



# Public Private Partnership and Social Infrastructure

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## ABSTRACT

*Economic growth in a country largely depends on the standards of its social infrastructure. Education and healthcare are twin most important areas of social infrastructure. It also covers care of the elderly people a good objective of which can be met through social security measures. This apart, social infrastructure also includes women empowerment which can be largely achieved through their education. There are over 2.5 lakh panchayats or rural government bodies in the country and they hold the key for social infrastructure development in rural areas where the challenge is formidable. Apart from the initiative of the government and its various agencies, NGOs and corporates are other social entities that can make valuable contribution in revamping social infrastructure development. In this paper, it is attempted to review a set of public private partnership models relevant for infrastructure development and review problems and issues in different areas of social infrastructure including education, healthcare, women empowerment, care of the elderly, etc, with the help of select case studies based on different public private partnership models and information and communication technologies.*

**Keywords:** Public private partnership, social infrastructure, education, healthcare, panchayats, NGOs, CSR.

## 1. Introduction

Public private partnership (PPP) model is gaining worldwide popularity for building and financing infrastructure projects. In a fast growing but capital scarce economy, PPP is a viable alternative to public funding, by harnessing private sector efficiencies for infrastructure development which traditionally has been the government domain. Objectives of PPPs in very broad terms can be achieved through privatization, a practice more commonly followed in Latin American economies—with the government selling the assets or its controlling stake in its various development programmes. In emerging Asian economies a common practice has been allowing ‘market access’ to private players to enter into hitherto closed markets (Chatterjee, 2006). PPP as it is largely understood is a cooperative venture between the public and private sectors in which several options are possible. It is built on the expertise of each partner that best meets clearly defined public needs through the appropriate location of resources, risks and rewards. A number of models have emerged ranging from contracting for limited period to complete privatization. This includes: build-operate-transfer (BOT), build-own-operate-transfer (BOOT), build-own-operate (BOO), build-transfer-operate (BTO), lease-develop-operate (LDO), rehabilitate-operate-transfer (ROT), design-build-finance-operate, management contract, service contract, asset sale, etc.

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Unlike product-market economies, most public utilities and core infrastructure services in India are governed by ultimate sovereign ownership of the underlying assets including monopolistic operating conditions by the government. Given this scenario, there is a need to make structural change in PPP model in order to facilitate flow of private capital for infrastructure development. Provisions of such models can be further modified according to the needs of different sectors such as roads, airports, ports, metro, bridges, hospitals, institutions, etc. PPP not merely means bringing private capital, but it also aims bringing private sector efficiencies and best practices in infrastructure management, a requirement which can be easily met by linking operating contracts with service-delivery standards (Chatterjee, 2006).

BOT provides consortia with a concession to finance, build, operate and maintain a facility. During the life of concession, investors collect user fees to cover the costs of construction and debt servicing and operations, and to realize a return on investment. At the end of the concession the facility is returned to the government agency which awarded the contract. BOT model is by far the most extensively used technique in roads and highway sectors. It is also finding growing acceptance for financing telecom and power projects. BOT has been successfully used in implementing projects in highways and roads sector. It is being used in executing concession agreements in ports sector as well. At one of the large ports in India, a container terminal was developed on BOT basis. In the project reports it was stated that only 50 per cent of the capacity will be reached in ten years period whereas it reached barely in four years under public private partnership. At the same port, another terminal exclusively made by the government alone, it could attain only 65 per cent capacity utilization. Thus, PPP model immensely improved throughput and efficiency of the port (Desai, 2006).

BOO is similar to BOT model but without a clause for transfer of ownership. BOO is commonly used in developing telecom, power and social infrastructure e.g. wastewater treatment facilities. Design-build-finance-operate is very similar to BOO but with the main difference that the former is more applicable for high tech engineering projects such as a petroleum refinery where considerable design engineering is involved. BOOT is very similar to BOT, but with the difference that in the former the project is transferred to the government agency which controls the project after a negotiated period. This model is commonly used for financing road projects, port infrastructure, power utilities, etc (Singh, 2004). In BTO model, private enterprises build, transfer ownership of the facility to the public authority at the beginning of the franchise operating period, and then operate as per the terms of contract. As private builders do not own the facility, the model is generally adopted where public authority feels that the facility should not be permanently transferred to the private owners such as airports, or where certain liability issues necessitate continued public ownership of the project when it is delivering service (Singh, 2004).

LDO model is particularly appropriate when the government agency retains ownership of the existing infrastructure and receives payments under lease agreement with a private lessee, who in turn finances development and oversees operation of the facility/utility. This model is well suited for developing airport, port or rail infrastructure, as due to strategic reasons government would always like to keep their ownership with it.

ROT model enables private investors to rehabilitate and operate a facility during the concession period, after which the nursed or rehabilitated facility is restored to the official authority. Such facility could be a non-functional waste treatment plant, a sick pharmaceutical company needing financial, technical and research inputs, or any other non-functional service facility (Singh, 2004).

'Management contract' permits private investors to assume overall responsibility for a full range of investment, operation and maintenance functions to make day-to-day decisions under profit sharing or fee payment. This model is appropriate for running utility services such as power, water or sanitation services. While 'management contract' involves wider responsibilities, a 'service contract' is more narrowly focused

on a specific activity. In 'service contract' a private contractor performs a particular operating or maintenance service for a fee over a specified period of time. This approach is particularly appropriate for running social infrastructure facilities such as schools or hospitals which official agency may find difficult to manage efficiently (Singh, 2004).

In some cases, even though PPP models allow for exclusive right over public assets, it is free from the evil of monopoly business such as high user charges or low service quality. This happens when government follows competitive bidding process to decide on lowest user charges or provide viability gap funding to safeguard consumer interests. Contracts are designed to ensure service quality (Desai, 2006).

