Chapter-2

Literature Review

To understand the sustainable development initiatives taken in India in general, and in the state of UP in particular, and the ways and means adopted by the government, it is necessary to look at the historical context and the socio-political framework within which planning for development is pursued in the state. A number of institutional reforms introduced after the attainment of independence, which laid down the foundations for rapid socio-economic development and for creating new opportunities for sharing the benefits of development by the citizens, especially the marginalised sections of society, have been undertaken. One of the most popular modes in all civilised, developed and developing nations, for sustainable development process is through Public Private Partnership (PPP) for improving the socio-economic conditions of people living in rural and urban areas. It was realised in some time that governments alone cannot be expected to undertake sustainable development of the country alone, without roping in partners from the private sector as governments, specifically in the developing countries have faced resource crunch for taking up projects for all-round development in all sectors of economy. PPP has been a great contributor in creating not only infrastructure facilities, but also in providing various kind of services to the people.

In this chapter, we have tried to find out how PPP has contributed to ease the sufferings of the people in the fields of education, transport, medical facilities, sanitation, water supply, public distribution system etc. through the researches and studies of other scholars and academicians in the field. All attempts have been made to incorporate the material available so that we may find areas and further scope where we can contribute to the literature in the area of public private partnerships in UP. We are also aware of the fact that every book and article might not have been included in this chapter.
Literature Review

Books

A. Venkat Raman and James Warner Björkman, in the book, “Public-Private Partnerships in Health Care in India: Lessons for developing countries”\(^1\), examine PPP as an important tool to alleviate deficiencies in public health system as well to reduce economic stress on poor people from expensive, burgeoning and unregulated private health sector. It discusses PPP case studies in the health sector of nine states of India that have benefited the people. It also studies PPP in health sector across different countries of the world. It examines the types of PPP, objectives and scope of services, benefits for target populations, responsibilities of partners, payment mechanisms and operational concerns for their success in health sector.

Aarushi Jain, in the book, “Public Private Partnerships for Rural Development: A Corporate Social Responsibility Perspective”\(^2\), discusses the importance of PPP and Corporate Social Responsibility (CSR) in bringing efficiency, effectiveness, quality-consciousness, customer-orientation and value for money in economic and financial circles. The PPP and CSR are complementary and supplementary to each other to unleash faster and all-inclusive rural development. It discusses the implementation of PPP for rural development in the areas of rural infrastructure, education, health, social justice and empowerment, drinking water, environmental protection, agriculture women and child development, local self-government, etc. PPP is a very useful tool in bringing harmonised rural development and improvement in public service delivery at the grassroots level. This book analyses and suggests various modalities for PPP in rural development. The author advocates that the CSR should be integrated with the PPP for better results in the rural areas.

E. R. Yescombe, in the book entitled, “Public-Private Partnerships: Principles of Policy and Finance”\(^3\), highlighted that PPP has become increasingly popular around the world as a way of procuring and maintaining public sector infrastructure in different sectors such as transportation, public utilities, social infrastructure and other specialised services. It discusses various PPP models practiced worldwide. The book

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deals with the concession and Private Finance Initiative (PFI) models of PPP. The author shares his experience for the best way to finance or contract projects, as well as to develop PPP policies or negotiate projects. It explains a systematic and integrated approach to finance PPP projects within the public policy framework, and explains the project finance techniques used for the purpose.

Gaurav Dwivedi, “Public-Private Partnerships in Water Sector: Partnerships or Privatisation?”^4 looks at various aspects of PPP and discusses the efficacy of PPP projects in addressing the problems faced by the public sector water supply services. He looks into the decision-making processes, people’s participation, transparency, the power equations, the political economy and the socio-economic context of the communities where such models are being implemented. There has been a widespread protest against the privatisation of water in places like Delhi and Mumbai. He also discusses some other alternative options to PPP in the water sector. He opines that there is a need to explore, evaluate and then choose the best from what is available, keeping in mind the technical, economic and social constraints.

Graeme Hodge and Carsten Greve, in the edited book, “The Challenges of Public-Private Partnerships: Learning from International Experience”^5, highlighted that PPP plays a major role in the building of modern infrastructure and provides various services. In their opinion, it is better than the traditional method, however, it is facing many problems. They advance recent thought on PPP in the areas of risk transfer, financial implications, politics, contractual matters, management and accountability. Some international case studies are presented from the United States, United Kingdom, Germany, Denmark, and Australasia. A range of PPP experience in terms of successes and failures have been presented in this book.

