

Public-private partnership in infrastructure development: indian experience and o...

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Public-Private Partnership in Infrastructure Development: Indian Experience and Options Dr. Velu Suresh Kumar* & M. Appavu** Abstract

Infrastructure bottleneck has been a serious concern in India in its way of robust pace of economic progression. While many advanced economies and fiscal constrained developing countries have developed their physical infrastructure successfully either through private participation or through public-private partnership (PPP) model, in India, private participation in the process of infrastructure development has received lackluster response.

While private telecom services is a success story in India, the PPP constitutes a miniscule share in overall infrastructure building despite initiation of various policy adjustments and sector-specific reform programmes. The main focus of this paper is to assess the global practices towards PPP in the infrastructure development and the Indian experience in private participation in infrastructure development. It also focuses on the sector-wise developments of infrastructure projects with the status of PPP.

The paper also identifies some generic issues such as inadequate transparency of procedures, inappropriate risk allocation, improper project appraisal, cost and time overruns, overlapping of regulatory independence, dearth of good governance, etc. , which need attention to attract private investors to participate in the public infrastructure building. Keywords :

Infrastructures, Public Provided Private Goods *Assistant Professor, Department of Economics, H. H. The Rajah's College (Autonomous), Pudukkottai, Tamil Nadu ??? 622 001.

Email:com **M. Phil Research Scholar in Economics, Jamal Mohamed College (Autonomous), Trichy. Public-Private Partnership in Infrastructure Development: Indian Experience and Options Dr. Velu Suresh Kumar* & M. Appavu** Introduction Physical infrastructure is an integral part of development of an economy and provides basic services that people need in their everyday life. The contribution of infrastructure to economic growth and development is well recognized both in academic and policy debates.

Well developed physical infrastructure provides key economic services efficiently, improves the competitiveness, extends vital support to productive sectors, generates high productivity and supports strong economic growth.

Physical infrastructure covering transportation, power and telecommunication through its forward and backward linkages facilitates growth; social infrastructure including water supply, sanitation, sewage disposal, education and health, which are in the nature of primary services, has a direct impact on the quality of life.

Over the years, the basic infrastructure in India has been developed to an extent, which is not sufficient enough while considering India's geographical and economic size, its population and the pace of overall economic development. Infrastructure bottleneck has been a serious concern in India and basic infrastructure like roads, railways, ports, airports, communication and power supply are not comparable to the standards prevalent in its competitor countries.

To develop the Indian infrastructure to a world class and to remove the infrastructure deficiency in the country, the investment requirements are

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mammoth, which could not be met by the public sector alone due to fiscal constraints and mounting liabilities of the Government. This would call for participation of private sector in co-ordination with the public sector to develop the public infrastructure facilities. In this direction, the economic reforms initiated in the country provide forth the policy environment towards public-private partnership (PPP) in the infrastructure development.

Sector-specific policies have also been initiated from time to time to enhance the PPP in infrastructure building. Accordingly to overcome the infrastructure deficit, the Eleventh Plan has projected an investment of Rs. 20, 56, 150 crore which would imply an investment of 7. 6 per cent of GDP during the during the Eleventh Plan and 9 per cent of GDP in the terminal year of the Plan (2011-12). This includes public sector investment of Rs. 7, 65, 622 crore in the Central sector and Rs. 6, 70, 937 crore in the State sector, leaving the balance of Rs. , 19, 591 crore, to be invested by the private sector. Private capital would thus fund 30 per cent of the total investment during the Eleventh Plan, as compared to 20 per cent realized during the Tenth Plan (GOI, 2010). Against this setting, the rest of the paper is organized as follows. Section I attempts to review the structure of PPP through literature survey. Section II assesses the global practices towards PPP in the infrastructure development. Section III captures the Indian experience in private participation in infrastructure development.

