CHAPTER- I

INTRODUCTION

1.1 Introduction

Urbanization is a relatively recent but by far the most dominant social transformation of our times. From an overwhelmingly rural, the world has fast transformed itself into an urban society. Urbanization is likely to “Overshadow” the other upcoming changes and transformations. Industrialization and urbanization are the twin phenomena becoming the hallmarks of independent India. There has been a large-scale migration of people from the rural areas to cities in search of jobs. The pace at which urbanization took place was quite slow in the earlier days and it has gained momentum during the 90s. Urban development is so fast paced in the cities and metropolises that the cities have increased their areas many folds with exponential growth of population.

1.2 Urbanization in India

The most impressive feature of India’s urbanization is its massive size. In numerical terms, India’s urban population is the fourth largest in the world, and is higher than the total urban population of all countries put together barring China, USA and earlier Soviet Union. What distinguishes India most from many countries in the world is its long tradition of urbanization. The tradition goes back to nearly five thousand years when the Indus Valley civilization saw birth of some of the earliest settlements in human history.

The pace of urbanization in India has been rapidly increasing, especially in the last four decades. Population of India has increase from 361 million in 1951 to 1210 millions in 2011 and the urban population increased from 62 million to 377 million in 2011. Ratio of Urban population to Total population increased from 17 % in 1951 to 31%in 2011. Growth of the urban population is 32% in the last decade. Number of Towns /Urban agglomerations increased from 2843 in 1951 to 5480 as per census 2011.
The massive size of India’s urban population, coupling with staggering regular increments to it, has put a severe strain on urban resources. Strain is evident particularly in housing, transport, water supply, sanitation, power and employment sectors giving rise to the much-talked about notion that India is “Over Urbanized”.

1.3 Urban Governance

The urban governance is mainly handled by urban local bodies (ULBs). These ULBs are vested with a long list of functions by the state government under the ULB Act through Constitutional (Amendment) Act, 1992. These functions include urban planning, including town planning; regulation of land use and construction of buildings; planning for economic and social development; roads and bridges; water supply for domestic, industrial, and commercial purposes; public health, sanitation, conservancy, and solid waste management; fire services; urban forestry, protection of the environment, and promotion of ecological aspects; safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded; slum improvement and up-gradation; urban poverty alleviation; provision or urban amenities and facilities such as parks, gardens, and playgrounds; promotion of cultural, educational, and aesthetic aspects; burials and burial grounds; cremation grounds and electric crematoria; cattle pounds; prevention of cruelty to animals; vital statistics, including registration of births and deaths; public amenities including street lighting, parking lots, bus-stops and public conveniences; and regulation of slaughterhouses and tanneries.
The sources of revenue of these ULBs are listed in below.

### Sources of revenue for ULBs

<table>
<thead>
<tr>
<th>Source</th>
<th>Major Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A) Internal Sources:</strong></td>
<td></td>
</tr>
<tr>
<td>Tax Revenue</td>
<td>Property taxes; tax on vehicles, animals, trade, show tax, advertisement tax, etc.,</td>
</tr>
<tr>
<td>Non-Tax Revenue</td>
<td>Rents, user charges, fees, fines, etc.,</td>
</tr>
<tr>
<td><strong>(B) External Sources:</strong></td>
<td></td>
</tr>
<tr>
<td>Grants-in-Aid</td>
<td>Various grants</td>
</tr>
<tr>
<td>Shared Taxes</td>
<td>Entertainment tax, motor vehicle tax, land revenue, profession tax, etc.,</td>
</tr>
</tbody>
</table>


### 1.4 Urban Development in Karnataka

Karnataka’s urban population has grown at the rate of 28.85% in the last decade. 34% of Karnataka in terms of population and 1.62 % of the state in terms of area is officially classified as ‘urban’ as defined in the Census of India. As per the 2001 census Karnataka had 270 census towns. Population of Karnataka as per census 2011 is 61.13 millions. Karnataka's population rose 15.7% in the past decade (2001-2011) compared with 17.5% increase from 1991 to 2001. As per the 2011 census Karnataka has 220 statutory towns, 24 urban agglomerations and 127 census towns. As per census, constituents of urban area are Statutory Towns, Census Towns and Outgrowths. This definition of urban areas and their classification is however not followed in most state government classifications. For purposes of planning and fund allocation etc. state governments tend to follow definitions based on their own legislations. Karnataka has 226 statutory towns. Provision of municipal services to citizens, such as water supply, roads, solid waste management and street lighting is one of the fundamental responsibilities of the Urban Local Bodies (ULBs). Though these are obligatory services of the ULBs, until now, there has been no concerted effort to assess either the quality of infrastructure or the service provided. As a result, the ULBs and other government agencies do not possess the adequate data, necessary to review and evaluate the status of infrastructure and service provision on both qualitative and
quantitative parameters. While there is indeed a general perception that urban infrastructure services have not been keeping pace with the increasing needs of the citizens, the lack of relevant data has to a large extent hampered the ability of the ULBs and other decision-making bodies in taking the necessary actions to address and set right these deficiencies.

It is important to note that ULBs have limited sources of finance but innumerable development programs on one hand and O & M responsibilities on the other resulting in a serious tight-robe walking by them. It is important to note that the major share of revenues is accounted by the city corporations of Bangalore, Mysore, Hubli-Dharwar, Mangalore, Gulbarga, Bellary, and other major city corporations. If the revenues of these corporations are excluded, the per capita availability of revenues will drastically come down to a lower level. Hence, the ULBs in Karnataka are suffering from resource crunch and mounting expenses leading to permanent financial crises and hence depending highly on Government finance and other sources of finance to augment the infrastructure facilities to the civilians.

1.5 The Emerging Trend

In the midst of this financial crisis faced by the ULBs, the international institutions have taken keen interest in financing the infrastructure development in India through the provisioning of loans. These international institutions are popularly labeled as donors.

