

## **Educational Outreach: Critically Important for the Beneficiaries to Understand the Pros and Cons of PPP Projects (With Special Reference to NMC)**

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### **Abstract**

Given the emerging nature and complexity of public-private partnerships, this often requires an educational outreach effort to explain the pros and cons of public-private partnerships, explain the public sponsor's reasons for undertaking a public-private partnership project, and to explain the anticipated public-private partnership structure. With the introduction of PPP, the partner could supply services more effectively and cheaply. Many studies reveal that due to weaknesses in the public sector such as inefficiencies, wastefulness, carelessness, weakness in service delivery and provision of low quality goods for high rates, developing nations face problems to manage the waste properly. So, governments in developing nations have increased the involvement of the private sector to provide effective services which will conserve resources and achieve sustainable development. Thus developing countries have introduced PPP as an alternative solution to manage waste. Also the study found that the public sector alone could not deliver effective and valuable services. This paper specially focuses on NMC's PPP projects which help NMC to achieve infrastructure development as well as reduces the financial burden on NMC.

### **Key Words**

NMC (Nagpur Municipal Corporation), PPP (Public Private Partnership), Educational Outreach, Sustainable Development, Financial Management

### **Introduction**

#### **PPP Projects:-**

Public-private partnerships are contractual agreements formed between a public agency (federal, state, or local) and a private sector entity that allows for greater private sector participation in the delivery, operation, and financing of infrastructure projects. Public-private partnerships can include projects where significant design, construction, financial, and operational risk is transferred from the public sector to the private sector. Through these types of arrangements, inherent project risks are borne by that party best suited to control and manage those risks. A public sponsor's responsibility during a public-private partnership project includes:

- Conducting upfront due diligence on potential projects
- Defining public objectives
- Selecting the appropriate public-private partnership model
- Conducting a fair procurement process
- Negotiating a well structured public-private partnership agreement
- Ensuring compliance with the public-private partnership agreement over its term

Some of the benefits of public-private partnerships for state and local governments include:

1. Public-private partnerships are an effective way of financing, managing and operating roads and other infrastructure facilities while minimizing taxpayer costs and risks.
2. Governments across the country and around the world are seeking ways to finance needed infrastructure projects and trying to deliver better services to taxpayers.

3. Public-private partnerships maximize the strengths of both the public and private sectors, offering taxpayers more efficiency, accountability, and cost and time-savings.
4. Public-private partnerships can be used to build roads and other infrastructure projects that may have been delayed or shelved altogether due to fiscal constraints.

Public-private partnerships are very flexible delivery systems that can be structured to meet the objectives of the sponsoring public agency. Public-private partnership structures can cover an entire spectrum of risk transfer. On one end of the spectrum is a fully self-funding concession agreement where the private sector takes all development, design, construction, revenue, finance, and operations risk. The other end of the spectrum is a design-build contract where the public sector retains all project risks and simply transfers design and construction risk.

In evaluating the appropriateness of a specific public-private partnership structure for a given project, the public agency's goals and objectives must be clearly defined. These goals and objectives may differ from project to project. Examples of potential objectives that a public sector sponsor may have for a project include:

- Provide unfunded infrastructure
- Leverage scarce resources
- Minimize an agency's investment
- Expedite project delivery
- Provide for long term operation and maintenance
- Generate revenue to fund other needs
- Foster economic development

**Advantages:**

1. Acceleration of infrastructure provision
2. Faster implementation
3. Better risk allocation
4. Better incentives to perform
5. Improved quality of service
6. Generation of additional revenues
7. Investment in infrastructure
8. Generating commercial value from public sector assets

**Types of Public-Private Partnerships**

Public-private partnerships can be structured to deliver a wide range of infrastructure projects. Properly designed public-private partnerships are a means to efficiently allocate risks and returns between the public sector and the private sector. Some of the typical types of infrastructure projects include the following:

1. Roadways, Bridges and Tunnels
2. Water/Wastewater Facilities
3. Buildings
4. Correctional Facilities
5. Schools
6. Courthouses
7. Office Buildings
8. Maintenance Facilities
9. Ports of Entry
10. Airports
11. Intelligent Transportation Systems (ITS)

12. Parking Facilities
13. Railroad Lines

Though specific objectives vary significantly by project, there are generally four basic objectives for a public agency to enter into a public-private partnership:

1. Maximize the ability of public sponsors to leverage existing federal and/or state revenue sources
2. More effectively use existing public funds
3. Move projects into construction more quickly than under traditional financing mechanisms
4. Make possible major infrastructure investments that might not otherwise receive financing

The following terms are commonly used to describe partnership agreements, although this should not be considered a definitive or complete listing:

- **Finance Only:** A private entity, usually a financial services company, funds a project directly or uses various mechanisms such as a long-term lease or bond issue.
- **Operation & Maintenance Contract (O & M):** A private operator, under contract, operates a publicly-owned asset for a specified term. Ownership of the asset remains with the public entity.
- **Build-Finance:** The private sector constructs an asset and finances the capital cost only during the construction period.
- **Design-Build-Finance-Maintain (DBFM):** The private sector designs, builds and finances an asset and provides hard facility management (hard fm) or maintenance services under a long-term agreement.
- **Design-Build-Finance-Maintain-Operate (DBFMO):** The private sector designs, builds and finances an asset, provides hard and/or soft facility management services as well as operations under a long-term agreement.
- **Build-Own-Operate (BOO):** The private sector finances, builds, owns and operates a facility or service in perpetuity. The public constraints are stated in the original agreement and through on-going regulatory authority.
- **Concession:** A private sector concessionaire undertakes investments and operates the facility for a fixed period of time after which the ownership reverts back to the public sector

Table 1

DETAILS OF PPP PROJECTS BY NMC (NURM)

Sr.No.	Name of the Project	Sector	Private Partner Name	Type of PPP arrangement
1	Water supply Pench IV (part 2) (NAG -012)	Water Supply	M/s Veolia Water (India)Pvt.Ltd. New Delhi	DBOOT
2	Recycle & reuse of waste water(NAG 016)	Sewerage		30 % Contribution by Mahagenco
3	Water Audit project (NAG 011)	Water Supply	M/s. Enviorex protection Co. Pvt. Ltd.Mumbai	50 % Contribution
4	Energy audit for water supply projects for water supply (NAG 008)	Water Supply	M/s Veolia Water (India) Pvt. Ltd. New Delhi	Contribution by PPP Operator * O&M
			M/s Mechatronic Systems Pvt. Ltd. Pune	30 % Contribution by PPP * Maintenance
5	Kanhan augmentation scheme (NAG 015)	Water Supply	M/s Veolia Water (India) Pvt. Ltd. New Delhi	Contribution by PPP Operator * O&M
6	DPR for rehabilitation planto implement 24/7 water supply for nagpur city(NAG 028)	Water Supply	Orange City water Pvt.Ltd.	PPP operator will be service provider
7	Procurement of buses(NAG-x)	Public Transport	M/s VanshNimay Infraproject Pvt. Ltd. Mumbai	30 % Contribution by PPP * Maintenance

**Review of literature:**

EfrainSadka (2007), in her research paper submitted to IMF states that PPP involve the supply by the private sector of infrastructure and services deriving from infrastructure assets which have traditionally been supplied by the public sector. These partnerships are spreading all over the world for better expenditure controls and maybe to hide public budget deficits. The author also suggests that if such arrangements are properly designed and transparently reported then, they can enhance the efficiency of the provision of services.

L.Lakshmanan (2008) submitted a paper to RBI to propose a production function framework for analyzing the interrelation between public infrastructure expansion and private production growth. According to the researcher the framework consisted of two versions of the dynamic two-sector model and each sector is assumed to generate a spillover effect on the other. The paper assumed growth equations for seven East Asian economies over the period of 1979–1998. The empirical results indicatedthat although the influences of private production sector on public infrastructure sector are relatively greater the model cannot be rejected. This proved that keeping a balance between infrastructure expansion and private sector growth is crucial for rapid economic development and how efficiently does the government manage the existing stocks.

GajendraHaldea (2012) worked upon a report Published by Secretariat for Infrastructure Planning Commission, Government of India stating that PPP Model for the Electricity distribution would enable full regulatory oversight for ensuring consumer protection andcompetition. The ownership of assets would continue to remain with the Government and the use ofassets would revert to the Government after the concession period. The PPP Model would also enablelimited recourse financing andViability Gap Funding (VGF) support.After detailed deliberations; the Task Force on Private Participation in the Power DistributionSector supported the PPP Model and recommended its adoption by the States.