In competitive bidding, selection process to award contracts follows clear and transparent methods. Comments are invited from all stakeholders during pre-bid meetings to ensure fair treatment to all parties involved. Qualification criteria is elaborated in the official document and adhered to while carrying out technical bid evaluation. Awarding agency maintains transparency in awarding contracts by disclosing pertinent details of the winning bid along with the nature of the contract awarded. Higher user charges often become necessary for minimizing risks of private players implementing projects under the PPP model (Desai, 2006). PPPs need to have more transparent bidding system. Parties involved in developing the project and bid criteria however themselves cannot participate in the bidding process (Chatterjee, 2006).

There is a growing realization that India should spend minimum 10 per cent of GDP on infrastructure development. This requires investments to the tune of \$275-300 billion. It is not possible for central and state governments to mobilize such huge sum and hence tapping private capital becomes inevitable. Nation is on growth of 5 per cent of GCFI (Gross Capital Formation in Infrastructure) as a percentage of GDP. Based on experience of other developing economies which have done well in this regard, 10-20 per cent of the GCFI can be garnered from private capital sources. This is possible by creating relevant SPVs (special purpose vehicles) under viable PPP formats to facilitate such private capital flow (Chatterjee, 2006). Increasing information and communication technology (ICT) penetration is critical for socio-infrastructure development and removing socio-economic disparities. A recent study (2007) undertaken by CII and Accenture showed that expansion of ICT technologies is likely to increase business opportunities in low income markets by 20 per cent across various industries. The study found that socio-economic disparities between rich and poor largely on account of poor social infrastructure is most significant obstacle to the sustainable growth of the Indian economy. ICT applications can help mitigate these disparities.

Rural India needs business to invest in industries such as finance and insurance; in ventures that bring new infrastructure such as telephony and roads. This is where telecommunications can help. Where physical infrastructure may not reach easily, the Internet can. Broadband access is the ideal platform to connect a geographically diverse country such as India. This high-speed Internet technology holds tremendous potential, such as distance learning, telemedicine, supply chain management, customer relationship management, etc (Chambers, 2006).

In Gujarat all Panchayati Raj Institutions (PRIs) in villages have been connected with internet kiosks and linked with state government headquarters at Gandhinagar. These centers are owned and managed by local youth trained from among the educated unemployed of the village and promote entrepreneurship, provide e-literacy and function as the rural business hubs (RBH) of a large number of ICT-enabled services for the community. RBH initiative is based on 4-P model, namely, public-private-panchayat-partnership model. In this strategic CSR (corporate social responsibility) initiative, whereas industry will provide marketing and technological support, rural entrepreneurs will mobilize rural workforce and resources and deliver products and services on time, to enable them to reach global market through industry back-up and support.

## 2. Education and Healthcare: Twin Most Important Social Infrastructure Areas

Education and health provide biggest guarantee for social security. Investments in education and health care not only help the person who benefits from them but also the firm that employs him. A firm that employs educated and healthy employees is likely to be all round gainer. Investments in education and health infrastructure achieve long term benefits both to individuals and society. A society of educated workforce brings further pressure on government for improving standards for education and health infrastructure which in turn improves levels of social security. Due to funds limitations, successive governments did not spend enough on elementary education. Higher levels of elementary education help contain social and gender inequity that facilitates social security. Government, NGOs and corporates need to accord much greater priority to social infrastructure particularly education and healthcare but without diluting emphasis on child development, women empowerment and care of the elderly either which are also vital components of social infrastructure.

### *Education in India*

The Lok Sabha unanimously passed the 93rd (now renumbered 86th) Amendment to the Constitution which mandates the State to provide 'free and compulsory education to all children of the age six to fourteen years.' BJP-led NDA government in 1999, rolled out the *Sarva Shiksha Abhiyan* (Education for All) to provide free and compulsory education to all children in 6-14 years age group, which the UPA Government is also pursuing in right earnest. The fact that programmes like the SSA have to be pushed in the 60th year of independence shows that quality of education infrastructure over the years has generally been poor considering that as on date there are large number of dropouts every year from successive classes. Out of every 100 girls who enroll in class 1, only 59 stay enrolled in class 5, only 41 in class 8, with only 27 left for enrollment in class 10. As for males, out of every 100 boys who enroll in class 1, only 62 boys stay enrolled in class 5, only 50 enrolled in class 8, and only 32 remained in class 10. These figures prove that drop out rate is quite significant both among boys and girls but between the two it is higher for girls. As per the National Family Health Survey (1998-99), the main reason for drop-outs given by 40.6 per cent boys and 26 per cent girls is 'not interested in studies', which is sad reflection on quality of education available in schools (*The Economic Times*, September 5, 2006). Due to largeness of the country, providing elementary education is a gigantic task. Out of an estimated population of 193 million children in the age group of 6-14 years in 2001, about 35 million children were out of school (either not enrolled at all or have dropped out after enrolling) as of 2001. As per the official statistics, this figure has come down to about 13.6 million by 2005-06 but as per estimates made by some NGOs actual drop-out is not less than 19 million (*The Economic Times*, September 5, 2006).

The proportion of expenditure (revenue and capital outlay) on education (including sports, art and culture) as a per cent of total expenditure in 2000-01 was 17.4 per cent, in 2003-04 it was 12.6 per cent that was estimated to rise to 14.4 per cent in 2006-07. The proportion of expenditure (revenue and capital outlay) on health (medical, public health and family welfare) as per cent of total expenditure in 2000-01 was 4.7 per cent, in 2003-04 it was 3.5 per cent and it was estimated to grow to 4.4 per cent in 2006-07 (*The Economic Times*, January 5, 2007). In fact, combined social sector expenditure to total expenditure ratio (commonly known as fiscal priority to social sectors) for major states has declined to 33 per cent during the period 2000-05 from an average 37 per cent during 1990-95. However, for the 2005-07 period, the combined ratio improved to 35 per cent. The Twelfth Finance Commission has also underscored the need for greater social sector allocations by states and recommended grants-in-aid for several deficient areas which need investments (*The Economic Times*, January 5, 2007).