Section IV focuses on the sector-wise developments of infrastructure projects with the status of PPP. Finally, concluding observations are drawn in Section V. *Assistant Professor, Department of Economics, H. H. The Rajah's College

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Mohamed College (Autonomous), Trichy. Structure of PPP ??? Literature

Survey The expression public-private partnership is a widely used concept world over but is often not clearly defined.

There is no single accepted international definition of what a PPP is (World Bank, 2006). The PPP is defined as “ the transfer to the private sector of investment projects that traditionally have been executed or financed by the public sector” (IMF, 2004). Any arrangement made between a state authority and a private partner to perform functions within the mandate of the state authority, and involving different combinations of design, construction, operations and finance is termed as Ireland’s PPP model. In UK’s Private Finance Initiative (PFI), where the public sector purchases services from the private sector under long-term contracts is called as PPP program. However, there are other forms of PPP used in the UK, including where the private sector is introduced as a strategic partner into a state-owned business that provides a public service. The PPP is sometimes referred to as a joint venture in which a government service or private business venture is funded and operated through a partnership of government and one or more private sector companies. Typically, a private sector consortium forms a special company called a special purpose vehicle (SPV) to build and maintain the asset.

The consortium is usually set up with a contractor, a maintenance company and a lender. It is the SPV that signs the contract with the government and

with subcontractors to build the facility and then maintain it. According to Ministry of Finance Government of India, the PPP project means a project based on a contract or concession agreement, between Government or statutory entity on the one side and a private sector company on the other side, for delivering infrastructure service on payment of user charges.

This is a narrower definition as compared to world best practices where the private sector participation in any form of concession agreement, divestiture of the public sector, greenfield projects and management and lease contract are considered as PPP. The Planning Commission of India has defined the PPP in a generic term as “ the PPP is a mode of implementing government programmes/schemes in partnership with the private sector.

It provides an opportunity for private sector participation in financing, designing, construction, operation and maintenance of public sector programme and projects”. In addition, greenfield[1] investment in the infrastructure development has also been given more encouragement in India. Thus, the PPP combines the development of private sector capital and sometimes, public sector capital to improve public services or the management of public sector assets (Michael, 2001). The PPP has two important characteristics.

First, there is an emphasis on service provision as well as investment by the private sector. Second, significant risk is transferred from the Government to the private sector. The PPP model is very flexible and discernible in variety of forms. The various models/ schemes and modalities to implement the PPP are set out in Table 1. Global Practices towards Infrastructure Development A

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number of OECD countries have well established PPP programmes. Other countries with significant PPP programmes include Australia and Ireland while the US has considerable experience with leasing.

Many continental EU countries, including Finland, Germany, Greece, Italy, the Netherlands, Portugal and Spain have PPP projects, although their share in public investment remains modest. Reflecting a need for infrastructure investment on a large scale, and weak fiscal positions, a number of countries in Central and Eastern Europe, including the Czech Republic, Hungary and Poland, have embarked on PPP. There are also PPP programmes in Canada and Japan. The PPP in most of these countries are dominated by road projects.

Similarly, the EU Growth Initiative envisages the use of PPP type arrangements primarily to develop trans-European road network. Table 1: Schemes and Modalities of PPP | Schemes | Modalities | | Build-own-operate (BOO) | The private sector designs, builds, owns, develops, operates and manages an asset | | Build-develop-operate (BDO) | with no obligation to transfer ownership to the government.

These are variants of | | Design-construct-manage-finance (DCMF) | design-build-finance-operate (DBFO) schemes. | | Buy-build-operate (BBO) | The private sector buys or leases an existing asset from the Government, renovates, | | Lease-develop-operate (LDO) | modernises, and/ or expands it, and then operates the asset, again with no | | Wrap-around addition (WAA) | obligation to transfer ownership back to the Government. | Build-operate-transfer (BOT) | The private sector designs and builds an asset, operates it,

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and then transfers it | | Build-own-operate-transfer (BOOT) | to the Government when the operating contract ends, or at some other pre-specified | | Build-rent-own-transfer (BROT) | time. The private partner may subsequently rent or lease the asset from the | | Build-lease-operate-transfer (BLOT) | Government. | Build-transfer-operate (BTO) | | Source: Public Private Partnership, Fiscal Affairs Department of the IMF While focusing on country specific practices, the PFI of the UK is perhaps the best developed government's PPP programme, which also comprises privatisation and other forms of co-operation between the public and private sectors, including the provision of guarantees.