There are three types of donors providing assistance in India: multilateral donors; bilateral donors; and foundation assistance. The multilateral donors are the Asian Development Bank (ADB), the World Bank (WB), the United Nations (UN), and the European Union (EU). The types of assistance include market rate loans, various concession loans, and grants. The World Bank group, consisting of IBRD, IDA, IFC and MIFA; the Asian Development Bank (ADB), European Union and United Nation have a large number of subscribing member countries, their subscriptions being in huge sums of money. They also borrow in the international capital market. These monies are then lent to member-countries who want them for investment in development projects. Loans extended by ADB and the WB have long-term repayment and grace periods. Among the agencies of United Nations, the United
Nations Development Program (UNDP) constitutes the largest source of assistance. The EU extends grants and has recently focused on the environment sector with thrust on training and capacity Building for government and non-governmental organizations. The United Kingdom’s Department for International Development (DFID) and the United States Agency for International Development (USAID) are the two major bilateral donors in the urban sector. DFID has historically been a large assistance provider to India. Since the 1990s, DFID’s focus has been on the alleviation of poverty through Slum Development Programs, which also has a strong component on improving environmental health. DFID’s program has two separate policies covering ‘environment’: the Water and Sanitation Policy, and the Urban Poverty Alleviation Policy. The Japanese Bank for International Cooperation (JBIC) provides project-tied aid in the form of soft loans at a low rate. Though JBIC assists infrastructure projects, environmental considerations are a priority. A recent World Bank Study shows that the external assistance for environment improvement has totaled US$ 9.9 billion for the years 1995-2000. Of this, about US$ 2.7 billion (28 percent) has been for urban infrastructure, of which US$ 2.2 billion (81 percent) goes to water and sanitation projects, while US$ 525 million (19 percent) goes to slum up-gradation. Countrywide or multi-state projects get the maximum share (29 percent) followed by Tamil Nadu, Maharashtra and Karnataka (15 percent each). Since 1990s, the Government of India has treated external assistance to states as “additionality” over the plan allocations. This assistance is channeled based on a 70:30 loan/grant ratio at a fixed interest rate. The foreign exchange risk is borne by the Government of India. ADB’s involvement in India’s urban sector began in 1993 with a technical assistance (TA) to prepare an urban infrastructure project in Karnataka. Since then ADB has provided 25TA grants totaling US$ 11.35 million to prepare projects and support capacity building.

Since 1995, ADB has approved loans for eight projects in the urban sector, totaling US$1.8 billion: Karnataka Urban Infrastructure Development (US$ 105 million), Rajasthan Urban Infrastructure Development (US$ 250 million), Karnataka Urban Development and Coastal Environment Management (US$ 175 million), Urban Environmental Infrastructure Facility (US$ 200 million), Kolkata Environmental Improvement (US$ 250 million), Housing Finance I and II (US$ 420 million), and Urban Water Supply and Environmental Improvement in Madhya Pradesh (US$ 200 million). In addition, ADB has approved a US$ 500 million loan for Gujarat
Earthquake Rehabilitation and Reconstruction in 2001. ADB is relatively small with 47 member countries, concentrating on the economic and social development of the developing member-countries of the Asia-Pacific region.

Several factors have combined in recent years to change the context within which ADBs lending operations occur. The economic analysis of projects will be reviewed with the aim of strengthening project quality and with the greater emphasis on social and environmental concerns. The Bank seeks to provide finance primarily for public and near-public goods, and for those elements, such as roads, irrigation systems or enterprise restructuring, which help to create the conditions under which a larger number of goods can be produced as private goods. The Bank is also involved in reducing public bad such as environmental costs or poverty, and in funding some private sector developments where they can play a catalytic or demonstration role.

1.6 Statement of the Problem

The ULBs in India are constantly failing to deliver the services for which they have been established. The resource crunch has limited them to tackle the day-to-day issues and the long term issues were out of the purview of them. The vicious circle of no-development to no-revenue generation resulted in degeneration of the quality of service to the citizens. The state governments used the EAPs as a tool to break this circle. The assistance was sought to create the infrastructure in the ULBs.

Karnataka Urban Infrastructure Development Project (KUIDP) was the first Asian Development Bank assisted urban infrastructure project in Karnataka. The objective of the project was to achieve urban development in South Karnataka ULBs. The total project cost was US$ 107 million with ADB loan constituting US$ 80 million and the balance US$ 27 million funds sourced from Government of Karnataka. The components of the project consist of environmental sanitation, road improvement, poverty alleviation, municipal building, industrial sites and services, and lake conservation. The project period was from May 1996 to June 2004. KUIDP was implemented in Tumkur, Ramanagara, Channapatna, Mysore, Mandya and Maddur. Following table presents an overview of loans outstanding inclusive of interest.
Table 1.1 STATEMENT SHOWING THE TOTAL DUES AS AT 31.12.2010  
(Rs.in lakhs)

<table>
<thead>
<tr>
<th>TOWNS</th>
<th>TOTAL RELEASE OF LOAN INCLUDING IDC</th>
<th>PRINCIPAL</th>
<th>INTEREST</th>
<th>Repayments inclusive of int</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>OVERDUES</td>
<td>CURRENT DUES</td>
<td>TOTAL</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>Ramanagaram &amp; Channapatna Urban Development Authority</td>
<td>902.79</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Channapatna City Municipal Council</td>
<td>1,508.05</td>
<td>635.93</td>
<td>20.28</td>
<td>656.21</td>
</tr>
<tr>
<td>Maddur Town Municipal Council</td>
<td>473.48</td>
<td>174.07</td>
<td>6.96</td>
<td>181.03</td>
</tr>
<tr>
<td>Mandya City Municipal Council</td>
<td>829.74</td>
<td>305.04</td>
<td>12.20</td>
<td>317.24</td>
</tr>
<tr>
<td>Mysore Urban Development Authority</td>
<td>7,483.32</td>
<td>-</td>
<td>83.44</td>
<td>83.44</td>
</tr>
<tr>
<td>Mysore City Corporation</td>
<td>12,063.81</td>
<td>4,855.92</td>
<td>167.62</td>
<td>5,023.54</td>
</tr>
<tr>
<td>Ramanagaram City Municipal Council</td>
<td>3,785.89</td>
<td>1,382.02</td>
<td>54.78</td>
<td>1,436.80</td>
</tr>
<tr>
<td>Tumkur Urban Development Authority</td>
<td>2,315.15</td>
<td>553.51</td>
<td>20.50</td>
<td>574.01</td>
</tr>
<tr>
<td>Tumkur City Municipal Council</td>
<td>4,286.53</td>
<td>1,645.29</td>
<td>61.42</td>
<td>1,706.71</td>
</tr>
<tr>
<td>Karnataka Industrial Area Development Board</td>
<td>1,042.49</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34,691.25</td>
<td>9,551.78</td>
<td>427.20</td>
<td>9,978.98</td>
</tr>
</tbody>
</table>

Source : KUIDFC
1.7 REVIEW OF LITERATURE

Introduction

Urbanization is a global phenomenon. Industrialization and globalization have boosted the process of urbanization. Urbanization in Indian scenario is also significant. Migration from rural to urban in search of jobs and better living conditions in the era of industrialization during post independence period has created lot of pressure on the urban infrastructure facilities. globalization which created avenues in service sector boosted the urbanization to the new heights creating tremendous pressure on the urban facilities. The best way of approaching quality of life measurement is to measure the extent to which people's 'happiness requirements' are met - i.e. those requirements which are a necessary (although not sufficient) condition of anyone's happiness - those 'without which no member of the human race can be happy.' Urbanization is associated with bundles of problems. Quality of life linked to the living conditions in the urban areas. Urban Local Bodies are finding it difficult to address the needs of its citizens. Basic infrastructure facilities need to be created to provide services to the citizens.