ICT can go a long way in improving access to education. Low income markets where standards of education are poor offer vast scope for ICT applications. In Andhra Pradesh, Jawahar Knowledge Centres (JKCs) set up through public private partnerships; impart fresh graduates technical and professional

education to fresh graduates. In A.P. a broadband network connects state secretariat with district headquarters, *mandals*, and villages and offers 'plug and play' mode of business environment. Similarly, Rajiv Internet Village Centers, aim at providing electronic based service delivery to citizens living in rural areas through kiosks, e-literacy and rural network. In fact, AP is having full-fledged ICT Department, which is run by an IAS officer under ministerial supervision. 'Vartalap Virtual Classroom System' developed by the Centre for the Development of Advanced Computing (C-DAC) scientists in Bangalore provides interactive online learning in Indian languages enabling a professional to conduct live sessions with students over a computer network. Using internet kiosks, rural students can log into remote sessions, making education viable even in remote villages (Chambers, 2006).

### ***Healthcare in India***

As per the WHO definition, health is a state of complete physical, mental, social, spiritual and environmental well-being and not merely the absence of disease. In fact, health is a fundamental human right and attainment of desirable standards of health care is most important social objective. Some communities in India have registered impressive lifespans but the average is still low. As per WHO figures for BRIC nations (Brazil, Russia, India and China) life expectancy at birth in years is 62 years for India, it is 65 years for Russia, 71 years for China and 70 years for Brazil. Due to resource crunch, successive governments at the centre did not make adequate investment in health care in twentieth century. At present India spends about one per cent of its GDP on health care, which is less than the average of 2.8 per cent of the GDP spent by some less developed countries. Common Minimum Programme (CMP) of the UPA Government plans to hike it to 2-3 per cent of the GDP. For improving health services in rural areas, GOI has already launched 'National Rural Health Mission'.

GOI also plans to charge 2 per cent cess for healthcare which till date is hardly 1 per cent of the GDP. Affluent can easily contribute towards welfare of the less privileged. Public-private partnership in healthcare has so far not made any significant headway. GOI may also think of cross-subsidy mechanism like using a part of medical tourism revenue to fund public health (TOI, 2007).

India has a serious shortage of doctors and nurses. There are barely 1.15 physicians per 1000 persons while WHO figures for other BRIC nations are, Russia (4.25), China (1.06) and Brazil (0.6). Average amount a person spends on healthcare per year in India in US dollars is 82 as compared to 551 in Russia, 278 in China and 597 in Brazil. Total fertility rate in India is 3 per woman in India as against 1.3 in Russia, 1.7 in China and 2.3 in Brazil. Public health as a subject in the Concurrent List of the Constitution is the responsibility of state governments and most health services are state-controlled. States are thus free to choose policies of their choice. Country faces dual burden of both communicable and non-communicable diseases. Non-communicable diseases such as heart disease and mental health extract a major toll of health expenditure. It is a myth that non-communicable diseases on account of life-styled related issues affect the rich and upper middle class only.

While the economy is growing above 8 per cent per annum but malnutrition is coming down only by 1 per cent. Malnutrition impairs mental and physical development in children and makes them sickness prone. This is all happening despite GOI's schemes like 'mid-day meals' and 'Integrated Child Development Services' that aim to improve children health. Considering the poor state of health of Indian children, large scale efforts are needed for improving their health. Information and Communication Technology (ICT) has the potential to significantly change the delivery of healthcare services and patient care and the management of healthcare system. ICT connects healthcare service provider, patients and the government to educate and inform healthcare professionals, managers and consumers, to stimulate innovation in healthcare and health system management. ICT can help minimize unnecessary diagnostic or therapeutic interventions through more direct communication between service provider and patients. ICT can facilitate quality healthcare to individuals by providing comparative performance of different service providers so

that they can make more informed choice. These services can range from simple patient centered treatment to advice from global service providers.

RFID is an asset tracking technology. Like a barcode, it has the ability to track the location of an asset as the asset makes its way through the supply chain. In healthcare RFID emerges as an ideal solution to minimize errors with regard to identification of patients, blood and other pathological samples. RFID tags can be placed on sample collection bottles that identify the source of the sample, the time it was collected, where it has been between the patient collection point, and the lab where it will be analyzed, etc.

### **3. Population Growth and its Adverse Impact on Social Infrastructure**

Man's presence on earth is known to exist from time immemorial. Agriculture as a basis of human subsistence is known to exist for over 10,000 years. World population was then estimated to be around 15 million. With sufficient food supply, population doubled four times to reach a figure of 250 million by the time of Jesus Christ. After that the first doubling was estimated to have occurred by 1650 raising the population to 500 million. The second doubling occurred during 1850 after a lapse of 200 years raising the population to 1 billion. Third doubling occurred 80 years later in 1930 when the world population rose to 2 billion mark. In another forty years after third doubling, world population again doubled to four billion people during early seventies. By the turn of the century, another 2 billion people were added by the year 2000 with 90 per cent of them (additions) living in developing nations, raising the world population to over 6 billion people.

World had entered the 20th century with a population of less than two billion but entered 21st century with a figure of more than 6 billion. The global population, which grew by 13 million a year in early 1900 increased by about 90 million a year by the turn of the 20th century. It is said that 90 per cent of population increase took place in developing world. The world's total fertility in developing countries, estimated at 2.8 children per woman, could drop to 2.15 by 2050, which as per a UN study is close to the replacement level of total fertility rate (Singh, 2003). If the population does not lose its growth momentum, world will reach its 7 billion mark by 2015 and 9 billion by 2050. Bulk of the projected growth (85 per cent) is likely to take place in developing world. Growing population is a menace to the mankind which is responsible for increase in poverty, food scarcity and hunger, political instability, environmental degradation, and low sustainability of development initiatives (Singh, 2003). It is thus most appropriate that world observes July 11 every year as the World Population Day.

Development has to be achieved without further destruction of the environment. Massive consumption of natural resources such as forests and livestock leads to changes in the natural ecosystem at a much larger scale than ever before. By 2050, per capita availability of irrigated land, which now yields about one-third of the global food harvest, will drop by 12 per cent and crop land availability and forest land cover per person will shrink by 21 per cent and 31 per cent, respectively (Singh, 2003).