Graeme Hodge and Carsten Greve, in “Rethinking Public-Private Partnerships: Strategies for Turbulent Times”^6 have examined PPP policies in the wake of global financial crisis of 2008. Many governments started rethinking about their PPP strategy for undertaking future projects in heightened distrust of private financial markets. It

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aims to highlight the strategies that countries, organisations and individual actors used to address these conditions. This gives a clearer picture of the kind of conceptual framework that might be employed for PPP projects.

Geert Dewulf, Anneloes Blanken and Mirjam Bult-Spiering, “Strategic Issues in Public-Private Partnerships”\(^7\), explain that every PPP project is different and should be managed accordingly. The projects require considerable capability and skills from both public sector and private sector. They mainly focus on the concession form of PPP that are launched all over the world in order to generate value for money. It deals with the emergence of concession worldwide, history, rationale, motives, various forms to enable for making strategic decision making. Though, it has been criticised for high transaction cost, low level of contract flexibility, and the impact on the public in general. It aims at improving the performance of concessions. The book also discusses the problems encountered, the solutions found for those problems, and the different approaches to concessions chosen across different countries.

Girish K. Mishra, in his book, “Private Sector Interface and Harmonisation for Urban Development”\(^8\), provides some notable experiences and information gained particularly from the United States on various aspects of public-private sector interface and harmonisation in the field of urban development. In India, the involvement of private sector in development has arisen not due to external situation, but internal pressures as well because of inadequate housing and infrastructural facilities on account of lack of financial resources and increasing population. An attempt has been made to address various administration, financial, land and technical issues so as to harmonise relationship between the public and private sectors.

Magdalena Bexell and Ulrika Mörth, in “Democracy and Public-Private Partnerships in Global Governance”\(^9\), critically analyses how PPP can provide democratic practices in global governance by broadening participation and providing arenas for deliberations on global public policy in various issue areas. The book evaluates and compares the democratic legitimacy and effectiveness of two types of

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PPP, i.e., the Johannesburg Partnerships adopted at the World Summit on Sustainable Development (WSSD), and projects under the Kyoto Protocol’s Clean Development Mechanism (CDM). It discusses the differences and similarities between transnational and national partnership in equitable development, distribution of resources, and empowerment of weak communities.


undertake the goal of addressing broad questions of housing laws, policies and practices, with a primary emphasis on how best to approach the PPP through which most affordable housing is built, operated, and maintained. It discusses the ethical paradigms of housing as an economic good, as a home, as a human right, as a source of social order, and as an element in a functional land-use system. This book also captures some of the most important challenges, and explores some of the great potential of affordable housing through PPP.

Oliver W. Porter, in the book entitled, “Public/private partnerships for Local Governments”,

shares his experiences in the book when he was responsible for the implementation of Sandy Springs, the first new city to be incorporated in Georgia through PPP model. The record of success of this and other three cities are outlined in this book. He provides a roadmap for introducing improved government services that should be studied by all local officials. The PPP model is well suited for all local governments. It addresses the benefits and hurdles involved with the conversion of traditional cities to the PPP model.

P. Jagadish Gandhi and M. J. Joseph, “Public-Private Partnerships in Nation Building”,

explain in the edited book that PPP has become not merely a nation building programme, but a refined strategy of societal governance in the beginning of 21st century. The book highlights PPP opportunities in social sectors, telecommunication, agriculture and water supply. It also discusses A.P.J. Abdul Kalam’s views on PPP in economic development and nation building. After the

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11 Oliver W. Porter, Public/private partnerships for Local Governments, USA, Author House Publication 2008.

liberalisation policies implemented in 1991, the private sector started playing an increasingly major role in the Indian economy. The contribution of PPP has been recognised in infrastructure and other services. It also highlighted the Provisions for Urban amenities in Rural Areas (PURA) scheme for rural development on PPP model to provide economic opportunities, bridge rural-urban divide, generation of employment and enhancing rural prosperity.