Scope of Review:

Urbanization is a relatively recent but by far the most dominant social transformation of our times. From an overwhelmingly rural, the world has fast transformed itself into an urban society. Urbanization is likely to “Overshadow” the other upcoming changes and transformations. Industrialization and urbanization are the twin phenomena becoming the hallmarks of independent India. There has been a large-scale migration of people from the rural areas to cities in search of jobs.

With almost 400 million Indians living in urban areas, the country has the second largest urban population in the world. It comprises about 31 per cent of the total population and contributes to over 60 per cent of the country’s GDP. Essential infrastructure facilities need to be provided to this growing urban population.
• The country has over 5,400 towns and cities. The urban population of the country has been growing at a rapid pace of over 32 per cent over the last decade. This is significantly higher than the growth of the rural population (approximately 12 per cent).

• Employment in urban areas registered a growth of around 38 per cent, substantially exceeding the rural employment growth rate of around 16 per cent.

• A large number of Indian cities and towns need adequate infrastructure facilities, specifically in the areas of water management, roads, transportation, housing, sanitation, sewage etc.

• The government has initiated a number of steps to improve the physical and economic infrastructure and improve facilities in urban areas. In addition to the basic infrastructure projects, a number of urban transportation projects have also been taken forward, e.g. metro rails. (Urbanindia.nic.in)

The project financials and service delivery management by urban local bodies are a subset of a broader infrastructure development and management. A few major empirical studies relating to the broader perspective are presented below.

Raghuram.G (1999) argues that “Government of India has played a dominant role in the development, financing and management of infrastructure facilities. Demand for infrastructure particularly transportation is expected to grow very rapidly in the next decade on account of growth in population, rapid urbanization and sustained industrial growth. The magnitude of resources required for meeting demand requirement of infrastructure facilities is colossal”. Financing of infrastructure development in the road sector has been traditionally through government budgetary allocations. However, the huge gap between demand and supply in invest able funds has rendered such conventional sources inadequate to leverage project activity, compelling a look at alternative sources for financing such as the private sector.

Pyle (1994) in his study indicates that many developing countries are learning fast the relevance of project finance appraisal by orienting the issues towards setting incentives for bidding processes. Choosing tolling and pricing mechanism along with a continued
search for privatization strategies, He indicates that simple but rigorous and transparent permitting policies may be a developing country’s best guarantee of effective private sector infrastructural development.

**Yun-Hwan Kim (2005)** concludes that Asian developing economies are now faced with the urgent call to develop physical infrastructures to strengthen the foundations of sustained development and poverty reduction. How to finance long term, large-scale capital investment projects is indeed a formidable challenge. Bond financing is one of the most profitable and appropriate financing options. A notable development now is the rapid expansion of international project bond markets, providing developing countries with wider choices in bond financing. Since the Asian financial crisis, the Asian economies have taken impressive preliminary actions to nurture domestic and regional bond markets. Many challenges, however, still lie ahead.

**George E. Peterson, (2009)** opined that “Land-based financing has become an important element of urban infrastructure finance, especially in locations where cities are growing rapidly. The potential advantages of land finance go beyond the generation of revenue. As part of the mix of capital financing, land-based financing complements borrowing. Most land-financing techniques generate revenue up front, thereby reducing the need for debt and the risks associated with future debt service. Three risks in particular deserve emphasis. Urban land markets are volatile, and recent transactions may reflect a land asset bubble; Land sales often lack transparency and accountability; Special measures may need to be taken to make land-based financing support investment in basic municipal services.

**Afeikhena Jerome(2008)** opined that, to solve Africa’s infrastructure investment problems, broad institutional reform along with greater financial commitments by governments and the private sector will be required. Private participation in infrastructure requires fiscal reform and improvements in public sector management. It also requires careful attention to the basics of project design, including identifying and allocating risk and ensuring sound procurement practices.

**Weiping Wu(2010)** in his study on effect of urban infrastructure financing on the economic performance in China points to a strong association between infrastructure investment and economic performance and infrastructure investment was justified in
both responding to unmet demands from the past and paving the way for future economic growth.

Ramakrishna Nallathiga (2010) opined that the ‘off-budget’ approaches by exploiting the non-conventional means of resource mobilization, as most of the cities show little or no revenue surplus to match the capital expenditure for providing infrastructure services.

Daniel Platz (2009) explores the potential of sub-sovereign bonds in urban infrastructure in developing countries. Based on the US experience, applying a supply and demand side framework for analysis of the market for sub-sovereign bonded debt to developing countries Mexico, India and South Africa. It is suggested that the regulatory environment, a diversified financial sector and increased capacity for debt support and management matter most for the development of the sub-sovereign bond market.

Stéphane Straub (2008) conclude that, Concerning the link between infrastructure investment and growth, there is a positive and significant link. (Infrastructure and Growth in Developing Countries: Recent Advances and Research Challenges, The World Bank Development Research Department Research Support Team, January 2008. The resource requirement for creating urban infrastructure is very huge. Rakesh Mohan Committee Report (1996) had estimated the total fund requirement for urban infrastructure is in the range of Rs. 94,000 crores for the period 1996-2001. The fund requirement of water supply and toilet facilities in urban areas was estimated at Rs.21,000 crores for 2001-2011 and Rs 22,800 crores for 2011-21. It had assessed that the total annual investment needs for water supply, sanitation and road sectors in urban area at Rs.28,036 crores per year for the period 1996-2006.

Baker & Mckenzer (1996) explores “Over the last ten years, there has been an accelerating global trend towards the executing of major infrastructure projects on a privatized basis”. A number of concession based legal structures have been discovered or developed as part of this trend, among which the BOT (Build, Operate & Transfer) concept is the widely known. “Privatization relieves the government of the financial and administrative burden in relation to the propose works’ can accelerate growth in the economy through works themselves and through multiplier effect on the economy”.

11
Sudha Wadhwan (2002), in their study “After attaining independence in in 1947, India inherited the already set up infrastructure facilities which included a road and railway network, a few airports & ports, basic urban telephone network etc. This infrastructure facility were created by the then rulers, primarily to gather raw materials for exporting the same to England to feed their industry, and was far from adequate to meet growing needs of the economic activities in the country post-independence. Till the 1980s, responsibility for developing infrastructure in India rested with the Central/State Governments. Over the years, however, a need for private sector participation in strengthening government efforts (through the public sector) became inevitable to reinforce/expand infrastructure to sustain the growing economic activity in the country”. Tax & Policies of RBI encourages private sector in this direction special tax incentives U/S 10 (23) G were extended by the Government of India besides some other concessions. Due to Government initiatives, considerable private sector participation in power and road sectors has materialized since then.