India's population as per the 2001 Census stood at 1.027 billion (102.7 crore) with 0.531 billion (53.1 crore) males and 0.495 billion (49.57 crore) females (Jumani, 2006, p.15). The rural-urban break-up of the population is 0.741 billion (74.16 crore) in rural areas (72.22 per cent), and 0.285 billion (28.53 crore) in urban areas (27.78 per cent). Registering a threefold increase in population, India's population increased from 361 million at the time of Independence to over 1 billion in 2001. Every year 16 million people were added during 1981-91 which increased to 18 million people during 1991-2001. While the total urban population is still lower than the rural population, the urban population growth of 31 per cent during 1991-2001 has far exceeded that of rural growth of 18 per cent during the same period. However, apparently urban population growth has considerably slowed down which during 1971-81 period was as high as 45 per cent.

The immediate objective of the National Population Policy (2000) of the GOI is to address unmet needs of contraception, health care infrastructure, and health personnel, and to provide integrated service delivery for basic reproductive and child health care. The medium-term objective is to bring TFR (average number of children born to a woman during her life time) to replacement levels by 2010. The long-term objective is to achieve a stable population by 2045.

Stabilizing population is an essential requirement for promoting sustainable development with more equitable distribution. However, this needs not only making reproductive healthcare accessible and affordable to all, but also providing and extending outreach of primary and secondary education, extending basic amenities including housing, sanitation, safe drinking water, transport, communications, and creating employment opportunities for rural poor including women empowerment.

#### **4. Care of Elderly and Social Security**

In India, there are 70 million people above 60 years of age constituting 6.5 per cent of the total population. This is likely to touch 179 million by 2026 forming 13.3 per cent of the population. In India, following continuous improvement in healthcare facilities, there is consequent decrease in mortality rate and increase in the life expectancy at birth. In recent periods, life expectancy at birth has increased from 32.5 to 55.4 years for males and 31.7 to 35 years for females. Aged population which stood at 43.5 million in 1985 grew to 61.4 million in 1991.

In India family members generally take care of the elderly people. Grand children often act as bond between parents and grand parents. In ancient India, elderly people used to enjoy high moral position in family whose advice and counsel was generally taken very serious and binding by the family members. In recent periods, however, difficulties of the aged people have multiplied manifold with changing times. Staying of elderly people with family members is becoming increasingly difficult as social norms are changing fast. 'Support of the elderly' and 'taking care of the elderly' are two different goals. While the former involves financial support such as pensions and social security, the latter involves extending emotional support which can be more easily provided by family members or by such individuals in whom elderly persons have confidence. In fact, for proper care, elderly need both economic and emotional support.

In many Indian families living with children is becoming humiliating experience especially when elderly do not have financial assets and contribute towards family income. Elderly generally prefer old-age homes when they experience neglect by family members. Elderly people these days desire social security through independent living as in many cases children find it difficult to support their aging parents. Accordingly, care of the aged is emerging as a major social problem in the country. Ever growing population of widows at places like Vrindavan in U.P. is a case-in-point. At Vrindavan some 20 thousand women stay in very ill-equipped *ashrams* (old age homes) in pitiable conditions. There is an acute need for building old age homes for senior citizens in view of continued increases in their numbers. Apart from government initiatives, NGOs and corporates such as Mathura Refinery of the Indian Oil Corporation in the vicinity can extend helping hand by setting up old age homes at Vrindavan under their public private partnership and CSR initiatives.

In India, basic social infrastructure for growing population of the elderly is old-age homes, which at several places are run by the government. While old-age homes exist in larger number in cities, these are much less in rural areas. Social security needs of the elderly consist of food, clothing, shelter, healthcare and emotional support. Government supported social security is a basic human right which seeks to provide livelihood to those who cannot earn their livelihood due to some permanent or temporary reasons. Older persons need social security as they cannot work and earn due to age. Right to work and right to social

security are complimentary social rights. Right of livelihood can also be viewed as part of right to life which is a fundamental right under Article 21 of the Constitution of India.

The term livelihood is a broad expression covering all basic life necessities which enables a person 'to live with human dignity', 'including all those aspects of life which go to make a man's life meaningful, complete and worth living' which would be 'something more than mere survival.' The Constitution of India in Article 41 of the 'Directive Principles of State Policy' makes a special provision for the old-age security. The subject of pension, social security and social insurance finds reference both in the State and Concurrent lists.

Elderly persons are a high vulnerable group in society which increases with age. The vulnerability is on account of their employment capability, lack of assets, ill health and neglect by immediate family. In vast country like India providing social security to all vulnerable groups is a difficult task. A social security should focus on providing minimum income security that can take care of food, clothing and shelter, besides health security and emotional support. Magnitude of social security needed however depends on age and economic status.

In USA, everyone who serves and pay tax is first required to have a social security number (SSN). A person is required to show his SSN to his employer, financial institutions and internal revenue services. Anyone who works and earns in has to pay tax towards social security and in their old age they receive some bare minimum subsistence money that can suffice to support them when they have no other source of income left. As one works and pays tax he earns social security credits. Most people need 40 credits i.e. 10 years of work to qualify for resulting benefits from social security. Following death of social security number holder, survivors receive the benefit from the social security.

Social security in India comprises multi-tiered system. The first tier comprises National Social Assistance programme followed by schemes like ESI Scheme, Employers Liability Schemes and those under the EPF Act. Old-age pension and numerous voluntary health insurance, etc. are the schemes in the next tier which are being operated by LIC, GIC, UTI and other financial institutions. This apart, in recent years, for providing social security to the workforce in the unorganized sector, several new schemes such as welfare funds, subsidized insurance schemes, Self Help Groups, micro-credit, micro-finance, and micro-insurance schemes, etc. have been introduced.

Extending social security to a large population is very difficult for the government and it is precisely here that NRIs, NGOs and corporates can also contribute in the kitty under their public-private partnership and CSR initiatives. Private financial services providers can make old age pension schemes more liberal on easy terms by charging less and giving more under PPP initiatives. In old-age homes, RFID transponders can be provided to senior citizens, with a view to keep an eye on their movements. These tags can have such information as blood group, drug allergies, personal characteristics, etc. so that in the event of emergency necessary help could be arranged by people around them. RFID wristbands are ideally suited whenever senior citizens move out of old age homes unescorted.

