

A Study on Evaluating Financing Alternatives for Urban Local Bodies in Karnataka Based on Financial Health and Risk Absorption Capacity

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Abstract

The municipalities are the third tier of the Government after the Union Government and the State Government and they have been vested with additional responsibility under the 74th Constitutional Amendment which includes water & sanitation, roads & bridges, sanitation, slum development, burial grounds, urban planning among many others. The study aims to develop a framework to suggest a suitable source of financing for the ULBs for which 11 Municipal Corporations were studied by using both primary and secondary data. Since the ULBs differ in their revenue structure, one size fits all will not be suitable and this study suggests the alternative framework based on the financial stability of the ULB.

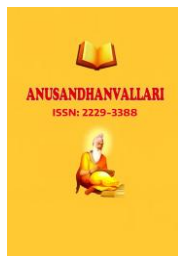
Key Words: Sustainable Financing, Fiscal Health, Infrastructure, Urbanization.

Introduction

Urban development today requires not just effective governance but a strong and sustainable financial backbone. The growth of cities demands investments in infrastructure, services, sustainability, and technology that cannot be met through grants and transfers alone. In Karnataka, while Urban Local Bodies (ULBs) have achieved significant administrative capacity, there remains a deep mismatch between their financial responsibilities and their fiscal autonomy. The need to bridge this gap has led to the design of a differentiated financing framework that classifies ULBs based on their financial readiness, revenue capacity, institutional competence, and risk-bearing ability.

The approach adopted in this framework moves away from the outdated ‘one-size-fits-all’ financing model. It recognizes that different ULBs face different challenges, and financial instruments must match each ULB’s maturity level. This document presents a detailed financial analysis of 11 ULBs in Karnataka, mapping their financial positions, exploring the most suitable financing options, and proposing a phased, risk-aligned roadmap for sustainable financial evolution. While ULBs may appear similar in administrative structure, their financial realities differ significantly. Several factors must be considered while evaluating financing readiness:

- The proportion of own-source revenue in total income.
- The capacity and efficiency of property tax collections.
- The use of GIS technology in tax base management.
- Adherence to KMABR accounting standards.
- Financial disclosure practices and audit compliance.
- Debt market exposure and debt servicing capacity.



- Staff competence in financial management and alternative financing models.

Failure to recognize these distinctions can lead to financial stress, unsustainable debt, and project failures if complex financing models are introduced prematurely. This framework offers a risk-calibrated model that ensures ULBs grow financially in line with their capacity while protecting fiscal stability.

The existing sources of fund are not sufficient considering the rapid urbanization and the vision of building world class infrastructure. This is also in line with the Viksit Bharat 2047. Hence there is urge to look for innovative source of finance to fullfil the Viksit Bharat mission.

It is pertinent to use and integrate new financial management ideas and tools to control their costs, identify new revenue sources, and improve local tax collection. In addition, local governments have potential access to large sources of external funding, though they often do not know how to tap them.

The unprecedented lockdown also had severe impact on the revenues of the municipalities own revenue as the ULBs were at the forefront of fighting the covid 19 battle. Hence a robust financing is pertinent to build world class infrastructure and also maintaining the existing infrastructure.

Review Of Literature

Agua, P. B., & Mendes, P. M. (2021) In Project Finance there is limited or no recourse over the sponsor's assets and so investors rely on future cash flows for profitability. However, most investors still decide based on the Net Present Value (NPV) of an opportunity, and use risk-adjusted discount rates to cope with uncertainty. This additional mark-up can ultimately turn down an otherwise profitable venture. By making the continuous-time behaviour of cash flows visible, simulation models based on System Dynamics avoids these drawbacks and provides a method to assess and manage financial risks that takes growth into account.

Enzo Scannella (2012) observes that the development of new financing models for project finance is likely to attract private sector investor to finance large European energy infrastructure projects in a difficult public financial context. The project bond could be a useful long-term financial instrument to mobilise the necessary financing to meet EU's strategic energy infrastructure needs.

Teresa SZOT-GABRYŚ (2013) observes that Project finance creates a new business entity i.e. Special Purpose Vehicle which will manage the undertaken project on behalf of investors in the investment stage, then in the stage of exploitation of its current, operational activity in order to carry out an intended investment project. It facilitates the analysis of conditions of project performance and its financial effectiveness; whereas, legal and economic isolation from its owners limits project-related investor risk.

Bekhzod Yusupov, Azrai Abdullah (2014) In light of the continuous growth of the industry and increasing demand for funds, new funding structures and innovative financing instruments will continue to evolve. Project finance is one of the most effective practices in risky environments. Research studies and practical experience show that project finance could be an efficient risk mitigation tool and directly impact the development of a whole economy.

