India Studies in Business and Economics

The Indian economy is considered to be one of the fastest growing economies of the world with India amongst the most important G-20 economies. Ever since the Indian economy made its presence felt on the global platform, the research community is now even more interested in studying and analyzing what India has to offer. This series aims to bring forth the latest studies and research about India from the areas of economics, business, and management science. The titles featured in this series will present rigorous empirical research, often accompanied by policy recommendations, evoke and evaluate various aspects of the economy and the business and management landscape in India, with a special focus on India's relationship with the world in terms of business and trade.

More information about this series at http://www.springer.com/series/11234

Kumar V. Pratap · Rajesh Chakrabarti

Public-Private Partnerships in Infrastructure

Managing the Challenges

Springer

Kumar V. Pratap
Ministry of Finance,
Government of India
New Delhi
India

Rajesh Chakrabarti
Jindal Global Business School
O P Jindal Global University
Sonipat, Haryana
India

and

Sunay Policy Advisory Pvt. Ltd.
Gurugram, Haryana
India

ISSN 2198-0012 ISSN 2198-0020 (electronic)
India Studies in Business and Economics
ISBN 978-981-10-3354-4 ISBN 978-981-10-3355-1 (eBook)
DOI 10.1007/978-981-10-3355-1

Library of Congress Control Number: 2017948623

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Foreword

India is the second most popular market for Public–Private Partnerships (PPP) in the developing world as per the Private Participation in Infrastructure database of the World Bank. However, given the infrastructure deficit in the country, PPPs need to be scaled up across sectors and geographies. In this environment, this book that starts with infrastructure challenges, talks about options for infrastructure financing, and discusses the transaction structure, is timely and should prove useful to the uninitiated as well as professionals to enter into such partnerships. This book should be especially useful to students who need to understand the nitty-gritties of the PPP transaction process. The many case studies in the book emphasize its real-life flavor, which should enhance understanding of the complex subject.

However, not everything is sanguine about PPPs. Owing to the resource crunch faced by countries, they have invited the private sector for provisioning of infrastructure. Increasingly infrastructure projects are being renegotiated squandering the gains from private participation in infrastructure. This trend is catching up across the world, including India.

My own research for Latin America and Caribbean region shows that infrastructure contracts are becoming more fragile with time: incidence of renegotiations for the region has increased from 30% to 68% between 1985–2000 and 1988–2010; time to renegotiate has decreased from 2.2 years to 1 year from start of commercial operations; and the sectors most vulnerable to renegotiations are transport and water and sewerage where the incidence has increased to 78% and 87% respectively, making renegotiations the rule rather than the exception.

Renegotiation of infrastructure projects for reasons other than incompleteness of contracts or poorly designed contracts are bad in principle and practice. The Government of India and the infrastructure regulatory agencies would be well advised to make renegotiations not a matter of routine but exceptionally difficult. There exist many mechanisms to accomplish this, like asking the private party to pay a fee linked to the total project cost for applying to the public authority for renegotiations, which would be forfeited in case the renegotiation request is rejected; requiring a hefty performance bond in the form of bank guarantee; declaring and acting upon the pledge that the public authority would not entertain

a renegotiation request within the first 5 years of commercial operations of the project, etc. All these measures would deter opportunistic bids and preserve their sanctity.

While India is doing well in terms of the stock of PPP projects, there are sectors such as water and sewerage where there is immense scope of private participation, but with a realistic dose of caution. Water is under-priced in India, like in the rest of the world, and any effort to bring in private players would have to be accompanied by an increase in water retail tariffs, which makes the effort politically sensitive. However, there exist examples across the world (Manila Water Company, to name one) where tariff increase has come with much better service delivery, making the initiative politically palatable. India would be well advised to follow such examples to augment infrastructure services at a rapid pace and maintain its position as the fastest growing large economy in the world.

I commend the authors for a balanced and comprehensive exposition of the various facets of infrastructure PPPs and hope the book finds a wide readership.