Binoy Mishra (2003) said, “In the past few decades there has been a trend of global interest in project finance as a tool for economic investment. Project finance helps to finance new investment by structuring the financing around project’s own operating cash flow and assets, without additional sponsor guarantees. Thus the technique is able to reduce investment risk and raise finance at a relatively low cost, to the benefit of sponsor and investor.” The change in attitude towards private sector has necessitated major regulatory reforms, which in turn have created new markets in areas that were previously the preserve of government activity. Government is also willing to provide incentives to encourage private investors in to new sectors. Private investors and lenders were much less willing to support the projects. Project finance offers a means for investors, creditors and other unrelated parties to come together to share to share the costs, risks and other benefits of new investment in an economically efficient and fair manner. “Project finance can provide a strong and transparent structure for projects, and through careful attention to potential risks.”

Patricia Clarke Annez (2006) in their study comparing the subsidies in water sector comments that, no matter how desirable the objective of full cost recovery may be for water, its practicability is questionable. Adding sanitation to the package of services provided, as many utilities do, although coverage is typically lower in developing
countries, makes cost recovery even less feasible or even desirable. The externalities associated with sanitation services imply that some subsidization funded out of general tax revenues is efficient.

Daniel Platz (2009) explores the potential of sub-sovereign bonds in urban infrastructure in developing countries. Based on the US experience, applying a supply and demand side framework for analysis of the market for sub-sovereign bonded debt to developing countries Mexico, India and South Africa. It is suggested that the regulatory environment, a diversified financial sector and increased capacity for debt support and management matter most for the development of the sub-sovereign bond market.

George E. Peterson, (2009) opined that “Land-based financing has become an important element of urban infrastructure finance, especially in locations where cities are growing rapidly. The potential advantages of land finance go beyond the generation of revenue. As part of the mix of capital financing, land-based financing complements borrowing. Most land-financing techniques generate revenue up front, thereby reducing the need for debt and the risks associated with future debt service. Three risks in particular deserve emphasis. Urban land markets are volatile, and recent transactions may reflect a land asset bubble; Land sales often lack transparency and accountability; Special measures may need to be taken to make land-based financing support investment in basic municipal services.

Afeikhena Jerome (2008) opined that, to solve Africa’s infrastructure investment problems, broad institutional reform along with greater financial commitments by governments and the private sector will be required. Private participation in infrastructure requires fiscal reform and improvements in public sector management. It also requires careful attention to the basics of project design, including identifying and allocating risk and ensuring sound procurement practices.

Weiping Wu (2010) the study reveals that effect of urban infrastructure financing on the economic performance in China points to a strong association between infrastructure investment and economic performance and infrastructure investment was justified in both responding to unmet demands from the past and paving the way for future economic growth.
Komives, et al (2005) explores document in detail the state of cost recovery in the water sector across the world. In-spite of reforms in many countries there is widespread subsidies. Patricia Clarke Annez (2006) comparing the subsidies in water sector comments that, no matter how desirable the objective of full cost recovery may be for water, its practicability is questionable. Adding sanitation to the package of services provided, as many utilities do, although coverage is typically lower in developing countries, makes cost recovery even less feasible or even desirable. The externalities associated with sanitation services imply that some subsidization funded out of general tax revenues is efficient.

Key (1993) in his study highlights that chapter credits for infrastructure development by governments are in fact costlier because of cost overruns apathy towards revenue management leading to bad credit rating.

Nevitt (1989) observes that there is a positive relationship amongst efficient delivery management revenue collection and debt management in infrastructure development and management. The studies by IFC (1993) and Pylee (1994) also support the findings of Nevitt.

The World Bank (1994) defines economic infrastructure services as services including those from

- Public utilities – power, telecommunications, piped water supply, sanitation and sewerage, solid waste collection and disposal and piped gas,
- Public works-roads and major dam and canal works for irrigation and drainage,
- Other transport sectors- urban and inter-urban railways, urban transport, ports and waterways, and airports

Parmar.G (2002) defined “Infrastructure can be generally defined as the physical framework of facilities required for providing goods and services to the people. Efficient infrastructure contributes to the economic development both by increasing productivity and by providing amenities, which enhance quality of life. Efficient in infrastructure comprises of all the basic facilities necessary for development and well
being of a country or area. The availability of adequate and efficient infrastructure facilities is vital in accelerating the economic development of any country.”

Mckinder (2000), in his study “Banks and Financial Institutions are main sources of financial markets in the economy of any nation in the world, “For the infrastructure project development in case of BOT (Build, Operate & Transfer) projects, private sector has to arrange funds. Main sources of funds for private sector are banks and financial institutions. But financial institutions and banks also look upon their requirement before funding for the project. Funding criteria for financial institution varies depending upon its policies and procedures. Therefore, it is very important for private sector to study available financial institution varies depending upon its policies and procedures. Therefore, it is very important for private sector to study available financial institute’s funding criteria and funding agreement.

Harrison (1992) alludes to the need for coordinated management “More and more undertakings are involving multiple disciplines and/or multiple companies for their completion. If these undertakings are to be completed successfully, the individual disciplines and companies can no longer take a blinkered, parochial approach and be managed as separate entities. They are inevitably interdependent and interact, and therefore require integration into one project organization.

Kliem and Ludin (1992) in their study draw attention to the complexities of the interactions between the various components of project work and organization, and suggest that “perhaps the best way to see what is meant by the people side of project management is to regard a project as a system”. Morris (1994), enumerates some of these components: "Before one goes very far, discussion of attitudes and commitment, of criticism or communications, leads to project organizational issues such as project leadership, team management, industrial relations, and owner-supplier contractual and organizational relationships."

Lock (1996) stresses the importance of appropriate organisational support for the management of projects, asserting that project managers:"cannot expect to operate effectively alone, without adequate support and cooperation. This obviously includes the willing cooperation of all staff engaged on the project, whether they report to the project manager in the line organization or not. But it also includes support from
higher management in the organization, who must at least ensure the provision of essential finance, accommodation, facilities, equipment, manpower and other resources when they are needed and the availability of suitable clerical or other supporting staff. Just as those working on the project need to be properly motivated, so does the project manager, and supportive higher management who show constructive and helpful interest in the project can go a long way to achieve this.