John K.M.Mawutor1 &Obeng Kwadwo (2014) Multinational companies in emerging countries use project finance to reduce their exposure by transferring their risks to other stakeholders. The risk associated with the project should be studied by practitioners and academicians to reduce the risk exposures to the various parties.

Z. Stoyanova, Petkova (2017) states that Regulation (EC) No 1083/2006 is essential for project financing in the water sector. In Art. 57 of the Regulation are set out a conditions for ensuring the sustainability of the operations and the contribution of the Funds as well as the specificities related to the financing of revenue-generating projects. This Regulation is important because it is related to project selection conditions, the conditions for

determination the sustainability of the investment in the development of the cost benefit analysis. In this regard it is connected with water projects because they require preparation a cost benefit analysis that is mandatory.

Jakob Müllner (2017) Project Finance (PF) loan is awarded to a separate project company that is financially and organizationally separated from the sponsoring firms. Second, in true PF, banks relinquish the right to recover the loans from the equity sponsors in the event of default. Loan securitization is based solely on the projected cash-flows of the project and not on the creditworthiness of the investing sponsors. As a result, banks take on extensive risks related to the non-performance of the project.

Sisira Lohawiboonkij (2019) Project finance is the most preferred financing alternative for infrastructure projects in developing countries, followed by municipal bonds, government funding and forfeiting model come as the third best options. The least preferred alternative is bank loans due to the conservative and limited lending capacity of banks and tight tenor limit.

Agua, P. B., & Mendes, P. M. (2021) In Project Finance there is limited or no recourse over the sponsor's assets and so investors rely on future cash flows for profitability. However, most investors still decide based on the Net Present Value (NPV) of an opportunity, and use risk-adjusted discount rates to cope with uncertainty. This additional mark-up can ultimately turn down an otherwise profitable venture. By making the continuous-time behaviour of cash flows visible, simulation models based on System Dynamics avoids these drawbacks and provides a method to assess and manage financial risks that takes growth into account.

Ministry of Urban Development, GoI (2017) At the time of initiation of the project the project rules and regulation governing value Capture in the State need to be studied and possibilities of applying existing VCF methods has to be examined. If the existing VCF tools are inadequate, new VCF tools could be proposed.

Ramakrishna Nallathiga (2017) An inventory of land use has to be prepared and prioritisation of public land which is in excess can be done and it can be shown on map showing the size of land parcel, current use, development potential and the commercial/real estate value of land parcel.

Strategic Government Advisory (SGA), YES BANK (2017) Tax Incremental Financing can be leveraged to channelize funds for infrastructure development. Through this mechanism, ULBs can divert future enhanced property tax proceeds to finance urban infrastructure development projects.

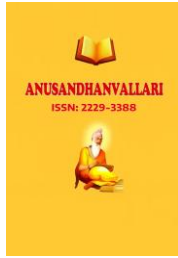
Mishra, Alok Kumar, Abhishek Malhotra and Iti Vyas (2020) Tax Incremental Financing (TIF) approach is very relevant for cities in India because, while most cities suffer from a lack of current revenue surplus to finance worthwhile development projects on a 'pay-as you-go' principle, they can still bank on future tax increments due to innovative urban planning and implementation of value-creating projects, innovatively structured.

Alan Fuchs, Gail Hurley and Arthur Minsat (2012) Additional finance should be continuous, predictable and sustained to enable long-term planning and strategic action. Global and domestic financing to move to a lower carbon pathway should be prioritized, and simultaneously tapped by development finance practitioners.

Ibrahim Abdel Gelil (2018) Green bonds are a good example of impact investments debt instruments issued to raise capital to fund specific clean power projects or projects aimed at reducing climate change risk such as wind farms, solar parks, energy efficient technologies, smart grid installations, electric vehicles and infrastructure, and green building systems.

Research Problem

With the migration of people from the rural areas to the urban areas in search of better employment opportunities, quality education also the industries being massively concentrated in the urban areas there is massive requirement of funds for building world class infrastructure and also maintaining the existing infrastructure. The existing source of finance is inadequate and hence there is an urgent need to look for alternative source of finance based on the risk bearing capacity of the ULBs.



Research Gap

There are various studies on alternative sources of finances which are mostly generic in nature, there is no specific study on which source would be suitable for Karnataka, considering the local needs, risk bearing capacity and the financial position of the ULBs. The present study aims to suggest suitable financing options for ULBs in karnataka based on their financial position and risk-bearing capacity

Research Questions

What are the alternative sources of finance available for the ULBs in addition to the existing source of finance.