Washington DC

Prof. J. Luis Guasch
Professor of Economics at University of California
San Diego
Formerly Head of the Global Expert Team on Privatization
The World Bank

Preface

This book is an attempt to better understand the broad realities and challenges of managing infrastructure Public–Private Partnerships (PPP) in developing countries with a special focus on India. It is meant to be a text for the students of infrastructure and PPP design, as well as an operating manual for the practicing manager or government official in charge of making such large and expensive projects work out right. Consequently, our attempt here has primarily been to focus on the key decisions and design aspects of these projects as identified in the literature and the recent global PPP experience. However, we also discuss the context and the broad historical and economic principles of PPPs here, since a failure to understand these principles would limit the readers' understanding of the challenges.

The central questions that the volume seeks to shed light on include: what is a PPP and why is it gaining popularity? What broad needs does it fulfill for its many stakeholders? What are the different ways of structuring and financing PPPs and with what implications? What are the observed flashpoints of conflicts that arise in PPPs? How can better design of PPP contracts avoid such problems and help resolve them? What roles do regulatory structures play in helping PPPs? What are the implications of renegotiating PPPs?

Our broad approach in writing this book has been to move away from abstract theoretical discussion of these issues to elucidate the always complicated issues involved with case studies and in-depth examples. We have, therefore, included several case studies from India as well as many other developing countries to bring out the nuances of contract design and enforcement, the clash of private and public objectives, and the time inconsistencies and incomplete contracting issues that frequently crop up in large scale infrastructure PPP projects.

Apart from helping PPP students and practitioners in their jobs, we also hope to stimulate research interest in contemporary PPP reality in India and other emerging markets. We recognize that the field of infrastructure PPPs is an evolving one. There is no last word here and new knowledge is being created every day around the world as innovations are tried out in contracting, financing, structuring and (re)negotiating contracts, and the experiences recorded. Also the multidimensional nature of the issues involved—the shifting politico-economic environment, the

technical issues, the sometimes unanticipated environmental challenges—leave room for reinterpretation of events in the recent past as well. Our attempt here, therefore, is to capture, organize, and present the reality of PPPs as we understand them now to help practitioners to learn from experience and avoid the errors of the past in engineering future partnerships. But this is only a step in the never-ending journey of seeking knowledge.

The extent to which this volume encourages further research in infrastructure PPPs and informs the PPP practitioner—in governments, private sector, transnational organizations, or any other stakeholder—in making better decisions would, therefore, be the litmus test of the value of our efforts.

New Delhi, India

Kumar V. Pratap
Rajesh Chakrabarti

Acknowledgements

Several people contributed in myriad ways to the long project that finally culminated in the present volume. We apologize in advance to those whom we would doubtless fail to mention despite our best efforts.

We, particularly Dr. Pratap, owe a massive debt of gratitude to Prof. N.R. Prabhala of the University of Maryland, Clive Harris of the World Bank, Carol Graham of the Brookings Institution, Mark Hugo Lopez of the Pew Research Center, Gajendra Haldea and Ravi Mital of the Planning Commission, and Madhusudan Prasad of the Ministry of Urban Development, who helped form and organize our thoughts on the subject. Our association with the Indian School of Business (ISB), Mohali and Hyderabad has also helped coalesce the material into its present shape. We would like to thank ISB and the Bharti Institute of Public Policy for the opportunity. We would also like to thank the five batches of students at ISB for the questions and discussion that have helped us make our arguments more robust. We also learnt a huge amount from our discussions with Prof. Richard Neufville of MIT.

We would like to particularly thank Prof. V. Raghunathan of Varalakshmi Foundation as well as the GMR top management for the support and access that they provided to us in writing the case study on the Indira Gandhi International Airport at Delhi. Mandar Kagade and Aadhaar Verma at the Bharti Institute provided great help in creating the initial draft of the case study.

Sagarika Ghosh and Nupoor Singh of Springer shepherded the project in the most encouraging manner. Praveen Kumar and other Springer team members provided great support without which this project would never have been completed.

The OP Jindal Global University has been the academic home of Prof. Chakrabarti for much of this project. Special thanks to the Vice Chancellor, Prof. Raj Kumar and the Dean, Jindal Global Business School, Prof. Tapan Panda for their support.

We alone remain responsible for the errors and shortcomings that we are sure have crept into and remained in the book despite our best efforts. We can only appeal to the readers' indulgence and kind feedback here.