The PFI projects are viewed primarily as being about the provision of services, and not about the acquisition of assets. In this endeavour, the private sector makes a long-term commitment to maintain assets and provide services, and the government makes a long-term commitment to procure those services; significant risk is transferred to the private sector; public sector investment projects are considered for PFI where they are likely to represent value for money, and where it meets the UK government's criteria for efficiency, equity and accountability (IMF, 2004).

In the case of Ireland, the pickup in enthusiasm for PPP can be summarised that there was quick buy-in on the part of all PPP stakeholders, where the government made it clear that its social partners would be consulted on the approach taken to select PPP projects. Second, the government paid more attention to the efficiency benefits of PPP than to just their fiscal advantages.

Third, conclusion was reached that the PPP would be a success despite some institutional challenges that had to be overcome.

To facilitate the PPP process, the National Development Finance Agency of Ireland was set up to mobilise resources to finance PPP projects and to provide financial advice to government agencies seeking to form PPPs.

Chile's experience with PPP has been successful and a significant portion of the sizeable infrastructure gap was fulfilled through this model. Chile's success with PPP has been underpinned by a solid institutional framework, well developed procedures to identify, evaluate the projects, efforts to ensure adequate sharing of risks between the stakeholders, and reforms to ensure the availability of financing for projects.

In the case of Mexico, most progress has been made with respect to telecommunications, ports and airports, but this mainly takes the form of privatisation. Empirical evidence suggests that public infrastructure in Mexico has negligible effects on private sector costs. The PPP has been operating in China for over 20 years. Since the introduction of open economic policy in early 1980s, some state-owned enterprises started their reform by becoming a limited liability company. Since the 1990s, some local governments have initiated to resort to the private sector on the provision of public facilities and services.

Since 2000, the PPP has become one principal strategy used by the Chinese Government in the provision of public facilities and services. The main objective of PPP is to make use of market competition in order to ensure the effective use of resources in the provision of public facilities and services.

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However, some local governments place too much emphasis on attracting private investments by offering even more favorable terms than the normal national status. Cross country analysis reveals that the PPP model differs widely across countries and sectors.

Many developing countries have developed their power projects, roads, telecom, ports and airports through PPP model, which they considered as the opposite way of developing the public infrastructure through private participation, while these countries have faced fiscal constraints. Judging from the country experiences, the selection of right PPP model is based on the concessions that the PPP is getting, level of development, risk sharing mechanism, government guarantees, stability of the policy environment and commercial consideration of the projects.

Therefore, it is rightly accepted that right type of private participation in the infrastructure development with right risk sharing is the only way out to build public infrastructure and thereby bridge the infrastructure gap. Indian Experience in Private Participation in Infrastructure Development Before the launching of economic reforms in the country, the infrastructure projects were mainly developed by the Government. Since the initiation of the economic reforms, the development of infrastructure has been given thrust through varied means.

Along with the initiation of structural reforms in the country, the Government of India has announced new industrial policy in 1991 to develop the industrial and infrastructure sectors, which gave more emphasis on private participation. Policy announcements relating to sector-specific infrastructure

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developments with the PPP have also been announced in the subsequent annual Budgets of the Union Government. The coverage of the term infrastructure was expanded from time-to-time to enable the sector to avail of fiscal incentives such as tax holidays and concessional duties during the course of their development.

Since the initiation of the reform process, measures were introduced to strengthen the existing infrastructure and to develop new projects with private participation. The private sector participation in the infrastructure building have broadly been taken place through corporatisation of existing PSUs (e. g. GAIL, ONGC, IOC, etc), greenfield investment for development of new projects, PPP in the form of BOT or BOOT model in the road sector and concession agreements with the private sector such as rehabilitate, operate, and transfer; or rehabilitate, lease or rent and transfer; or build, rehabilitate, operate, and transfer basis.

