

**Study of Norms Based
Devolution for Urban Local
Bodies - A Phased Approach for
Tamil Nadu**

DRAFT REPORT

**Submitted to the Fifth State Finance
Commission**

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Contents

1. Executive Summary.....	4
2. Study Context, Objectives and Approach	6
3. Global Practices.....	8
4. Framework for Entry Points for Norms into Devolution.....	14
5. Overview of Current Devolution Framework.....	16
6. Analysis of ULB Financials	20
7. Entry Points for Norms Based Devolution	27
8. Recommendations	39
9. Computed Capital Gap Index for ULBs.....	40
10. Computed Revenue Potential Index for ULBs	56
11. Annexures.....	72

11

11

11

11

11

1.Executive Summary

Tamil Nadu has emerged as the most urbanised State and as per the Socio Economic and Caste Census 2011. This trend is expected to continue, and Urban Local Bodies (ULBs) are expected to witness significant inflow of migrant population, in turn creating both opportunities and challenges for local bodies. While there are a number of avenues of resource raising for ULBs, the devolution of funds from the State through the State Finance Commission remains a key source of funding for ULBs. While devolution offers an equalization channel to adjust for inherent disadvantages, it also offers a powerful avenue to recognize both inherent characteristics and local jurisdiction efforts to incentivize performance. Hence, devolution needs to be accompanied by a transparent and relevant set of norms which capture contextual and effort linked dimensions of local finance. In this context, the Fifth SFC has commissioned this study to assess potential entry points for Norms Based Devolution

The study starts with a summary of key objectives and the approach used for the same. This is followed by a roundup of global practices around norms in devolution (equalization), with a deep dive into Australia's model of devolution, which has both cost and revenue indexation components built in. The recommendations of the 14th CFC and the 4th SFC pertinent to norms based devolution are studied, in conjunction with trend analysis of ULB financials over the past five years. This culminates in a set of focus areas for entry of norms into devolution for ULBs in Tamil Nadu, which are then validated through a combination of secondary data analysis¹ and validation through primary interactions with a cross section of stakeholders in the ecosystem

The study identifies two near term and two midterm recommendations for greater involvement of norms in devolution. The near term recommendations are inclusion of a "Capital Gap Index" and a "Revenue Potential Index" to respectively accommodate for the incremental investments required for creating a level playing field in terms of service delivery for horizontal devolution in ULBs (at a Municipal Corporation, Municipality and Town Panchayat level), and to adjust for ULB's factor advantages in terms of the assessee base and ability to charge for key own revenue heads, especially property taxes. These two recommendations are accompanied by full index sets (capital gap index and revenue potential index in Section 9 and Section 10 respectively) for all ULBs, calculated based on the methodology explained in

¹predominantly using SFC data for both ULB financials, as well as needs and aspiration from ULBs

Section 7. The focus of these recommendations is towards immediate implementation and entry pathways for norms, based on existing data.

The midterm recommendations include simplification of the O&MGF and the IGF appraisal criteria to enhance the equity in availment of such funds (especially for smaller ULBs), and pilot testing low cost models for collection of outcome based indicators. Such an assessment would not only help evaluate the needs and self-financing potential of ULBs, but also to identify and reward ULBs for enhanced transformation efficiencies in conversion of inputs into service level outcomes. Two specific channels for such outcome based assessment are highlighted for rollout in the midterm. The focus of these recommendations is to create an enabling ecosystem in the mid-term for collection of data to facilitate incorporation of more advanced norms into the devolution schema

2. Study Context, Objectives and Approach

Managing efficient urbanisation is critical for ensuring that India remains on high growth trajectory and such growth is sustainable as well as inclusive. Cities as agencies through which development objectives can be met was realised post the 74th Constitutional Amendment and with the launch of Jawaharlal Nehru Urban Renewal Mission (JNNURM), and more recently the Smart Cities Mission (SCM) and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT). As the structural transformation of Indian economy is underway which essentially means inter-alia a significant shift in its occupational structure in favour of non-farm employment, managing Indian urban space has emerged as a key priority area for all the stakeholders, to make cities as engines of economic growth. The report of the High Power Executive Committee (HPEC, 2011) estimated that by 2031, India will have more than 87 metropolitan areas and the country's urban population is likely to soar to over 600 million, adding about 225 million people to present urban population.

Tamil Nadu is the most urbanized State in India. Moving ahead of both Gujarat and Maharashtra, Tamil Nadu has emerged as the most urbanised State and as per the Socio Economic and Caste Census 2011. Of the total households in the State 42.47 per cent (48.45 per cent of population) in are urban areas. This trend is expected to continue, and Urban Local Bodies (ULBs) are expected to witness significant inflow of migrant population, in turn creating both opportunities and challenges for local bodies. While there are a number of avenues of resource raising for ULBs, the devolution of funds from the State through the State Finance Commission remains a key source of funding for ULBs. Structurally, the SFC devolution continues to be a key component in ULBs expenditure. It accounts for ~ 30% of the total expenditure for Town Panchayats, ~ 27% for Municipalities and ~ 20% for Municipal Corporations.

Devolution entails a transfer of fiscal resources across jurisdictions with the aim of offsetting differences in revenue raising capacity or public service cost. Its principal objective is to allow sub-central governments to provide their citizens with similar sets of public services at a similar tax burden even if incomes differ across areas. Fiscal devolution can be seen as the natural companion to fiscal decentralisation as it aims at correcting potential imbalances resulting from sub-central autonomy. It aims at reducing or eliminating differences in net fiscal benefit, i.e. the benefits that the public sector provides otherwise identical households residing in different jurisdictions. Net fiscal benefit is the difference between the utility households derive from consuming public services and the taxes they pay for producing these services, standardised to take differences in preferences and tax rates into account.

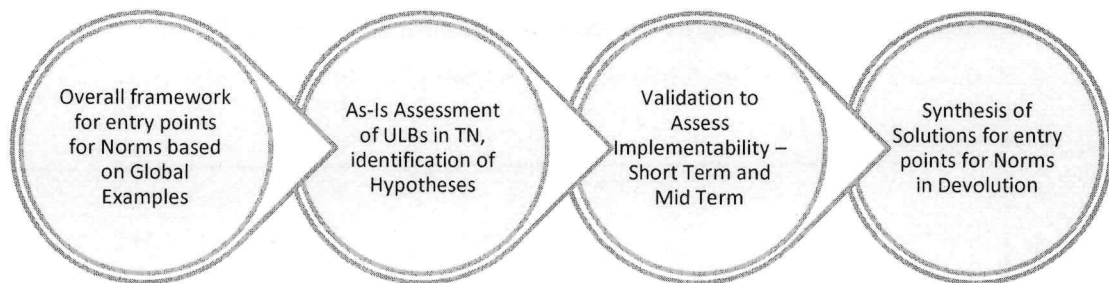
Unlike interpersonal redistribution, devolution is not concerned with differences in individual household income but with differences in access to public services in a geographical sense. It has three objectives

- Equity: the primary objective of decentralization is horizontal equity among the residents of different jurisdictions, i.e. ensuring that, subject to local preferences, all persons or firms can obtain comparable public services at comparable tax rates.
- Efficiency: Decentralization may correct for inefficiencies that might arise if households or firms choose their location based on fiscal rather than productivity considerations. However, it may also reduce labour mobility and local governments incentives to develop their economic and fiscal base.
- Stability: Decentralization may help support macroeconomic stabilization and insure regions against asymmetric shocks they may not be able to cope with if left alone. However, it can also exacerbate cyclical movements and jeopardise fiscal stability.

While devolution offers an equalization channel to adjust for inherent disadvantages, it also offers a powerful avenue to recognize both inherent characteristics and local jurisdiction efforts to incentivize performance. Hence, devolution needs to be accompanied by a transparent and relevant set of norms which capture contextual and effort linked dimensions of local finance. In this context, the Fifth SFC has commissioned this study to assess potential entry points for Norms Based Devolution. The study assesses the current devolution framework in Tamil Nadu, evaluates options for financing infrastructure creation and service delivery by ULB in key gaps with reference to norms applicable by Union / State Government, overviews the different models of Norms Based Devolution (NBDs) from global experiences and tries to answer questions such as 'How effective is NBD in enhancing quality of public expenditure? Does NBD improve local body accountability and efficiency in resource allocation and use? Does NBD augur a bottom-up planning approach?' etc. It also seeks to assess key challenges/risks associated with implementing norms based financing – including those posed by political economy and propose a risk mitigation/management strategy through appropriate policy, regulatory and institutional interventions

Towards this mandate, we have taken an approach (illustrated below), involving development of a framework for identification of potential entry points for norms into devolution, evaluation of global experiences on norms based devolution, assessment of key issues and fitment in the Tamil Nadu context, identification of hypotheses on entry points for norms and validation of the same through a combination of secondary and primary analysis (with a cross section of respondents in the ecosystem).

The study culminates in synthesis of recommendations to enable greater penetration of norms into devolution, both in the short and medium term



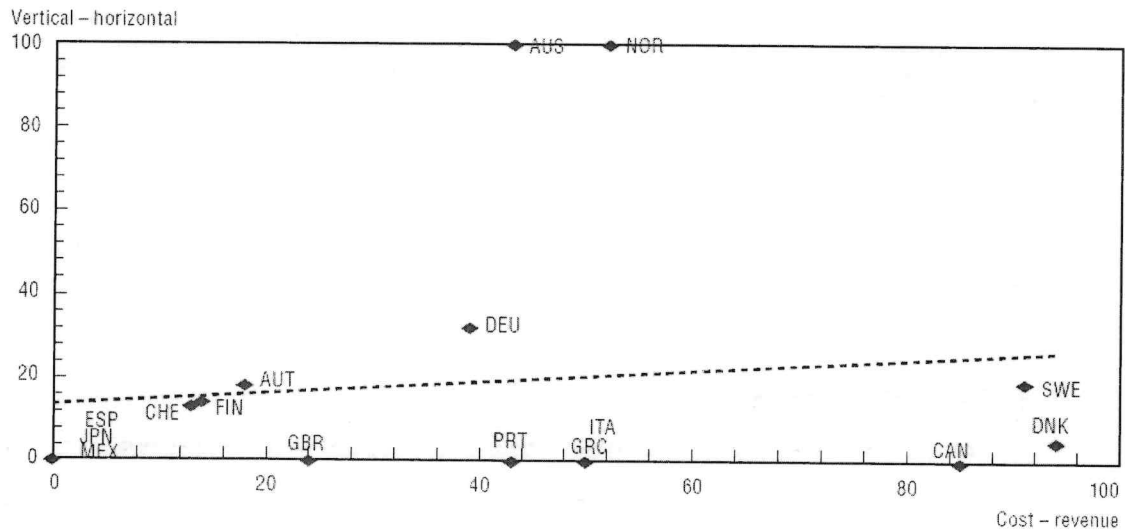
3.Global Practices

The central features of fiscal equalisation systems can be assessed using a few key variables (Dafflon and Vaillancourt, 2002). These include the size of transfers relative to GDP, government expenditure, intergovernmental transfers or population; the type of disparity or inequality the systems is tackling, i.e. differences in revenue or in cost; or to what extent fiscal equalisation is part of the wider fiscal federal framework such as tax sharing arrangements. The variety of equalisation arrangements can be best captured by a taxonomy reflecting the direction of equalisation transfers – horizontal versus vertical – and the type of disparity equalised – revenue versus cost equalisation.

- The first distinction is between horizontal and vertical equalisation. In horizontal equalisation arrangements payments are transferred between sub-central governments, while in vertical or “gap filling” arrangements equalisation payments are transferred from the central government to sub-central governments.
- The second distinction is between revenue and cost equalisation. Revenue equalisation aims at reducing differences in a jurisdiction’s per capita revenue raising capacity, while cost equalisation aims at reducing differences in the per capita cost of providing a standard set of public services. Cost difference can be differentiated into whether they are due to needs (a

higher level of a particular service is required per capita) or higher unit cost (a particular service is more expensive per unit in one jurisdiction than another).

Profiling OECD countries on nature of devolution/ equalization arrangements



Source: OECD report on fiscal equalization (2010)

Globally, in federal countries, equalization payments account for a significant share of overall budget, though that number is higher in developing countries. Typically, the effect of equalization is substantial, with the coefficient of variation of fiscal capacity (estimated as the resource availability per capita) before and after transfers decreasing by almost two thirds.

#	Country	% of GDP (Govt. Budget)	Cost & Revenue Equalization	Variation (Pre - Post)	Gini (Pre - Post)
1	Australia	0.5% (1.4%)	Joint	16.8	5
2	Austria	3.8% (7.6%)	Separate		
3	Canada	1% (2.5%)	Separate	9.7	3
4	Germany	2% (4.2%)	Separate	10.3	4
5	Italy	3% (6.3%)	Separate	33	11
6	Spain	3% (7.6%)	Cost only	16.4	11
7	Switzerland	3% (8.2%)	Separate	8.7	4

Cost and Revenue Equalization are two key models used globally for devolution. Most jurisdictions focus on cost equalization for vertical devolution and revenue equalization for horizontal devolution. Since we are looking at devolution from a ULB perspective, it is instructive to evaluate more closely the Cost based vs. Revenue based models of devolution.

- Revenue equalisation addresses differences in sub-central tax raising capacity. An account of revenue equalisation is given in Table 3. Most revenue equalisation systems are of the horizontal or “solidarity” type. In general Representative Tax Systems (RTS) with a standardised tax base are used to assess revenue raising capacity, but in a few countries actual tax revenue is used. Most transfers are closed-ended, i.e. there is a ceiling on the total quantum of grants, or total funds are determined by tax sharing formulas. The “marginal equalisation rate”, (or “equalisation tax”, “tax back” or “compensation rate”), i.e. the amount of equalization grants a local government loses if it increases its own tax revenue, varies considerably across countries; however, on average sub-central jurisdictions have to dedicate more than 70% of additional tax revenue to equalisation.
- Cost equalisation addresses two forms of cost differences. The first refers to the unit cost for providing a certain service – e.g. maintaining one road kilometre is more expensive in the mountains than in the plain – and the second refers to needs – e.g. more elderly care is required in a jurisdiction where the population is older. The two sources of cost variations are sometimes difficult to distinguish, as both finally lead to differences in the per capita cost for service provision. Most countries have developed cost indicator systems that take both differences in unit cost and differences in need into account, usually distinguishing between “geographic indicators” – reflecting unit cost differences due to topography – and “socio-economic indicators”, reflecting differences in need due to a local government’s social structure. Unlike revenue equalisation, cost equalisation is vertical in most countries, i.e. central government often fine-tunes subcentral public service delivery. While most countries today use standard cost type equalisation formulae, in several countries equalisation is based on historical or actual expenditure. In most unitary countries cost equalisation is closed-ended while in many federal countries it is open-ended, and indeed cost equalisation tends to occupy a larger share of government expenditure in the latter than in the former.

Of federally structured countries, Australia presents an interesting case study of implementation of norms based devolution focusing on both cost and revenue equalisation angles. Over the coming pages,

we attempt to summarize key features of devolution in Australia, with implications for the Tamil Nadu context.

Case Study – Devolution Model in Australia

The Commonwealth's Local Government (Financial Assistance) Act was passed in 1995 that sought to achieve the following key objectives:

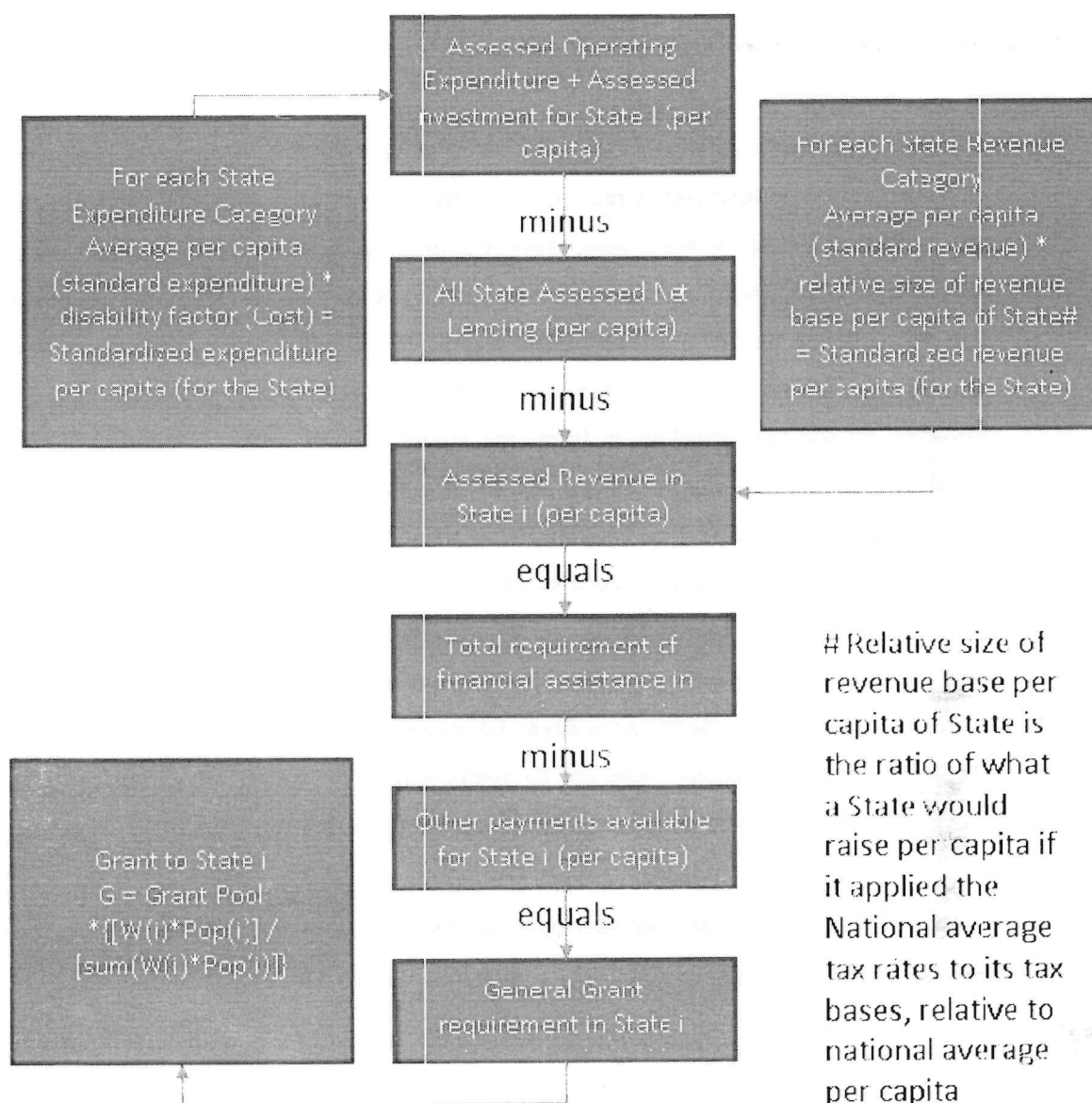
- To increase the transparency and accountability of methodologies used in allocating the Australian Government's grants to local governing bodies
- To promote consistency in the methods by which grants are allocated to achieve equitable levels of services by local governing bodies

