like construction and other works in hard environment. These are considered “hard and dirty” works and therefore not welcome especially by the younger generation. This created the window for importing foreign workers to fill up blue collar vacancies. With the cheaper labor from neighboring countries, the business sector has enjoyed cost saving and therefore more

can be reinvested for further expansion.

Technology

Technology is the power behind to change our life style and improve out quality of life.

The Internet

Comprehensive infrastructure setup has been a fundamental attractiveness for foreign investment and local business

establishment, not to mention about the IT infrastructure. Currently, the household broadband internet penetration rate has achieved more than 70%. The comprehensive IT infrastructure also has encouraged MNC to setup their regional operation in Singapore. The successful of the financial and IT services business are highly rely on the state of the art IT infrastructure. On the other hand, the Singapore government is moving towards electronic governance.

Singapore aims to triple tourism receipts to \$30 billion and double visitor arrivals to 17 million visitors by 2015

Many useful resources and information are available in the relevant ministries/department or government agencies website. For instance, the Customs Office of Singapore has



provided e-service. This approach enables to cut red tapes and enhanced the efficiency.

Future Outlook

- The Q₃ of 2009 has shown significant recovery from recession, with growth encompassing various sectors of the economy. The pace is likely to be strongest in Asia as domestic consumption, backed by stimulus measures, continues to drive growth.
- Singapore's economic condition is linked to global condition and hence can expect a modest recovery.
- Singapore has faced a sharp decline in export from 2008 to 2009. This is mainly due to the fact that the US economy has contracted and it is an important export market not just in terms of direct trade but because large proportion of Singapore's exports to its three largest markets – Malaysia, Hongkong and China are ultimately destined for the US.
- The import of good and services has also sharply declined from 2008 to 2009 by 22.8% in line with a contraction in demand for imported inputs and a drop in commodity prices.
- Singapore can expect a mild deflation in the year 2010. In addition to sharp contraction in domestic demand, transport cost are expected to fall with the declining international price of oil. There has been a decline in the value of Singapore dollar and hence there can be a risk that import price pressure can pick up. However, keeping in view the decline in commodity prices from the level it reached in 2008, such pressure should be negligible. Now if we expect a recovery in

international commodity and raw –material prices then it would put a forward pressure on consumer prices in 2010.

- Owing to a combination of rising expenditure and falling revenue, the fiscal position is likely to deteriorate sharply in the next two years. Although the economy may grow at a modest rate in 2010, the government has to keep fiscal policy loose for the next few years.
- It is recommended that the fiscal policy is not kept loose beyond a couple of years because that may not work for Singapore in the long run because increase in inflation and uncontrollably devalue the SGP\$ beyond the goals prescribed by monetary policy. [IER](#)

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COGNITIVE RADIO

The silver bullet for our spectrum shortage ?

Arun Mehta

Professor of Computer Engineering, JMIT Radaur, and President, The Bidirectional Access Promotion Society

Manasi Dash

Executive Director, The Bidirectional Access Promotion Society

Spectrum Management In India

A radio is a device that uses radio spectrum for communications, such as GPS, TV, mobile telephony, etc. The conventional manner of dealing with the radio spectrum is to parcel slices of this and allow each user to use the share, without permission to use any other part of the spectrum, even if it is empty.

This kind of approach was necessary when computers were slow and expensive, because the radios did not work well when there was interference, for instance someone else trying to use the same slice of spectrum. But radios have become far smarter now, and if suitably designed, can easily share spectrum. An example is that of WiFi, which even though far less smart than the radios of today, has allowed people to use what was “garbage” spectrum – polluted by microwave ovens and the like – as the easiest way for laptops to connect to the Internet.