Adams and Barndt (1988) collected data from "a variety of research efforts using different samples collected at different times over a two-year period". They found, inter alia, that "Individual project organizations tend to be relatively small in the early and late phases of their life cycle, and much larger in the middle phases. As the project progresses in its life cycle, the overall intensity of conflict decreases. The smaller the project, the more closely it resembles the characteristics classically recognized as representing project teams - participative, dynamic, and collegial team efforts. Larger efforts clearly display the characteristics of more bureaucratic organizations."

Baguley (1995) believes that the use of project teams leads to increased involvement and commitment by the participants and better integration with the wider organisation: "The project team is a powerful weapon in the process of managing change and creating the successful project. This can only take place with the support and cooperation of others, and those who attempt to impose change on others put not only the project, but also their future relationship with others, at risk."

Adams and Brandt's (1988) research leads them to offer advice about team construction: "The project team size should be kept as small as possible, consistent with being able to accomplish the tasks; Increased formalization of the project's structure [eg, specialized groups, formal reports, chain of command, specified procedures] should be avoided wherever possible; Team members should be encouraged to work jointly to resolve conflicts in a manner that is best for the project as a whole, rather than for any one team member."

Munns (1995) has examined the effects of trust on work and productivity. He defines two kinds of trust; Global and Specific. "Global trust relates to the universal perception of other people or groups. ... The 'specific' element of trust relates to the
way in which an individual responds to a particular situation". Recent research has concentrated on specific trust, but has tended to study "permanent organisations in which trust has been allowed to develop over a period of time". Munns points out that project are temporary organisations, with people employed on temporary basis, doing something unique. They therefore do not allow enough time for trust to build. Members of the team “cannot experience situational trust when the situation is abstract, which is the case in a temporary environment. The specific component of trust, which relies on the situation, can only be developed as the project team begins to work together and the behaviour of the team members can be assessed".

**Larson and Gobeli (1987)** surveyed 510 members of the [US] Project Management Institute. 30% were project managers or project directors, 16% were top management, 26% were functional managers. Overall, 80% had experience of managing projects. "Over three-quarters of respondents reported that their company had used matrix. Of those who responded yes, 89 per cent felt that matrix would probably or definitely continue to be used. Only 1 per cent reported that matrix would definitely not be used again.". All three forms of matrix were widely used. The project matrix form had been used by over 78% of respondents, functional matrix by 74%, and balanced matrix by 64%. There was a slight bias towards project matrix for smaller firms. 123 respondents had experience of all three forms of matrix. This group rated project matrix highest - between 'effective' and 'highly effective'. Functional matrix was rated 'ineffective', whilst balanced matrix was rated between 'ineffective' and 'effective'. Curiously, "one of the reasons mentioned for dropping matrix was that the organization was too small to sustain a matrix structure. However, when the effectiveness ratings were examined according to size of firm, size had little impact on the ratings".

**Cleland (1994)** explores " one study of the significance of project management structure on the success of 546 development projects” in which “it was found that projects relying on the functional organization or a functional matrix were less successful than those which used a balanced matrix, project matrix, or project team. The project matrix outperformed the balanced matrix in meeting schedule and outperformed the project team in controlling cost."
Lawrence and Lorsch (1967) who studied six organisations in an industry “characterized by relatively rapid technological change and product modification and innovation”. They assessed the degree to which units [subsystems] within each organisation were differentiated from each other “in terms of subsystem formal structures, the members’ goal orientation, members’ time orientations and members’ interpersonal orientations”, and how well integrated the subsystems were into the overall organisation, that is, how well they could cooperate and work together synergistically. The performance of the organisations was assessed using “conventional financial data used by management as measures of performance”. Lawrence and Lorsch concluded that “other things being equal, differentiation and integration are essentially antagonistic, and that one can be obtained only at the expense of the other”. The implications of this for project management are somewhat ambiguous. It appears that Lawrence and Lorsch were not considering specifically project-type situations, but rather the ability of specialist functional units to cooperate. It may be that project-oriented matrix forms are an answer to their observations, rather than an example of them.

Caulkin (1996) observes that, of twenty-three programmes examined by the National Audit Office - "almost all were late [the average slippage was 31 months]" and total overspend came to £700 million. Caulkin cites some examples of well-known projects that overran budget and/or schedule, including: Eurofighter - 3 years late and £1.25 billion overspent [UK liability only]; the British library - "nearly three times dearer than it should have been, still unfinished and without a definite completion date"; the Stock Exchange Taurus project - "embarrassingly aborted"; the London Ambulance computer system, which collapsed disastrously when implemented; and the Channel tunnel, notoriously over-budget.

De Wit, (1988)opined that Just as the traditional ‘Time-Cost-Quality’ triangle has proved inadequate in defining project objectives, so these factors have been found unsatisfactory in assessing the success or failure of projects, a concept which “has remained ambiguously defined both in the project management literature and, indeed, often within the psyches of project managers.”

Pinto and Slevin, (1986). The study reveals that project success must be judged on the outcomes of the project within the recipient organization, and not solely on the
adequate discharge of the ‘contractual’ criteria of budget, performance measurement, and delivery on schedule, is widely supported across the recent literature. "The research conducted by the authors on over 650 projects supports the following definition of success: If the project meets the technical performance specifications and/or mission to be performed, and if there is a high level of satisfaction concerning the project outcome among key people in the parent organization, key people in the client organization, key people in the project team, and key users or clientele of the project effort, the project is considered an overall success."

Baker et al (1988) found that "Technical performance is integrally associated with perceived success of a project, whereas cost and schedule performance are somewhat less intimately associated with perceived success". Satisfaction of people associated with the project was also found to be more important than cost or schedule performance.

Pinto and Slevin (1988) suggest three criteria for project implementation success:
Technical validity - the project "works" or "does what it is purported to do";
Organizational validity - "the project [is] compatible with the needs of the user. ... if the final project is not used by the clients, that implementation effort is viewed as a failure"; and Organizational effectiveness - "once the new project has been given to the clients and is being used, it is contributing to an improved level of organizational effectiveness in the client's organization". Their view is that:

"A project is generally considered to be successfully implemented if it

- Comes in on-schedule [time criterion]
- Comes in on-budget [monetary criterion]
- Achieves basically all the goals originally set for it [effectiveness criterion]
- Is accepted and used by the clients for whom the project is intended [client satisfaction criterion]."

Cleland (1994) takes a broadly similar view:"Project success means that the project has met its cost, schedule, and technical performance objectives and has been integrated into the customer's organization to contribute to the customer's mission. A
successful project means that the organization has been successful in positioning itself for the future; a specific strategy has been designed and implemented."