These objectives are sought to be achieved under the following overarching principles

- Full Horizontal Equalization: General purpose grants to LBs are allocated on full equalization basis to ensure that service standards can be homogenous.
- Structural Adjustments: Factors in cost of service and revenue raising capacity, customized to specific issues (e.g. geology, demographic, property value etc.) through elaborate formula (Revenue and Cost Relativity Indices)
- Minimum grants: Every local governing body in the state is entitled to a minimum grant under the National Principles. This minimum grant is of 30 per cent of the general purpose pool distributed on a per capita basis
- Effort Neutral: This means as far as practicable, policies of individual local governing bodies in terms of expenditure and revenue effort (good or bad) will not affect the grant determination

The devolution formula hence takes into account two important aspects – adjustment for cost to serve across various jurisdictions, and revenue raising ability normalization. While the former is calculated through a detailed cost calculation of individual services (e.g. roads, water supply etc.) at a local body level, the latter is calculated by assuming the system's average tax rates for each local body, in line with the philosophy of "effort neutrality". The same is illustrated in the flow chart in the next page

Step by Step Methodology for Devolution – Australia



Source: Tax Devolution and Intergovernmental Transfer Policy Options in a Budgetary Crisis: Lessons from Australia – Journal of Tax Research

The detailed institutional structure and coordination arrangements to facilitate the above process is presented in the annexure. This lays out key stakeholders, their roles and responsibilities and information flows between them. It is important to note that such a clearly drawn out institutional structure is an essential dependency for implementation of such a devolution model

Inferences and implications for Tamil Nadu

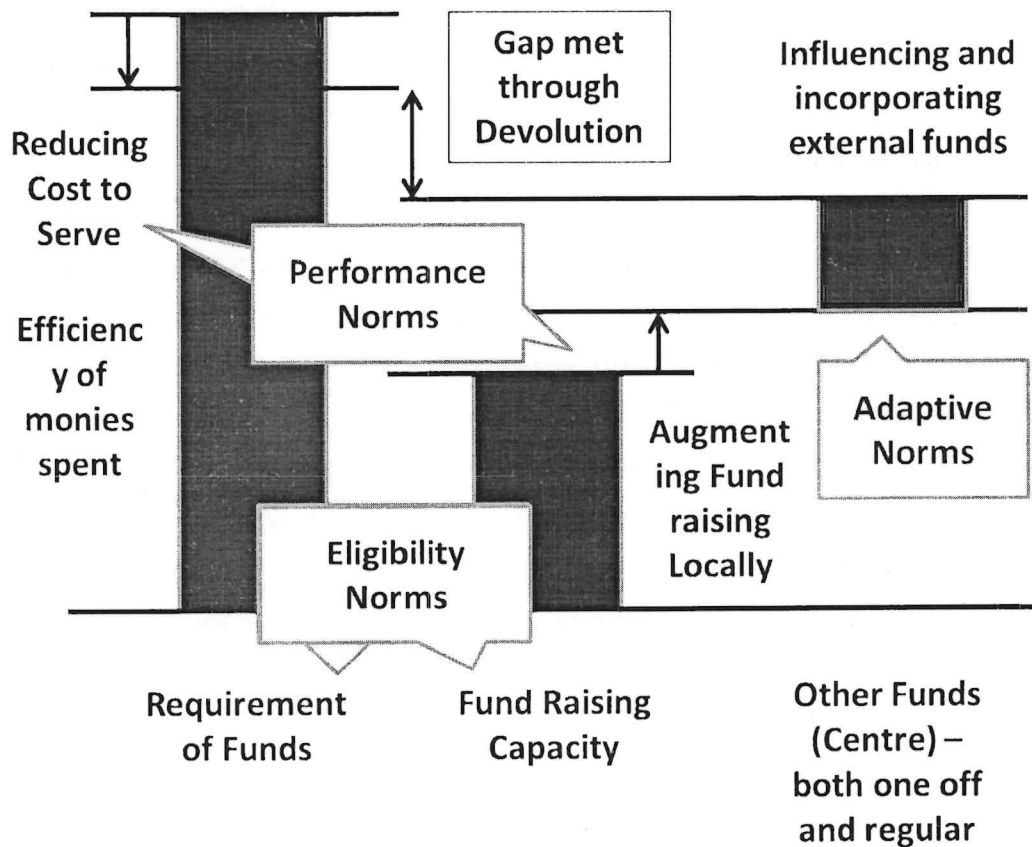
- Cost based and revenue based equalization methods are used to guide devolution formulae globally. Cost based approaches require strong backbone of cost data, at a local body level, maintained on an ongoing basis, while revenue approaches typically require normative view of “revenue potential”, which is usually assumed through the average tax rate across jurisdictions
- The Australian model of devolution offers significant improvements in terms of enhanced coverage through norms, as well as transparency on what influences devolution
- However, on the cost equalization front, the model is quite complex, requiring significant investments in ULB capacity to comprehend and respond effectively to the formula, as well as robust and regular data for incorporation (for example, the revenue and cost relativity indices require benchmarks on costs and economic opportunities to be updated on an annual basis)
- The revenue potential calculation is relatively simpler, and does not assume any external estimation of “potential”. The model is also adaptive, in that it looks at other transfers and sources of funding before deciding the devolution quantum
- The “effort neutral” argument may not be appropriate in the Indian context (as the State is actively trying to inspire ULBs to embark on reforms, and reward better effort)

Based on this view of global practices, we develop a framework to guide our thinking and entry points for norms based devolution for ULBs in Tamil Nadu in the following section

4. Framework for Entry Points for Norms into Devolution

Based on learnings from global practices of devolution, we present below the proposed framework for evaluating entry points for Norms Based Devolution in Tamil Nadu ULBs.

Framework for Identification of Entry Points for Norms in Devolution



Three categories of norms can be identified

1. Eligibility Norms – These are norms which deal with assessment of the current requirement of funds, as well as the revenue raising ability of the ULB
 - a. Requirement of funds – The existing norms used by the 4th SFC and the 14th CFC consider population and area as key parameters for assessment of requirement of funds. While

the 4th SFC also considers debt outstanding as a parameter, the weightage accorded to this is small. On the other hand, there is significant potential for expanding norms in this category on the basis of service level “cost to serve” calculations. As seen in the Australian model, such granular assessments of financial resource requirements, adjusting for service delivery cost variations across local bodies can provide a more nuanced assessment of finance requirements

- b. Fund raising capacity – Typically SFCs have considered tax buoyancy (estimated from historical growth rates and overall economy growth projections for the forecast period) to assess the fund raising capacity. Alternatively, a nominal approach involves looking at the average (demonstrated) fund raising performance of a comparable group, and benchmarking ULBs to such a standard. Given that property tax forms a central component of ULB’s own revenue, norms around assessment and collection of property taxes, and revision of rates are potential entry points. It is to be noted that some of these are already discussed in performance grants under the earlier SFC and CFCs
2. Performance Norms – These are norms which accommodate for the performance of ULBs given their eligibility scenario. These have three dimensions
- a. Norms to recognize variation in cost to serve – On the basis of the identified to cost to serve (under eligibility norms), ULBs can be rewarded or penalized based on the actual costs incurred. This can incentivize prudent expenditure planning, and act as a counterbalance to the incentive to inflate costs (under the cost equalization framework)
 - b. Norms to recognize variation in revenue raising – While nominal anchors can be designed around average revenue performance of a comparable cohort, these norms enable recognition of actual revenue performance – through either structural initiatives (e.g. decision to collect user charges for urban services) or operational efficiencies (e.g. increasing the collection efficiency)
 - c. Norms to recognize service delivery – Outside of financial parameters, service level benchmarks enable assessment of the transformation of inputs (funds) into outcomes (service delivery). Both the absolute value of performance on such SLBs, as well as trend performance (to adjust for historical handicaps) can be used to evaluate service delivery performance and incentivize the same
3. Adaptive norms – the third class of norms pertain to provisions to recognize sources of finance outside of the ULB and State control (e.g. Central government funding, other external funding channels etc.) and adjust for the same. Usually this is effective if such external sources have eligibility criteria which exclude certain types of ULBs

5. Overview of Current Devolution Framework

The current devolution framework in Tamil Nadu is influenced by the Central Finance Commission (CFC) and the State Finance Commissions (SFCs). We capture below, some of the key recommendations from these Commissions pertinent to application of norms for devolution

Central Finance Commission (CFC) Recommendations

The Tenth Finance Commission was the first to have recommended grants for rural and urban local bodies. The Tenth Finance Commission gave some concrete recommendations regarding municipal finances, that Rs. 1,000 crore for urban local bodies may be used for developmental purposes, in the five year term of the Commission. This was under the condition that local bodies would raise resources and match requirements during the time, and that the grants by the Centre would not be used for operational purposes. The Eleventh Commission's recommendations were directed towards local bodies' financial assistance to a greater extent. Supplementing State funds for further financial assistance on the basis of state finance commissions' reports, and recommendations on the usage of funds for functions like audits, maintenance of civic facilities and operations of the local bodies were also part of its recommendations. The annual grant during this period was Rs. 400 crore for the ULBs. The Fourteenth Finance Commission (FFC) recommended higher grants for local governments. The amount of grant for local government was increased to 53.5 per cent from 27.5 per cent as recommended by the 13th Finance commission and 17.5 per cent as recommended by the 12th Finance Commission. Consequent to the 74th amendments to the Constitution, the Tenth Finance Commission introduced exclusive grants for urban local bodies.

The four Finance Commissions, prior to the FFC, used population and area (except for the Tenth FC) as the criteria to reflect need for resources. The FFC has recommended distribution of grants to states using population data (Census 2011) with a weight of 90 per cent and area with a weight of 10 per cent. Based on the urban and rural population (Census 2011) of the respective state, the grant to each state will be divided into a grant to the duly constituted gram panchayats and a grant to the duly constituted municipalities. The FFC recommended grants in two parts: basic grants and performance grants. The ratio of basic to performance grant is 80:20 with reference to duly constituted municipalities. The FFC observed that by taking steps as per recommendations of the State Finance Commissions (SFCs) and the Central Finance Commissions, there is considerable scope for the local bodies to improve revenues from own sources. To further add to the resources at the level of state and local bodies, the FFC has suggested

some initiatives on tax (property tax, use of land-based instruments, advertisement tax, entertainment tax, and tax on professions, trades, callings and employments) and Non-Tax measures (Income from cess or royalty on minor minerals, service charges on government property and issue of municipal bonds).

A brief summary of key recommendations from the 14th CFC are

- Acknowledges significant gaps in both financial and service level data from ULBs, which hinders any need based estimation of devolution. This has been continuously reiterated through the 11th, 12th and 13th CFC reports as well
- Does away with the "Index of decentralization or devolution" adopted by the 13th FC. Instead uses Population (basis Census 2011) @ 90% and Area @ 10%
- Total grant to ULBs is INR 87,144 Crore (about INR 500 per capita), split into a basic grant @ 80% and performance grant @ 20%. Basic grant focuses on service delivery on devolved areas, and putting in place accounting and audit systems
- These grants are to be disbursed to ULBs and RLBs according to the respective SFC formulae. This means that there is a significant pool of funds (20% of Central fund assistance to ULBs) which is performance based, providing a window for performance norms for the 5th SFC
- Overall eligibility criteria for performance grants include publishing accounts, improvement in own revenue and publishing service standards. State Governments may create their own additional performance assessment criteria
- Also recommends raising professional tax ceiling from INR 2500 to INR 12500, and improving conditions for ULBs to access the bond market (directly for larger ULBs and through intermediaries for smaller ones)

"...as in the case of the performance grant for gram panchayats, a detailed procedure for the disbursement of the performance grant to urban local bodies would have to be designed by the State Government concerned, subject to certain eligibility criteria. To be eligible, the urban local body will have to submit audited annual accounts that relate to a year not earlier than two years preceding the year in which it seeks to claim the performance grant. It will also have to show an increase in own revenues over the preceding year, as reflected in these audited accounts. In addition, it must publish the service level benchmarks relating to basic urban services each year for the period of the award and make it publicly available. The service level benchmarks of the Ministry of Urban Development may be used for this purpose. The improvement in revenues will be determined on the basis of these audited accounts and on no other basis..."

- 14th SFC on performance grants for ULBs

Fourth State Finance Commission (SFC) Recommendations

The Fourth SFC evaluated the criteria and weightages adopted by the Second and the Third SFCs for vertical sharing between ULBs and PRIs as per the table below

<i>No.</i>	<i>Factor</i>	<i>Percentage Contribution</i>
1	Population	50%
2	Needs	
2.1	O&M	10%
2.2	Capital	10%
2.3	Debt	5%
3	Resource Potential	
3.1	Inverse Per Capita	15%
3.2	Inverse Assigned Revenue	10%
	Total	100%

For the O&M, historical data was projected forward based on overall growth rate assumptions. For capital needs, the anticipated requirements furnished by local bodies was taken². For calculating inverse ratios on percapita house/property tax and assigned revenue, actuals from 2005-06 to 2009-10 were taken into account. The key recommendations of the Fourth SFC are captured below along with their status based on the Action Taken Report (ATR). Recommendations taken up by the State Government as suggested in the 4th SFC report include

- Continuation of the existing global sharing ratio to local bodies at 10% of the net SOTR
- Self-assessment system for property taxes with penalties (for default in filing) and rewards (for prompt payment)
- Encouragement of GIS mapping for enhancing property tax base
- Earmarking 10% out of devolution towards the Infrastructure Gap Filling Fund (@7%) and the O&M Gap filling fund (@3%)
- Horizontal sharing formula comprising of 80% weightage for 2011 Census population, 15% weightage for area, and 5% weightage for debt outstanding,
- Better audit and control within ULBs
- Revision in charges and service standards of para statal service providers.

Recommendations taken up modified

- Creation of a dedicated Solid Waste Management fund (with a corpus of 250 Crore vs. the suggestion of 200 Crore)
- Vertical sharing formula within ULBs accepted at 58:42 for RLB vs. ULB (against the recommendation of 56:44). Vertical sharing formula within ULBs accepted at 40:29:31 for Municipal Corporations, Municipalities and Town Panchayats (against the recommendation of 40:31:29)
- From the vertical share of SFC devolution recommended for rural and urban local bodies, 2.5 percent be allocated as a separate corpus for incentive fund (subject to a maximum of 10 lakh for Town Panchayats, 20 lakh for Municipalities and 50 lakh for Municipal Corporations) from

²On the capital needs, the Fourth SFC report mentions that ideally fund requirement based on norms should have been taken

SFC devolution. The ATR fixes 50% of the 2.5% incentive fund for ensuring periodic (quinquennial) revision and balance 50% for collection of 100% of demand.

- A cash award be given to best performing local bodies (first three Municipal Corporations, Municipalities and Town Panchayats) – this has been instituted through the Chief Minister's award for ULBs programme

The recommendations of the 4th SFC provide a basis for consideration of entry points of norms into devolution. Cost norms (to determine the benchmarks for O&M and Capital costs) and Revenue potential norms (to determine inverse percapita numbers) have been acknowledged by the 4th SFC as key focus areas for norms.