### **Aims & Objectives of the Study**

1. To understand the inevitability of educational outreach for PPP projects among the beneficiaries of NMC
2. To evaluate the present financial procedures adopted by Nagpur Municipal Corporation.
3. To analyze the impact of PPP in the financial management of NMC
4. To suggest alternatives and amendments, in financial management, on the basis of findings of the study.

### **Hypothesis**

Following are the statements of hypothesis in this research work.

- Proper financial management shall result in better performance by Nagpur Municipal Corporation with respect to financial position.
- PPP approach reduces financial burden of Nagpur Municipal Corporation
- Educational outreach for PPP projects is inevitable

### **Research Methodology**

**Universe of Study:** The universe of study shall be Nagpur City.

**Sampling Frame:** The sample size of the respondents shall be prepared according to the following table.

**TABLE NO. 2**

#### **Sample Frame**

<b>S.No.</b>	<b>Type of Respondent</b>	<b>No.</b>
1.	Office Bearers & Employment of NMC	50
2.	Beneficiaries of NMC	400
	<b>Total</b>	<b>450</b>

### **Data Collection:**

Without data there is no ground for investigation. Data are the core of the science of statistics.

Data shall be collected from two types of sources. (i) Primary and (ii) Secondary.

#### **i. Primary Data:**

For the purpose of this study 50 Officers and Employees of Nagpur Municipal Corporation will be considered. In all 400 beneficiaries of NMC shall be considered as sample.

The primary data will be collected from these respondents by interviews and predesigned questionnaire.

#### **ii. Secondary Data:**

The facts and figures that have already been collected are called secondary data. The secondary data exists before the investigation starts.

There are following sources of data collection in secondary methods. For the purpose of this research the secondary data will be collected from various Annual Reports of NMC, Government reports, and other authentic literature.

### Hypothesis Testing

**Hypothesis 1:** The revenue resources of Nagpur Municipal Corporation are responsible for the development of the City

To test the existing hypothesis the various ratios have been calculated to observe the allocation of the resources on various head. The majority of the ratios are as follows:

**TABLE NO. 3**

#### Expenditure Ratios

Expenses	Percentage of tax and non tax revenue
Establishment	34.30
Pension	10.06
ContingentExp	20.92
Repairs & Maintenance	3.84
Loan Repayment	7.07
Capital Expenditure	23.25
Others	3.82
Deposits and Advances	3.65
Investment	4.03

(The ratios are calculated on last 10 years average)

To measure the development of the city major ratios are Capital expenditure and investment as these are non recurring expenses incurred mainly for the purpose of generating long term benefits. In the present study it has been observed that substantial portion of revenue is allocated on Capital expenditure (23.25 per cent) and investment (4.03 per cent) respectively. Collectively it is accountable for 27.28 per cents of total revenue resources of the Municipal Corporation.

Thus on the basis of the facts and figure it can be conclude that Municipal corporation is doing all development related activities properly by doing proper allocation of funds for development.

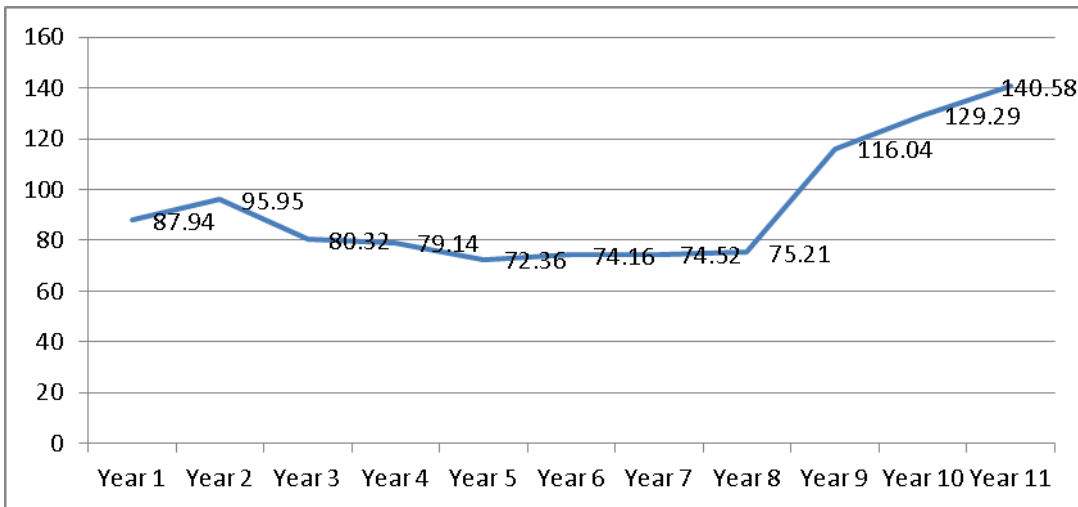
Hence Null hypothesis “the revenue resources of Nagpur Municipal Corporation are responsible for the development of the City” is accepted