Philipp Pattberg, Frank Biermann, Sander Chan, and Aysem Mert, in their edited book, “Public-Private Partnerships for Sustainable Development Emergence, Influence and Legitimacy”\(^\text{13}\), provide first authoritative assessment of partnerships for sustainable development, ten years after the Johannesburg WSSD. It discusses the increasing number of transnational PPP projects since WSSD. It also compares between India and China in partnership beyond the Organisation for Economic Co-operation and Development (OECD). The partnership for sustainable development has assumed vibrant civil society and non-government organisational actors that can handle assistance funds channeled outside of government relation.

R N Joshi, “Public–private partnerships in Infrastructure, Perspectives, Principles, Practices”\(^\text{14}\), discusses PPP as an effective and sustainable route to develop various public infrastructure facilities. It explains the concept of PPP including equitable risk allocation, financial approach, contractual relationship between inherently opposed entities, and the supportive legal and regulatory framework. It presents an in-depth analysis of various key infrastructure sectors, comprising roads, water and sanitation, urban rail transit, airports, ports, power and telecommunication, including the case studies of Delhi Metro Rail Corporation. He cites an example of Brazil, where when tolls were introduced during the peak harvest season, the governor forced the concessionaire to charge only 50 percent of the original tariff.

Yogendra Sharma, “Public Private Partnership in Infrastructure”\(^\text{15}\), shares his experiences of the successful initiatives by the Indian railways in attracting PPP in the provision of railway infrastructure. He gives the successful examples of Kutch


Railway Company, a joint venture of the Ministry of Railway, Government of Gujarat, Kandla Port Trust and Mundra Port. The book also discusses in detail various legal frameworks, issues related to railway operations, innovative methods of operations and maintenance, and setting up of new benchmarks. It also provides proper perspective to the prospective investors, project execution agencies, banks/funding institutions, training institutes etc., across the country and abroad as well.

Articles

A. S. Malik, in the article, “Public Private Partnership: Primary School Education and Panchayati Raj Leadership in Haryana”\(^\text{16}\), discusses that PPP for qualitative primary education in Haryana has provided the opportunity to the panchayati raj leaders not only to avail the qualitative primary education at their doorstep but also to gain experience through this programme which has helped them to be more effective leaders of the future.

Amirullah, “Private Partnership and Prospects of ICT in Sustainable Development of Rural India”\(^\text{17}\), analyses some of the more successful ICT projects through PPP that have helped in ensuring employment, good governance, economic, social and political empowerment, providing information, education and skill development in India. Project Nemmadi and Bangalore One of Karnataka, e-Mitra of Rajasthan, Gyan Ganga of Gujarat, Project Ashwini of Andhra Pradesh and e-Krishi project of Kerala are some of these. Indeed, this is a small world today and ICT is making it even smaller. ICT is changing the world, creating a distance-less, borderless world of instantaneous communication.

The author in another research paper, “Transforming Education of North-East India through Public Private Partnership”\(^\text{18}\), discussed some of the successful PPP models in education. Rajasthan has adopted two models of PPP implementation in education i.e. the school adoption model and the Design Build Finance Operate and


Transfer (DBFOT) model. In the same way, Adarsh Model School Scheme of Punjab government, launched in 2007 through PPP model provides quality education to students in rural areas and ensures them educational opportunities at par with their counterparts in urban areas with a zero dropout rate.

Amrita Datta, in her article, “Public-Private Partnership in India: A case for Reform”, has presented an overview of the PPP model of development in India. It describes the economic imperatives for public and private resource management and the case for PPP. It critically looks at the ramifications of this paradigm of economic growth and development, which has had limited success with certain projects. Apart from a multi-faceted critique of PPP across various sectors, the article observed that there has been an asymmetry in the flow of funds, and an overarching emphasis on infrastructure in the hard sectors.

Anthony Adomi Mbina, analysed the impact of PPP in tourism development in the paper, “Public-Private Partnership in Sustainable Tourism Development: A Panacea of Poverty Alleviation in Cross River State, Nigeria,” by providing a roadmap to guide tourists, building and running of hotels, generating employment for citizens, provision of tourism workers and information, among others. This has promoted good quality of life, increased self-esteem and confidence, gives people the opportunity to make their own choices, gives satisfaction, enjoyment and pleasure, enables people to become involved in and feel part of the community, and so on.