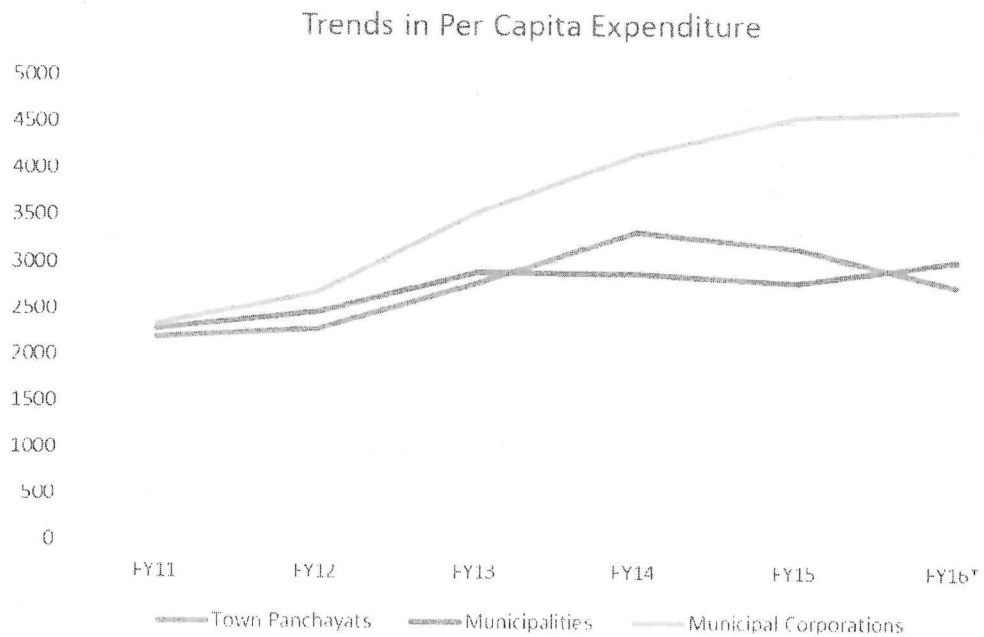
From this perspective, we analyze the ULB financials to identify

1. Equity and efficiency of the current model of devolution
2. Candidates for cost and revenue potential norms, which can help take forward the observations of the 4th SFC on entry points for norms into the sharing formula

6. Analysis of ULB Financials

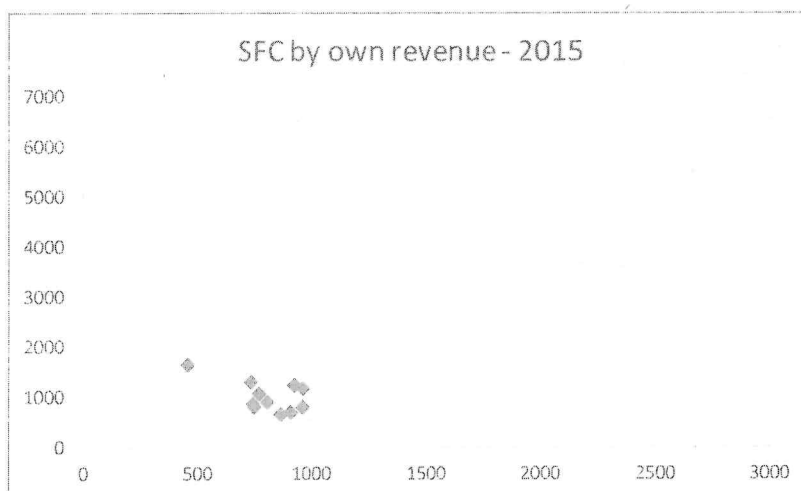
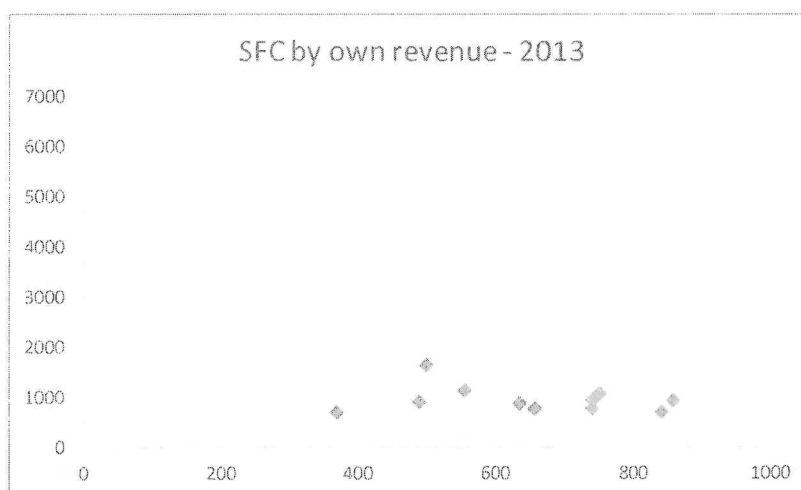
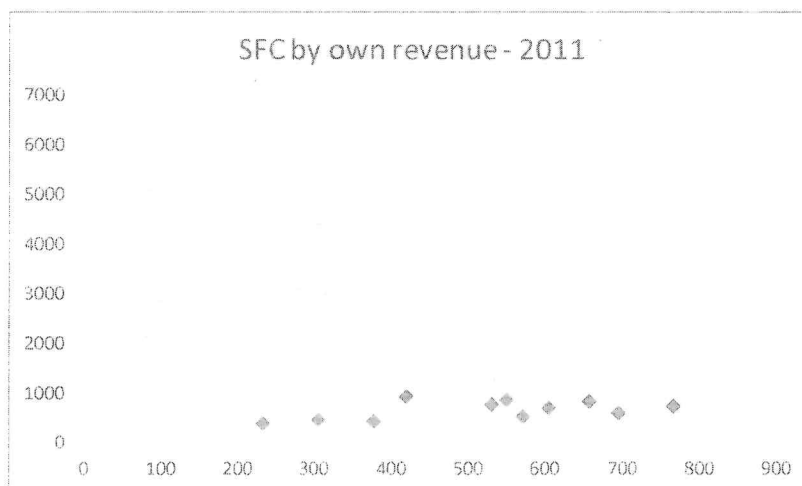
With this understanding of the framework for entry points for norms into devolution, as well as the current devolution framework, and its accommodation of various norms, we look at analysis of ULB financials over the past five years. The objective of this analysis is to identify prominent trends, signals for potential imbalances and validation of hypotheses on alternative norms to be incorporated into the devolution framework

Since equity is one of the key objectives of devolution, by adjusting for other factor disadvantages to provide for comparable levels of service, we assess the trends in per capita expenditure between the three categories of local bodies.



While Municipal Corporations, Municipalities and Town Panchayats have largely started from a similar base (around INR 2300 per capita), the variation has expanded over the past five years, especially with Municipal Corporations clocking a significantly higher pace of expenditure growth. While enhanced focus on urban renewal and large ticket projects (around ring roads, bridges and flyovers, and large ticket sanitation initiatives) could explain this trend, there is however no clear evidence that the cost to serve per capita has fundamentally moved differently for Municipal Corporations when compared to Municipalities and Town Panchayats (detailed analysis of cost to serve by ULB category is provided in the Annexure). This provides a hypothesis that the inequity of resource availability is increasing among ULBs. To further assess the source of the inequity, we carry out a series of dependency tests and distribution assessments of various sources of funding, particularly the SFC devolution. The results of these analyses is presented in the following pages

Trends in Share of SFC Devolution vs. Own Revenue – Municipal Corporations



	Investment per capita (est @ 2016 prices)	O&M per capita (est @ 2016 prices)	Investment weight	O&M weight
Water supply	7652	752	12%	28%
Sewerage	7059	429	11%	16%
Solid Waste Management	587	233	1%	9%
Urban Roads	34478	596	53%	22%
SWD	5292	80	8%	3%
Urban Transport	8074	557	12%	21%
Traffic support infrastructure	1418	51	2%	2%
Street Lighting	549	12	1%	0%

Of the above components, Water supply, sewerage and storm water drains, and urban roads, cumulatively account for about 85% of the capital cost, and about 70% of the O&M expenditure. Given that data on the current asset penetration for these services is available with the SFC, we consider this base to evaluate the “capex need gap” at a ULB level. Within these three service areas, water supply has a relative weight of 14%, roads at 63% and sewerage and storm water drains at 23% for Capex.

Methodology for calculating the “capex need gap”

The asset data³ from the SFC is taken at a ULB level, to work out the per capita availability of assets (e.g. water lines, roads, sewerage lines and drains). This is then compared within each ULB category (Municipal Corporations, Municipalities and Town Panchayats) to arrive at a relative index of asset penetration for that category. Owing to presence of outliers in the data, we have done the comparison across the top quintile (i.e. the asset intensity of all ULBs is compared to the 75th percentile of the distribution within that ULB category). This enables calculation of the capital needs for ULBs, rather than relying on their own projections (reference Page 234 of the 4th SFC Report). With increasing penetration of the O&MGF and the IGF, a cross sectoral project database is likely to be created with details of unit cost by asset category.

Moving forward, the financing need estimates, based on the cost benchmarks can be used to determine the quantum of horizontal devolution within each tier of ULBs. Similar to the formula used for vertical sharing between PRIs and ULBs (Page 201 – 4th SFC Report), the horizontal transfer formula can take into account “capex need gap” of ULBs, calculated as mentioned above. This would provide equalization for

³It is recognized that the current data only provides a view of the asset stock in these areas, but not the asset age. Hence, a complete picture of the replacement immediacy is not available. However, the above methodology can be applied in the immediate term, with data on asset age and replacement cycles brought in in the mid term under the SFC data collection coverage

current level of service delivery and asset quality, which do not figure in the population + area + debt formula at present. The full index for all ULBs across categories is presented in Section 9

Norms for Revenue Potential

The Fourth SFC report, while looking at the vertical sharing ratio between ULBs and PRIs, makes note of resource potential, for which it calculates the inverse per capita of assigned revenue and property tax. However, this strictly is not a statement on the “potential”, rather the “currently realized extent of the potential”. As mentioned in the earlier section, a number of countries apply normalization parameters, where they look at the average revenue from a similar base, and establish that as the benchmark revenue assumption for the local body

We present below a simple methodology to assess the revenue potential for local bodies at a granular level. We postulate that the revenue potential is a function of three factors

1. The household income of the relevant demographic – Given that both property taxes and other fees and service linked charges are influenced by the household disposable income, we consider the income distribution as a key determinant of the revenue raising ability of the ULB
2. The assessee mix of the ULB – Given that residential, commercial and industrial (among other categories) assessments have significantly different revenue potential, the assessee number, as well as the assessee mix can influence the revenue raising ability
3. Finally, the willingness to pay, as well as the willingness to charge are also functions of the level of investment made into service delivery. Hence, percapita investment in service delivery can be a lagged measure of revenue raising ability

Methodology for calculating the “Revenue Raising Ability”

The index of revenue raising ability is calculated through a combination of the above three parameters, as follows

- For assessing the household income, the Census 2011 data on purchasing power estimates of households is used. This data is available only at a district level. Hence, we take the urban household data for each district, mapping each ULB to its district. We take the proportion of the households in the income bands above 2 lakh (as a fraction of total number of households in the

district) as the metric of household income. This provides a score for each district (captured below)

District Level Household Income Index

District (Urban)	HH with over 2l HH Income	% over 2l	Score
Ariyalur	13,100	15.1%	0.87
Chennai	768,013	16.2%	0.94
Coimbatore	479,544	16.8%	0.97
Cuddalore	134,772	14.4%	0.84
Dharmapuri	41,417	14.8%	0.86
Dindigul	130,083	15.3%	0.89
Erode	210,552	17.3%	1.00
Kancheepuram	464,424	15.4%	0.89
Kanniyakumari	240,136	14.8%	0.86
Karur	76,062	16.4%	0.95
Krishnagiri	68,894	14.6%	0.85
Madurai	311,871	15.6%	0.90
Nagapattinam	56,294	15.1%	0.87
Namakkal	121,761	16.4%	0.95
Perambalur	16,101	15.6%	0.90
Pudukkottai	47,863	14.5%	0.84
Ramanathapuram	58,496	13.6%	0.79
Salem	291,324	15.3%	0.89
SIVAGANGAI	67,587	15.2%	0.88
Thanjavur	133,552	15.3%	0.88
The Nilgiris	66,388	15.9%	0.92
Theni	110,510	15.5%	0.90
Thiruvallur	424,558	14.9%	0.86
TIRUVARUR	40,543	15.2%	0.88
Thoothukkudi	140,671	15.5%	0.89
Tiruchirappalli	217,894	15.7%	0.91
Tirunelveli	247,203	15.4%	0.89
Tiruppur	287,850	16.5%	0.95
Tiruvannamalai	72,732	13.8%	0.80
Vellore	242,119	13.6%	0.78
VILLUPURAM	76,970	13.7%	0.80
Virudhunagar	168,969	16.4%	0.95

- For evaluating the assessee base of ULBs, first we calculate the relative contribution of each of the three key categories – residential, commercial and industrial on a “per assessment” basis. This helps identify weightages to the three categories (i.e. one commercial assessee on an

Tharamangalam	1.76	1.65	1.07	1.53
Thedavur	1.32	1.00	1.44	1.15
Thevur	1.29	1.22	1.67	1.33
Valapadi	1.40	1.36	1.00	1.28
Vanavasi	1.80	1.28	1.48	1.40
Veeraganur	1.00	1.24	1.11	1.18
Veerakkalpudur	1.47	1.40	1.20	1.37
Yethapur	1.00	1.00	1.45	1.10
Aalampalayam	1.66	1.49	1.11	1.43
Athanur	1.37	1.20	1.11	1.20
Erumapatty	1.53	1.26	1.66	1.39
K.N.Paty	1.25	1.00	1.64	1.18
Mallasamudram	1.87	1.27	1.43	1.39
Mohanur	1.35	1.36	1.11	1.30
Namagiripettai	2.00	1.14	1.71	1.39
Padaveedu	1.45	1.31	1.53	1.38
Pandamangalam	1.53	1.40	1.12	1.35
Paramathy	1.36	1.03	1.00	1.07
Pattanam	1.00	1.09	1.29	1.12
Pillanallur	1.31	1.10	1.36	1.19
Pothanur	1.75	1.42	1.06	1.38
R.Pudupatty	1.03	1.00	1.12	1.03
Seerapalli	1.36	1.03	1.49	1.18
Sendamangalam	1.37	1.44	1.00	1.33
Velur	1.68	1.51	1.34	1.50
Vengarai	1.24	1.50	1.40	1.44
Vennandur	1.40	1.51	1.14	1.41
B.Mallapuram	1.70	1.14	1.00	1.19
Harur	1.74	1.63	1.37	1.58
Kadathur	1.47	1.33	1.00	1.28
Kambainallur	1.32	1.00	1.62	1.19
Karimangalam	1.34	1.34	1.08	1.28
Marandahalli	1.56	1.53	1.47	1.52
Palacode	1.33	1.65	1.00	1.46
Pappaparatti	1.00	1.42	1.00	1.27
Pappireddipatti	1.00	1.15	1.00	1.09
Pennagaram	1.00	1.39	1.31	1.32
Anthiyur	1.21	1.49	1.14	1.37
Appakudal	1.06	1.00	1.29	1.08
Arachalur	1.52	1.31	1.54	1.39
Ariyappam palayam	1.44	1.45	1.57	1.48
Athani	1.10	1.06	1.38	1.14
Avalpoondurai	1.11	1.00	1.39	1.10
Bhavanisagar	1.61	1.00	1.00	1.09

Chenna samudram	1.00	1.00	1.00	1.00
Chennimalai	1.34	1.53	1.14	1.41
Chithode	1.49	1.36	1.00	1.30
Elathur	1.00	1.00	1.00	1.00
Jambai	1.39	1.23	1.41	1.29
Kanjikoil	1.14	1.16	1.04	1.13
Karumandi Chellipalayam	1.56	1.33	1.57	1.42
Kasipalayam (Gobi)	1.26	1.05	1.26	1.12
Kembanaicken palayam	1.46	1.09	1.39	1.21
Kilambadi	1.00	1.00	1.37	1.08
Kodumudi	1.46	1.54	1.36	1.49
Kolappalur	1.21	1.31	1.44	1.32
Kollankoil	1.34	1.30	1.62	1.38
Kugalur	1.47	1.41	1.00	1.33
Lakkampatti	1.14	1.22	1.00	1.16
Modakkurichi	1.09	1.00	1.00	1.01
Nallampatti	1.00	1.00	1.00	1.00
Nambiyur	1.00	1.16	1.00	1.10
Nasiyanur	1.30	1.42	1.00	1.31
Nerinjipettai	1.09	1.15	1.28	1.17
Olagadam	1.00	1.00	1.00	1.00
P.Mettupalayam	1.47	1.38	1.00	1.31
Pasur	1.00	1.00	1.00	1.00
Periyakodivery	1.39	1.26	1.00	1.22
Perundurai	1.21	1.56	1.33	1.46
Pethampalayam	1.00	1.00	1.39	1.09
Salangapalayam	1.55	1.31	1.05	1.29
Unjalur	1.00	1.03	1.00	1.02
Vaniputhur	1.66	1.43	1.00	1.37
Vellottamparappu	1.00	1.00	1.18	1.04
Vengambur	1.00	1.00	1.00	1.00
Alandurai	1.00	1.21	1.35	1.21
Anamalai	1.00	1.21	1.00	1.14
Annur	1.00	1.40	1.15	1.29
Chettipalayam	1.00	1.00	1.00	1.00
Dhaliyur	1.00	1.03	1.00	1.02
Ettimadai	1.23	1.00	1.07	1.05
Gudalur	1.77	1.27	1.58	1.41
Idigarai	1.00	1.24	1.71	1.31
Irugur	1.00	1.29	1.55	1.31
Kannampalayam	1.00	1.00	1.00	1.00
Karamadai	1.00	1.58	1.44	1.47
Karumatham Patti	1.46	1.26	1.39	1.32
Kinathukadavu	1.00	1.19	1.00	1.12

Kottur	1.62	1.72	1.62	1.69
Madukkarai	1.43	1.49	1.45	1.47
Mopperipalayam	1.00	1.00	1.75	1.17
Narasimhanaickenpalay	1.20	1.19	1.31	1.22
No.4 Veerapandi	1.00	1.00	1.00	1.00
Odayakulam	1.29	1.00	1.00	1.04
Othakkal mandapam	1.63	1.00	1.00	1.09
P.N.Palayam	1.23	1.16	1.00	1.14
Perianegamam	1.16	1.00	1.00	1.02
Perur	1.00	1.00	1.15	1.03
Pooluvapatti	1.00	1.19	1.00	1.12
Samathur	1.00	1.00	1.00	1.00
Sarcarsama kulam	1.00	1.14	1.01	1.09
Sirumugai	1.50	1.57	1.22	1.48
Suleswaranpatti	1.28	1.47	1.16	1.37
Sulur	1.09	1.35	1.00	1.23
Thirumalayam Palayam	1.00	1.00	1.00	1.00
Thonda Muthur	1.43	1.00	1.00	1.06
Vedapatti	1.00	1.40	1.00	1.25
Vellalore	1.49	1.47	1.44	1.46
Vettaikaranpudur	1.26	1.34	1.67	1.40
Zaminuthukuli	1.81	1.31	1.00	1.31
Adigaratty	1.61	1.11	1.00	1.15
Bikkatty	1.00	1.34	1.60	1.35
Devershola	1.00	1.00	1.50	1.11
Hulical	1.00	1.30	1.00	1.19
Jegathala	1.41	1.50	1.00	1.38
Ketti	1.74	1.78	1.48	1.71
Kil Kundah	1.63	1.28	1.19	1.31
Kotagiri	1.48	1.44	1.00	1.35
Naduvattam	1.98	1.28	1.09	1.34
O' Valley	1.00	1.00	1.75	1.17
Sholur	1.30	1.26	1.00	1.21
Adirampattinam	1.72	1.73	1.81	1.75
Aduthurai	1.93	1.73	1.83	1.78
Ayyampettai	1.41	1.51	1.69	1.53
Dharasuram	1.00	1.00	1.00	1.00
Madukkur	1.33	1.30	1.84	1.43
Melathiruppanthruthi	1.44	1.42	1.73	1.49
Melattur	2.00	1.00	1.68	1.29
Orathanadu	1.00	1.66	1.69	1.57
Papanasam	1.39	1.43	1.61	1.46
Peravurani	1.00	1.17	1.84	1.30
Perumagalur	1.00	1.00	1.48	1.11