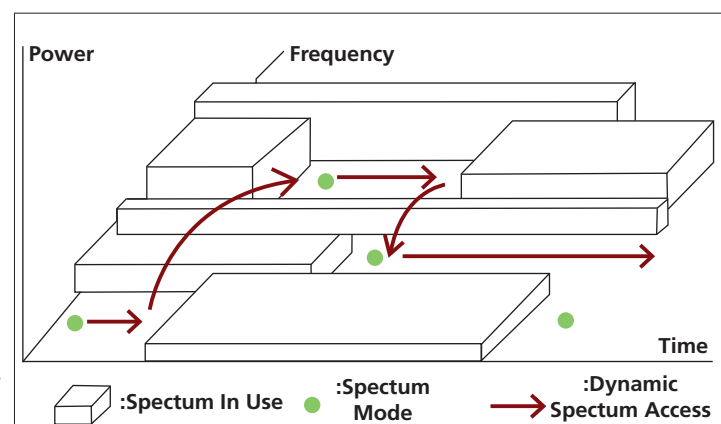
Spectrum is a contentious arena where several large telecom companies, the broadcasting sector, defence and other security agencies and over a dozen other government departments squabble over share. India acquired radio equipment from the east and west over the decades of the cold war. To avoid interference, a Standing Committee for Frequency Allocation (SACFA) was set-up, with 20 government departments as members. Before any transmitter can start broadcasting, it needs clearance of all the members of SACFA. Even a device emitting a few milliwatts of power is considered a transmitter. So effectively, to comply with the letter of

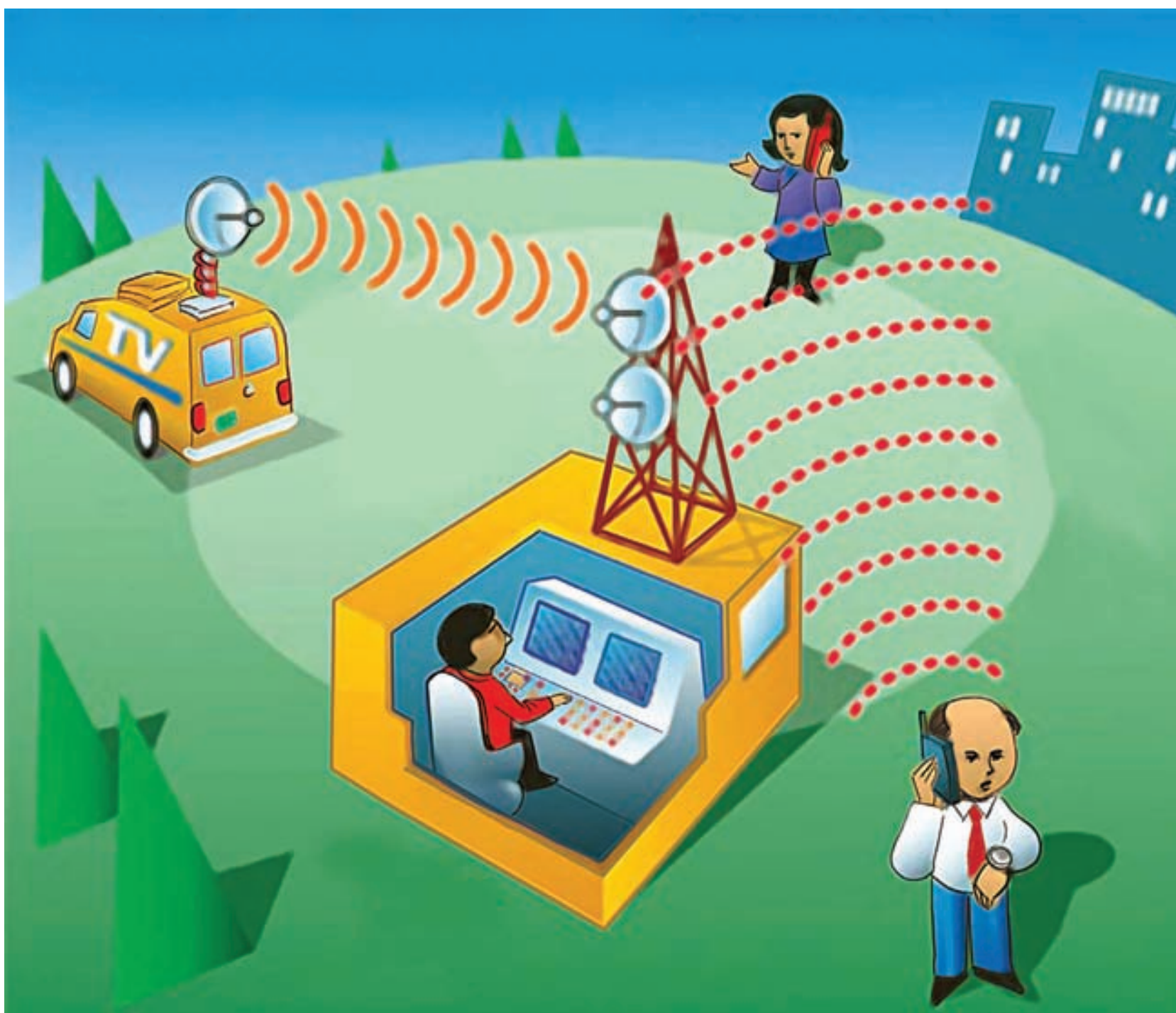
law, you would need clearance from the 20 government departments that are SAFCA members before installing even a tubelight in your house.