## **5. Women Empowerment and Gender Equity**

In evolutionary biology, diversity which is a very natural for growth of various species, facilitates adaptability and survival of species under varied circumstances. In corporate world in globalization era when cross-cultural issues are widely emerging and bringing diversity, diversity management achieves same objectives, namely, adaptability and survival of diverse workforce in a composite scenario. Adaptability, a connotation of flexibility, results from mutual tolerance, inter-personal sensitivity, and willingness to work together, under diverse situations (Maznevski and Jonsen, 2006).



Diversity instead of being seen as setback should be seen as challenge to be successfully overcome. Diversity in workforce could be on account of age, gender, ethnicity and nationality of individuals working in the organization, which affect adaptability, survival and performance. Diverse groups that have linkage with larger social networks bring rich and varied experience. Collectively, they bring host of ideas and perspectives that improve problem solving capabilities. Wisdom lies in accepting people as they are then maximizing performance from their differential capabilities (Maznevski and Jonsen, 2006).

Diversity management, be it, gender related or culture related is receiving considerable attention in organizations. According to Mr. Azim Premji, Chairman, Wipro, the only way for business to make a difference is when society breaks traditional silos (such as governmental and non-governmental, public and private, etc), and begins to integrate and synergize. The basis of such integration and synergy is to be trust – faith that each segment can perform and deliver exceedingly well. Mr. Premji added (2006): ‘We believe diversity forces us to look at every issue from different perspectives. This means that we end up with an employee profile that not only breaks traditional social barriers such as gender, but breaks nuanced higher order barriers (such as wanting to promote someone who thinks and acts like you do). All of this is imbued into the organization through processes.’

Many organizations place treating diverse work groups evenly as CSR goal initially till eventually it emerges as an organizational philosophy. As CSR interventions, companies should build cultures of acceptance and tolerance, and managers should build skills in understanding and communicating differences among diverse work groups.

Number of females per thousand males (sex ratio) fluctuated between 924 to 934 during past three decades (1971-2001). This is much lower than the sex ratio of 980 in the early part of the twentieth century (Jumani, 2006, p.16). In fact, the low sex ratio in several northern and north-western states of India is impacting on availability of marriageable women. With juvenile sex ratios in Punjab (793), Haryana (820) and some other states touching new low, demand for small family norms, and intense desire to have a son, issue of shortage of marriageable women may emerge as real challenge in coming years (Kaur, 2004).

Accordingly, inter-caste and inter-state marriages are gathering momentum (Kaur, 2004). Given this scenario, corporates as an employer of large workforce can help in maintaining desired male female ratios. This apart, corporates and NGOs, as CSR initiatives can create awareness for maintaining balance in sex ratios in surrounding areas. Women entrepreneurs in rural areas are empowering them by harnessing ICT technologies. A rural woman entrepreneur in Kizhanur village in Tamil Nadu in 2006 started a dedicated data processing unit for Chennai-based BPO. It shows that rural women as determined as their women counterpart to contribute in the global economy. It enables women to stay and work in their home village and contribute to the rural economy (Chambers, 2006).

## **6. Select Cases on Public Private Partnership and Social Infrastructure Development**

Providing every child sound education, say, up to high school level is desirable for social and economic reasons. This would prepare more children to access higher education and courses for specialized qualifications. They would then be able to participate in India’s economic progress and its successful engagement with the global markets (Kamath, 2006).

GOI has sought to universalize education traditionally by setting up government schools both in urban and rural areas. Many of these schools however at present lack necessary infrastructure and adequate trained teachers due to continuously rising population. This is often discerned in terms of poor academic results and high drop-out rates (Kamath, 2006). To fill the gap in elementary education, a number of private schools have come as education providers but with them too everything is not ideal in terms of quality of

education or infrastructure facilities. There are apprehensions in achieving larger development objectives through private schools. Whereas on one hand private schools should accord development priorities, parallelly efforts should be directed in improving government school system (Kamath, 2006).

ICICI Bank, a premier private bank in the country, as part of its social objectives, has come out with several solutions to improve teacher performance in government schools. It also provides loan facilities to private schools to expand their infrastructure and capacity. It also provides loan facilities including loan vouchers that allow low income families to access the education of their choice, whether public or private (Kamath, 2006).

### ***Panchayats and Public Private Partnership***

Traditionally, India's development planning has been at macro level and top down that focused too much on big picture such as a big dam or river linking project. During the period of late Shri Rajiv Gandhi as Prime Minister (1984-89) emphasis was placed on bottom up approach for planning in which local bodies particularly village panchayats would play greater role. This experiment was conceived to meet the menace of drought with people support and part financing belonged to the bottom up approach for planning and poverty alleviation.

Panchayats can play important role in village cleanliness and village sanitation. Maharashtra's experience with panchayats to promote sanitation and hygienic practices is a case-in-point (Iyer, 2006). In Maharashtra, between 1997 and 2000, a record 1.7 million toilets were constructed by the state government but hardly fifty per cent of them were actually utilized by villagers with large number converted into storage space by the unscrupulous farmers. Arising out of constitutional amendments, the Government of Maharashtra involved village panchayats in their Clean Village Campaign (*Sant Gadge Baba Swachhta Abhiyan*) and achieved impressive results in proper use of the facility created.

Maharashtra government provided necessary administrative, technical and financial support to the panchayats for creating awareness among villagers towards cleanliness. As an incentive to panchayats, it introduced a cash prize of Rs. 2.5 lakh to be awarded to a *gram panchayat* for pushing this programme, but with the rider that the award money is to be used for improving village infrastructure only (Iyer, 2006). Encouraged by the results, Government of Maharashtra, increased its outlay to Rs. 200 crores on sanitation for building more toilets in next stage of its programme (Iyer, 2006).