Sholapuram	1.16	1.54	1.54	1.49
Swamimalai	1.15	1.45	1.32	1.38
Thirubuvanam	1.34	1.51	1.77	1.54
Thirukattupalli	1.79	1.61	1.50	1.61
Thirunageswaram	1.30	1.33	1.96	1.47
Thiruppananthai	1.69	1.47	1.96	1.61
Thiruvaiyaru	1.46	1.41	1.69	1.48
Thiruvidaimaruthur	2.00	1.00	1.41	1.23
Vallam	1.37	1.32	1.21	1.30
Veppathur	1.00	1.29	1.88	1.38
Keelvelur	1.00	1.19	1.92	1.33
Kuthalam	1.42	1.43	1.79	1.51
Manalmedu	1.05	1.31	1.65	1.35
Thalanayar	1.00	1.02	1.92	1.22
Tharangampadi	1.00	1.22	1.85	1.33
Thittachery	1.06	1.26	1.93	1.38
Vaithieswarankoil	1.74	1.18	1.00	1.22
Velankanni	1.18	1.60	1.39	1.49
Kodavasal	1.38	1.38	1.83	1.48
Koradachery	1.30	1.29	1.48	1.33
Muthupettai	1.54	1.60	1.84	1.64
Nannilam	1.40	1.67	1.91	1.68
Needamangalam	1.29	1.44	1.62	1.46
Peralam	1.80	1.47	2.00	1.64
Valangaiman	1.55	1.69	1.84	1.70
Balakrishnampatti	1.53	1.46	1.21	1.41
Kallakkudi	1.62	1.55	1.00	1.44
Kattuputhur	1.20	1.39	1.23	1.33
Koothappar	1.75	1.52	1.49	1.55
Lalgudi	1.57	1.58	1.56	1.58
Mannachanallur	1.22	1.52	1.42	1.46
Mettupalayam	1.58	1.39	1.33	1.40
Musiri	1.35	1.51	1.26	1.43
Ponnampatti	1.18	1.63	1.75	1.60
Poovalur	1.00	1.40	1.19	1.30
Pullambadi	1.60	1.61	1.29	1.53
S.Kannanur	1.41	1.52	1.00	1.39
Sirugamani	1.24	1.23	1.50	1.29
Thathiengarpattinam	1.48	1.44	1.00	1.35
Thottiam	1.37	1.58	1.67	1.57
Uppiliapuram	1.38	1.40	1.00	1.30
Aravakurichi	1.25	1.07	1.35	1.16
Krishnarayapuram	1.00	1.23	1.00	1.15
Marudur	1.00	1.00	1.48	1.11

Nangavaram	1.52	1.28	1.76	1.42
P.J.Cholapuram	1.00	1.00	1.74	1.17
Pallapatti	1.42	1.72	1.13	1.54
Punjaipugalur	1.34	1.33	1.00	1.26
TNPL Pugalur	1.00	1.00	1.66	1.15
Uppidamangalam	2.00	1.00	1.86	1.33
Punjaithottakurichi	1.00	1.00	1.00	1.00
Puliyur	1.00	1.18	1.00	1.11
Arumbavur	1.59	1.66	1.00	1.50
Kurumbalur	1.61	1.40	1.53	1.46
Labbaikudikadu	1.72	1.86	1.68	1.80
Poolambadi	1.00	1.21	1.00	1.13
Alangudi	1.34	1.42	1.00	1.31
Annavasal	1.18	1.47	1.82	1.51
Arimalam	1.00	1.23	1.24	1.20
Illuppur	1.48	1.75	1.66	1.69
Karmabakkudy	1.00	1.31	1.82	1.38
Keeramangalam	1.70	1.44	1.95	1.59
Ponnamaravathy	1.18	1.43	1.45	1.40
A.Vellalapatti	1.00	1.00	1.00	1.00
Alanganallur	1.41	1.55	1.42	1.50
Elumalai	1.69	1.67	1.28	1.59
Palamedu	1.78	1.62	1.00	1.50
Paravai	1.59	1.65	1.10	1.52
Peraiyur	1.00	1.36	1.00	1.23
Sholavandan	1.73	1.82	1.62	1.76
T.Kallupatti	1.44	1.48	1.00	1.37
Vadipatti	1.67	1.74	1.00	1.56
Aundipatti	1.53	1.76	1.00	1.56
B. Meenakshipuram	1.79	1.60	1.11	1.51
Boothipuram	1.39	1.55	1.00	1.41
C. Pudupatti	1.46	1.41	1.10	1.35
Devathanapatti	1.61	1.78	1.00	1.58
Genguvarpatti	1.40	1.57	1.12	1.44
Hanumanthanpatti	1.33	1.76	1.00	1.53
Highwavys	2.00	2.00	2.00	2.00
Kamayagoundanpatti	1.60	1.74	1.00	1.55
Kombai	1.60	1.71	1.00	1.54
Kutchanur	1.21	1.11	1.00	1.10
Markayankottai	1.49	1.00	1.00	1.07
Odaipatti	1.63	1.80	1.28	1.66
Palanichettipatti	1.66	1.68	1.23	1.57
Pannaipuram	1.34	1.57	1.11	1.43
Tamaraikulam	1.60	1.61	1.62	1.61

Thevaram	1.67	1.70	1.02	1.55
Uthamapalayam	1.65	1.70	1.18	1.57
Veerapandi	1.31	1.81	1.51	1.67
Agaram	1.70	1.76	1.39	1.67
Ammaya naickanur	1.72	1.73	1.56	1.69
Ayakudi	1.79	1.73	1.55	1.70
Ayyalur	1.77	1.23	1.87	1.45
Ayyampalayam	1.48	1.55	1.00	1.41
Balasamudram	1.43	1.72	1.62	1.66
Chinnalapatti	1.28	1.63	1.13	1.47
Eriodu	1.24	1.38	1.52	1.39
Natham	1.24	1.57	1.18	1.44
Neikkarapatti	1.60	1.62	1.37	1.56
Nilakottai	1.50	1.77	1.00	1.55
Palayam	1.32	1.15	1.74	1.31
Sriramapuram	1.00	1.00	1.20	1.04
Thadicombu	1.55	1.29	1.74	1.42
Vadamadurai	1.00	1.33	1.57	1.34
Vathalagundu	1.66	1.70	1.24	1.59
Vedasandur	1.67	1.67	1.70	1.67
Pannaikkadu	1.00	1.26	1.24	1.22
Pattiveeranpatti	1.30	1.53	1.00	1.38
Sevugampatti	1.00	1.00	1.00	1.00
Sithayankottai	1.52	1.53	1.16	1.45
Abiramam	1.83	1.47	1.63	1.56
Kamuthi	1.55	1.71	1.43	1.62
Mandapam	1.19	1.12	2.00	1.33
Mudukulathur	1.33	1.63	1.00	1.44
R.S.Mangalam	1.45	1.64	1.68	1.62
Sayalkudi	1.00	1.00	1.00	1.00
Thondi	1.41	1.57	1.61	1.55
Chettiyarpatti	1.49	1.61	1.00	1.46
Kariapatti	1.45	1.57	1.08	1.44
Mallanginar	1.33	1.56	1.32	1.48
Mamsapuram	1.61	1.77	1.00	1.57
S.Kodikulam	1.49	1.82	1.51	1.70
Seithur	1.50	1.62	1.00	1.46
Sundarapandiam	1.41	1.53	1.33	1.47
W.Pudupatti	1.04	1.69	1.00	1.44
Watrap	1.24	1.84	1.35	1.64
Kanadukathan	1.00	1.00	1.00	1.00
Kandanoor	1.00	1.27	1.14	1.20
Kottaiyur	1.21	1.01	1.89	1.24
Manamadurai	1.84	1.67	1.36	1.63

Natrasankottai	1.83	1.00	1.60	1.25
Nerkuppai	1.64	1.22	1.82	1.41
Pallathur	1.88	1.00	2.00	1.35
Puduvayal	1.00	1.11	1.60	1.21
Singampunari	1.49	1.60	1.00	1.45
Thiruppathur	1.96	1.72	1.80	1.77
Thiruppuvanam	1.00	1.00	1.00	1.00
Ilayangudi	1.59	1.71	1.09	1.55
Achanpudur	1.37	1.57	1.00	1.42
Alangulam	1.41	1.34	1.23	1.32
Alwarkurichi	1.00	1.00	1.00	1.00
Ayikkudi	1.34	1.19	1.00	1.17
Cheranmahadevi	1.01	1.39	1.08	1.27
Courtalam	1.00	1.00	1.00	1.00
Eruvadi	1.32	1.68	1.00	1.47
Gopalasamudram	1.44	1.83	1.75	1.76
Ilangi	1.48	1.00	1.00	1.07
Kalakkad	1.78	1.55	1.27	1.52
Kallidaikurichi	1.45	1.69	1.00	1.50
Keelappavoor	1.52	1.35	1.83	1.48
Manimuthar	1.32	1.13	1.00	1.13
Melagaram	1.04	1.41	1.00	1.27
Melaseval	1.00	1.32	1.00	1.20
Moolakkaraipatti	1.00	1.44	1.00	1.28
Mukkudal	1.26	1.47	1.02	1.34
Nanguneri	1.00	1.00	1.00	1.00
Naranammal puram	1.44	1.62	1.32	1.53
Panagudi	1.14	1.44	1.06	1.31
Panpoli	1.48	1.68	1.06	1.51
Pattamada	1.34	1.65	1.24	1.51
Rayagiri	1.31	1.62	1.34	1.51
Sambavar vadakarai	1.00	1.00	1.00	1.00
Sankar Nagar	1.00	1.08	1.00	1.05
Sundarapandiapuram	1.46	1.62	1.44	1.56
Surandai	1.68	1.41	1.50	1.47
Thirukkurungudi	1.92	1.34	1.70	1.50
Thiruvengadam	1.49	1.32	1.00	1.27
Thisayanvilai	1.24	1.55	1.12	1.41
Vadakaraikilpidagai	1.64	1.61	1.00	1.47
Vadakkuvalliyoor	1.00	2.00	1.07	1.65
Vasudevanallur	1.55	1.73	1.44	1.64
Veeravanallur	1.30	2.00	2.00	1.90
Alwarthirunagari	1.42	1.20	1.14	1.22
Arumuganeri	1.82	1.63	2.00	1.74

Authoor	1.00	1.44	1.64	1.42
Eral	1.42	1.73	1.64	1.66
Ettayapuram	1.45	1.61	1.29	1.51
Kadambur	1.00	1.00	1.11	1.03
Kalugumalai	1.27	1.52	1.78	1.54
Kanam	1.00	1.21	1.47	1.24
Kayathar	1.00	1.65	1.60	1.54
Nazareth	1.70	1.55	1.97	1.67
Perungulam	1.49	1.00	1.90	1.27
Pudur (V)	1.71	1.34	1.00	1.31
Sathankulam	1.74	1.71	1.61	1.69
Sawyerpuram	1.00	1.64	1.93	1.62
Srivaikundam	1.00	1.47	1.00	1.30
Thenthirupperai	1.00	1.34	1.37	1.30
Tiruchendur	1.52	1.79	1.61	1.71
Udankudi	1.65	1.57	2.00	1.68
Vilathikulam	1.22	1.60	1.29	1.48
Agasteeswaram	1.00	1.00	1.48	1.11
Alloor	1.00	1.25	1.37	1.24
Anjugramam	1.00	1.00	1.37	1.08
Aralvaimozhi	1.82	1.00	1.14	1.15
Arumanai	1.44	1.11	1.74	1.30
Attoor	1.60	1.00	1.00	1.08
Azhagappapuram	1.00	1.26	1.05	1.18
Azhagiapandipuram	1.00	1.00	1.00	1.00
Boothapandy	1.24	1.00	1.00	1.03
Edaicode	1.24	1.26	1.76	1.37
Eraniel	1.00	1.10	1.58	1.20
Ezhudesam	1.06	1.00	1.58	1.14
Ganapathipuram	1.00	1.23	1.83	1.33
Kadayal	1.00	1.00	1.47	1.11
Kaliyakkavilai	1.12	1.55	1.91	1.57
Kallukuttam	1.00	1.00	1.90	1.20
Kanniyakumari	1.25	1.74	1.52	1.62
Kappiyarai	1.00	1.00	1.04	1.01
Karungal	1.33	1.00	2.00	1.27
Keezhkulam	1.00	1.00	1.86	1.20
Killiyoor	1.86	1.32	1.78	1.50
Kollemcode	1.00	1.29	1.83	1.37
Kothanalloor	1.21	1.36	1.36	1.34
Kottaram	1.27	1.00	1.26	1.10
Kulasekaram	1.00	1.30	1.03	1.19
Kumarapuram	1.12	1.00	1.32	1.09
Manavalakurichy	1.00	1.00	1.75	1.17

Mandaikadu	1.24	1.58	1.48	1.51
Marungoor	1.00	1.51	1.79	1.50
Mulagumoodu	1.48	1.00	1.65	1.22
Myilaudy	1.00	1.00	1.47	1.11
Nalloor	1.18	1.11	1.38	1.18
Neyyoor	1.00	1.19	2.00	1.35
Pacode	1.00	1.08	1.77	1.23
Palapallam	1.54	1.01	1.82	1.27
Palugal	1.28	1.14	1.56	1.25
Ponmanai	1.15	1.52	1.86	1.55
Puthalam	1.00	1.00	1.94	1.21
Puthukadai	1.16	1.46	1.73	1.48
Reethapuram	1.40	1.00	1.67	1.21
Suchindrum	1.23	1.33	1.00	1.24
Thazhakudy	1.20	1.53	1.24	1.42
Then thamaraiikulam	1.00	1.10	1.93	1.27
Thengamputhoor	1.00	1.01	1.86	1.20
Theroor	1.00	1.04	1.38	1.11
Thingalnager	1.69	1.31	1.56	1.42
Thiruparappu	1.00	1.00	1.63	1.14
Thiruvattar	1.35	1.14	1.83	1.33
Thiruvithancode	1.98	1.00	1.13	1.17
Unamalaikadai	1.26	1.51	1.77	1.53
Valvachagostam	1.20	1.42	1.85	1.49
Vellimalai	1.00	1.45	1.81	1.47
Verkilambi	1.14	1.10	1.46	1.19
Vilavoor	1.47	1.00	1.00	1.07
Villukuri	1.00	1.02	1.14	1.04
Bargur	1.00	1.00	1.00	1.00
Denkanikottai	1.77	1.57	1.54	1.59
Kaveripattinam	2.00	1.72	1.45	1.70
Kelamangalam	1.63	1.54	1.14	1.46
Nagojanahalli	1.26	1.57	2.00	1.63
Uthangarai	1.63	1.75	1.79	1.74
Udayarpalayam	1.42	1.59	1.00	1.43
Varadharajanpet	1.00	1.44	1.20	1.32
Avanasi	1.43	1.46	1.47	1.46
Chinnakkam palayam	1.00	1.03	1.00	1.02
Kaniyur	1.19	1.61	1.43	1.51
Kolathupalayam	1.00	1.05	1.00	1.03
Komaralingam	1.25	1.64	1.00	1.44
Kunnathur	1.00	1.61	1.38	1.47
Madathukulam	1.25	1.66	1.81	1.63
Mulanur	1.00	1.06	1.63	1.18

Muthur	1.00	1.25	1.44	1.26
Rudrawathi	1.00	1.00	1.00	1.00
Samalapuram	1.39	1.28	1.67	1.39
Sangaramanallur	1.00	1.19	1.29	1.19
Thali	1.00	1.00	1.00	1.00
Thirumurugan poondi	1.35	1.54	1.07	1.41
Uthukuli	1.00	1.00	1.00	1.00

average is worth eight residential assesses on an average in Municipal corporations). The weightage is then used to normalize for the assessee type variations, and evaluate a standardized assessee density percapita across ULBs (within each category). This score is compared with other ULB scores (within the category) and normalized by comparing with the 75th percentile (third quintile) to adjust for outliers. The resultant index provides a measure of the revenue raising ability at a ULB level on account of the composition of the properties

	Residential	Commercial	Industrial
Average demand per assessment (INR)			
MC	1170	9663	5427
M	1047	2949	6140
TP	330	1073	9312
Implied weights			
MC	1	8	5
M	1	3	6
TP	1	3	28
% of assessments (2015)			
MC	90%	9%	1%
M	87%	12%	1%
TP	92%	7%	1%
Share of overall demand (2015)			
MC	61%	34%	5%
M	67%	26%	6%
TP	71%	18%	11%

- To compare the service intensity of ULBs, we calculate the cumulative capital expenditure of the ULB over the past five years on a percapita basis (adjusted to 2013 population as a mid-point). This is held to be an indicator of the level of asset intensity, and hence service intensity in the local body. This number is normalized between ULBs in a category (Municipal Corporations, Municipalities and Town Panchayats) through a third quartile comparison as above, to adjust for outliers. This produces an index reflecting the ability to charge of the ULB (justified by investments made towards infrastructure for the citizens)

The three scores calculated above (household income, assessee base and capital investment intensity) are combined with equal weightages, to arrive at the aggregate index of revenue raising ability. This can be incorporated in place of the inverse ratio identified by the 4th SFC, to bring in an estimate of the potential for own revenue augmentation at a ULB level. The full index for all ULBs across categories is presented in Section 10

Shencottah	1.63	1.50	1.00	1.41
Tenkasi	1.48	1.25	1.11	1.25
Vikramasingapuram	1.47	1.37	1.00	1.30
Kayalpattanam	1.68	1.61	1.91	1.69
Kovilpatti	1.65	1.56	1.00	1.45
Colachel	1.00	1.24	1.00	1.15
Kuzhithurai	1.01	1.02	1.00	1.01
Nagercoil	1.64	1.63	1.31	1.56
Padmanabhapuram	1.00	1.00	1.49	1.11
Hosur	1.93	1.90	1.95	1.91
Krishnagiri	1.65	1.74	1.09	1.58
Ariyalur	1.26	1.67	1.00	1.46
Jayamkondam	1.00	1.49	1.45	1.41
Dharapuram	1.62	1.00	1.38	1.17
Kangeyam	1.00	1.23	1.00	1.15
Palladam	1.00	1.46	1.35	1.37
Udumalpettai	1.00	1.59	1.11	1.40
Vellakoil	1.00	1.00	1.00	1.00