Kumar V. Pratap
Rajesh Chakrabarti

Contents

About the Authors[1]

Dr. Kumar V. Pratap is currently Joint Secretary (Infrastructure Policy and Finance) at the Department of Economic Affairs, Ministry of Finance, Government of India. Earlier, he has worked with the Prime Minister's Office, Ministries of Finance and Urban Development, and Planning Commission (New Delhi, India), and the World Bank and Embassy of India (Washington DC, USA). He has lectured at various reputed institutions, both in India and abroad, and is also a visiting faculty at the Indian School of Business, Hyderabad and Mohali. He has been part of many Government of India committees in the infrastructure sectors including the Task Force for setting up a Road Regulator and the chair of the Committee writing the Model Concession Agreement for Public–Private Partnerships (PPPs) in the Urban Water Supply sector. He is on the Board of Directors of Indore Smart City Development Limited. He has published with Oxford University Press, the World Bank, *Economic and Political Weekly*, and the popular press. He is a recipient of a letter of appreciation from the Indian Prime Minister, and fellowships from the University of Melbourne's Emerging Leaders program, and University of Maryland's John J Sexton and doctoral programs. He has a MBA from Indian Institute of Management, Lucknow, India (1987) and a PhD from the University of Maryland, College Park, USA (2011).

Dr. Rajesh Chakrabarti is Professor and Executive Vice Dean at the Jindal Global Business School, Jindal Global University, Sonipat, India, and co-founder of Sunay Policy Advisory based in Gurugram, India. He has taught finance for over a decade and a half—at the University of Alberta, Canada, Georgia Tech, USA, and the Indian School of Business (ISB). As the founding Executive Director of the Bharti Institute of Public Policy at ISB's Mohali campus, he helped design and launch one of India's leading public policy programs. He has also been Executive Vice President, Research and Policy at the Wadhwani Foundation. Rajesh has held visiting positions at various institutions including Indian Institute of Management (IIM) Calcutta, Indian Statistical Institute (ISI) Delhi, India Development

[1]Views are personal and may not correspond with the views of the organizations with which the authors are affiliated.

Foundation (IDF) Gurgaon, ICN Business School, Nancy, France, and the Federal Reserve Bank of Atlanta. He has authored or edited eight books, in addition to authoring several book chapters and articles on finance, economics, and management in leading international scholarly journals. He has been a columnist with the *Financial Express* and is frequently quoted in the media. His current research interests are in the areas of management and public policy. Rajesh is an alumnus of Presidency College, Kolkata, and IIM Ahmedabad, and earned his PhD from the University of California, Los Angeles, USA.

Abbreviations

AAI	Airports Authority of India
AC	Average Cost
ACS	Average Cost of Supply
AERA	Airports Economic Regulatory Authority
ALM	Asset-Liability Mismatch
AMI	Advanced Metering Infrastructure
AMSS	Amarchand & Mangaldas & Suresh Shroff & Co
AP	Andhra Pradesh
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
AT	Average Tariff
AT&C	Aggregate Technical and Commercial Losses
BGT	Biwater Gauff (Tanzania) Limited
BHEL	Bharat Heavy Electricals Limited
BOO	Build–Own–Operate
BOOT	Build–Own–Operate–Transfer
BOT	Build–Operate–Transfer
BRICS	Brazil, Russia, India, China, South Africa
BRPL	BSES Rajdhani Power Limited
BSNL	Bharat Sanchar Nigam Limited
BTC	Baku–Tbilisi–Ceyhan
BYPL	BSES Yamuna Power Limited
CA	Concession Agreement
CAG	Comptroller and Auditor General of India
CCGT	Combined Cycle Gas Turbine
CCI	Cabinet Committee on Infrastructure
CDPQ	Caisse de depot et placement du Quebec
CERC	Central Electricity Regulatory Commission
CESCO	Central Electricity Supply Company of Orissa
CGPL	Coastal Gujarat Power Limited