What is the present financial status of the ULB.

What would be the suitable source of finance for the ULB based on their risk bearing capacity.

Research Objective

To study the alternative sources of finance for the Urban Local Bodies

To study the financial health of the Urban Local Bodies

To suggest a suitable source of finance for the Urban Local Bodies.

To develop a framework for suitable source of financing of the Urban Local Bodies.

Research Methodology

The study is based on both primary and secondary data for which 11 City Corporations were considered. The secondary data was collected from the audited accounts of the ULBs , CAG reports, Finance Commission Reports, whereas primary data was collected through the questionnaire which were rolled out to the Municipal commissioners also few were contacted over the phone.

Table Showing Financial Health of Urban Local Bodies:

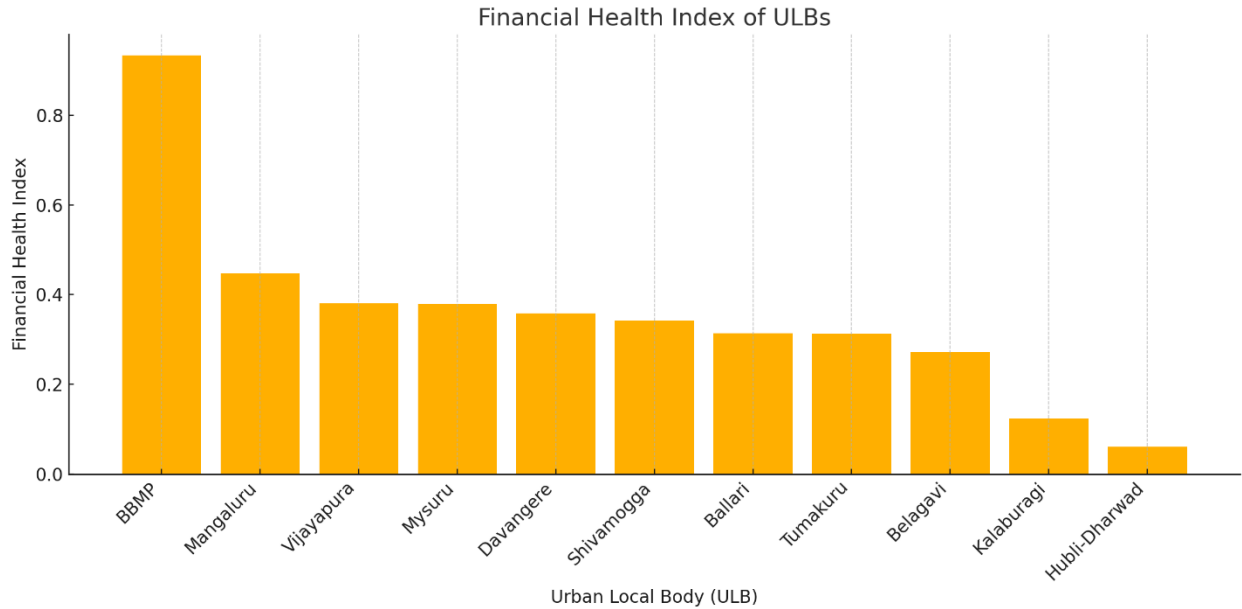
ULB	Avg_Achievement_Ratio	CV_Achievement_Ratio	Avg_Capital_Expenditure_Ratio	Total_Own_Revenue	Total_Revenue_Expenditure	Total_Capital_Expenditure	Financial_Health_Index
BBMP	161.798	72.072	59.031	4098621.278	3694211.198	5322845.992	0.934
Mangaluru	87.717	16.928	63.098	100504.928	113740.376	194483.672	0.447

Vijaya pura	54.728	34.94	66.103	21659.734	38614.354	75301.963	0.38
Mysur u	70.134	16.659	59.374	273803.483	391197.92 3	571720.508	0.379
Davan gere	55.403	25.22	63.535	26306.303	52525.155	91519.366	0.358
Shiva mogg a	50.788	25.99	63.075	25858.57	49380.42	84352.099	0.342
Ballar i	46.256	38.858	61.497	18823.91	45873.014	73266.973	0.314
Tuma kuru	49.124	10.638	60.327	27739.37	55875.559	84963.909	0.312
Belag avi	37.371	27.009	59.246	34513.883	92153.232	133965.662	0.271
Kalab uragi	40.542	12.86	42.437	51498.214	126828.98 5	93501.151	0.124
Hubli- Dhar wad	55.618	15.059	30.404	156142.849	281934.76 3	123167.816	0.06