Capex Gap – Town Panchayats

	Water	Roads	Sewer and SWD	Net
Atchirupakkam	1.11	1.06	1.00	1.06
Chitlapakkam	1.63	1.68	1.47	1.62
Edaikazhinadu	1.00	1.00	2.00	1.23
Karunguzhi	1.34	1.50	1.00	1.36
Kunrathur	1.67	1.55	1.60	1.58
Madambakkam	1.36	1.33	1.54	1.38
Mamallapuram	1.47	1.39	1.00	1.31
Mangadu	1.43	1.57	1.78	1.60
Nandivaram Guduvancheri	1.52	1.47	1.55	1.50
Peerankaranai	1.43	1.52	1.23	1.44
Perungalathur	1.34	1.34	1.17	1.30
Sriperumbudur	1.28	1.29	1.00	1.22
Thirukalukundram	1.51	1.55	1.51	1.54
Thiruneermalai	1.54	1.60	1.00	1.46
Thirupporur	1.00	1.06	1.00	1.04
Uthiramerur	1.26	1.27	1.62	1.35
Walajabad	1.35	1.45	1.00	1.33
Arani	1.67	1.52	1.02	1.43
Gummidipoondi	1.59	1.66	1.35	1.58
Minjur	1.48	1.51	1.61	1.53
Naravarikuppam	1.81	1.71	1.24	1.62

Pallipat	1.00	1.42	1.00	1.27
Podhaturpet	1.64	1.70	1.18	1.57
Ponneri	2.00	1.65	1.39	1.64
Thirumazhisai	1.54	1.65	1.74	1.65
Thirunindravur	1.18	1.25	1.77	1.36
Uthukottai	1.50	1.51	1.03	1.40
Annamalai Nagar	1.41	1.52	1.89	1.59
Bhuvanagiri	1.51	1.49	1.85	1.58
Gangaikondan	1.34	1.47	1.58	1.48
Kattumannarkoil	1.66	1.45	1.67	1.53
Killai	1.66	1.22	1.97	1.45
Kurinjipadi	1.33	1.40	1.19	1.34
Lapettai	1.52	1.62	1.74	1.63
Mangalampettai	1.51	1.54	1.00	1.41
Melpattambakkam	1.28	1.14	1.26	1.19
Parangipettai	1.00	1.00	1.00	1.00
Pennadam	1.65	1.65	1.62	1.64
Sethiyathope	1.52	1.68	1.85	1.69
Srimushnam	1.44	1.47	1.32	1.43
Vadalur	1.25	1.41	1.84	1.49
Thittagudi	1.54	1.30	1.70	1.43
Thorapadi	1.30	1.38	2.00	1.51
Valavanur	1.14	1.29	1.47	1.31
Vikkiravandi	1.24	1.00	1.00	1.03
Ananthapuram	1.32	1.45	1.28	1.40
Arakandanallur	1.27	1.57	1.23	1.45
Chinnasalem	1.52	1.67	1.66	1.65
Gingee	1.49	1.57	1.64	1.58
Kottakuppam	1.30	1.55	1.49	1.50
Manalurpet	1.43	1.59	1.37	1.52
Marakkanam	2.00	1.24	1.89	1.49
Sankarapuram	1.70	1.80	1.49	1.71
T.V.Nallur	1.38	1.68	1.55	1.61
Thirukoilur	1.79	1.79	1.32	1.68
Thiyagadurgam	1.44	1.50	1.38	1.47
Ulundurpet	1.49	1.73	1.46	1.64
Vadakkanandal	1.70	1.63	1.31	1.56
Alangayam	1.94	1.61	1.15	1.55
Ammoor	1.34	1.41	1.00	1.30
Kalavai	1.32	1.19	1.00	1.17
Kaveripakkam	1.57	1.57	1.00	1.44
Natrampalli	1.26	1.51	1.00	1.36
Nemili	1.51	1.67	1.50	1.61
Odugathur	1.18	1.37	1.00	1.26

Pallikonda	1.39	1.71	1.26	1.56
Panapakkam	1.61	1.65	1.27	1.56
Pennathur	1.31	1.46	1.00	1.33
Sholinghur	1.48	1.72	1.15	1.56
Thakkolam	1.70	1.52	1.70	1.58
Thimiri	1.78	1.72	1.35	1.64
Thiruvalam	1.00	1.38	1.31	1.31
Udayendiram	1.54	1.66	1.23	1.55
Vilapakkam	1.25	1.00	1.00	1.03
Chengam	1.60	1.70	1.36	1.61
Chetpet	1.73	1.70	1.10	1.57
Desur	1.83	1.59	1.00	1.49
Kalambur	1.46	1.54	1.06	1.42
Kannamangalam	1.02	1.46	1.02	1.30
Kilpennathur	1.48	1.25	1.12	1.25
Pernamallur	1.33	1.14	1.21	1.18
Polur	1.73	1.73	1.42	1.66
Pudupalayam	1.59	1.58	1.24	1.51
Vettavalam	1.61	1.51	1.25	1.47
Arasiramani	1.00	1.20	1.82	1.31
Attayampatty	1.79	1.45	1.57	1.52
Ayothiapattanam	1.22	1.24	1.00	1.18
Belur	1.18	1.49	1.28	1.40
Edanganasalai	1.11	1.35	1.30	1.30
Elampillai	1.75	1.50	1.00	1.42
Gangavalli	1.61	1.06	1.00	1.12
Jalagandapuram	1.80	1.59	1.53	1.60
Kadayampatty	1.62	1.45	1.54	1.49
Kannankurichi	1.45	1.44	1.57	1.47
Karuppur	1.75	1.66	1.42	1.62
Keeripatty	1.00	1.03	1.38	1.11
Kolathur	1.64	1.23	1.00	1.24
Konganapuram	1.00	1.20	1.53	1.25
Mallur	1.75	1.01	1.96	1.33
Mecheri	1.13	1.12	1.45	1.20
Nangavalli	1.42	1.48	1.61	1.50
Omalur	1.00	1.00	1.00	1.00
P.N.Palayam	1.18	1.35	1.23	1.30
P.N.Patty	1.12	1.27	1.31	1.26
Panamarathu patty	1.37	1.55	1.56	1.52
Poolampatti	1.00	1.38	1.82	1.42
Sankari	1.71	1.58	1.76	1.64
Sendarapatty	1.08	1.52	1.65	1.49
Thammampatty	1.50	1.09	1.00	1.13

10. Computed Revenue Potential Index for ULBs

Revenue Potential Score – Municipal Corporations

Municipal Corporation	HH Income Score	Infra Score	Assessee score	Overall score
VELLORE	0.78	1.00	0.81	0.87
SALEM	0.89	0.53	0.81	0.74
ERODE	1.00	0.39	1.00	0.80
COIMBATORE	0.97	0.27	0.86	0.70
THANJAVUR	0.88	1.00	0.71	0.86
THIRUCHIRAPALLI	0.91	0.46	0.73	0.70
MADURAI	0.90	0.25	0.70	0.62
DINDIGUL	0.89	1.00	1.00	0.96
TIRUNELVELI	0.89	0.40	0.90	0.73
THOOTHUKUDI	0.89	0.35	1.00	0.75
TIRUPPUR	0.95	0.37	0.79	0.71

Revenue Potential Score – Municipalities

Municipality	HH Income Score	Infra Score	Assessee score	Overall score
Anakaputhur	0.89	0.84	0.50	0.74
Chengalpattu	0.89	0.43	0.42	0.58
Kanchipuram	0.89	0.49	0.62	0.67
Maduranthagam	0.89	0.72	0.50	0.70
Maraimalainagar	0.89	1.00	0.58	0.82
Pallavapuram	0.89	0.67	0.52	0.69
Pammal	0.89	0.91	0.72	0.84
Tambaram	0.89	1.00	0.56	0.82
Sembakkam	0.89	0.90	1.00	0.93
Avadi	0.86	0.76	0.51	0.71
Poovai	0.86	0.34	0.78	0.66
Thiruthani	0.86	0.56	0.62	0.68
Thiruverkadu	0.86	1.00	0.62	0.83
Tiruvallur	0.86	1.00	0.53	0.80
Chidambaram	0.84	1.00	0.68	0.84
Cuddalore	0.84	0.27	0.45	0.52
Nellikuppam	0.84	0.58	0.45	0.62
Panruti	0.84	0.62	0.75	0.73
Vridhachalam	0.84	0.57	0.61	0.67

Kallakurichi	0.80	0.53	1.00	0.78
Tindivanam	0.80	0.40	0.75	0.65
Villupuram	0.80	0.46	0.72	0.66
Ambur	0.78	0.43	0.40	0.54
Arakonam	0.78	0.77	0.53	0.69
Arcot	0.78	0.42	0.67	0.63
Gudiyatham	0.78	0.47	0.60	0.62
Jolarpet	0.78	1.00	0.70	0.83
Melvisharam	0.78	1.00	0.43	0.74
Pernambet	0.78	0.62	0.62	0.67
Ranipet	0.78	1.00	0.82	0.87
Thirupathur	0.78	1.00	0.91	0.90
Vaniyambadi	0.78	1.00	0.58	0.79
Walajapet	0.78	1.00	0.68	0.82
Arani	0.80	0.53	0.60	0.64
Thiruvathipuram	0.80	0.21	0.52	0.51
Tiruvannamalai	0.80	0.77	0.65	0.74
Vandavasi	0.80	1.00	0.78	0.86
Attur	0.89	0.45	0.96	0.77
Idappadi	0.89	0.47	0.78	0.71
Mettur	0.89	0.33	0.77	0.66
Narasingapuram	0.89	0.47	0.75	0.70
Komarapalayam	0.95	0.66	1.00	0.87
Namakkal	0.95	0.67	0.96	0.86
Pallipalayam	0.95	0.58	1.00	0.84
Rasipuram	0.95	0.34	1.00	0.77
Thiruchengode	0.95	0.39	1.00	0.78
Dharmapuri	0.86	0.57	0.81	0.75
Bhavani	1.00	0.43	0.87	0.77
Gobichettipalayam	1.00	0.34	0.94	0.76
Punjaipuliampatti	1.00	0.49	1.00	0.83
Sathiyamangalam	1.00	0.61	0.93	0.85
Mettupalayam	0.97	1.00	0.84	0.94
Pollachi	0.97	0.46	0.60	0.68
Valparai	0.97	1.00	0.25	0.74
Coonoor	0.92	0.64	0.66	0.74
Gudalur	0.92	0.96	0.83	0.90
Nelliyalam	0.92	1.00	0.53	0.82
Udhagamandalam	0.92	0.88	0.66	0.82
Kumbakonam	0.88	0.30	0.64	0.61
Pattukottai	0.88	0.64	0.88	0.80
Mayiladuthurai	0.87	0.26	0.89	0.68
Nagapattinam	0.87	0.95	0.62	0.82
Sirkali	0.87	1.00	0.72	0.87

Vedaranyam	0.87	0.38	0.98	0.74
Koothanallur	0.88	1.00	0.76	0.88
Mannargudi	0.88	0.44	0.61	0.64
Thiruthuraipoondi	0.88	0.50	1.00	0.79
Tiruvarur	0.88	0.32	0.91	0.70
Manapparai	0.91	1.00	0.88	0.93
Thuraiyur	0.91	0.21	1.00	0.71
Thuvakudi	0.91	0.40	0.52	0.61
Karur	0.95	0.34	0.85	0.71
Kulithalai	0.95	0.48	0.64	0.69
Perambalur	0.90	0.90	1.00	0.93
Aranthangi	0.84	0.39	1.00	0.74
Pudukottai	0.84	0.71	0.61	0.72
Melur	0.90	0.29	0.96	0.72
Thirumangalam	0.90	1.00	1.00	0.97
Usilampatti	0.90	0.89	0.91	0.90
Bodinayakanur	0.90	0.67	0.58	0.71
Chinnamanur	0.90	1.00	0.90	0.93
Cumbam	0.90	1.00	0.67	0.85
Periyakulam	0.90	0.26	0.66	0.61
Theni-allinagaram	0.90	0.59	1.00	0.83
Theni-gudalur	0.90	0.61	0.62	0.71
Kodaikanal	0.89	1.00	0.69	0.86
Ottanchathiram	0.89	1.00	1.00	0.96
Palani	0.89	1.00	0.63	0.84
Keelakarai	0.79	0.36	0.72	0.62
Paramakudi	0.79	0.57	0.93	0.76
Ramanathapuram	0.79	0.69	1.00	0.83
Rameswaram	0.79	0.11	0.62	0.50
Aruppukottai	0.95	0.19	1.00	0.71
Rajapalayam	0.95	0.28	1.00	0.74
Sattur	0.95	0.57	1.00	0.84
Sivakasi	0.95	0.95	1.00	0.96
Srivilliputhur	0.95	1.00	1.00	0.98
Thiruthangal	0.95	1.00	1.00	0.98
Virudhunagar	0.95	0.94	1.00	0.96
Devakottai	0.88	0.45	0.93	0.76
Karaikudi	0.88	0.83	0.70	0.80
Sivagangai	0.88	0.91	1.00	0.93
Ambasamudram	0.89	1.00	1.00	0.96
Kadayanallur	0.89	0.37	0.86	0.71
Puliyangudi	0.89	0.45	0.91	0.75
Sankarankoil	0.89	0.61	0.88	0.79
Shencottah	0.89	0.41	1.00	0.77

Tenkasi	0.89	0.33	1.00	0.74
Vikramasingapuram	0.89	1.00	0.97	0.95
Kayalpattanam	0.89	0.31	0.88	0.69
Kovilpatti	0.89	1.00	1.00	0.96
Colachel	0.86	0.62	0.87	0.78
Kuzhithurai	0.86	0.97	1.00	0.94
Nagercoil	0.86	0.42	0.70	0.66
Padmanabhapuram	0.86	0.99	0.95	0.93
Hosur	0.85	0.38	0.12	0.45
Krishnagiri	0.85	1.00	0.95	0.93
Ariyalur	0.87	0.08	1.00	0.65
Jayamkondam	0.87	0.53	1.00	0.80
Dharapuram	0.95	0.85	0.68	0.83
Kangeyam	0.95	0.65	1.00	0.87
Palladam	0.95	1.00	1.00	0.98
Udumalpettai	0.95	0.75	0.81	0.84
Vellakoil	1.00	1.00	0.99	1.00

Revenue Potential Score – Town Panchayats

Town Panchayat	HH Income Score	Infra Score	Assessee score	Overall score
Atchirupakkam	0.89	1.00	0.55	0.82
Chitlapakkam	0.89	0.65	0.37	0.64
Edaikazhinadu	0.89	0.85	0.40	0.71
Karunguzhi	0.89	0.77	0.68	0.78
Kunrathur	0.89	0.66	0.27	0.61
Madambakkam	0.89	1.00	0.47	0.79
Mamallapuram	0.89	0.91	0.83	0.88
Mangadu	0.89	0.80	0.39	0.69
Nandivaram Guduvancheri	0.89	0.69	0.36	0.65
Peerankaranai	0.89	0.69	0.47	0.68
Perungalathur	0.89	0.79	0.48	0.72
Sriperumbudur	0.89	1.00	0.56	0.82
Thirukalukundram	0.89	0.63	0.59	0.70
Thiruneermalai	0.89	0.88	0.38	0.72
Thirupporur	0.89	1.00	0.51	0.80
Uthiramerur	0.89	0.68	0.43	0.67
Walajabad	0.89	0.73	0.60	0.74
Arani	0.86	0.62	0.51	0.66
Gummidipoondi	0.86	0.56	0.48	0.63
Minjur	0.86	1.00	0.30	0.72
Naravarikuppam	0.86	1.00	0.76	0.87

Pallipat	0.86	1.00	0.82	0.89
Podhaturpet	0.86	0.97	0.41	0.75
Ponneri	0.86	0.36	0.58	0.60
Thirumazhisai	0.86	1.00	0.81	0.89
Thirunindravur	0.86	1.00	0.49	0.78
Uthukottai	0.86	0.56	0.74	0.72
Annamalai Nagar	0.84	0.34	0.33	0.50
Bhuvanagiri	0.84	0.36	0.44	0.55
Gangaikondan	0.84	0.72	1.00	0.85
Kattumannarkoil	0.84	1.00	0.61	0.82
Killai	0.84	1.00	0.37	0.74
Kurinjipadi	0.84	0.93	0.53	0.77
Lapettai	0.84	1.00	0.50	0.78
Mangalampettai	0.84	0.60	0.66	0.70
Melpattambakkam	0.84	1.00	0.47	0.77
Parangipettai	0.84	1.00	1.00	0.95
Pennadam	0.84	0.08	0.58	0.50
Sethiyathope	0.84	0.64	0.59	0.69
Srimushnam	0.84	0.55	0.51	0.63
Vadalur	0.84	0.54	0.61	0.66
Thittagudi	0.84	1.00	0.42	0.75
Thorapadi	0.84	0.65	0.39	0.63
Valavanur	0.80	0.77	0.48	0.68
Vikkiravandi	0.80	0.90	0.47	0.72
Ananthapuram	0.80	0.71	0.53	0.68
Arakandanallur	0.80	0.47	0.45	0.57
Chinnasalem	0.80	0.44	0.85	0.69
Gingee	0.80	0.56	1.00	0.79
Kottakuppam	0.80	0.42	0.35	0.52
Manalurpet	0.80	0.80	0.58	0.72
Marakkanam	0.80	0.68	0.40	0.62
Sankarapuram	0.80	1.00	0.61	0.80
T.V.Nallur	0.80	0.62	0.49	0.64
Thirukoilur	0.80	0.46	0.72	0.66
Thiyagadurgam	0.80	0.73	0.48	0.67
Ulundurpet	0.80	0.48	0.55	0.61
Vadakkanandal	0.80	0.89	0.39	0.69
Alangayam	0.78	0.66	0.45	0.63
Amموor	0.78	0.35	0.48	0.54
Kalavai	0.78	0.58	0.49	0.62
Kaveripakkam	0.78	0.50	0.49	0.59
Natrampalli	0.78	1.00	0.71	0.83
Nemili	0.78	0.71	0.57	0.69
Odugathur	0.78	1.00	0.61	0.80