CIL	Coal India Limited
COD	Commercial Operation Date
CoS	Committee of Secretaries
CPI (UNME)	Consumer Price Index for Urban Non-Manual Employees
CPPIB	Canada Pension Plan Investment Board
CRR	Cash Reserve Ratio
CSA	Coal Supply Agreement
CSO	Civil Society Organization
CWS	City Water Services Ltd
DAME	Delhi Airport Metro Express
DAMEPL	Delhi Airport Metro Express Private Limited
DAWASA	Dar-es-Salaam Water and Sewerage Authority
DAWASCO	Dar-es-Salaam Water and Sewerage Corporation
DBFOT	Design–Build–Finance–Operate–Transfer
DERC	Delhi Electricity Regulatory Commission
DESU	Delhi Electricity Supply Undertaking
DF	Development Fee
DIAL	Delhi International Airport Limited
DMRC	Delhi Metro Rail Corporation
DPC	Dabhol Power Company
DPR	Detailed Project Report
DVB	Delhi Vidyut Board
EAP	East Asia and Pacific
EBIT	Earnings before Interest and Taxes
EC	Evaluation Committee
ECB	External Commercial Borrowings
EGoM	Empowered Group of Ministers
EMIO	Emerging Market Investors and Operators
EMP	Enhanced Monitoring Period
EP	Equator Principles
EPC	Engineering, Procurement and Construction
EWURA	Energy and Water Utilities Regulatory Authority
FARAC	Fideicomiso de Apoyo al Rescate de Autopistas Concesionadas
FC	Financial Consultant
FDI	Foreign Direct Investment
FII	Foreign Institutional Investment
FRBM	Fiscal Responsibility and Budget Management
GCF	Gross Capital Formation
GCR	Global Competitiveness Report
GDP	Gross Domestic Product
GDR	Global Depository Receipt
GETE	Group of Eminent Technical Experts
GNPA	Gross Non-Performing Assets
GoI	Government of India
GoM	Group of Ministers

GoT	Government of Tanzania
GRC	Government Review Committee
GTA	Global Technical Adviser
HAM	Hybrid Annuity Model
HOT	High Occupancy Toll
HPEC	High-Powered Expert Committee
HSR	High-Speed Rail
ICR	Interest Coverage Ratio
ICSID	International Centre for Settlement of Investment Disputes
IDF	Infrastructure Debt Funds
IDP	Initial Development Plan
IE	Independent Engineer
IFC	International Finance Corporation
IGIA	Indira Gandhi International Airport
IIFCL	India Infrastructure Finance Company Limited
IMG	Inter-Ministerial Group
INFRA	Infrastructure Recovery and Assets
IOC	Indian Oil Corporation
IPO	Initial Public Offer
IRDA	Insurance Regulatory and Development Authority
IRFC	Indian Railway Finance Corporation
IRSDC	Indian Railway Station Development Corporation
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
JV	Joint Venture
JVC	Joint Venture Company
kWh	Kilowatt hour
L&T IDPL	L&T Infrastructure Development Projects Limited
LAA	Land Acquisition Act, 1894
LAC	Latin America and Caribbean
LC	Legal Consultant
LD	Lease Deed
LNG	Liquefied Natural Gas
MA HSR	Mumbai–Ahmedabad High-Speed Rail
MC	Marginal Cost
MCA	Model Concession Agreement
MCP	Mandatory Capital Project
MERC	Maharashtra Electricity Regulatory Commission
MES	Military Engineering Services
MMTPA	Million Metric Tonnes Per Annum
MoCA	Ministry of Civil Aviation
MoEF	Ministry of Environment and Forests
MoF	Ministry of Finance
MoU	Memorandum of Understanding
MR	Marginal Revenue

MSEB	Maharashtra State Electricity Board
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MSS	Mahan Sangharsh Samiti
MSW	Municipal Solid Waste
MTNL	Mahanagar Telephone Nigam Limited
MYT(O)	Multi-Year Tariff (Order)
NAFTA	North American Free Trade Agreement
NBFC	Non-Banking Finance Company
NDA	National Democratic Alliance
NDMC	New Delhi Municipal Council
NDPL	North Delhi Power Limited
NDTL	Net Demand and Time Liabilities
NGO	Non-Governmental Organization
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
NOIDA	New Okhla Industrial Development Authority
NPA	Non-Performing Assets
NPC	Net Present Cost
NRHM	National Rural Health Mission
NRW	Non-Revenue Water
NTBCL	Noida Toll Bridge Company Limited
NTDPC	National Transport Development Policy Committee
NUWA	National Urban Water Authority
O&M	Operation and Maintenance
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OMDA	Operation, Management and Development Agreement
OPIC	Overseas Private Investment Corporation
P	Price
PAP	Project Affected Persons
PC	Planning Commission
PCEL	Pink City Expressway Private Limited
PE	Private Equity
PFC	Power Finance Corporation
PFI	Private Finance Initiative
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
POG	Procurement of Goods (Contract)
PPA	Power Purchase Agreement
PPI	Private Participation in Infrastructure
PPP	Public–Private Partnership
PSC	Public Sector Comparator
PSL	Priority Sector Lending
PSP	Private Sector Participation
PSU	Public Sector Undertaking