Interpretation:

The financial health analysis of Urban Local Bodies (ULBs) in Karnataka reveals significant disparities in performance, with BBMP emerging as the strongest municipality across all key indicators. BBMP demonstrates exceptional financial self-sufficiency, achieving a 162% cost recovery from its own revenue sources and topping the Financial Health Index (FHI) at 0.934. Mangaluru and Vijayapura follow distantly, showing relatively strong capital expenditure ratios and moderate revenue performance. ULBs like Mysuru, Davangere, and Shivamogga fall into the moderate performance category, maintaining a fair balance between revenue generation and capital investment. In contrast, ULBs such as Ballari, Tumakuru, Belagavi, and Kalaburagi are characterized by low own-source revenues and poor cost recovery, indicating high dependency on external grants. Kalaburagi and Hubli-Dharwad, in particular, show alarmingly low FHI scores (0.124 and 0.060 respectively), suggesting a critical need for financial strengthening and governance reforms. Overall, while some ULBs exhibit readiness to invest in infrastructure, many lack the financial foundation to sustain such development, highlighting the importance of internal revenue mobilization and fiscal autonomy.

Graph Showing Financial Health of Urban Local Bodies:



Interpretation:

The bar chart titled "*Financial Health Index of ULBs*" visually highlights the comparative financial performance of Urban Local Bodies (ULBs) in Karnataka. It clearly shows that BBMP significantly outperforms all other ULBs, with a Financial Health Index (FHI) nearing 0.93, making it a benchmark for municipal financial sustainability. Mangaluru, Vijayapura, and Mysuru follow at a much lower tier, indicating moderate financial health. Most other ULBs, including Ballari, Tumakuru, Belagavi, and Kalaburagi, exhibit low FHI scores, with Hubli-Dharwad showing the weakest performance. The declining trend from left to right reflects a consistent drop in financial resilience, self-reliance, and revenue-generating capacity. This visualization reinforces the need for targeted financial reforms and capacity building in lower-performing ULBs to bridge the wide gap from the benchmark set by BBMP.

Municipality	Revenue Receipts Trend	CAGR (Revenue)	Expenditure Trend	CAGR (Expenditure)
BBMP	Significant increase from ₹2,140.73 Cr to ₹385,168.94 Cr	141.50%	Highly variable, peaked at ₹637,917.59 Cr in 2020-21	30.80%
Hubli-Dharwad	Steady increase with peak in 2019-20, then decline and recovery	66.20%	Fluctuating with overall increase	62.60%
Mysuru	Consistent growth with jump in 2019-20	9.00%	Steady increase	7.40%
Mangaluru	Growth until 2020-21, then	-11.60%	Fluctuating with slight overall	-1.30%

	sharp decline		decrease	
Kalaburagi	Gradual increase with peak in 2019-20	10.80%	Consistent growth	11.10%
Belagavi	Variable growth with peak in 2019-20	9.70%	Fluctuating with overall increase	11.60%
Davangere	Steady increase	11.90%	Strong growth	23.50%
Ballari	Growth until 2019-20, then sharp decline	-9.00%	Consistent increase	22.60%
Vijayapura	Growth with peak in 2020-21, then decline	14.00%	Fluctuating with moderate growth	11.80%
Shivamogga	Steady growth with jump in 2021-22	33.60%	Variable but increasing	21.90%
Tumakuru	Consistent growth	13.60%	Steady increase	11.10%

ANALYSIS

The financial performance of municipalities varies significantly. BBMP shows an exceptional rise in revenue (CAGR 141.5%) but faces fluctuating expenditure trends, peaking in 2020-21. Hubli-Dharwad and Mysuru demonstrate steady revenue growth, while Mangaluru and Ballari witness sharp declines post-2020-21. Cities like Kalaburagi, Belagavi, and Davangere maintain stable growth, whereas Shivamogga records a remarkable revenue CAGR of 33.6%. Tumakuru shows consistent upward trends in both revenue (13.6%) and expenditure (11.1%). High expenditure fluctuations indicate financial instability in some municipalities, requiring better fiscal management. suggests fluctuating investment trends, while Tumakuru and Ballari maintain stability.