Pallikonda	0.78	0.69	0.59	0.69
Panapakkam	0.78	0.52	0.71	0.67
Pennathur	0.78	0.70	0.53	0.67
Sholinghur	0.78	0.24	0.63	0.55
Thakkolam	0.78	0.30	0.42	0.50
Thimiri	0.78	0.45	0.58	0.60
Thiruvalam	0.78	0.77	0.54	0.70
Udayendiram	0.78	0.30	0.45	0.51
Vilapakkam	0.78	0.92	0.77	0.82
Chengam	0.80	0.25	0.58	0.54
Chetpet	0.80	0.42	0.63	0.62
Desur	0.80	1.00	0.87	0.89
Kalambur	0.80	1.00	0.65	0.82
Kannamangalam	0.80	0.53	0.79	0.71
Kilpennathur	0.80	0.74	0.53	0.69
Pernamallur	0.80	1.00	0.52	0.77
Polur	0.80	1.00	0.73	0.84
Pudupalayam	0.80	1.00	0.52	0.77
Vettavalam	0.80	0.28	0.48	0.52
Arasiramani	0.89	0.33	0.52	0.58
Attayampatty	0.89	0.30	0.72	0.64
Ayothiapattanam	0.89	0.44	1.00	0.78
Belur	0.89	0.56	0.54	0.66
Edanganasalai	0.89	0.29	0.63	0.60
Elampillai	0.89	0.31	1.00	0.73
Gangavalli	0.89	0.85	0.70	0.81
Jalagandapuram	0.89	0.20	1.00	0.70
Kadayampatty	0.89	0.57	0.32	0.59
Kannankurichi	0.89	0.50	0.61	0.66
Karuppur	0.89	0.51	0.55	0.65
Keeripatty	0.89	0.49	0.41	0.59
Kolathur	0.89	0.51	0.70	0.70
Konganapuram	0.89	1.00	0.77	0.88
Mallur	0.89	0.51	0.58	0.66
Mecheri	0.89	0.46	0.61	0.65
Nangavalli	0.89	0.59	0.69	0.72
Omalur	0.89	1.00	1.00	0.96
P.N.Palayam	0.89	0.87	0.56	0.77
P.N.Patty	0.89	0.53	0.90	0.77
Panamarathu patty	0.89	0.48	0.56	0.64
Poolampatti	0.89	0.54	0.59	0.67
Sankari	0.89	0.25	1.00	0.71
Sendarapatty	0.89	0.33	0.47	0.56
Thammampatty	0.89	0.51	0.90	0.77

Tharamangalam	0.89	0.29	0.44	0.54
Thedavur	0.89	0.74	0.56	0.73
Thevur	0.89	0.34	0.55	0.59
Valapadi	0.89	0.65	0.85	0.79
Vanavasi	0.89	0.23	0.58	0.57
Veeraganur	0.89	0.71	0.67	0.75
Veerakkalpudur	0.89	1.00	1.00	0.96
Yethapur	0.89	0.35	0.54	0.59
Aalampalayam	0.95	0.38	0.73	0.69
Athanur	0.95	0.26	0.59	0.60
Erumapatty	0.95	0.67	0.55	0.72
K.N.Paty	0.95	0.68	0.71	0.78
Mallasamudram	0.95	0.30	1.00	0.75
Mohanur	0.95	0.42	0.73	0.70
Namagiripettai	0.95	0.50	0.55	0.67
Padaveedu	0.95	1.00	1.00	0.98
Pandamangalam	0.95	0.31	0.66	0.64
Paramathy	0.95	0.84	0.67	0.82
Pattanam	0.95	0.59	0.66	0.73
Pillanallur	0.95	0.48	0.82	0.75
Pothanur	0.95	0.56	0.56	0.69
R.Pudupatty	0.95	0.97	0.52	0.81
Seerapalli	0.95	0.63	0.67	0.75
Sendamangalam	0.95	0.34	0.62	0.64
Velur	0.95	0.57	0.77	0.76
Vengarai	0.95	0.33	0.54	0.61
Vennandur	0.95	0.28	0.67	0.63
B.Mallapuram	0.86	0.72	0.49	0.69
Harur	0.86	0.80	0.73	0.80
Kadathur	0.86	0.67	1.00	0.84
Kambainallur	0.86	0.66	0.47	0.66
Karimangalam	0.86	1.00	0.77	0.87
Marandahalli	0.86	1.00	0.71	0.86
Palacode	0.86	0.57	0.77	0.73
Papparapatti	0.86	0.49	0.76	0.70
Pappireddipatti	0.86	0.96	0.74	0.85
Pennagaram	0.86	0.42	0.68	0.65
Ammapettai	1.00	#N/A	0.25	#N/A
Anthiyur	1.00	0.33	1.00	0.78
Appakudal	1.00	0.60	1.00	0.87
Arachalur	1.00	0.71	0.41	0.71
Ariyappam palayam	1.00	0.29	1.00	0.76
Athani	1.00	1.00	0.39	0.80
Avalpoondurai	1.00	0.91	0.98	0.97

Bhavanisagar	1.00	0.54	0.17	0.57
Chenna samudram	1.00	0.68	0.30	0.66
Chennimalai	1.00	0.68	1.00	0.89
Chithode	1.00	0.92	1.00	0.97
Elathur	1.00	0.53	0.33	0.62
Jambai	1.00	0.50	0.85	0.78
Kanjikoil	1.00	0.55	0.49	0.68
Karumandi Chellipalayam	1.00	0.74	1.00	0.91
Kasipalayam (Gobi)	1.00	0.67	0.56	0.74
Kembanaicken palayam	1.00	0.53	0.86	0.80
Kilambadi	1.00	0.64	0.39	0.68
Kodumudi	1.00	0.63	1.00	0.88
Kolappalur	1.00	0.50	0.83	0.78
Kollankoil	1.00	0.70	0.48	0.73
Kugalur	1.00	0.70	0.52	0.74
Lakkampatti	1.00	0.29	0.75	0.68
Modakkurichi	1.00	0.81	1.00	0.94
Nallampatti	1.00	0.74	0.17	0.64
Nambiyur	1.00	0.55	1.00	0.85
Nasiyanur	1.00	0.77	0.85	0.87
Nerinjipettai	1.00	0.61	0.44	0.69
Olagadam	1.00	0.49	0.59	0.69
P.Mettupalayam	1.00	0.34	1.00	0.78
Pallapalayam	1.00	#N/A	0.32	#N/A
Pasur	1.00	0.85	0.09	0.64
Periyakodivery	1.00	0.39	0.93	0.77
Perundurai	1.00	1.00	1.00	1.00
Pethampalayam	1.00	1.00	1.00	1.00
Salangapalayam	1.00	0.42	0.80	0.74
Sivagiri	1.00	#N/A	1.00	#N/A
Unjalur	1.00	0.73	0.27	0.67
Vadugapatti	1.00	#N/A	0.59	#N/A
Vaniputhur	1.00	0.55	0.46	0.67
Vellottamparappu	1.00	0.89	0.24	0.71
Vengambur	1.00	1.00	0.48	0.83
Alandurai	0.97	1.00	0.29	0.75
Anamalai	0.97	0.57	1.00	0.85
Annur	0.97	1.00	0.56	0.84
Chettipalayam	0.97	1.00	0.78	0.92
Dhaliyur	0.97	1.00	0.40	0.79
Ettimadai	0.97	0.62	0.35	0.65
Gudalur	0.97	0.37	0.98	0.78
Idigarai	0.97	1.00	0.25	0.74
Irugur	0.97	1.00	1.00	0.99

Kannampalayam	0.97	1.00	0.94	0.97
Karamadai	0.97	0.43	0.81	0.74
Karumatham Patti	0.97	0.67	1.00	0.88
Kinathukadavu	0.97	1.00	0.27	0.75
Kottur	0.97	1.00	0.67	0.88
Madukkarai	0.97	0.48	1.00	0.82
Mopperipalayam	0.97	0.86	1.00	0.95
Narasimhanaickenpalay	0.97	0.79	0.86	0.88
No.4 Veerapandi	0.97	1.00	1.00	0.99
Odayakulam	0.97	0.84	0.76	0.86
Othakkal mandapam	0.97	0.75	0.56	0.76
P.N.Palayam	0.97	0.87	1.00	0.95
Pallapalayam	0.97	#N/A	1.00	#N/A
Perianegamam	0.97	0.64	0.22	0.61
Perur	0.97	1.00	0.19	0.72
Pooluvapatti	0.97	0.53	0.20	0.57
Samathur	0.97	0.60	0.25	0.61
Sarcarsama kulam	0.97	0.81	1.00	0.93
Sirumugai	0.97	0.28	1.00	0.75
Suleswaranpatti	0.97	0.61	0.31	0.63
Sulur	0.97	0.98	1.00	0.98
Thenkarai	0.97	#N/A	0.21	#N/A
Thirumalayam Palayam	0.97	0.92	0.49	0.79
Thonda Muthur	0.97	0.62	1.00	0.87
Vedapatti	0.97	0.39	0.27	0.55
Vellalore	0.97	0.84	1.00	0.94
Vettaikaranpudur	0.97	1.00	0.47	0.81
Zaminuthukuli	0.97	1.00	0.38	0.78
Adigaratty	0.92	0.85	1.00	0.92
Bikkatty	0.92	0.65	0.15	0.57
Devershola	0.92	0.87	1.00	0.93
Hulical	0.92	0.94	0.31	0.72
Jegathala	0.92	0.80	0.99	0.90
Ketti	0.92	1.00	0.50	0.81
Kil Kundah	0.92	0.37	0.56	0.62
Kotagiri	0.92	1.00	1.00	0.97
Naduvattam	0.92	0.68	1.00	0.87
O' Valley	0.92	0.20	0.78	0.63
Sholur	0.92	1.00	0.44	0.79
Adirampattinam	0.88	0.32	1.00	0.74
Aduthurai	0.88	0.32	0.64	0.61
Ammapettai	0.88	#N/A	0.59	#N/A
Ayyampettai	0.88	0.30	0.50	0.56
Dharasuram	0.88	1.00	1.00	0.96

Madukkur	0.88	0.72	1.00	0.87
Melathiruppanthruthi	0.88	0.61	0.54	0.68
Melattur	0.88	0.85	0.26	0.66
Orathanadu	0.88	1.00	0.64	0.84
Papanasam	0.88	0.07	0.82	0.59
Peravurani	0.88	0.67	1.00	0.85
Perumagalur	0.88	1.00	0.19	0.69
Sholapuram	0.88	1.00	1.00	0.96
Swamimalai	0.88	0.46	0.33	0.56
Thirubuvanam	0.88	0.35	1.00	0.75
Thirukattupalli	0.88	0.55	1.00	0.81
Thirunageswaram	0.88	0.36	0.55	0.60
Thiruppananthai	0.88	0.63	0.65	0.72
Thiruvaiyaru	0.88	1.00	0.76	0.88
Thiruvidaimaruthur	0.88	1.00	0.33	0.74
Vallam	0.88	0.47	1.00	0.78
Veppathur	0.88	0.51	0.54	0.64
Keelvelur	0.87	0.58	0.47	0.64
Kuthalam	0.87	0.51	0.83	0.74
Manalmedu	0.87	0.79	0.91	0.86
Thalanayar	0.87	0.90	0.33	0.70
Tharangampadi	0.87	0.43	0.82	0.71
Thittachery	0.87	0.71	0.49	0.69
Vaithieswarankoil	0.87	1.00	0.77	0.88
Velankanni	0.87	1.00	0.00	0.62
Kodavasal	0.88	0.25	1.00	0.71
Koradachery	0.88	1.00	0.35	0.74
Muthupettai	0.88	0.40	1.00	0.76
Nannilam	0.88	1.00	0.62	0.83
Needamangalam	0.88	0.13	0.35	0.45
Peralam	0.88	1.00	0.13	0.67
Valangaiman	0.88	0.46	0.87	0.74
Balakrishnampatti	0.91	0.49	0.13	0.51
Kallakkudi	0.91	0.80	0.70	0.80
Kattuputhur	0.91	0.53	0.94	0.79
Koothappar	0.91	0.21	0.51	0.54
Lalgudi	0.91	0.38	1.00	0.76
Mannachanallur	0.91	0.45	1.00	0.79
Mettuppalayam	0.91	1.00	0.55	0.82
Musiri	0.91	0.28	1.00	0.73
Ponnampatti	0.91	0.35	1.00	0.75
Poovalur	0.91	0.41	0.37	0.56
Pullambadi	0.91	1.00	0.57	0.83
S.Kannanur	0.91	0.71	0.92	0.84

Sirugamani	0.91	0.56	0.50	0.66
Thathiengarpur	0.91	0.50	1.00	0.80
Thottiam	0.91	1.00	0.26	0.72
Uppiliapuram	0.91	0.54	0.25	0.57
Aravakurichi	0.95	1.00	1.00	0.98
Krishnarayapuram	0.95	0.63	0.53	0.70
Marudur	0.95	0.60	0.46	0.67
Nangavaram	0.95	1.00	0.59	0.85
P.J.Cholapuram	0.95	0.94	0.23	0.71
Pallapatti	0.95	0.41	1.00	0.79
Punjaipugalur	0.95	0.28	1.00	0.74
TNPL Pugalur	0.95	1.00	1.00	0.98
Uppidamangalam	0.95	0.70	0.60	0.75
Punjaithottakurichi	0.95	0.70	0.63	0.76
Puliyur	0.95	0.67	1.00	0.87
Arumbavur	0.90	0.50	0.39	0.60
Kurumbalur	0.90	0.96	0.41	0.76
Labbaikudikadu	0.90	0.16	0.51	0.52
Poolambadi	0.90	0.68	0.39	0.66
Alangudi	0.84	0.00	1.00	0.61
Annavasal	0.84	0.57	0.47	0.63
Arimalam	0.84	1.00	0.31	0.72
Illuppur	0.84	0.50	1.00	0.78
Karmabakkudy	0.84	0.40	0.49	0.57
Keeramangalam	0.84	0.43	0.65	0.64
Keeranur	0.84	#N/A	0.46	#N/A
Ponnamaravathy	0.84	1.00	1.00	0.95
A.Vellalapatti	0.90	1.00	0.15	0.68
Alanganallur	0.90	0.50	0.24	0.55
Elumalai	0.90	0.41	1.00	0.77
Palamedu	0.90	0.66	0.55	0.70
Paravai	0.90	1.00	1.00	0.97
Peraiyur	0.90	0.77	0.62	0.76
Sholavandan	0.90	0.77	1.00	0.89
T.Kallupatti	0.90	0.59	0.76	0.75
Vadipatti	0.90	0.24	1.00	0.71
Aundipatti	0.90	0.35	1.00	0.75
B. Meenakshipuram	0.90	0.48	0.19	0.52
Boothipuram	0.90	0.21	0.89	0.67
C. Pudupatti	0.90	0.48	0.99	0.79
Devathanapatti	0.90	0.51	0.46	0.62
Genguvarpatti	0.90	1.00	0.29	0.73
Hanumanthanpatti	0.90	1.00	0.50	0.80
Highwavys	0.90	0.63	0.33	0.62

Kamayagoundanpatti	0.90	0.71	0.49	0.70
Kombai	0.90	0.46	0.30	0.55
Kutchanur	0.90	0.99	0.17	0.68
Markayankottai	0.90	0.85	0.21	0.65
Mela- chokkanathapuram	0.90	#N/A	0.38	#N/A
Odaipatti	0.90	0.81	0.30	0.67
Palanichettipatti	0.90	0.05	0.78	0.58
Pannaipuram	0.90	0.13	0.35	0.46
Tamaraikulam	0.90	0.76	0.34	0.67
Thenkarai	0.90	#N/A	0.21	#N/A
Thevaram	0.90	0.35	1.00	0.75
Uthamapalayam	0.90	0.27	0.63	0.60
Vadugapatti	0.90	#N/A	0.52	#N/A
Veerapandi	0.90	1.00	0.40	0.76
Agaram	0.89	0.47	1.00	0.79
Ammaya naickanur	0.89	0.39	1.00	0.76
Ayakudi	0.89	0.30	0.63	0.60
Ayyalur	0.89	1.00	0.46	0.78
Ayyampalayam	0.89	0.28	0.28	0.48
Balasamudram	0.89	0.56	0.60	0.68
Chinnalapatti	0.89	0.27	1.00	0.72
Eriodu	0.89	1.00	0.63	0.84
Kannivadi	0.89	#N/A	0.49	#N/A
Keeranur	0.89	#N/A	0.29	#N/A
Natham	0.89	0.75	1.00	0.88
Neikkarapatti	0.89	0.98	0.63	0.83
Nilakottai	0.89	1.00	1.00	0.96
Palayam	0.89	0.98	0.61	0.83
Sriramapuram	0.89	0.79	0.33	0.67
Thadicombu	0.89	1.00	1.00	0.96
Vadamadurai	0.89	1.00	0.66	0.85
Vathalagundu	0.89	0.43	1.00	0.77
Vedasandur	0.89	0.45	0.59	0.64
Pannaikkadu	0.89	1.00	0.37	0.75
Pattiveeranpatti	0.89	0.63	0.27	0.60
Sevugampatti	0.89	0.36	1.00	0.75
Sithayankottai	0.89	0.55	0.47	0.64
Abiramam	0.79	0.22	0.56	0.52
Kamuthi	0.79	0.61	1.00	0.80
Mandapam	0.79	0.96	0.63	0.79
Mudukulathur	0.79	0.44	1.00	0.74
R.S.Mangalam	0.79	1.00	1.00	0.93
Sayalkudi	0.79	0.26	0.71	0.59
Thondi	0.79	1.00	0.35	0.71