This makes new innovations in communications in the country nearly impossible and explains well why there is a big gap between India's achievements in the area of software as compared to telecommunications, which the country almost entirely imports.

Smart Radio Technology

Cognitive radio (also called smart radio, or software defined radio) can, among many remarkable capabilities, intelligently detect which communication channels (spectrum) are in use and which are not, and avoid occupied channels and instantly move into vacant ones. It allows one to make use of the not-being-used slice of spectrum and thus optimizes the use of





available spectrum while minimizing interference to other users. It is also possible for modern “cognitive” radios to share spectrum not only with each other, but also with existing users – by simply avoiding slices that others are using.

It can help us to use spectrum in ways that the developed countries cannot even dream of. Community networks worldwide have used innovative mesh networking technolo-

gies such as to make it possible to automatically configure networks with a minimum of administrative effort, that volunteers can handle.

India is one of the countries which makes very poor use of spectrum. Not only can we start using this spectrum in ways that more developed countries cannot think of, this technology also provides us with a neat way out of our regulatory

mess and so-called shortage in spectrum.

Such smart usage of spectrum does not require much regulation: it is merely necessary to enforce simple rules for good neighbourly behaviour, so that nobody hogs any part of the spectrum indefinitely.

Advantages of this Approach

A big advantage of this approach, is that the shared spectrum can be made available free of cost, thus making it easier for new technologies to enter the market. It is like a beach; if we allow people to share large beaches, all kinds of people from different class use them too, allowing the proliferation of products and services that would not be possible otherwise.

Many companies are finding innovative ways to use this smart technology. For instance, Path Intelligence Ltd., uses cognitive radio technology to track pedestrian foot traffic in shopping malls by tracking their cell phones. The U.S. military and intelligence services, many large defense contractors and other NATO nations are using this technology for Battlefield networks, survivable networks, Public safety communications bridges, Emergency low-power beacons, Mine safety and underground communications, Synthetic Aperture RADAR, Passive RADAR.

With the use of such a cognitive radio device one can record multiple channels of FM simultaneously, navigate using GPS, decode HDTV, transmit over emergency bands and even open garage doors. Many countries are using this technology in military services and defense systems, research work in wireless technologies, teaching students, wildlife tracking, medical imaging and many more.

Numerous researchers in wireless networks are using this technologies to study topics like MIMO systems (A smart antenna technology where both the transmitter and receiver use multiple antennas to improve communication performance), Ad-hoc and mesh networking and other communication technologies like Mac layers.

Many universities within the U.S. and around the world use this technology in teaching software radio, signals and systems, digital signal processing, communication systems and



For any new use of spectrum, as in 3G, it is indeed hard to get the existing user of the spectrum to vacate it

FPGA design Other innovative uses include radio astronomy, wildlife tracking, RFIDs, medical imaging, sonar, and customizable test equipment.