Arathi Chitla in her paper, “Impact of Information and Communication Technology on Rural India”, discussed the impact of ICT on rural India that how it can help in eradication of poverty, e-governance performance, strengthening the livelihood of poor as well as in improving the socio-economic development. It can facilitate speedy, transparent, accountable, efficient and effective interaction between

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the public, citizens, business and other agencies. It can also enhance poor people's opportunities by improving their access to markets, health, and education.

Archana G. Gulati explains in the paper, “Public Private Partnership for Rural ICT Services-From Obligation to Opportunity”\(^\text{22}\), to bridge the digital divide effectively by focusing on broadband enabled access to information and knowledge for the rural population under Common Service Centre (CSC) programme that has been set up under National e-Government Action Plan, a PPP initiative. It has extended the reach of digital services and economic opportunities into the rural and remote areas of the country. The author has also made some interesting suggestions on further fine tuning of existing measures involving the innovative use of PPP to further hasten the penetration of ICT into rural areas.

Bibi Ishrat Jahan, in her paper, “Public Private Partnership in Uttar Pradesh Health Care Delivery System-UPHSDP as an Initiative”\(^\text{23}\), discusses the role of PPP in health care delivery system in UP through Uttar Pradesh Health System Development Project (UPHSDP), which is a World Bank project. She compares the health status of Indian states through the level of income, health expenditure, health indicators and other health infrastructures particularly in UP. The UPHSDP has helped in improving the condition of health system in remote and inaccessible areas of the state to serve poor and disadvantaged groups, particularly women. It has doubled the registration of pregnant women, over five-fold increase in institutional delivery, increased awareness about family planning, both among men and women. But, a lot is still to be done for solving the health problems in the state.

Bijoya Roy and Siddharta Gupta focused on increasing cost of medical care in rural hospitals of West Bengal, in their paper, “Public Private Partnership and User Fees in Healthcare Evidence from West Bengal”\(^\text{24}\). This article attempts to study the content of PPP with respect to provisioning of diagnostic services in the rural


\(^{23}\) Bibi Ishrat Jahan, Public Private Partnership in Uttar Pradesh Health Care Delivery System-UPHSDP as an Initiative <http://www.esocialsciences.org/Download/repecDownload.aspx?q=s=UqnnrN48NH8UOPcbSXUd2VGYcZv4PKBqmYew4K3OxxVXh3R1p1atjW2NFiL4w1Cv3jMkeBFHEXcJjGguCtn+wlvevBSAaF8Hgl5iwCDq8s0EblcplPbTQAkJXwPjikZ/h1RogQufyH1+mm5bG+57Mf7qezIHYd96jozgk2CKTZLjY YeoxL204cWSaASP8ouE9/pAE8jr7nV6a3/Dg==> (accessed on 28-12-2015)

hospitals of West Bengal, their user fee structures and compares it across a set of basic diagnostic services delivered by public sector healthcare institutions, PPP and the private sector. The revised user charges and a restrictive exemption and waiver policy under the PPP framework have produced exclusionary effects in the primary healthcare system in the state.

David J. Spielman, Frank Hartwich and Klaus Grebmer, in their article, “Public-Private Partnerships and Developing-Country Agriculture: Evidence from the International Agricultural Research System”\(^{25}\), examine the role of PPP in promoting pro-poor productivity-enhancing technological innovations in the agricultural research system. The paper discusses the impact on International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Hybrid Pearl Millet Research Consortia, which is found to have contributed to the growth of a competitive private industry that now supplies the majority of improved pearl millet and sorghum hybrid seeds to smallholders in India’s arid and semi-arid tropics.

Inderjeet Singh Sodhi, in his paper, “Public-Private Partnerships in India: How to ensure Transparency and Accountability”\(^{26}\), focusses on the factors that are affecting transparency and accountability in PPP projects. This article discusses in detail transparency and accountability in the PPP based projects and schemes, and examines the viability of PPP for various sectors. Lack of transparency and accountability could lead to inefficiency and lessened development.