Chettiyarpatti	0.95	0.52	1.00	0.82
Kariapatti	0.95	0.55	1.00	0.83
Mallanginar	0.95	0.48	1.00	0.81
Mamsapuram	0.95	0.39	1.00	0.78
S.Kodikulam	0.95	0.36	0.44	0.58
Seithur	0.95	0.57	0.61	0.71
Sundarapandiam	0.95	0.87	1.00	0.94
W.Pudupatti	0.95	0.72	0.21	0.63
Watrap	0.95	0.60	1.00	0.85
Kanadukathan	0.88	0.61	0.21	0.57
Kandanoor	0.88	0.90	1.00	0.93
Kottaiyur	0.88	0.95	0.98	0.94
Manamadurai	0.88	0.67	1.00	0.85
Nattrasankottai	0.88	0.64	1.00	0.84
Nerkuppai	0.88	0.65	0.19	0.57
Pallathur	0.88	1.00	0.72	0.87
Puduvayal	0.88	0.73	1.00	0.87
Singampunari	0.88	1.00	0.47	0.78
Thiruppathur	0.88	1.00	1.00	0.96
Thiruppuvanam	0.88	1.00	0.75	0.88
Ilayangudi	0.88	0.27	1.00	0.72
Achanpudur	0.89	1.00	0.59	0.83
Alangulam	0.89	0.68	1.00	0.86
Alwarkurichi	0.89	1.00	0.76	0.88
Ayikkudi	0.89	0.68	0.75	0.77
Cheranmahadevi	0.89	1.00	1.00	0.96
Courttalam	0.89	1.00	0.29	0.73
Eruvadi	0.89	1.00	0.49	0.79
Gopalasamudram	0.89	0.90	0.75	0.84
Ilangi	0.89	1.00	0.41	0.77
Kalakkad	0.89	1.00	1.00	0.96
Kallidaikurichi	0.89	1.00	1.00	0.96
Keelappavoor	0.89	0.41	1.00	0.77
Manimuthar	0.89	1.00	0.85	0.91
Melagaram	0.89	0.38	0.31	0.53
Melaseval	0.89	0.74	0.58	0.74
Moolakkaraipatti	0.89	0.57	0.94	0.80
Mukkudal	0.89	0.71	0.51	0.70
Nanguneri	0.89	0.50	0.25	0.55
Naranammal puram	0.89	0.42	0.38	0.57
Panagudi	0.89	0.67	0.89	0.82
Panpoli	0.89	0.35	0.30	0.51
Pattamadaai	0.89	1.00	1.00	0.96
Pudur (S)	0.89	#N/A	0.30	#N/A

Rayagiri	0.89	0.35	0.84	0.69
Sambavar vadakarai	0.89	0.98	1.00	0.96
Sankar Nagar	0.89	1.00	0.91	0.93
Sivagiri	0.89	#N/A	1.00	#N/A
Sundarapandiapuram	0.89	1.00	0.40	0.76
Surandai	0.89	0.58	1.00	0.82
Thirukkurungudi	0.89	1.00	0.50	0.80
Thiruvengadam	0.89	0.80	0.44	0.71
Thisayanvilai	0.89	1.00	1.00	0.96
Vadakaraikilpidagai	0.89	1.00	1.00	0.96
Vadakkuvalliyoor	0.89	0.65	1.00	0.85
Vasudevanallur	0.89	0.55	0.93	0.79
Veeravanallur	0.89	1.00	1.00	0.96
Alwarthirunagari	0.89	0.67	1.00	0.85
Arumuganeri	0.89	1.00	0.60	0.83
Authoor	0.89	0.52	0.35	0.59
Eral	0.89	0.41	0.65	0.65
Ettayapuram	0.89	0.61	1.00	0.83
Kadambur	0.89	0.65	0.24	0.60
Kalugumalai	0.89	0.66	1.00	0.85
Kanam	0.89	1.00	0.12	0.67
Kayathar	0.89	0.41	0.55	0.62
Nazareth	0.89	0.41	0.00	0.44
Perungulam	0.89	1.00	0.55	0.81
Pudur (V)	0.89	0.69	0.62	0.73
Sathankulam	0.89	0.32	0.88	0.70
Sawyerpuram	0.89	0.41	0.30	0.54
Srivaikundam	0.89	0.46	1.00	0.78
Thenthirupperai	0.89	0.81	0.18	0.63
Tiruchendur	0.89	0.74	1.00	0.88
Udankudi	0.89	0.34	0.97	0.74
Vilathikulam	0.89	0.62	1.00	0.84
Agasteeswaram	0.86	1.00	0.30	0.72
Alloor	0.86	1.00	0.54	0.80
Anjugramam	0.86	0.67	0.44	0.66
Aralvaimozhi	0.86	0.52	0.91	0.76
Arumanai	0.86	0.36	0.57	0.59
Attoor	0.86	1.00	0.32	0.72
Azhagappapuram	0.86	1.00	0.15	0.67
Azhagiapandipuram	0.86	0.70	0.46	0.67
Boothapandy	0.86	0.78	0.96	0.87
Edaicode	0.86	0.60	1.00	0.82
Eraniel	0.86	0.61	0.52	0.66
Ezhudesam	0.86	0.43	1.00	0.76

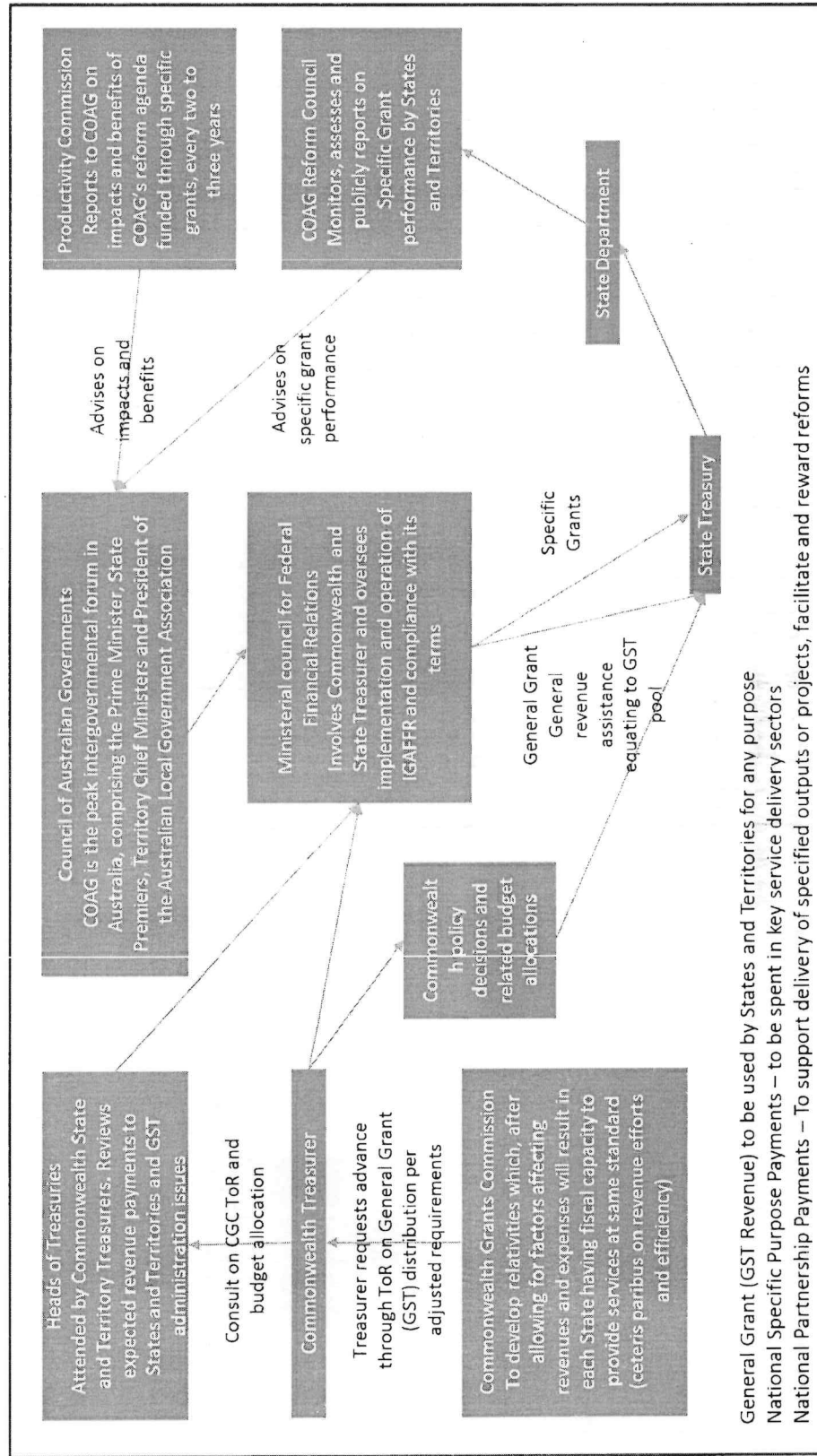
Ganapathipuram	0.86	0.60	0.50	0.65
Kadayal	0.86	0.87	1.00	0.91
Kaliyakkavilai	0.86	1.00	0.56	0.81
Kallukuttam	0.86	0.58	1.00	0.81
Kanniyakumari	0.86	1.00	0.87	0.91
Kappiyarai	0.86	0.49	0.69	0.68
Karungal	0.86	0.88	0.44	0.73
Keezhkulam	0.86	0.37	0.52	0.59
Killiyoor	0.86	1.00	0.59	0.82
Kollemcode	0.86	0.36	1.00	0.74
Kothanalloor	0.86	0.48	0.71	0.68
Kottaram	0.86	0.70	0.64	0.73
Kulasekaram	0.86	0.80	0.63	0.76
Kumarapuram	0.86	0.63	0.71	0.73
Manavalakurichy	0.86	0.83	1.00	0.90
Mandaikadu	0.86	0.83	0.64	0.78
Marungoor	0.86	1.00	0.45	0.77
Mulagumoodu	0.86	0.96	1.00	0.94
Myilaudy	0.86	1.00	0.40	0.75
Nalloor	0.86	0.75	0.52	0.71
Neyyoor	0.86	0.50	0.40	0.59
Pacode	0.86	0.88	0.78	0.84
Palapallam	0.86	0.42	0.42	0.56
Palugal	0.86	1.00	0.73	0.86
Ponmanai	0.86	1.00	0.61	0.82
Puthalam	0.86	0.36	0.35	0.52
Puthukadai	0.86	0.85	0.48	0.73
Reethapuram	0.86	1.00	0.74	0.87
Suchindrum	0.86	0.75	1.00	0.87
Thazhakudy	0.86	0.82	0.19	0.62
Then thamaraiikulam	0.86	0.33	0.55	0.58
Thengamputhoor	0.86	0.30	0.57	0.58
Theroor	0.86	1.00	0.46	0.77
Thingalnager	0.86	1.00	0.24	0.70
Thiruparappu	0.86	0.60	1.00	0.82
Thiruvattar	0.86	1.00	1.00	0.95
Thiruvithancode	0.86	0.81	0.30	0.66
Unamalaikadai	0.86	0.57	1.00	0.81
Valvachagostam	0.86	0.44	1.00	0.76
Vellimalai	0.86	0.38	0.53	0.59
Verkilambi	0.86	0.75	0.89	0.83
Vilavoor	0.86	1.00	1.00	0.95
Villukuri	0.86	1.00	0.46	0.77
Bargur	0.85	1.00	0.74	0.86

Denkanikottai	0.85	1.00	0.90	0.92
Kaveripattinam	0.85	1.00	1.00	0.95
Kelamangalam	0.85	1.00	0.35	0.73
Nagojanahalli	0.85	1.00	0.46	0.77
Uthangarai	0.85	1.00	1.00	0.95
Udayarpalayam	0.87	0.59	0.20	0.56
Varadharajanpet	0.87	0.75	0.46	0.69
Avanasi	0.95	0.66	1.00	0.87
Chinnakkam palayam	0.95	0.72	0.36	0.68
Kaniyur	0.95	0.59	0.27	0.60
Kannivadi	0.95	#N/A	0.21	#N/A
Kolathupalayam	0.95	0.72	1.00	0.89
Komaralingam	0.95	0.54	0.54	0.68
Kunnathur	0.95	1.00	1.00	0.98
Madathukulam	0.95	0.37	0.83	0.72
Mulanur	0.95	0.85	1.00	0.93
Muthur	0.95	0.82	1.00	0.93
Rudrawathi	0.95	1.00	0.35	0.77
Samalapuram	0.95	0.66	1.00	0.87
Sangaramanallur	0.95	0.54	0.57	0.69
Thali	0.95	0.75	0.26	0.66
Thirumurugan poondi	0.95	0.43	1.00	0.79
Uthukuli	0.95	0.15	0.73	0.61

A

11. Annexures

Inter Governmental Consultative and Advisory Framework in Australia



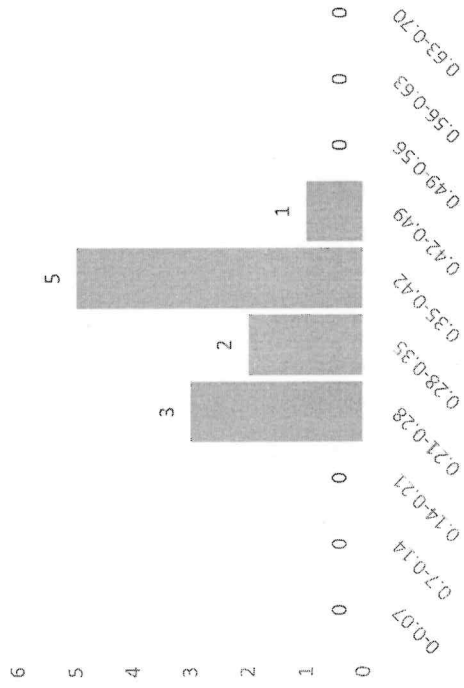
Trends in Property Tax dependency of Own revenues for ULBs

The dependency on property tax (Property Tax : Own Revenue) for Municipal Corporations on an average was around 28% - 42%, Municipalities at around 35% to 50%, and Town Panchayats at 15% - 20%. It is interesting to note that this dependency has been largely static across categories of ULBs over the past five years. The dependency is similar for Municipal Corporations and Municipalities (though the variance is higher for Municipalities), and the distribution is near normal. However, for Town Panchayats, the distribution is fat tailed