Descriptive Statistics shows the alternative sources of funds

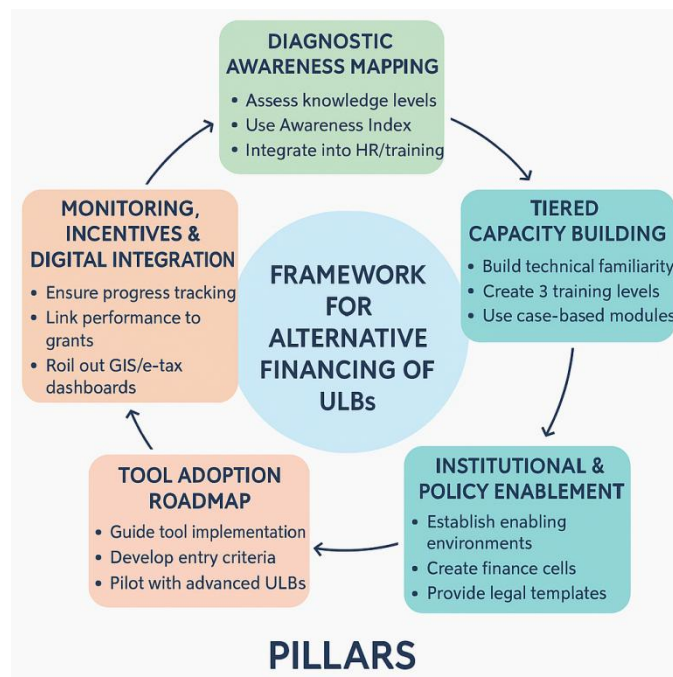
	N	Mean	SD	Skewness		Kurtosis	
				Skewness	SE	Kurtosis	SE
Municipal_Bonds	152	3.17	0.875	0.1999	0.197	-0.496	0.391
Tax_increment_financing	152	4.12	1.317	0.0432	0.197	-1.065	0.391
Value_capture_financing	152	3.34	1.169	0.3376	0.197	-0.4768	0.391
Land_Based_financing	152	2.66	1.251	0.283	0.197	-0.8444	0.391
Project_finance	152	3.51	1.302	0.4178	0.197	-0.828	0.391

Public_private_partnership	152	2.72	1.402	0.3271	0.197	-1.189	0.391
Green_bonds_climate_bonds	152	2.52	1.01	0.2975	0.197	0.0128	0.391

ANALYSIS

Among alternative funding sources, tax increment financing has the highest mean (4.12), indicating frequent use. Municipal bonds (3.17), project finance (3.51), and value capture financing (3.34) also show moderate reliance. Skewness and kurtosis values suggest that these sources are relatively well-distributed, though land-based financing and public-private partnerships exhibit moderate variation. Overall, alternative funding mechanisms are being utilized, though reliance varies across categories.

Framework for Alternative Financing of ULBs: A Tiered and Evidence-Based Approach



The proposed framework, visually presented as a structured, multi-stage flowchart, is a direct response to the findings of Objective 4 and the core challenges identified in your empirical data. It is designed to translate awareness into implementation, ensuring that Urban Local Bodies (ULBs) can systematically adopt and sustain alternative sources of finance tailored to their unique capacities and constraints.

Findings And Suggestion

It builds from the ground up—starting with awareness—and scales through structured learning, institutional strengthening, and strategic financing decisions, all the way to performance tracking and digital integration. It is rooted in the lived realities of ULBs, validated by empirical evidence, and designed with the flexibility and



robustness necessary to enable India's urban local bodies to transition from dependency to self-sufficiency in financial governance. Thus, the framework under Objective 4 not only addresses existing gaps but also lays a strong foundation for resilient, responsive, and resourceful urban governance in the years ahead.

Conclusion

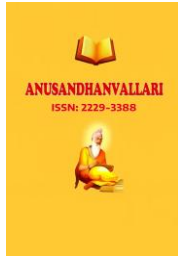
Karnataka's urban finance architecture is currently at an inflection point. The diversity of ULB financial positions demands an equally diversified financing strategy that balances fiscal innovation with institutional caution. This framework allows Karnataka's ULBs to safely evolve from grant-dependent financial systems toward independent market-based financing structures while avoiding systemic financial risks. BBMP, owing to its revenue base and institutional capacity, is market-ready for municipal and green bonds. The other 10 ULBs require careful phased exposure to alternative financing instruments such as TIF, VCF, PPPs, and Project Finance under controlled environments backed by state-level support systems. By implementing this framework with strong legal, institutional, and policy backing, Karnataka can build one of India's most advanced, resilient, and fiscally responsible urban financial ecosystems over the coming decade.

Future Scope For Study

The financial structure of the ULB is dynamic and requires regular overhaul to maintain sustainable source of finance, also the funds for infrastructure development in enormous for which a regular study will be essential to understand the ever evolving landscape of the municipalities. The future researcher can explore a more efficient sustainable source of finance to suit the changing landscape.

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