**Hypothesis 2:** PPP approach reduces financial burden of Nagpur Municipal Corporation.

To test the existing hypothesis the trend analysis has been done and the trend line of Capital expenditure and investment has been drawn to see whether the trends are supporting to the hypothesis.

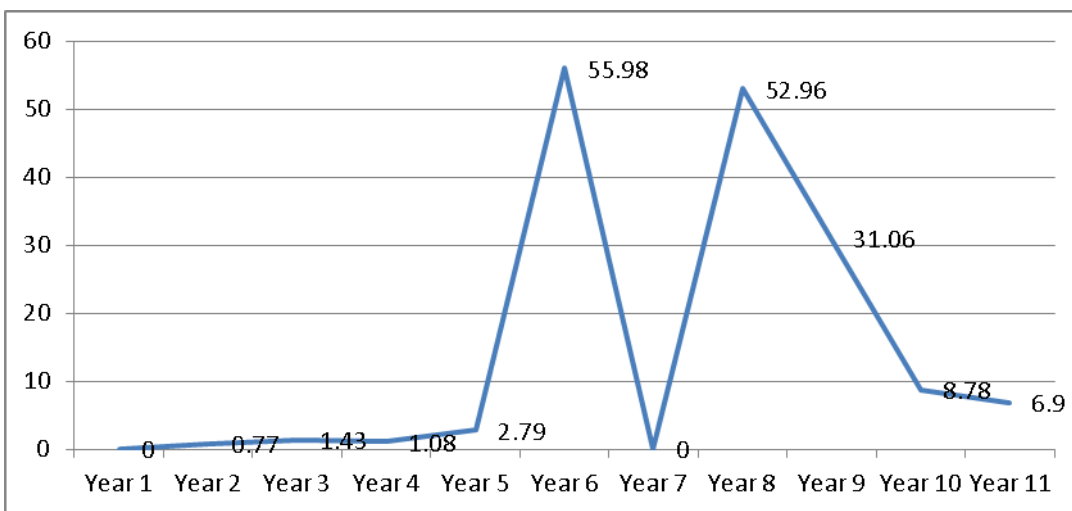
**Figure 1**

Trend line of Capital Expenditure during the period of study



**Figure 2**

Trend line of Investment during the period of study



On one to one comparison it has been observed that the investment amount tends to increase as and when capital expenditure decreases and in latter part of the study it has been prominently observed that the investment by NMC is declining as the capital expenditure (viz. Public Private Partnership) increases rapidly.

Further to jump on conclusion the correlation coefficient between capital expenditure and Investment has been measured and it is found that value of  $r = -0.144$  (negative correlation) which supports that NMC is reducing their investment in the presence of increase in Capital expenditure mainly through PPP mode.

Hence Null hypothesis “PPP approach reduces financial burden of Nagpur Municipal Corporation” is accepted

From the above hypothesis testing, we can attest the last hypothesis which states that:

Educational outreach for PPP projects is inevitable

The above hypothesis signifies the importance of PPP projects which reduces the financial encumbrance of NMC along with sustainable development and faster infrastructure

development. Hence it is very important to explain the importance of PPP projects to the beneficiaries of NMC.

Therefore the hypothesis – Educational outreach for PPP projects is inevitable can be accepted.