PV	Present Value
PwC	Price Waterhouse Coopers
QCBS	Quality-cum-Cost Based System
R&R	Rehabilitation and Resettlement
RAM	Rational Actor Model
RBI	Reserve Bank of India
REC	Rural Electrification Corporation
RFCTLARR	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Act, 2013)
RfP	Request for Proposal
RfQ	Request for Qualification
RGPPL	Ratnagiri Gas and Power Private Limited
RIL	Reliance Industries Limited
RLNG	Regasified Liquefied Natural Gas
RoFR	Right of First Refusal
ROT	Rehabilitate–Operate–Transfer
SAR	South Asia Region
SBD	Standard Bidding Documents
SBI	State Bank of India
SCM	Smart City Mission
SEB	State Electricity Board
SERC	State Electricity Regulatory Commission
SHA	Shareholders Agreement
SIPE	Supply and Installation of Plant and Equipment (Contract)
SLR	Statutory Liquidity Ratio
SoE	State-owned Enterprise
SPV	Special Purpose Vehicle
SSA	State Support Agreement
SSA	Sub-Saharan Africa
STM	Super Doll Trailer Manufacture Co. (T) Limited
SWM	Solid Waste Management
T&D	Transmission and Distribution
TAMP	Tariff Authority for Major Ports
TAPI	Turkmenistan–Afghanistan–Pakistan–India
THSRC	Taiwan High-Speed Rail Corporation
TINA	There Is No Alternative
ToD	Time-of-Day (tariff)
TPC	Total Project Cost
TPDDL	Tata Power Delhi Distribution Limited
TRAI	Telecom Regulatory Authority of India
UDAY	Ujwal Discom Assurance Yojana
ULB	Urban Local Body
UMPP	Ultra Mega Power Project
UNCITRAL	United Nations Commission on International Trade Law
UPA	United Progressive Alliance

USD	United States Dollar
VDOT	Virginia Department of Transportation
VfM	Value for Money
VGF	Viability Gap Funding

Prologue: The Delhi Noida Toll Bridge

Since its opening to traffic in February 2001, the Delhi Noida Toll Bridge across the River Yamuna has vastly improved the quality of commute and hence life itself for millions in India's capital. It was one of the first major Public–Private Partnership (PPP) projects in the country, and with its majestic eight-lane span, cloverleaf interchange, and modern approach road system on the Noida side as well as its connect to the Ashram flyover on the Delhi side, the 6-km-long bridge pretty much introduced modern planned road system structure in the country.

Many would argue that the bridge contributed much more to India than just the resulting ease of transport. As one of the very first PPP projects in the country, it literally provided concrete proof of the concept in the nation that would soon catapult to hosting the second highest number of PPP projects in the developing world. It provided functioning evidence that private capital could be effectively harnessed to provide public services. And with a series of firsts to its credit, it had opened multiple doors across sectors.

The construction of the mammoth structure was completed in 25 months, 4 months ahead of schedule. This was almost an unheard of accomplishment in the Indian setting, where time overruns in creating public infrastructure is a generally assumed feature. It was also completed within its budget of approximately Rs. 4.08 billion. More than anything else, it underlined the efficiencies of private project management, the mainstay of the PPP argument.

The project broke new ground in India's still fledgling capital markets by making an Initial Public Offer (IPO) of Deep Discount Bonds, first by any green-field infrastructure company. Its ability to raise funds from the market again proved the viability of the model on the financing side. It succeeded in raising money abroad as well through a Global Depository Receipt (GDR) issue. It was the first private infrastructure project to be listed on a stock exchange.