During water crisis in eighties, Maharashtra faced severe drought when fifty lakh people were on look out for alternative means of occupation as it was not possible to go ahead with agriculture without water. The only alternative source of subsistence, which the state administration could think of providing to farmers was stone breaking at a paltry rate of Rs. 2 per day.

It occurred to Vilasrao and a group of rural entrepreneurs struggling to earn livelihood that rural entrepreneurs could instead divert their energies for conserving rain water which could meet formidable challenge posed by drought. Local authorities particularly the district collector showed keen interest in building structures for water storage and extended all possible support to the farmers for building the local water bodies (Salunkhe, 2004).

Highly motivated rural entrepreneurs spared no efforts in building scores of water storage structures in record two to three months time, and when the rains actually arrived, huge storage capacity was already in place for storing rain water. Initially, the pilot project was limited to 15 villages, but later on structures were built practically in all areas that were hard hit by the drought. If the experiment is successful in one state, it can be replicated anywhere in the country.

Realizing that land among farmers is not divided according to family size but it is largely the result of individual family circumstances, it occurred to Vilasrao that if not land at least water could be allocated among poor farmers on the basis of family size. This new basis of water allocation, motivation of rural entrepreneurs, and continuous monitoring of activities by 'pani panchayat' led to spectacular success of this novel experiment.

Several leading IT and Telecom companies are already partnering with *panchayats* in distributing ICT services in rural areas. Tata Teleservices, a cellular service provider, is partnering with panchayats in distributing its services in rural areas. Telecom industry associations like the Cellular Operators Association of India and the Association of Unified Service Providers of India are also supporting panchayat-business or in more common-terminology public-private partnership in rural sector. Rural-urban divide in rural telephony is wide considering that urban teledensity is 31 per cent while in rural areas it is barely 2 per cent (with overall teledensity as 20 per cent in June 2007). India as of 2006 had over 100 million mobile users which may touch 200 million mark by 2007 and 500 million by 2010 (Monga and Philip, 2006). With participation of several agencies including *panchayats* the total number of telephone subscribers reached 225.21 million at the end of June 2007 as compared to 218.05 million in May 2007.

Intel, the world's largest semi-conductor company, is planning to reach India's all villages with one lakh IT kiosks through public private partnership. These kiosks to be called as common service centre (CSC) provide various services with the help of a personal computer and the internet connectivity. Intel has entered into a memorandum of understanding with the Infrastructure Leasing and Financial Services (IL&FS), under which the ILFS will provide technical know-how. Intel will also offer advisory services for wireless implementation towards a rural broadband programme. Intel, as a pilot project, has already set up such centers in Karnataka, West Bengal and Bihar. The CSCs are set up by individual entrepreneurs, to be financed by financial institutions such as ICICI Bank, while companies like HCL Technologies, HCL Infosystems and Wipro Infotech shall make hardware supplies in public private partnership mode.

### ***Public Private Partnership and Village Councils***

Government of Nagaland under public private partnership initiative set up Village Councils (VCs) and Village Development Boards (VDBs) to promote state's education, energy and sanitary infrastructure, and partner microfinance institutions. Village Councils (VCs) and Village Development Boards (VDBs) created under strong and cohesive village administration backed by legislation, have emerged as the main vehicles for rural development. VDBs financially supported by the state government plan and implement their own development schemes within the overall framework of the government fund allocations (Singh, 2006). Private partnership is more by way of 'public scrutiny and management'.

As a case-in-point till 2006, Nagaland was facing a huge problem of teacher absenteeism. Government of Nagaland found a solution to this problem by introducing system of 'public scrutiny and management', under which the control and management of government schools were handed over to the people, through their village education committees (VECs). Under this scheme of public private partnership, all 1500 primary schools in the state were under the purview of public management, which resulted in marked improvement in both teacher and student attendance (Singh, 2006).

This public private partnership model through 'public scrutiny and management' was not only used in education but also in other sectors such as electric power supply, water supply and rural tourism. This PPP model has worked scheme of public management has worked well for streamlining electricity revenue collection. The project is managed by village electricity management boards (VEMBs) set up under VCs. This was in aftermath of the single-point metering (SPM) installed under *Rajiv Gandhi Grameen Vidyutkaran Yojna* (RGGVY). Following SPM, electricity revenue collection in Nagaland increased from

Rs.2, 41,302 annually to Rs. 4,48,534 annually with the Kohima division registering the highest growth of 122 per cent (Singh, 2006).

VEMBs receive retail margins of 20 per cent for every unit sold and employ personnel through the rebate they receive. Several VCs are even engaged in generating electricity and own and operate a micro-hydro power plant at Chizami village and a Biomass Gasifier Project at Pfutseromi village. The state government has sought Planning Commission's approval to provide financial grants to the private local bodies to allow them to function as financial intermediaries to give cheap credit to local farmers and artisans under public private partnership. The VDBs already have substantial corpus, which requires to be supplemented by grants from the government.

According to the state government, given the closely-knit society and sound village administration, the VDBs/VCs are in an advantageous position to ensure timely recovery of such loans. This PPP cooperation backed by careful monitoring and support of local people protects farmers and artisans from the problems they otherwise face from unscrupulous village money lenders, who charge exorbitant rates of interest prejudicial to the interests of farmers and artisans (Singh, 2006).

### ***NGOs and Social Infrastructure***

Several leading NGOs such as CRY (Child Rights and You), 'Pratichi Trust' and *Pratham* and corporates such as Azim Premji Foundation (APF) of Wipro Technologies are providing helping hand to the government in its mammoth task of providing elementary education to country's large children population and improving literacy levels of adults. With an annual disbursement of over Rs. 13 crore, CRY maintains five regional offices countrywide and employs over 170 full time employees. Prof. Amartya Sen for giving boost to social infrastructure including elementary education and healthcare in South Asia, Prof. Amartya Sen, India's Nobel Laureate in Economics, set up 'Pratichi Trust' in 1999, with some of his Nobel Prize money, an NGO which is very active in India and Bangladesh.