Recently established joint venture structure of institutions to develop and modernise the Delhi and Mumbai airports is an apt form of PPP. According to the PPI database of the World Bank, about 513 infrastructure projects in India have attracted private sector participation and reached financial closure between 1990 and 2010, which constituted a share of 10. 7 per cent of the total project among 150 low and middle income countries in the world. Of which, transport sector has a major share at 51. 5 per cent followed by energy sector at 38. 9 per cent during the period.

The telecom sector accounted for a share of 7. 2 per cent in private participation during the period (Table 2). Table 2: Number and Investment in

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PPI Projects in India (Investment in US\$ million) Financial Year | Energy | Telecom | Transport | Water and Sewage | Total | | | Nos | Inv | Nos | Inv | Nos | Inv | Nos | Inv | Nos | Inv | | 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Total | 0 1 2 3 1 6 6 2 7 8 8 3 6 8 12 7 18 17 21 28 36 200 | 0 614 13 1, 051 311 1, 008 1, 553 970 1, 066 2, 500 1, 954 240 390 913 4, 256 910 , 501 10, 236 12, 889 24, 571 37, 776 108, 722 | 0 0 0 0 4 10 6 4 2 0 0 7 0 0 0 0 0 0 2 2 37 | 0 0 0 0 97 683 1, 229 3, 827 673 1, 045 682 3, 415 5, 008 2, 080 3, 701 5, 666 6, 823 8, 168 9, 934 7, 830 20, 335 81, 196 | 1 0 0 0 1 0 4 6 10 13 2 5 9 19 7 14 54 34 16 13 56 264 | 2 0 0 0 125 0 182 405 302 467 96 351 719 579 1, 141 1, 527 10, 028 3, 925 5, 424 4, 872 13, 787 43, 932 | 0 0 0 0 0 0 0 0 1 1 0 0 1 1 0 5 2 1 0 12 | 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 111 0 0 142 76 24 0 355 | 1 1 2 3 6 16 16 12 19 21 11 16 15 27 20 22 72 56 39 44 94 513 | 2 614 13 1, 051 533 1, 691 2, 964 5, 202 2, 041 4, 012 , 732 4, 008 6, 118 3, 572 9, 210 8, 102 22, 352 22, 472 28, 323 37, 296 71, 898 234, 204 | | World (1990-2010) | 2024 | 548, 279 | 798 | 761, 394 | 1291 | 275, 598 | 731 | 62542 | 4772 | 1647, 814 | | Note: Nos. ??? Number; Inv - Investment

Source: Compiled from Private Participation in Infrastructure (PPI) Database of the World Bank. [<http://www.ppi.worldbank.org>] Investment requirements of the infrastructure projects are huge and the private sector contribution to the development of public infrastructure has increased many folds during the recent period due to various policy initiatives by the Government towards more encouragement for private participation. However, when compared to other EMEs, private participation in the infrastructure development in India has gained momentum only recently and its share is not much encouraging.

India has attracted only about 14.2 per cent of the total investment among 150 low and middle income nations. The investment has flown mainly into the energy sector which constituted a share of 46.4 per cent of total investment in India, followed by telecom sector at 34.7 per cent and transport sector at 18. per cent between 1990 and 2010 (Table 2). According to the Private Participation in Infrastructure database of the World Bank, India is second only to China in terms of number of PPP projects and in terms of investments, it is second to Brazil. [2] Major share of investments have flown mainly to the sectors where the return on the investments and commercial considerations are high. However, while considering the investment requirements of the country to develop the basic infrastructure, it is considered to be a miniscule share.

Sector-wise Public-Private Participation in Infrastructure Development India has been growing at a level of 8.1 per cent, on an average, during the last three years and the supply of infrastructure has also improved to an extent to cope up with the increasing demand. The developments in the infrastructure projects since the introduction of economic reforms could be captured on the basis of two major data bases in addition to respective Ministry sources ??? one by the Planning Commission on PPP projects and the other by the World Bank on PPI database.