But this is only part of the story. In 2007, India's erstwhile Planning Commission, the key backer of infrastructure PPPs in the country, released a review with a scathing criticism of the manner in which the Toll Bridge was contracted and what that has implied for the exchequer.

The saga of the Delhi Noida Toll Bridge is both long and instructive. In April 1992, the government of Delhi, UP's New Okhla Industrial Development Authority (NOIDA), and the private sector infrastructure financing entity, IL&FS had signed a Memorandum of Understanding (MoU) to create the Toll Bridge. IL&FS created a subsidiary, Noida Toll Bridge Company Limited (NTBCL) exactly 4 years later in April 1996. The Concession Agreement (CA), or the contract defining the project, got signed another year and a half later, in November 1997. It granted the NTBCL the right to Build, Own, Operate, and Transfer (BOOT) the Toll Bridge for 30 years, extendable if certain conditions were not met. NTBCL was entitled to charge tolls to passing vehicles, the quantum of which would be revised periodically in step with inflation by a committee with representatives of all major stakeholders. Importantly, NTBCL will receive an assured post-tax return of 20% on the entire capital employed—project cost, repair costs, and the shortfall from the assured return in the previous year. NOIDA could give IL&FS Land Development Rights to make up for the shortfall in assured returns. Two months later, the governments of Delhi and UP signed "support agreements" to facilitate construction of the bridge and approach roads, respectively. By December 1998, Intertoll Services Management BV of Netherlands, subsidiary of an eponymous South African company, was brought in as the maintenance partner. Construction started within a few months.

Upon inauguration in 2001, however, the commercial reality did not live up to the projections. The expected traffic growth, particularly of the commercial traffic, did not take place, and the project continued to make losses for the next 5 years adding up to over Rs. 1.20 billion. Within a year of start of the operations, the company approached the institutional lenders and obtained a debt restructuring and succeeded in obtaining judicial approval in 2005 to alter the terms of its Deep Discount Bonds. The debt restructuring also triggered use of the land development rights granted under the CA. The cumulative shortfall of the assured 20% return meant an extension of the life of the concession well beyond the 30 years.

The disappointing financial performance and the fiscal burden it imposed on the public partners prompted a relook at the Concession Agreement itself. The 2007 Planning Commission review strongly criticized it for being biased to the private partners. Among other things, it argued that the central clause of 20% assured return to the project on capital employed was at the core of many of the problems since (i) without any cap on project cost it incentivized overinvestment; (ii) the interest rates being in the 12–16% range and the project being heavily leveraged, as is typical of project-financed infrastructure, it provided an unjustifiably high rate of virtually risk-free return on equity in excess of 30%; (iii) the inclusion of the shortfall of assured return in the capital employed, the base of the assured return, transferred the entire risk to the public partner with no incentive for the private partner to improve financial performance. It also pointed out several provisions that gave the project sponsor undue influence in setting terms in its own favor. One of its strongest objection was that the project award mechanism used a single-party negotiated contract rather than a public tender to private partners which would have allowed competitive forces to reduce the burden on the public sector.

A 2012 review of the project by one of the authors found that the total project cost would increase to over Rs. 830 billion (over 200 times the original project cost) by the end of the original contract period in 2031 on current traffic trends. In addition, since the project would never make as much money as guaranteed by the CA, it would last till perpetuity.

In October 2016, the Allahabad High Court, citing several reasons, including compromising public interest,[2] directed that, henceforth, the Concessionaire, Noida Toll Bridge Company, shall not impose or recover any user fee/toll from the commuters for using the Delhi Noida Toll Bridge.

With the Delhi Noida Toll Bridge, India had entered the era of infrastructure PPPs. It epitomized the PPP experience, both in its success in terms of swiftly delivering a swanky, well-maintained twenty-first century public asset, and its challenges and controversies, including over-optimistic (in hindsight) growth projections and acrimony over a flawed concession agreement. The sector and the country would have to learn to resolve these challenges and craft projects more efficiently over the years to come. For, despite all its challenges and roadblocks, infrastructure PPPs are here to stay.

[2]The Allahabad High Court judgment dated 26.10.2016 says "The action of NOIDA in awarding the Concession Agreement dated 10.11.1997 in favour of NOIDA Toll Bridge Company i.e. the Concessionaire fails to satisfy the test of reasonableness and public interest".