The Pratichi Trust works as driver of change to ensure that social infrastructure operates with quality. In India, the Trust has been so far more active in West Bengal and Jharkhand. In 2001, Pratichi (India) Trust conducted surveys on primary education, healthcare service and role of trade unions in select areas, by holding discussions with all stakeholders including parents, teachers, government officials and society at large. In 2004, worked to improve the plight of some 1200 schools and 250 *Shishu Shiksha Kendras* attended by the poorest of the children whose parents include sex workers, beggars and domestic help. In 2005, Pratichi Trust with a local NGO, 'Ayo Aidari Trust' near Shantiniketan, to run a healthcare centre at Kundaphari village near Dumka and has managed to revive the once abandoned immunization programme in the area (Majumdar, 2006).

In 2005, Pratichi tried to evaluate the effectiveness of 'mid-day meal scheme' and its recommendations following evaluation were later forwarded to the HRD Ministry. GOI forwarded its recommendations to the Planning Commission and all the district collectors. This was followed by a meeting between select parents and teachers at the state education department headquarters in Kolkata. Following its recommendations, the West Bengal Government, launched a massive advertisement scheme, set up helplines through newspapers and incorporated mothers' committee to involve parents. In 2006, it conducted a survey of private schools in Birbhum, findings of which were presented in a public meeting held at Shantniketan, which was also attended by Prof. Amartya Sen (Majumdar, 2006).

Pratham is another leading child welfare NGO in India which has annual budget of over 36 crore, was launched in 1994 with a mission to ensure that every child is in school and learning well. Pratham has played a major role in the conceptualization of the *Sarva Shiksha Abhiyan* (Education for All). It works on a tripartite partnership between state governments, corporates and grass root voluntary organizations.

During 12 years of its existence till 2006, it was operational in eighteen states, it has made 5 lakh children literate through application of its intensive 21 day reading and basic mathematics programme. Based on survey of 485 districts, vide its Annual Status of Education Report (ASER)-2005, it reported that almost half of the students in class VII are unable to exhibit the learning and comprehension levels they should have achieved in class II.

Apart from Pratham and CRY, there are several other NGOs which are working towards child welfare. Delhi-based NGO Pravah sensitizes students and teachers on issues like communal harmony and sexual harassment. A Delhi-based iDiscovery Centre for Education and Research works on education-based projects like innovative teaching, outdoor education and leadership development for corporates. Prayas works for protection of children and employment generation for the marginalized.

Habitat-building and housing-repair create opportunities to earn money and other micro-enterprise opportunities for the poor. Slum upgrade programme of the SEWA (Self Employed Women's Association) in Gujarat found that 35 per cent of the households who availed the loan facility also increased their weekly earnings by 35 per cent, due in part to the benefits of loans for home improvement, electricity, sanitation and piped water supply (Selvarajan, 2006).

### ***Rishi Valley Institute for Education Resources (RIVER)***

Rishi Valley Institute for Education Resources (RIVER) of the Rishi Valley Education Centre run by Krishnamurti Foundation (India) is a private initiative started in 1985 with people's participation. RIVER is situated at a drought ridden area of A.P., close to Madanapalle and about 140 km north-east of Bangalore. The Institute since 1885 is engaged in various programmes to economically uplift local population that includes marginal farmers, shepherds and daily wage earners on seasonal employment. RIVER has pioneered a child centered methodology on the lines of Montessori system of holistic education, addressing basic needs of elementary education in rural India that makes schools a community resource for conservation of cultural and natural heritage. It is essentially based on the multi-grade and multi-level teaching model where relatively few teachers manage more number of classes (Thanuja, 2006).

RIVER has developed a unique structure for village education that consists of network of satellite schools which have a community-based curriculum. Teaching is done by village youth trained in specially designed multi-grade methodologies, which is graded for individual levels of learning, filled with up-to-date information, and taught in local dialect. Curriculum is integrated with activities that aim to promote conservation, and sustain local culture by involving village craftsman and artists in programme delivery (Thanuja, 2006). As villagers are involved at every stage, RIVER functioning is purely on public private partnership mode.

The Institute as of 2007 worked in fourteen states under broad umbrella of *Sarva Shiksha Abhiyan* (SSA) with the government and UNICEF support. RIVER is also working in partnership with NGOs in India and abroad in countries like Ethiopia, Pakistan and China towards universalisation of education. RIVER was awarded the 'Most Innovative Development Project-2006' at the Sixth Annual Global Development Conference held at Senegal in 2006 for its work for developing a community based educational model of self-sustainable school as an instrument of lifting the community out of continuously degraded social and environmental scenario (Thanuja, 2006).

### ***Corporate Social Responsibility and Social Infrastructure***

Corporates in the first instance should provide welfare facilities for its employees such as education and health care facilities including crèche facilities for working women at its works. Corporates and NGOs under CSR obligations can offer technological back-up support for design of low cost housing, village drainage system, sanitation, solid waste management, drinking water supply, warehousing for grain and

seed storage, crop drying, decentralized energy systems, street lighting, etc. depending on the type of expertise available with them, which they may share under CSR obligations.

Azim Premji Foundation is the vehicle set up by Asim Premji, Chairman, Wipro Technologies, which has made pioneering role in raising standards of elementary education in the country. Primary education is the fulcrum of social development. The Foundation works in partnership with GOI, state governments, local governments, NGOs, individuals and communities, on a scale that is necessary to impact on a very large elementary education system in India. Azim Premji Foundation (APF) is active in Himachal Pradesh, Uttaranchal, Punjab, Delhi, Rajasthan, Gujarat, Madhya Pradesh, Chhattisgarh, Orissa, Karnataka, Andhra Pradesh, Pondicherry and Tamil Nadu.

The Foundation in 2006 touched nearly 20,000 schools, 60,000 teachers and three million children with active support of various state government officials. With over 250 professionals and over 1000 paid field volunteers, its vision is to 'significantly contribute to achieving quality universal education to facilitate a just, equitable and humane society'. Its aim is not to develop smaller 'islands of excellence' but to work towards contributing systemic changes to enable the government to deliver quality universal education across the country (*The Economic Times*, Awards for Corporate Excellence, September 11, 2006).