**The Association for Project Management (1995)** states that "Three basic sets of criteria [on which the relative success or failure of the project may be judged] can be identified:

1. Those of the sponsoring organisation i.e. the owner or user
2. The traditional or classic project management one of 'on time, in budget to specification';
3. The project participants' profitability”

**Kerzner (1989)** modified his earlier definition of project success as “the completion of a project within the constraints of time, cost, and performance” to “include completion:

- Within the allocated time period
- Within the budgeted cost
- At the proper performance or specification level
- With minimum or mutually agreed upon scope changes
- Without disturbing the main work flow of the organization
- Without changing the corporate culture.”

**Lientz and Rea (1995)** point out that to judge by “project on schedule and within budget [is] not as simple as it seems because the budget and schedule may have been changed many times”. They ask whether the end product is in use, and go on to consider “project manager and team performance ... did the project team deal with issues early or as soon as they surfaced? Or, did they fester and get worse? Was management kept informed about the project? What signs were there of misunderstandings.

**Chandrasekhar et.al (2001)** point out in relation to the general data situation in India “while India has a rather large and diverse economic and social database which compares well with the information available in other developing countries, the
information set is characterized by a number of inadequacies”. These inadequacies are problems relating to

- Coverage on account of overlapping populations or definitional variations
- Quality on account of shortfalls in reporting, improper questionnaire design, inadequate concepts & faulty methodologies
- Inter-temporal comparability on account of change in coverage, introduction of new variables
- Lack of timeliness.

Kundu (2001) opined that the problem is “not that data do not exist or not collected with adequate detail or at a sufficient level of dis-aggregation”. The problem really is that much of the information is not systematically compiled, rendered comparable and more easily accessible to potential users. As a consequence, much of the data collected by national or state level data gathering agencies do not become inputs in policy making, planning and academic research. As he points out, “data remains mostly in data-graveyards”. As per the information provided by the Central Public Health Engineering & Environment Organization (CPHEEO), based on data collected from state governments, as on 31st March 1997, 90% of urban population has been provided with water supply facilities and 49% with sewerage and sanitation facilities in the country. The CPHEEO itself warns that the coverage figures indicate only accessibility, and that the adequacy and equitable distribution fall short of the norms. In water supply transmission and distribution networks are of poor quality besides being outdated and badly maintained. Consequently physical losses are typically high, ranging from 25 to over 50%. Low pressures and intermittent supplies lead to back siphoning, resulting in contamination of water in the distribution network. Water is generally available for 2-6 hours a day in most Indian cities.

Solomon Benjamin (2000) the study suggests that an understanding of poverty in cities such as Bangalore (often referred to as India’s Silicon Valley) requires more attention to the governance processes in which different groups compete for public investments and support. It describes the differences between the “local” and the “corporate” economies within Bangalore and their links with government. The local economies provide most of the population (including virtually all poor groups) with
their livelihoods. They mostly develop outside the “master plan” areas, with diverse and complex economies and land tenure forms within which poor groups find accommodation and work. Their links with government are through local government – the City Corporation and its councilors and lower level bureaucracy. The corporate economies include the information technology industries for which Bangalore is well-known. Most of their links with government are with state and national parastatal agencies that control most of Bangalore’s development functions and have access to most government funding. But there is little local representation in these agencies. This profoundly disadvantages poor groups and the local economies in the competition for land, infrastructure and services. Rigid land use controls in the expanding corporate enclave areas exclude most pro-poor economic activity and threaten poorer groups’ fragile claims to land. Poor groups suffer demolition, resettlement, increased land prices and a governance system in which their local representative structure has little power. Meanwhile, the publicly sponsored “mega-projects” in Bangalore do little to support the local economies that are so important for the city’s prosperity; indeed, as this paper describes, many serve to disrupt them.

David H. Folz (2004) the study explores Service Quality and Benchmarking the Performance of Municipal Service show can local officials select benchmarking partners whose best practices have the most potential for applicability and success in improving service performance? This study suggests the process for selecting the most appropriate benchmarking partners and for making fair performance comparisons will be advanced if local officials initially address the issue of what level of input service quality level is desired or can be provided. Using data collected from a national survey, the study presents a framework for measuring service quality for municipal solid waste recycling programs It examines the connection between input service quality and service outcomes and describes the results of analyses of the contextual factors and best practices that distinguish the top recycling performers and potential benchmarking partners in each service-quality class. The study suggests a model for how local officials can use this type of information to select an appropriate benchmarking partner. The study shows that a quality-of-service framework for municipal services can advance local decision making about what citizens and stakeholders expect and will support in terms of input service quality. It also can help
local officials identify benchmarking partners that provide a service at the desired level of quality.

13th The Central Finance Commission (CFC) is required to make recommendations on the measures needed to augment the consolidated fund of a State to supplement the resources of Panchayats and Municipalities in State on basis of recommendations made by the State Finance Commission (SFC) of the State. The Tenth CFC was the first to make a provision for explicitly supporting the local bodies for 1995-2000 periods. As per the 13th CFC Report released in Feb 2010 the grants to local bodies will be now linked to divisible pool rather than ad-hoc grants given by last three CFCs. Total grants to ULBs over five years have been increased from Rs. 4500 crore in 2005-09 to Rs, 23,111 in 2010-2015. Thus, total grants will increase by nearly 4-times. Part of the grants to ULBs will be linked to performance. The report has recognized important role of National Municipal Accounting Manual and Municipal Bonds in municipal finance. There is a lot of focus on property tax improvement and Service Level Benchmarks. Thus, CFC grants will incentivise improvement in revenue base of ULBs and improve their credit worthiness.

Halachmi (1999) in his study there is a case to be made that public administration scholars need to focus even more attention on measuring the quality of public services and determining how managers can use this information to systematically select appropriate partners in a benchmarking process. There are several reasons it may be prudent for local governments to begin a benchmarking quest by considering the initial level of service quality that citizens prefer and are willing to support financially instead of first screening for potential benchmarking partners using various performance criteria. This study investigates two possible questions in particular: (1) whether a higher level of service quality leads to better recycling outcomes generally; and (2) whether there are important policy and community contextual differences that distinguish topper foring jurisdictions in the different quality-of-service Classifications.

Kopczynski and Lombardo (1999) the study reveals that the results of the regression analyses reported and suggest that managers need to consider both the community contextual features and the best practices that characterize top performers in the targeted quality-of service class. For a recycling program, the “best fit “benchmarking partner is the community that offers the best match in terms of popular support for recycling among local residents. Then, local officials can identify the actions needed
to achieve the desired service level and the best practices that appear to have potential for closing a performance gap. Implementation of those actions is followed by monitoring progress in meeting both Service-quality objectives and performance benchmarks.

**Poister and Streib’s (1999)** found that measuring the quality of municipal services and programs is one of the most common difficulties in performance measurement, it seems appropriate and timely for scholars to address this critical concern by suggesting frameworks for classifying the quality of municipal services, thus facilitating performance comparisons for whatever measures of efficiency and outcome effectiveness are agreed upon for a service.