Karthik Muralidharan, in his paper entitled, “Public-Private Partnerships for Quality Education in India”\(^{27}\), compares the status of public and private schools in India. The poor performance of government schools compel the students to leave the school or go to private schools. It discusses a system of scholarships/vouchers for poor students to be designed so as to obtain the efficiency benefits of the private schools. A voucher system provides the right incentives for schools to not only enroll


children but to prevent dropouts (since the voucher money goes with the child). It ensures greater efficiency, flexibility, and accountability of the private sector. It also provides a promising channel for improving the performance of government schools via increased competition.

K. M. Mital and Vivek Mital, in the article, “Public Private Partnership and Social Infrastructure”\(^a\), discuss the role of ICT in socio-infrastructural development and ways of removing socio-economic disparities between rich and poor as well as between rural and urban areas in their research article. This is the most difficult and tough obstacle to the sustainable growth of the Indian economy. ICT has tremendous potential to transform rural India through distance learning, telemedicine, supply chain management, customer relationship management, etc. They have also discussed the role of ICT in solving education, healthcare, social security of elderly persons, women empowerment and gender equality, particularly in rural and remote regions of the country. Some case studies were also discussed like Jawahar Knowledge Centre’s imparting technical and professional education to fresh graduates in Andhra Pradesh, Rajiv Internet Village Centre that aims at providing electronics based services delivery to citizens residing in rural areas through kiosks, e-literacy and rural networks.

Mahendra Sharma, Mr. Amit Patel and Ms. Pandya in their article, “Public Private Partnership (PPP) Approach-for Sustainable Development of APMCs in Gujarat”\(^b\), suggest PPP model for creating a competitive advantage for Agriculture Product Market Committee (APMC) of Gujarat which has enabled the farmers to adopt modern marketing practices. After independence, India has solved the problem of food grains production but it faces challenges in its distribution due to lack of infrastructure, storage of products, poor markets, etc. He suggests an ‘Integrated Agro-Bridge Center’ that would fulfill agriculture input requirement and also provide an efficient agriculture produce market. This model would enable agricultural community access ready information about weather, market prices, deliver knowledge on sustainable farm practices and risk management.


Manjappa D. Hosamane, in “The Impact of Public-Private Partnership in Public Health of Karnataka”\(^\text{30}\), have argued that PPP is an innovative mechanism to benefit the poor in health care. He examined issues such as the scope and objectives of the public and private partners, mechanisms used, performance monitoring, payment mechanisms, stakeholder/beneficiary perspectives and sustainability of the partnership through 12 case studies of different government programmes in Karnataka.

Meine Pieter van Dijk, in his article, “Public-private partnerships in basic service delivery: impact on the poor, examples from the water sector in India”\(^\text{31}\), discusses the role of PPP in basic service delivery and its impact on the poor. PPP can give the financial and skill bottlenecks for the fulfillment of the MDGs in the water and sanitation sector. There is a direct link between economic development and the growth rate of infrastructure in the rural areas in India. The transport infrastructure contributes to poverty alleviation by assuring cost-effective transport of goods and people.

Nand Daheja and Rakesh Gupta, in their article on elementary education titled, “Public Private Partnership for Elementary Education”\(^\text{32}\), have given many options for private sector participation under PPP schemes. The meager amount of budgetary allocation on elementary education and inability of people to pay, forces many students to leave their education mid-way despite passing of 86\(^{\text{th}}\) Constitutional Amendment that made free and compulsory education to all children between the ages of 6-14 years, a fundamental right. He listed seven options where PPP can play an important role in improving the elementary education.

Pankaj S Jain and Ravindra H Dholakia, in their paper, “Right to Education Act and Public-Private Partnership”\(^\text{33}\) discuss the low education budgetary allocation and poor teachers’ salaries to provide universal school education through government


schools. A combination of government school and private schools, to be held accountable under the PPP mode, is a superior alternative.

Priyanka Kokil, in his research paper, “SAP-LAP Analysis: Gyan Ganga, E-Gram and Communication Information Centers”\(^{34}\), made an analysis of three ICT projects namely; Gyan Ganga, E-Gram and Communication Information Centers (CIC), initiated by the Gujarat government to bring in SMART governance in rural villages. They have built kiosk centres at the village level to provide different services like education, health, e-government services, crop diseases, market prices, solutions with an agri-expert, veterinary services, etc. It has helped in building wealth by reducing farming costs, better credit options and facilities, increased crop yield, enabled effective post harvest management, provided expertise in animal husbandry and watershed management. All these projects provided an immense opportunity to harness the benefits of Information Technology (IT) in raising the socio-economic conditions of the people particularly in the rural and remote areas.