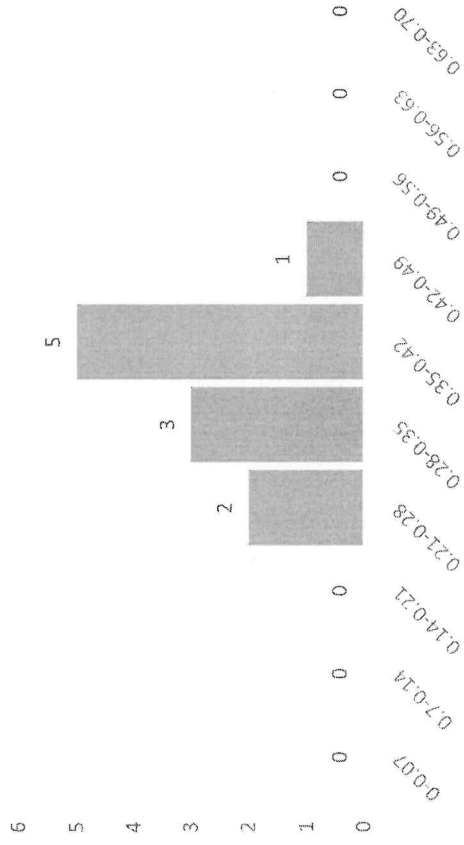
Municipal Corporations



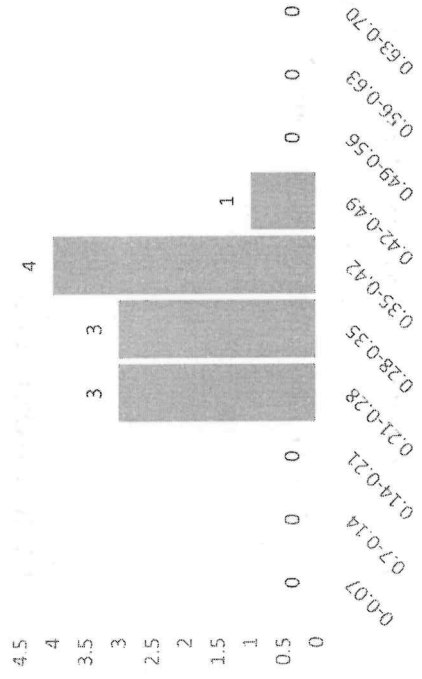
2013-Property tax/Own revenue ratio



2014-Property tax/Own revenue ratio

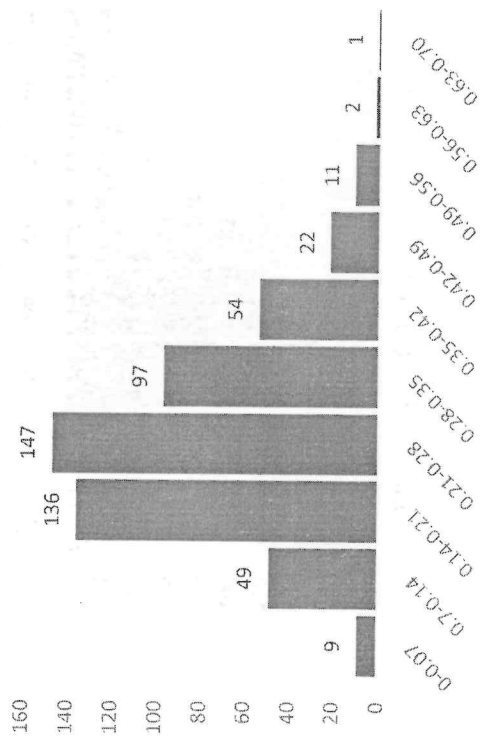


2015-Property tax/Own revenue ratio

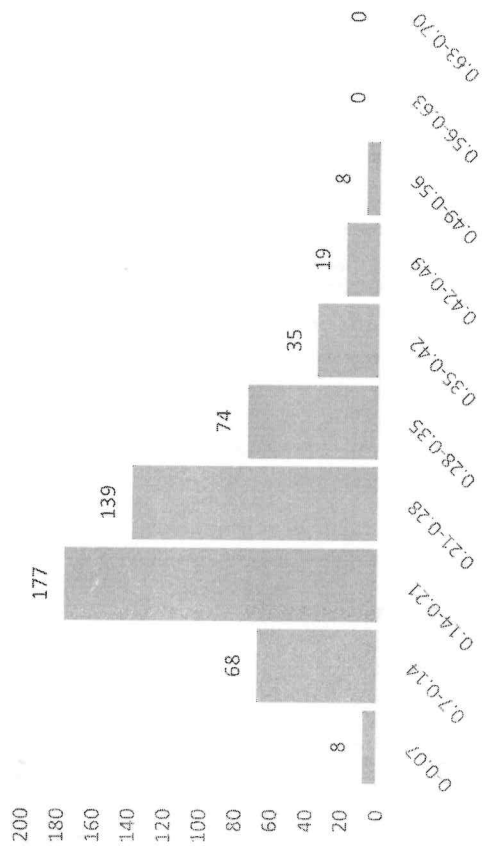


Town Panchayats

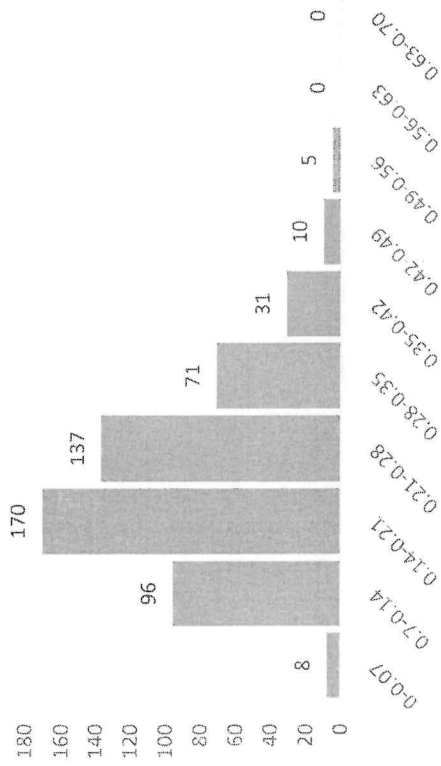
2010-11 Property tax/Own revenue ratio



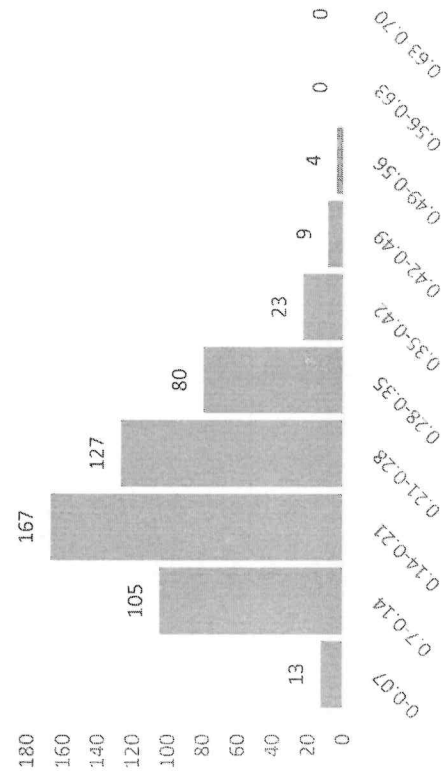
2011-12 Property tax/Own revenue ratio



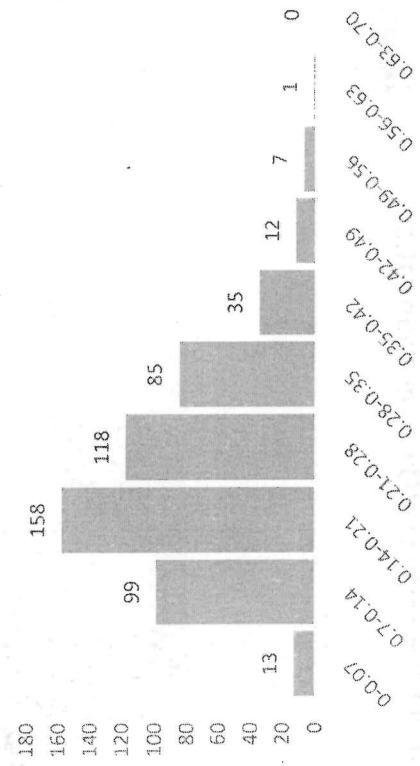
2012-13 Property tax/Own revenue ratio



2013-14 Property tax/Own revenue ratio

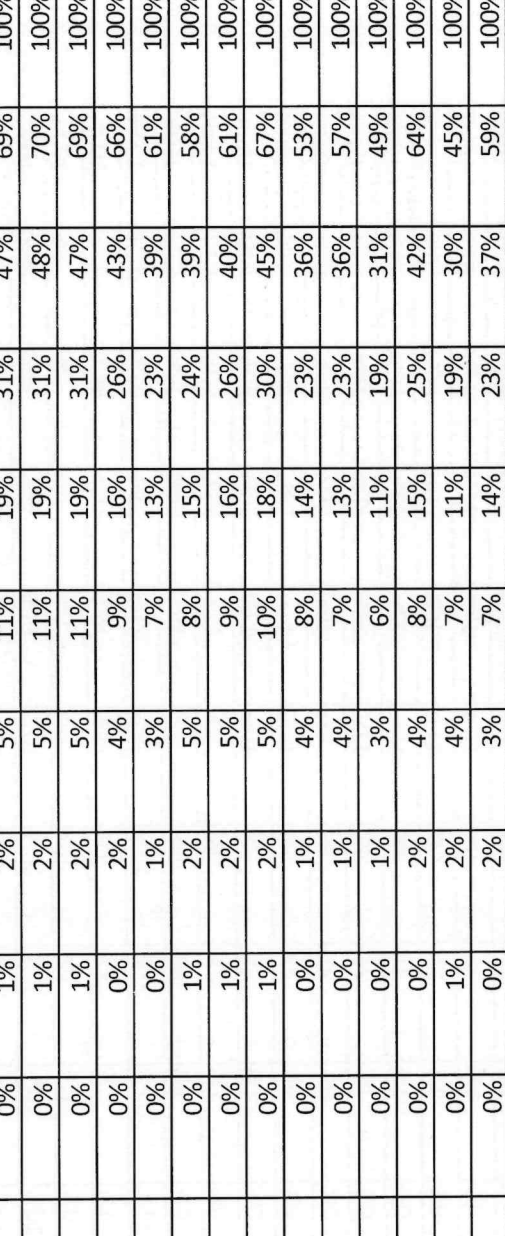


2014-15 Property tax/Own revenue ratio



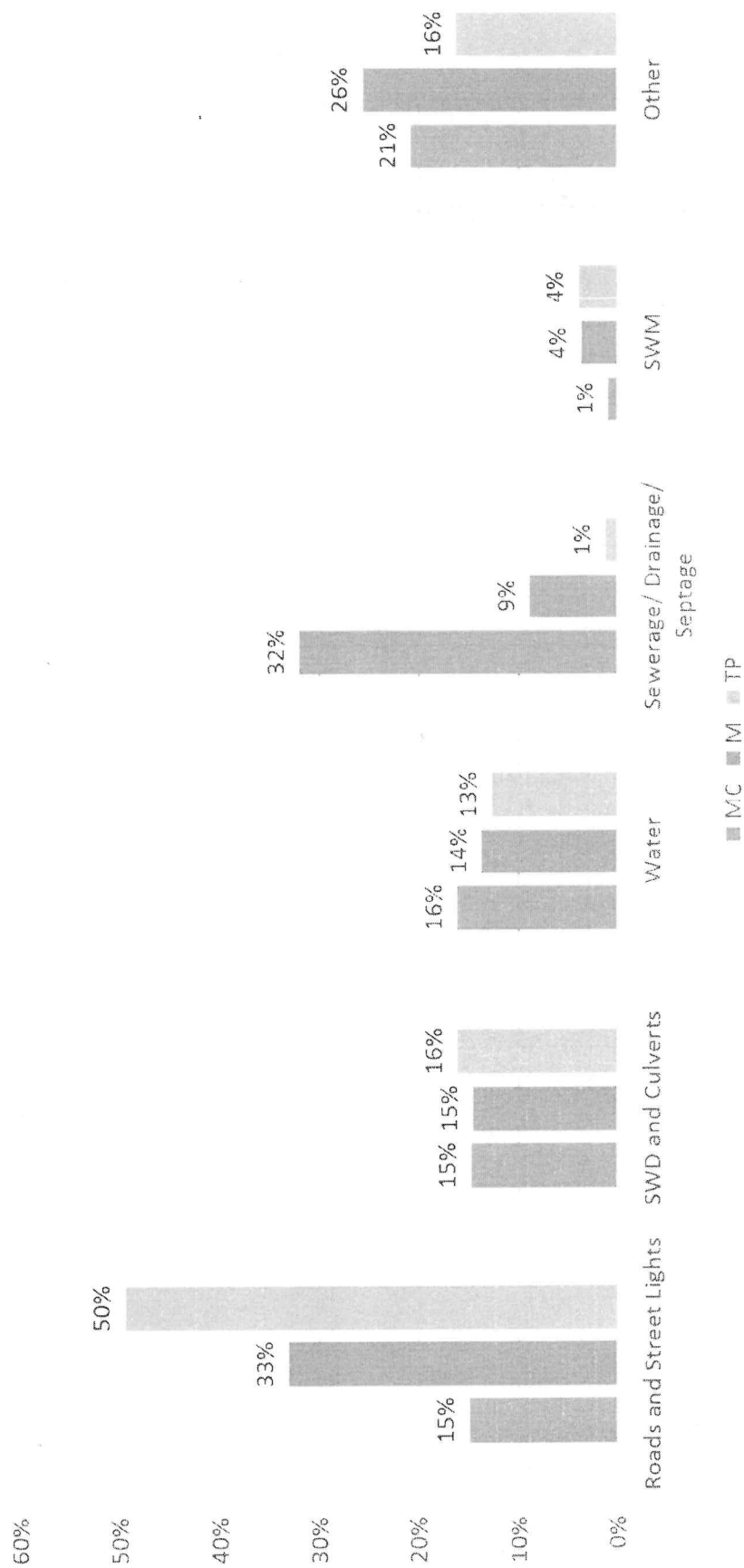
Category wise Capital Expenditure by ULBs

Municipal Corporations													
Decile		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%		
Parameters	Year	Corporations that spent on this work											
Roads, Bridges and culverts	2010-11	11	0%	0%	1%	2%	5%	9%	16%	26%	43%	100%	
	2011-12	11	0%	1%	4%	8%	14%	21%	31%	44%	59%	100%	
	2012-13	11	0%	1%	3%	7%	12%	18%	28%	39%	55%	100%	
	2013-14	11	0%	1%	2%	5%	10%	18%	28%	40%	55%	100%	
	2014-15	11	0%	2%	4%	7%	12%	19%	28%	41%	56%	100%	
Water and sanitation	2010-11	9	0%	0%	1%	3%	6%	11%	19%	35%	59%	100%	
	2011-12	9	0%	0%	1%	3%	6%	13%	24%	41%	66%	100%	
	2012-13	10	0%	1%	3%	6%	10%	17%	27%	38%	55%	100%	
	2013-14	10	0%	1%	2%	6%	11%	18%	30%	47%	70%	100%	
	2014-15	10	0%	1%	2%	3%	6%	11%	19%	34%	58%	100%	
Street lighting, education and enterprise	2010-11	10	0%	1%	2%	3%	7%	13%	34%	49%	70%	100%	
	2011-12	10	1%	2%	5%	9%	14%	22%	32%	47%	68%	100%	
	2012-13	10	0%	1%	4%	8%	14%	23%	34%	50%	72%	100%	
	2013-14	10	0%	1%	3%	6%	11%	18%	30%	46%	69%	100%	
	2014-15	7	1%	1%	4%	4%	10%	22%	22%	40%	65%	100%	
Sewerage	2010-11	2	1%	1%	1%	1%	1%	1%	1%	1%	1%	100%	
	2011-12	3	2%	2%	2%	2%	2%	2%	14%	14%	14%	100%	
	2012-13	3	1%	1%	1%	1%	1%	1%	16%	16%	16%	100%	
	2013-14	3	4%	4%	4%	4%	4%	4%	23%	23%	23%	100%	
	2014-15	4	1%	1%	1%	1%	3%	3%	10%	10%	10%	100%	

Municipalities													
Decile			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Parameters	Year	Municipalities that spent on this work											
Roads, Bridges and culverts	2010-11	118	0%	1%	2%	5%	11%	19%	31%	47%	69%	100%	
	2011-12	119	0%	1%	2%	5%	11%	19%	31%	48%	70%	100%	
	2012-13	119	0%	1%	2%	5%	11%	19%	31%	47%	69%	100%	
	2013-14	107	0%	0%	2%	4%	9%	16%	26%	43%	66%	100%	
	2014-15	104	0%	0%	1%	3%	7%	13%	23%	39%	61%	100%	
Water and sanitation	2010-11	75	0%	1%	2%	5%	8%	15%	24%	39%	58%	100%	
	2011-12	100	0%	1%	2%	5%	9%	16%	26%	40%	61%	100%	
	2012-13	100	0%	1%	2%	5%	10%	18%	30%	45%	67%	100%	
	2013-14	95	0%	0%	1%	4%	8%	14%	23%	36%	53%	100%	
	2014-15	86	0%	0%	1%	4%	7%	13%	23%	36%	57%	100%	
Street lighting, education and enterprise	2010-11	69	0%	0%	1%	3%	6%	11%	19%	31%	49%	100%	
	2011-12	94	0%	0%	2%	4%	8%	15%	25%	42%	64%	100%	
	2012-13	83	0%	1%	2%	4%	7%	11%	19%	30%	45%	100%	
	2013-14	87	0%	0%	2%	3%	7%	14%	23%	37%	59%	100%	
	2014-15	38	0%	0%	1%	3%	6%	10%	18%	31%	53%	100%	
Sewerage	2010-11	5	0%	0%	0%	1%	1%	4%	4%	36%	36%	100%	
	2011-12	4	0%	0%	0%	0%	2%	2%	22%	22%	100%		
	2012-13	8	0%	0%	1%	2%	4%	4%	7%	14%	34%	100%	
	2013-14	9	0%	0%	0%	0%	1%	2%	4%	6%	21%	100%	
	2014-15	13	0%	0%	0%	1%	1%	2%	5%	8%	13%	100%	

Town Panchayats												
Decile												
Parameters	Year	Panchayats that spent on this works	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Roads, Bridges and culverts	2010-11	491	0%	1%	3%	8%	14%	23%	36%	52%	73%	100%
	2011-12	496	0%	1%	4%	8%	15%	24%	37%	53%	73%	100%
	2012-13	490	0%	1%	3%	7%	13%	22%	34%	50%	71%	100%
	2013-14	475	0%	1%	3%	7%	12%	21%	33%	49%	70%	100%
	2014-15	479	0%	1%	3%	6%	11%	19%	30%	46%	68%	100%
Water and sanitation	2010-11	370	0%	1%	2%	6%	11%	18%	29%	45%	67%	100%
	2011-12	400	0%	1%	2%	5%	10%	17%	28%	44%	67%	100%
	2012-13	424	0%	1%	2%	5%	11%	18%	30%	46%	67%	100%
	2013-14	434	0%	1%	3%	7%	13%	22%	33%	50%	71%	100%
	2014-15	401	0%	1%	2%	6%	11%	18%	30%	45%	67%	100%
Street lighting, education and enterprise	2010-11	255	0%	0%	2%	4%	8%	15%	25%	40%	62%	100%
	2011-12	266	0%	1%	2%	5%	10%	17%	28%	43%	65%	100%
	2012-13	260	0%	1%	2%	5%	10%	17%	27%	42%	64%	100%
	2013-14	262	0%	1%	2%	4%	8%	15%	25%	40%	62%	100%
	2014-15	128	0%	1%	2%	4%	8%	15%	24%	39%	62%	100%
Sewerage	2010-11	2	21%	21%	21%	21%	21%	21%	21%	21%	21%	100%
	2011-12	4	1%	1%	1%	1%	13%	13%	13%	44%	44%	100%
	2012-13	3	0%	0%	0%	0%	0%	0%	2%	2%	2%	100%
	2013-14	3	10%	10%	10%	10%	10%	10%	38%	38%	38%	100%
	2014-15	3	11%	11%	11%	11%	11%	11%	34%	34%	34%	100%

Felt Needs of ULBs – Desired investment mix (projects) across service areas



Revenue Potential Index of Districts based on Municipality Tax Rates and Potential

District	HH Income Rank	Property tax rank	Delta(income rank-property tax rank)
THOOTHUKKUDI	12	31	-19
TIRUCHIRAPPALLI	5	20	-15
TIRUNELVELI	10	25	-15
KANNIYAKUMARI	4	16	-12
MADURAI	8	19	-11
VELLORE	18	29	-11
ERODE	6	15	-9
NAMAKKAL	9	17	-8
KRISHNAGIRI	22	30	-8
COIMBATORE	1	8	-7
TIRUPPUR	3	10	-7
SALEM	16	21	-5
Thiruvallur	7	11	-4
KANCHEEPURAM	2	5	-3
RAMANATHAPURAM	25	27	-2
THENI	27	28	-1
NAGAPATTINAM	19	18	1
KARUR	23	22	1
ARIYALUR	28	26	2
VIRUDHUNAGAR	13	7	6
Viluppuram	29	23	6
The Nilgiris	11	4	7
TIRUVANNAMALAI	31	24	7
PERAMBALUR	17	9	8
Thiruvarur	24	13	11
SIVAGANGA	14	2	12
THANJAVUR	15	3	12
CUDDALORE	26	14	12
PUDUKKOTTAI	20	6	14
DHARMAPURI	30	12	18
DINDIGUL	21	1	20

Revenue Potential Index of Districts based on Town Panchayat Tax Rates and Potential

District	District rank based on average household income	District rank based on average property tax collection for town panchayats	Delta(income rank - property tax rank)
Erode	6	27	-21
Namakkal	9	28	-19
Thoothukkudi	12	29	-17
Tirunelveli	10	25	-15
Perambalur	17	30	-13
Tiruchirappalli	5	17	-12
Kanniyakumari	4	15	-11
Virudhunagar	13	24	-11
The Nilgiris	11	19	-8
Thanjavur	15	22	-7
Pudukkottai	20	26	-6
Salem	16	21	-5
Coimbatore	1	5	-4
Tiruppur	3	6	-3
Madurai	8	11	-3
Ariyalur	28	31	-3
Kancheepuram	2	1	1
Thiruvarur	24	23	1
Krishnagiri	22	20	2
Thiruvallur	7	4	3
Dindigul	21	13	8
Ramanathapuram	25	16	9
Theni	27	18	9
Vellore	18	8	10
Sivaganga	14	3	11
Nagapattinam	19	7	12
Cuddalore	26	14	12
Karur	23	10	13
Viluppuram	29	12	17
Dharmapuri	30	9	21
Tiruvannamalai	31	2	29

ATHENA INFONOMICS

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