The Foundation has also set up training institutes for school teachers. Foundation lays more emphasis on improving quality of teachers than improving school infrastructure. It will be appropriate to recall what Pt. Jawahar Lal Nehru, country's first Prime Minister, once said 'if infrastructure is inadequate, a competent teacher can still teach under a tree but if good trained teacher is not available infrastructure cannot make up his absence' (*The Economic Times*, Awards for Corporate Excellence, September 11, 2006).

*The Economic Times* vide its Annual Corporate Excellence Awards for 2005-06 has honoured the 'Azim Premji Foundation' with the 'Corporate Citizen of the Year Award'. *The Economic Times* Jury noted that the contributions of the Foundation in realizing the dream of a more equitable society in India are unparalleled. This is a story that cannot be measured by numbers, as the task that the Foundation has undertaken is both massive and complex. It is the story of providing hope and opportunity and helping unlock the potential of millions of bright young minds. It is the story of the unflinching dedication of hundreds of anonymous dreamers, who have given up more comfortable alternatives to pursue a greater cause (*The Economic Times*, Awards for Corporate Excellence, September 11, 2006).

Contribution of private sector in GOI's flagship programme 'Sarva Shiksha Abhiyan' under public private partnership is showing impressive results. Several IT companies including Wipro through APF, IBM, Microsoft, NIIT, Hewlett Packard, and Aptech have made noted contribution through computer-aided learning in alternative and innovative education component of SSA. The APF has emerged as a clear leader with its presence in 12 states. Madhya Pradesh, Karnataka, Maharashtra, Tamil Nadu, West Bengal, Jharkhand and Haryana have received maximum corporate support (Mukul, 2006).

Contribution of private sector has gone up from Rs. 40.36 crores in 2005-06 to Rs. 53.43 crore in 2006-07 benefiting 27,289 schools and 52.83 lakh children in IT-enabled learning under their CSR initiatives. Microsoft invested Rs. 9.89 crore in 2006-07 as against Rs. 7.64 crore in 2005-06. During 2005-06 and 2006-07 combine, APF spent Rs. 8.06 crore in Karnataka. During 2006-07 APF spent Rs. 4.35 crore in Tamil Nadu. Everonn Systems India Ltd. spent Rs. 6.15 crore in 2006-07 on computer-aided learning in Jharkhand (Mukul, 2006). Bill Gates, world's greatest IT wizard owning over \$50 million who evolved an extraordinary software and gave new meaning to the word 'windows', has donated more than half of his personal wealth to the 'Bill and Melinda Gates Foundation', making it world's largest philanthropic organization devoted to health and education issues, especially in developing nations.

In June 2006, Warren Buffett, donated 85 per cent of his personal net worth (\$30 billion), largest philanthropic gift in history, to the Bill and Melinda Gates Foundation. When donating 85 per cent of his personal wealth to the Melinda Gates Foundation, Warren Buffett observed that he was applying the same principle to charity as he did to business by 'entrusting money to where it would be put to best use, with optimum efficiency.' (Nangia, 2006).

Warren Buffett's extraordinary deed has the potential to spur a few more among the super rich to address the plight of the sick and uneducated. The ultra-rich may derive inspiration from the Warren Buffett's famous quote, 'A rich person leaves his kids enough to do something, but not enough to do nothing.' Warren Buffett's lead in this direction is indeed an act worth emulating by ultra-rich anywhere in the globe (Bhat, 2007). Bill Gates is on record having said that his three children will only get a small portion of his personal wealth.

It is very gratifying that world's richest man Bill Gates, has chosen to pursue philanthropy as the road ahead for his rest of life. There are very few examples of likes of Bill Gates and Warren Buffett donating their huge portions of personal network for the cause of social welfare – far removed from their chosen fields of expertise (Bhat, 2007).

## 7. Concluding Remarks

India's capability wealth has made significant strides that enabled country launch satellite into outer space, make noted contributions in computer science and software development, but it could not achieve matching success in elementary education and primary healthcare. It is thus appropriate only that RBI has asked states to spend more on education, public health and family welfare (*The Economic Times*, January 5, 2007). According to the recent RBI guidelines, states need to accord much greater allocation on social infrastructure than it made so far. Mr. Sam Pitroda, Chairman, Knowledge Commission, has recently come out with host of suggestions, to tap country's knowledge base for country's all-round development. Suggestions are wide-ranging starting from massive expansion in higher education with 1500 new universities, a national knowledge network with gigabit capabilities to connect all university libraries, laboratories, hospitals and agricultural institutions; independent regulatory authority for higher education, 1.5 per cent of GDP allocation for higher education, commercial utilization of the universities' land for raising funds (Pitroda, 2007). Given the substantial risks involved, private sector may not be too enthusiastic about teaming with the bureaucracy to provide and manage infrastructure facilities (Kabra, 2006). In view of low economic returns, corporates may not be interested in public private partnership projects in several areas such rural connectivity, rural energy, rural healthcare, rural housing, etc. but may evince more interest in strategic CSR initiatives such as contract farming, contract research or contract manufacturing. Education and healthcare and other social infrastructure development should thus be accorded much greater priority by the government than made so far with support of all including PRIs (Panchayati Raj Institutions), NGOs and corporates. Contributions made by NGOs such as CRY and *Pratham* and corporate entities like *Azim Premji Foundation* in improving elementary education in the country in supplementing government efforts on a large scale are worth emulating by others. For success of PPP models it is necessary that public capital (coming as it does, tied-in with government control) and private capital (tied-up with private sector efficiencies and incentives) have to be utilized in most effective manner with minimum of red-tapism or adhocism (Chatterjee, 2006). For best operating results and resolving day-to-day conflicts, regulatory authority such as AICTE (All India Council of Technical Education) for technical and management education projects, MCI (Medical Council of India) for healthcare projects or TRAI (Telecom Regulatory Authority of India) for telecom projects play very useful role. PPPs need facilitative environment of independent regulatory authorities that help resolve conflicts among stakeholders.

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