R. K. Kundu and S. S. Chahar, in their paper entitled, “PPP in India: A Social Sector Review”\(^{35}\), discussed the importance of PPP in India and different models adopted for implementing various projects. They pointed out the initiatives taken by different Ministries of the Government of India in education, Integrated Child Development Scheme (ICDS) and environment protection through PPP. They have also discussed the status of PPP in states in this article.

Ramabrahmam and S. Sudhakar Babu, in their paper, “Public Private Partnership and Evolving National Health Policy: Need for a Cautious Approach”\(^{36}\), highlighted the emerging issues in health sector through PPP model. This has been tried out in some parts of India not only for mobilising funds but also to explore the possibilities of replicating the successful and best practices adopted by private sector into the public arena. This article presents a case study of Rajiv Arogyasari scheme of Andhra Pradesh and a critical analysis of PPP in health sector.


Roland Almqvist and Olle Högberg, in the paper, “Public-private partnerships in social services in Stockholm”\textsuperscript{37}, discuss three approaches of PPP procurement process in social sectors, i.e. Non-contractibility, Trust-based approach and Control-based approach for undertaking projects in social services. They suggested for long-term agreements that can yield incentives for investments and expansion, which in turn, may generate favourable outcomes.

Sangeeta Kohli, Ranjan Bandhopadhyay and Kamlesh Kohli, in their paper, “Public Private Partnership in Education: An Impactful means of Promoting Skill Development and Inclusive Growth in India”\textsuperscript{38} focus on how private corporations can collaborate with national, state and local governments to create a sustainable labour-supply model to meet the needs of today’s digital economy. The paper uses the endogenous growth theory to develop a comprehensive PPP model of resource enhancement in the Indian context of commitment for sustained growth.

S. Vijayanand, in his paper, “Stakeholders and public private partnerships role in tourism management”\textsuperscript{39}, discusses the multiplier effect of tourism on economy via PPP model through increased balance of payment, higher employment, rising incomes and forming new entrepreneurial activities in the country. It provides livelihood options to local people such as hotel workers, guides, porters, watchmen, and other service providers. The local community members are also involved in managing small business enterprises like cafeteria, souvenir shops, travel and transport services, craft shops etc. PPP in tourism plays an important role in countries where tourism development is in the early stages.

Shiv Raj Singh and Aarushi Jain in their article, “The Dynamics of Public Private Partnership for Socio-Economic Development”\textsuperscript{40}, mentioned different socio-economic indicators that are needed to transform India into a developed nation. The Government of India has made use of PPP in many infrastructure projects and is now


initiating PPP in social sector programmes so that all segments of society can gain from India’s growth and achieve a better quality of life. There is need to implement PPP in all states and in every sectors with full enthusiasm. They also discussed that there should be a clear policy and legal frameworks, competent institutions that can identify, procure and monitor PPP, efficient oversight and dispute resolution procedures.

Sushma Yadav and Nidhi Yadav, in “Governance in India and Public Private Partnership: A Paradigm Shift”41, discuss the nature and scope of PPP, especially in the health, education and water sectors. They briefly explore the multiplicity of issues involved both in the paradigm shift and in the role of the state as it moves to the PPP model. The healthy PPP shall foster inclusive growth and social empowerment besides contributing to improved service delivery and good governance.

T.S.N. Sastry, in his paper, “Public Private Partnership Vis-a-Vis the Development of Villages through Panchayati Raj”42, attempts to study how important is the PPP relationship in developing villages rather than concentrating to develop cities at the cost of neglecting the villages. There are many areas where PPP could be attracted in the development of villages such as agriculture extension services, medical facilities, transportation, primary and vocational education, tourism, and other sectors. The PPP has helped the villages in India in achieving a real sustainable development as an economic giant.