As we have already discussed about the PPI database, let us have a brief overview on the status of sector-wise infrastructure projects based on Government of India databases and throw some light on the sector specific issues. Since most of the infrastructure services are rendered by the

Government, commercial approach towards cost recovery has not been adopted, and with the limited resources at Government's disposal, PPP has been encouraged to fill the infrastructure gap. To support the PPP model projects, a Public Private Partnership Appraisal Committee (PPPAC) was constituted in January 2006.

The PPPAC has been adding value by shortening the approval process within the Government, reducing the transaction costs and acting as a central focal point for identifying and disseminating best practices in rolling out PPP across sectors and Ministries of the Government. Since its constitution, the PPPAC has approved 222 projects involving an investment of Rs. 225, 199 crore as on 10th August 2011. [3] A collective summary of sector-wise PPP projects in the Central and State is shown at Table 3. The table indicates that while 241 projects with an investment of Rs. 66, 627 crore have been completed, 292 projects with an investment of Rs. , 41, 111 crore are under implementation. Another 412 projects involving an investment of Rs. 3, 76, 561 crore are in the pipeline. In the Central sector, 39 PPP projects of national highways with an investment of Rs. 13, 698 crore and 23 PPP projects in the port sector with an investment of Rs. 5, 762 crore have been completed up to December 2009. Majority of the PPP projects pertaining to the road sector are under BOT or BOOT basis. Government has entered into concession agreement with the private partners for a period of 10 to 30 years in these road sector projects for construction, maintenance and revenue sharing arrangements.

In the civil aviation sector, airports involving a total investment of Rs. 5, 883 crore have been completed through PPP mode at Cochin, Bangalore and Hyderabad airports. At present 64 projects with an investment of Rs. 41, 911 crore in the road sector and 13 projects involving an investment of Rs. 10, 509 crore in the port sector are currently under implementation. The airports at Delhi and Mumbai are being upgraded with investment of Rs. 18, 777 crore. In railways, private entities are investing Rs. 2, 387 crore in rolling stock for container trains. In the rail sector, two loco factories are also being set up with an investment of Rs. , 500 crore while port connectivity and other projects of Rs. 830 crore are also under implementation. In sum, projects with an estimated investment of Rs. 4, 717 crore are under implementation in railway sector. It is expected that another 81 national highways projects envisaging an investment of Rs. 76, 341 crore would be awarded soon. 29 port projects with an estimated investment of Rs. 18, 466 crore are also in the pipeline. The Ministry of Railways plans to redevelop 50 railway stations in the PPP mode at an estimated cost of Rs. 90, 000 crore. In the State sector, 176 PPP projects in different sectors with a total investment of Rs. 1, 284 crore have been completed and 209 PPP projects are currently under implementation with an estimated investment of Rs. 1, 65, 197 crore. In addition, 252 PPP projects are in the pipeline involving an estimated investment of Rs. 1, 91, 754 crore.

Table 3: Sector and Sub-sector-wise PPI Projects in India (as in December 2009)

Sl. No	Sector	Completed Projects	Projects under Implementation	Projects in Pipeline	Total	No. of Projects	Project Cost (Rs. Cr)	No. of Projects	Project Cost (Rs. Cr)	No. of Projects	Project Cost (Rs. Cr)