### **Findings & Suggestions**

- On enquiring about the level of satisfaction regarding the benefits and services derived through PPP projects at Water Supply Pench (Part 2) of NMC to the sample respondents, it has been noticed that majority of the sample respondents (43 per cent) are partly satisfied,
- PPP projects of Recycle & Reuse of Waste Water of NMC to the sample respondents, it has been noticed that majority of the sample respondents (39 per cent) are partly satisfied.
- Interpretation:
  - PPP projects of Water Audit Project of NMC, it has been noticed that majority of the sample respondents (45 per cent) are partly satisfied, only 9 per cent of the sample respondents have satisfied with benefits and services of Water Audit Project.
  - PPP projects of Energy Audit Project for Water Supply, it has been noticed that majority of the sample respondents (40 per cent) are partly satisfied, only 15 per cent of the sample respondents are satisfied with benefits and services.
  - PPP projects of Kanhan Augmentation Scheme of NMC, it has been noticed that majority of the sample respondents (39 per cent) are partly satisfied, only 7 per cent of the sample respondents have satisfied with benefits and services.
  - PPP projects of DPR for rehabilitation plan to implement of NMC, it has been noticed that majority of the sample respondents (34 per cent) are partly satisfied.
  - PPP projects of Procurement of Buses of NMC to the sample respondents, it has been noticed that majority of the sample respondents (28 per cent) are partly satisfied, only 12 per cent of the sample respondents have satisfied with benefits and services of Procurement of Buses.

Typically PPP model has been adopted by Local Urban Bodies / Cities to achieve one or more than one the following objectives

- a) Improving Governance
- b) Superior Project Delivery
- c) Improving quality of service
- d) Investment required
- e) Reducing tariffs
- f) Reduce costs to government

### **Major Suggestions:**

A. Reducing Tariff: The transaction structure and bid process are derived from the above objectives. The objective of the Water projects is to reduce tariffs and hence, tariff is the bid parameter in the Salt Lake water supply and sewerage project promoted by KMDA.

B. Improve Quality of Supply and Reduce Cost: The objective of the SWM projects is to improve quality of supply and reduce costs, therefore there are penal clauses for non conformance to Standards of Quality (SOQ) and the tipping fee is the bid parameter.



C. Operating Efficiency and Improving Service Standards: The objective of PPP can also be achieving operating efficiency and improving service standards. Latur management contract specified various service quality parameters as well as performance parameters for improvement of operating efficiency.

D. Leveraging Funds: The increasing urbanization and consequent stress on existing urban infrastructure needs huge investment by local authorities. PPP can be useful for leveraging the funds available with them. Haldia Water Treatment Plant project was envisaged with a need to reduce operating losses, to increase production and to enhance quality of water and services.

E. Regulatory Mechanism: The regulatory mechanism for the Project might also have been prescribed by the concession or license agreements. The contractual agreement in the Chandrapur water supply project specified the water quality measurement system and penal provisions for deficiency in specified water quality parameters.

F. Payment Security Mechanism: There are specific issues when the Government or parastatal is a user of the services, there are issues regarding Payment Security Mechanism, whether escrows or default security mechanism. The Tipping Fee would ideally require to be paid through an escrow agent. In case of Nasik street lighting project, repayments to supplier of energy saving devices were secured by means of a direct payment mechanism by Nasik Municipal Corporation through an escrow arrangement.

G. Understanding the importance of PPP projects, beneficiaries can be educated about their acceptance in NMC. This awareness can be created through print media among the beneficiaries.

### **Conclusion**

Various PPP Projects undertaken by NMC such as Solid Waste Management (SWM), Recycling of waste water, Water supply projects, etc are very critical for achieving sustainable development. PPP projects not only reduce the financial burden on NMC, but also help NMC in conservation of resources.

In a developing country like India, where infrastructure development is the foremost priority of the government, it becomes very difficult to take such above mentioned projects. However PPP approach is helping public sector to undertake such capital intensive projects. 24/7 water supply project is a very interesting approach to conserve such a precious natural resource. In this project, 24/7 water is supplied with the intention that the beneficiaries will not waste water in storage. Without the assistance of private partner it's impossible for NMC to facilitate 24/7 water supply.

Thus PPP projects are very critical to meet the challenge of sustainable development. The study clearly reveals that the beneficiaries are also satisfied with services provided by NMC in collaboration with private partner and succeeding to rapid infrastructure development.

Many a time's beneficiaries are doomed with the augmented service charges because of the inclusion of PPP projects. But with their absence, it is very difficult to achieve infrastructure development and being a developing country is the foremost priority of the government. For the long term gain, educational outreach to the beneficiaries' regarding PPP projects is very important. Unless and until the beneficiaries are persuaded about the significance of PPP projects, it's very difficult to execute them. Hence the educational outreach of PPP projects is inevitable.

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