U. B. Singh, in his article entitled, “Public-Private-Partnership in Social Sector in India: In Quest of a Policy”43, focuses on various aspects of PPP projects for its successful implementation in India. This would enable the government to announce clearly the institutional framework including regulation, oversight and its evaluation. The article suggests for developing two sets of policies at the national and state levels i.e., one dealing with PPP initiatives in infrastructure, and the other focusses mainly on service-oriented projects. Further, he suggests that it should be rechristened as Public-Private-People-Partnership to broaden its scope at the local level.

Udoy M. Ghose, in his paper, “Prospects and Limitations of Public-Private-Partnerships as a Means for Technology Transfer: The Case of Nuclear Energy in India”\(^4\), discusses the transfer of know-how and technology as well as the acquisition of innovative capabilities from the private to the public partner in the nuclear energy sector, when technology transfer in the nuclear field from abroad was often disrupted due to international political disputes. By undertaking a PPP projects, governments can gain new skills, technology and knowledge which can expand government expertise.

V. Mathew Kurian in his paper, “PPP in social sectors: A Participatory Model, Public Private Partnership in Nation building”\(^5\), argues to explore the necessity of PPP in the development of social sectors. The liberalisation, privatisation and globalisation have excluded the vulnerable sections of society and the basic services like health and education are being made private commodities. He suggests that this can be solved through PPP model. The shortage of resource with the public can be compensated by the philanthropic works of private individuals and businesses, as was seen during the tsunami of 2004. The government as well as private sector should promote people’s organisation and other non-profit non-governmental organisations in social sectors.

Vinay Sharma, in “Public Private Partnerships for Rural Development through Creating Business Opportunities”\(^6\), proposes PPP model to be acknowledged as a viable mode of entrepreneurship for rural market development in India, through the mode of business opportunity development. He also lists several examples like Amul, the Self Employed Women’s Association (SEWA), Lijjat papad that support employment generation and achievement of sustained livelihood. Through the usage of technical and IT infrastructure/networks, the multi-national companies are also creating business opportunities in rural areas.


Vinay Sharma and Piyush Seth, in their paper, “Effective Public Private Partnership through E-Governance Facilitation”\textsuperscript{47}, have discussed the application of e-governance as a tool to effectively establish PPP in the case of provision of health to the rural and poor population. They say that it would support employment generation, poverty reduction and achievement of sustained livelihood. It has provided economic and social development opportunities, helped in participation and communication in policy and decision-making processes.

Wei Xiong, Xueqing Zhang and Hongyu Chen, in their article, “Early-Termination Compensation in Public–Private Partnership Projects”\textsuperscript{48}, address the key issue of compensation to the concessionaire in early-terminated projects before the originally scheduled date because of various unforeseen risks. The early termination of projects is found in different sectors throughout the world. They developed a ‘compensation estimation framework’ and a corresponding mathematical model through a market value approach. The compensation model provides a fair compensation system to safeguard the benefits of both the host government and the concessionaire of PPP project in future.

Xueqing Zhang, in “Criteria for Selecting the Private-Sector Partner in Public–Private Partnerships”\textsuperscript{49}, discusses the criteria for selecting private partners in PPP projects. This is a critical issue for the success of infrastructure projects. The private partners must have the necessary skills, experience, and resources to manage the risks and provide quality and cost effective facilities and services. He identifies four criteria for PPP projects in general i.e. (1) financial, (2) technical, (3) safety, health, and environmental, and (4) managerial for the successful implementation of projects.

Y. Pardhasradhi and Ravinder Kaur, in their article, “Public-Private Partnership and E-Governance: An Indian Experience”\textsuperscript{50}, discuss the PPP model in the implementation of e-governance in education, health, housing, agriculture, rural development and other areas. This article discusses the Akshaya programme of

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Kerala, *Bhoomi* project of Karnataka for records of land ownerships, and e-seva pilot projects of Hyderabad and Secunderabad. The *Bhoomi* project has eliminated bribery to a large extent and has curtailed the role of middlemen in the registration process. Some of the projects have been replicated in other states.

An analysis of related literature reveals that several relevant studies are conducted on PPP for the different aspects of infrastructure development throughout the world. There is a vast scope for further research in different sectors of PPP projects to select the best models for its successful implementation. This has become the need of the hour for all countries, either developed or underdeveloped, in ensuring better infrastructure and other services. There is a need for its study in India also as the central and state governments are implementing many projects throughout the country in different sectors.