Cr) | |(A) Central Sector | | | | | | | | | 1 | National Highways | 39 | 13, 698 | 64 | 41, 911 | 81 | 76, 341 | 184 | 1, 31, 950 | | 2 | Ports | 23 | 5, 762 | 13 | 10, 509 | 29 | 18, 466 | 65 | 34, 737 | | 3 | Airports | 3 | 5, 883 | 2 | 18, 777 | | | 5 | 24, 660 | | 4 | Railways | | | 4 | 4, 717 | 50 | 90, 000 | 54 | 94, 717 | | | Total (A) | 65 | 25, 343 | 83 | 75, 914 | 160 | 1, 84, 807 | 308 | 2, 86, 064 | |(B) State Sector | | | | | | | | | 1 | Roads | 96 | 6, 384 | 69 | 60, 865 | 86 | 39, 482 | 251 | 1, 06, 731 | | 2 | Ports | 20 | 19, 704 | 37 | 51, 549 | 18 | 17, 436 | 75 | 88, 689 | | 3 | Airports | | | 1 | 500 | 13 | 4120 | 14 | 4, 620 | | 4 | Railways | | | 1 | 500 | 3 | 312 | 4 | 812 | | 5 | Power | 7 | 8, 971 | 8 | 28, 392 | 34 | 62, 032 | 49 | 99, 395 | | 6 | Urban Infrastructure | 51 | 6, 105 | 74 | 19, 738 | 67 | 45, 838 | 192 | 71, 681 | | 7 | Other Sectors | 2 | 120 | 19 | 3, 653 | 31 | 22, 534 | 52 | 26, 307 | | | Total (B) | 176 | 41, 284 | 209 | 1, 65, 197 | 252 | 1, 91, 754 | 637 | 3, 98, 235 | |(C) Grand Total (A+B) | 241 | 66, 627 | 292 | 2, 41, 111 | 412 | 3, 76, 561 | 945 | 6, 84, 299 | | Source: Compendium of PPP Projects in Infrastructure, Planning Commission, GOI, New Delhi, March 2010.

Conclusion In India, infrastructure gaps exist in all most all the sectors, posing a serious threat to sustenance of the growth momentum. To augment the infrastructure facilities with private participation, the initiated policy measures have not met with significant success.

Except for the telecom sector, which has witnessed a revolution and has been able to attract massive private investments, other sectors have faced with lacklustre response. The status of the PPP in the infrastructure development in India, both in the Central Government schemes as well as State sponsored schemes, is not encouraging. Stable macroeconomic framework, sound regulatory structure, investor friendly policies, sustainable

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project revenues, transparency and consistency of policies, effective regulation and liberalisation of labour laws, and good corporate governance are the basic requirements, which define the success of the PPP model.

International experience suggests that the success of PPP projects requires a single objective of better services for the public at a reasonable cost. This is achievable through realistic and reasonable risk transfer while addressing the public concerns. The Indian PPP model should adhere to such objectives and best practices to march forward on the success path. In this pursuit, easy availability of long-term private capital is an essential requirement. Fostering the greenfield investments in the public infrastructure with appropriate user charges, transparent revenue and risk sharing agreements would transform the international capital inflows into productive ventures.

Above all, selection of right PPP model for a right project at a right time through realistic planning would go a long way in providing meaningful and hassle free infrastructure development, which ultimately would increase the infrastructure standards and thereby sustain the overall macroeconomic developments of the country. Reference: GOI (2010), “ Private Participation in Infrastructure”, Planning Commission, Government of India, New Delhi, January 2010. GOI (2010), Compendium of PPP Projects in Infrastructure, Planning Commission, Government of India, New Delhi, March 2010. IMF (2004), Public-private partnership, Fiscal Affairs Department, Washington DC, March 2004. Lakshmanan L. 2008), Public-Private Partnership in Indian Infrastructure Development: Issues and Options, Reserve Bank of India Occasional Papers, Vol. 29, No. 1, Summer 2008. Michael B. Gerrard (2001),

Public-Private Partnerships, Finance and Development, IMF, Washington, Vol. 38, No. 3, September 2001. World Bank (2006), India-Country Framework Report for Private Participation in Infrastructure, Washington DC, March 2006. ————— [1]Greenfield investment is defined as an investment in a start-up project, usually for a major capital investment and the investment starts with a bare site in a greenfield. [2] http://ppi.worldbank.org/explore/ppi_exploreRankings.aspx [3] http://www.pppinindia.com/projects_pppac.php