Making Hand-on Cognitive Radio

While there are many options, a low cost open source option is the above:

Hardware: A \$1400 Universal Software

Radio Peripheral (USRP) was developed by Matt Ettus and his team first in 2006 and later the 2nd version in 2009. This device is manufactured by the Ettus Research LLC.

Software: The GNU Radio toolkit for learning, building and deploying software-defined radio systems runs on this hardware. This was started in 2001 by John Gilmore, and is distributed free of cost under the terms of the GNU General Public License.

The Case of India

India has, in addition to government users many private users of spectrum. The old approach is in any case no longer tenable. For any new use of spectrum, as in 3G, it is hard to get the existing user of the spectrum to vacate it. This involves huge cost and delays, as we are witnessing. Also, the old approach would only have a chance of working, if all the private players are made members of SACFA too: the SACFA concept only works if all users of spectrum sit around a table. The government will of course never countenance private players having veto power over its deployment of spectrum.

Solution to the Problem

An excellent way to try this exciting new technology is in the 700 MHz Ultra High Frequency spectrum band right now. This spectrum is valuable as it can penetrate walls far easier than the higher frequency spectrum which is now being used for mobile communications. This spectrum was meant to be used for terrestrial TV broadcasting. In India we have only a few terrestrial TV channels operated by the government. The government has yet not allowed commercial or community TV broadcasting in this spectrum. Most of the spectrum in this band is unused. This is very unfortunate particularly, because even poor people in India have TV sets, or receive them free from political parties during elections. Video cameras are now common, as is the ability to edit video. A lot of Internet content is also now in the video format.

In terrestrial TV, we have an excellent means for bringing information to poor, illiterate people that we are making no effort to utilize. With very little effort, the government could earn large sums as license fees, while poor Indians would have greater access to information, and a greater ability to express themselves.

Also by simply insisting that any new user of spectrum must use smart technology that does not interfere with existing users, large segments of highly underutilized spectrum can be used in new ways, without requiring clearance from SACFA, as happens today with WiFi.

In other countries, there is such a shortage of UHF channels that billions of dollars are being spent on converting TV broadcasting from analog to digital. Some countries, including the US and the UK, have decided to let cognitive radios use the “white spaces” between digital TV stations to bring

wireless broadband to rural areas. Europe, Latin America and other parts of Asia are considering such rules, too. The total global market for cognitive “white space” devices using UHF channels is thus likely to grow from zero to huge in a few years. It is therefore essential that in thinking of new ways to use the 700 MHz band we ignore neither the old technology, for which the population already has receivers, nor new technologies like cognitive radio that can easily coexist with the existing users.

Using cognitive radio in this way could significantly reduce the cost of bringing broadband connectivity to remote villages. When using higher frequencies in the gigahertz band for communication, we need line of sight, which means tall masts, the main capital cost factor. With 700 MHz cognitive radio, we could use far shorter masts. Indeed, if we can simultaneously promote terrestrial TV, and put into the license conditions the requirement that the government is allowed to mount cognitive radios on the same masts as the antenna of the TV transmitter, we might eliminate the cost of erecting masts for rural wireless broadband almost entirely. The positive impact on the viability of rural broadband would be huge.

Simultaneously, if opportunities to deploy the latest innovative telecom technologies were to open up in the country, it would attract many international telecom companies to do their Research and Development in the Country, which would provide incentive to hundreds of overseas Indian radio technology experts to return. In the process, we could become world leaders in telecom development, just as we were able to do in IT services. A nationwide deployment of cognitive radio would be the perfect springboard to launch this model in other developing countries as well.

There lies an incredible opportunity, which could transform India from a distant follower in telecom technology, to a world leader. Opening up the terrestrial TV band for commercial and community TV together with cognitive radio costs the government nothing; indeed it generates revenue, even in the short term. It is important that, unlike in 3G, the government not wait until the technology is obsolete before allowing it into the country. It must act quickly to take advantage of this rare opportunity to become telecom technology leader. [IER](#)

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