**Chetan Vaidya and Hitesh Vaidya (2008)** in their study Rapid urbanization has increased the demand for urban infrastructure in India. Since public funds for these services are inadequate. Urban organizations have to look for alternative sources for financing their infrastructure needs. Accessing capital markets and PPP have emerged as viable options to finance urban infrastructure. In 1998, the Ahmedabad Municipal Corporation issued India’s first municipal bond without state guarantee to finance a water supply and sewerage project. To boost the municipal bond market, the GOI decided to provide tax-free status to municipal bonds. Only financially strong, large municipal corporations are in a position to directly access capital markets. To help small and medium local bodies to access the market Government of India introduced the concept of pooled financing. The Indo-US FIRE project helped the State Governments of Tamil Nadu and Karnataka issue municipal bonds by pooling municipalities. Based on the success of these two issues, the Government of India introduced a scheme for a Pooled Finance Development Fund that will support small- and medium-sized local bodies to access capital markets. Credit rating of a bond issue provides investors with an independent third-party evaluation of the credit strength or weakness of a particular issue. Over 80 urban local bodies in the country have either obtained a credit rating or are in the process of obtaining one. Several ULBs and utility organizations have issued bonds and have so far mobilized over Rs.12, 000 million through taxable bonds, tax-free bonds and pooled financing. A number of PPP options have emerged and these include: service contracts; performance-based service contract; joint sector company to implement and finance the project; a management contract for operations and maintenance; and construction cum build-operate-transfer
contract. Thus, market access and PPP are important innovations in the financing of urban infrastructure in the country.

Amitabh Kundu (2001) the study analyses the recent trends and structure of urbanization in India, examines the validity of the projections made by various international and national organizations and discusses the implications of the concentration of demographic and economic growth in and around a few large cities. The availability of basic amenities such as water supply, toilets and electricity are analyzed across the states and size class of urban settlements, reflecting an accentuation of regional imbalances. The impact of tapping capital market through a credit rating system and the launching of innovative borrowing instruments by the local authorities are also examined. The author argues that the initiatives for a new system of governance are likely to result in a top-heavy urban structure wherein a few large cities would claim much of the economic activity. Furthermore, it is argued that the recent changes in urban governance, including the Constitutional Amendment, may not effectively empower the smaller bodies, particularly those in the less-developed states, to undertake development responsibilities. The basic contention is that the issues concerning the hierarchy of urban settlements have not received adequate attention in contemporary development research. Given the wide disparity in economic strength of Third World towns and cities and their unequal access to capital market and public institutions, a liberal economic environment would facilitate a few large cities to corner much of the advantages from the system. The indifference on the part of the research community towards issues relating to urban structure is likely to institutionalize the existing inequality and accentuate regional imbalances.

Chetan vaidya(2009) the study reveals that India has to improve its urban areas to achieve objectives of economic development. However, urban governance and management of the services is far from satisfactory. In this context, the Government has launched a reform-linked urban investment program, JNNURM. The paper has analysed urban trends, projected population, service delivery, institutional arrangements, municipal finances, innovative financing, etc. It has also described status of JNNURM. As per population projection for 2026, level of urbanization would be different in various states. India’s future urban strategy should recognize these differences and plan accordingly. India’s future strategy should focus on: (a)
Inter-government transfers with built-in incentives to improve performance; (b) Capacity building of ULBs; (c) Investments on asset creation as well as management; (d) Integrate urban transport with land use planning; (e) Integrate various urban development and related programs at local, state and national levels; (f) Strengthen urban institutions and clarify roles of different organizations; and (g) Second generation of urban reforms should further focus on regulation, innovative financing and PPP, and climate change initiatives; (h) Different approach of supporting reform-linked investments needed for different states based on level of urbanization. It has recommended constitutional amendments as well administrative actions to improve India’s urban areas.

**Estian calitz and Johan Fourie (2007)** the study reveals that distinguish between the payment for and financing of the South African Government’s infrastructure investment programme, against the backdrop of shifting views on the role of government in the provision of infrastructure, developed a classification system that assists in macro planning and in any analysis of the financial implications of project financing and cost recovery at all levels of government. The prospects for mobilising funds other than tax revenue are assessed, namely government loans, private equity, development finance and donor funds.

**Carlos Óscar Arteta(2005)** suggest that a stronger reliance on bond markets relative to banks is associated with somewhat faster output growth during normal times. However, beyond this apparent benefit, countries with stronger bond market- based finance relative to bank finance do not appear to fare any better during crises. This evidence suggests that domestic bond market development may be conducive to growth, but might not necessarily ameliorate the output costs of banking crises

**Feiock and West (1996),** who found that public support for recycling affects policy success, it was hypothesized that cities in which recycling is more popular will have a higher level of service quality and participation. These authors also suggested that recycling is likely to be more popular among higher-income households.

**Rivenbark,Willam (2000).** The study reveals that explicitly addressing the issue of service quality at the outset of the benchmarking process, local officials may be able to deflect skepticism about making unfair performance comparisons and sustain
employee buy-in and support for the benchmarking enterprise. In this study, service quality has two related but distinct dimensions which, for the sake of clarity, are labeled input and output quality. As they are used here, input quality refers to the bundle of service characteristics and features that represent a particular level of service, distinguished by the policies and service infrastructure investment that enable a community to offer a more frequent, extensive, or convenient service for citizens. Output quality refers to the actual service outcomes that citizens experience or to measures of the timeliness, reliability, thoroughness, efficiency, and effectiveness of the service.

1.8 Need for the Study

The project intervention had resulted in the changes of the status of urban infrastructure of the project towns. The assets created should be utilized properly to extend the intended services to the citizens. The study was aimed to analyze the project finances and the service delivery management by the ULBs. The Critical analysis of the project implementation, repayment of loan, impact of project on the finances of the ULBs, service delivery management by the ULBs was required. Review of literature on project financing and service delivery management by urban local bodies, which are assisted by Asian Development Bank as in the case of Karnataka, revealed that an in-depth study was not conducted. Hence the present study was taken up to enquire in to the implications of loan financed by ADB and the effectiveness of service delivery management.

The outcome of the study would be helpful in setting the standards and points at preparedness required at the ULBs level to achieve the desired result. The gap analysis would help to focus on the relevant issue of service delivery which was lost in the argument for asset creation. The study would be helpful in preparing the ground for future projects and framing the policies for effective project financing of and service delivery from infrastructure.
1.9 Objectives of the Study

The study was carried out with the following objectives:

1. To explore the linkages between resources requirement of ULBs and financial assistance from external aided agencies;
2. To examine the impact of project intervention on service delivery;
3. To evaluate the relationship between services and the revenue generation;
4. To examine the impact of time over run on the cost of the Project;
5. To analyze the financial discipline of project ULBs in repayment of loan;
6. To evaluate the financial position of ULBs in the post project scenario;
7. To analyze the perception of the households on Water and Sewerage services; and
8. To offer suggestions based on the findings of the study.

1.10 Hypotheses for the Study

For the present study, following hypotheses are developed:

1. Project intervention has not resulted in uniform water supply services across the Project ULBs.
2. Better water supply services generate better revenues.
3. Water and sewerage projects take longer time than estimated time.
4. The time over run in water supply projects resulted in significant cost over-run.
5. The time over run in sewerage projects not resulted in significant cost over-run.
6. Repayments of water supply projects are not according to scheduled track of repayment.
7. There is significant gap between expected average instalments and dues in sewerage packages.
8. Income generation from water supply services is not higher than the expenditure.

9. Insufficient availability of water not induces extra expenditure.

1.11 Research Methodology

The present study uses descriptive and analytical methods to analyze the concepts and data. The detailed methodology of the study has been given below.

Data Source

The present study has been pursued with primary as well as secondary data.

Collection of Secondary Data

Secondary data were collected from the profiles of the organizations, books, journals, magazines, news papers, internet, published papers, etc. The present scenario was critically analyzed in the light of national/ international experiences backed by literature survey.

The relevant data at the state level were collected and further analyzed. Apart from the usual statistical data collected by the State Agencies, ULBs and the Urban Development Department, relevant details were also collected from the Directorate of Municipal Administration, City Managers Association, and Project Monitoring Unit with the Finance Department, and others.

Collection of Primary Data

Primary data has been collected from the selected project towns of Tumkur and Mysore. The primary data was collected through scheduled questionnaire and used face to face interview method. The purpose of survey was aimed at obtaining information from the field to know the level of service provision to the public and compare it with the bench markings. To collect the data for the purpose of analysis the Likert scale was used.
Sample Design

For the purpose of field survey, given the time and financial constraint, 540 primary samples were selected for the purpose of analysis and the base size of the sample maintained at 30. Each sample of 270 was selected in Tumkur and Mysore. Samples of 90 each from the Developed, Developing and Under Developed area were selected. Further the sample of 30 each of High, Medium and Low income groups were selected for the purpose of analysis. To select the sample units and to limit the samples size the stratified purposive random sampling method was followed. The following flow chart reveals the frame of sample design.

Sample Design

Karnataka

(540)

Tumkur

(270)

Mysore

(270)

Developed

(90)

Developing

(90)

Under-developed

(90)

Developed

(90)

Developing

(90)

Under-developed

(90)

In Each Area

(90)

High Income

(30)

Medium Income

(30)

Low Income

(30)

Note: Numbers in bracket represent number of samples.

Statistical Tools

Relevant statistical tools were used to analyze and interpret the data. The statistical techniques such as t-test, F-test, Chi-square test, Cohort analysis, ratio, percentage, indexes, ANOVA, simple regression models are used; descriptive statistics and graphs are also used to present the information. The results are taken from SPSS 16.0.
Analysis of Data

A separate methodology was developed for each chapter to analyze the data.

The data for the third chapter was collected from the ULBs, project appraisal reports, ADB reports, Karnataka infrastructure development reports and others. In the first section of this chapter descriptive method and in the last section analytical methods are used. The statistical technique t-test is used to identify the significant differences, the cohort analysis was used to locate the towns under high, medium and low functioning categories, ANOVA is used to identify the significant differences among the groups, and indexes are used wherever needed. Descriptive statistics and graphs are also used to present the information.

In the fourth chapter, two ULBs namely, Tumkur and Mysore are selected. Major focus of the study is to examine the efficiency in water supply and sewerage system. Packages under water supply and sewerage components were selected (six water related packages of project and five sewage related packages in Mysore, One water related package and four sewage related packages in Tumkur) are considered and analysed. Analysis is performed from three dimensions i.e., Implementation, Repayment, financial position of ULBs. To analyse the first dimension variables like estimated cost, awarded cost and actual cost of the particular package and estimated time and actual time taken to complete the project are considered. To analyse the second dimension, variables like the repayable amount in each quarter for each package of project and the actual amount paid towards the package of project are considered. To analyse the third dimension, variables like demand of tariff and actual collection along with total receipts and expenditure of the each ULB are considered and analysed. In the course of analysis to make the arguments reliable the statistical techniques like, ratio method, percentage method, coefficient method, t-test, F-test and graphical methods are used.

In the fifth chapter an attempt has been made to analyse the perceptions of house-holds about the water supply and sewerage services. Mysore and Tumkur have been selected for the field study. Mysore and Tumkur are two major ULBs of the ADB assisted projects. To collect the data, face to face interview was conducted with the help of structured questionnaire. The detailed methodology of collecting the
primary data and the analysis of data are detailed above. One sample t-test, F-test, and independent t-test, ANOVA are used to analyze the numeric quantitative data. The chi-square test is used to analyze the qualitative information. The first part of the analysis study will provide general information about house-hold respondents. The next part will analyze the perception of people on water supply and sewerage services in Tumkur and Mysore cities. To present the data crosstab was used.

1.12 Scope of the Study

The study focuses on the project assisted by Asian Development Bank and implemented by Karnataka Urban Infrastructure Development Project (KUIDP) in Mysore and Tumkur ULBs. The ADB assisted project was implemented in six project towns namely, Tumkur, Mysore, Ramanagara, Channapatna, Maddur and Mandya. Water and sewerage system improvement works were implemented in four towns of the project excluding Mandya and Maddur. Out of the remaining four towns, Tumkur and Mysore were purposely selected because exclusive water supply and sewerage works were implemented only in these two ULBs. Therefore, Channapatna and Ramanagara were not considered for the field and financial analysis. For the general analysis all the six ULBs were considered.

1.13 Limitations of the Study

The study focuses mainly on the Water supply and Sewerage systems implemented under the ADB assisted project in Mysore and Tumkur. The secondary time series data ranges from 1995 to 2010. Other than water and sewerage packages like roads, storm water drains, solid waste management, poverty alleviation, street lighting and others have not been considered for the present study. Primary data collection was conducted during 2010; therefore, the perceptions are subject to 2010 only.
1.14 Chapterization Scheme

Chapter-I Introduction

Chapter II- Urbanization and Urban Local Bodies

Chapter III-Project Implementation and Analysis of Efficiency in Service Delivery

Chapter IV-Financial Implications of Project on ULBs

Chapter V-Data Analysis and Interpretation

Chapter-VI-Major Findings Hypotheses Testing Suggestions and Conclusion