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A New Approach To Estimation Of Fiscal Decentralisation

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***Abstract:** Among the various aspects of local governance - political, administrative, fiscal and institutional arrangements etc., fiscal decentralization plays an important role in realizing effective public service delivery. The objective of the study is to examine the extent of fiscal decentralization of the Urban Local Bodies in Kerala. The present study used the 'Fiscal Decentralization Index' developed by Australian Business School as an alternative approach to overcome the defects of existing measures for calculating the extent of fiscal decentralization. The Fiscal decentralization Index takes into account two main attributes of fiscal decentralization - Fiscal Autonomy and Fiscal Importance of local governments, to analyze the extent of fiscal decentralization. Fiscal autonomy and fiscal importance of sub national governments provide two important but distinct measures of fiscal decentralization. Individually these values does not provide a holistic picture on the extent of fiscal decentralization. Hence the fiscal decentralization index is calculated as the geometric mean of Fiscal Autonomy and Fiscal Importance measures.*

I. INTRODUCTION

It is well documented that Decentralized urban governments have a comparative advantage in the provision public goods and services (Hafetz et. al, 2001, Faguet, 2004).But the envisaged efficiency in the provision of public service could be realized only when Local Self Government Institutions (LSGIs) are empowered with the devolution of functions, functionaries, finances and freedom of planning (four 'F s'). Among the four 'Fs', fiscal decentralization of subnational governments plays an important role in effective public service delivery

The state governments in India have substantial control over ULBs, as a major part of its revenue is in the form of devolved plan grants-in- aid. This centralization of revenue with states on the one hand and decentralization of expenditure responsibilities with the ULBs on the other results in greater dependency of local governments on higher tiers of government. Moreover the tax base of ULB sin India are narrow, rigid and lack buoyancy and they have not been able to levy rational user charges for the services they deliver (HPEC, 2011). The existence of dichotomy between fiscal decentralization and functional devolution evolved under decentralized governance in India over the years leaving larger implications on effective public service delivery which unfolds larger scope for further studies and research.

The normative approach is more relevant in in analyzing the finances of urban local bodies in Kerala as they are statutorily not allowed to have deficits in their budgets. The urban local bodies in India always maintain a balance in their budget by adjusting budgetary expenditure to revenue. Thus a normative approach which estimates the normative under spending on public services is more applicable for the purpose of assessing the fiscal performance of ULBs. The problem under study is to measure the status and extent of fiscal decentralization in Kerala with special reference to Thiruvananthapuram Municipal Corporation (TMC)

Among the various aspects of local governance - political, administrative, fiscal and institutional arrangements etc., fiscal decentralization plays an important role in realizing effective public service delivery. Hence the study examine the extent of fiscal decentralization, Trivandrum Municipal Corporation. The delivery of basic civic services and infrastructure development in Trivandrum urban area is incurred by Trivandrum Municipal Corporation and other Paraststals agencies like Government Line Departments, Development Authorities, and Centrally Sponsored Schemes etc. Since lack of clarity in activity mapping and overlapping of functional domain exists among the different agencies in TMC area, the estimation of investment by each agencies in urban infrastructure and their corresponding under spending in service delivery become difficult.

II. OBJECTIVE OF THE STUDY

The objective of the study is to examine the extent of fiscal decentralization of the Urban Local Bodies in Kerala.

III. FISCAL DECENTRALIZATION IN TMC - MEASUREMENT AND INTERPRETATION

As of now, the studies on the measurement of fiscal decentralization remain haphazard in nature as they only used either expenditure or revenue aspects of local self-governments for calculations, disregarding the critical elements of 'fiscal autonomy' and 'fiscal importance' of ULBs. For instance, Oats (1972) used 'local government's share' in total public revenue as the measure of the degree of fiscal decentralization. Wooler and Philips (1998) measured fiscal decentralization as the ratio of local government revenues to total government revenues. Similarly Davoodi and Zou (1998) measured the level of fiscal decentralization as the spending by local self-governments as a fraction of its total government spending. The stated measures remained inadequate as they have not taken into account the critical variables via, 'fiscal autonomy' and 'fiscal importance' of sub national governments in estimating the extent of fiscal decentralization. This lacuna in the previous studies has been revisited and discussed in the present study using the same in the composite measure of 'Fiscal Decentralization Index'.

IV. FISCAL DECENTRALIZATION INDEX (FDI)

The Fiscal Decentralization Index (FDI) is the geometric mean of the measures of Fiscal Autonomy (FA), and Fiscal Importance (FI) of the Urban Local Bodies (ULB). Fiscal Autonomy of the ULB is the ratio of ULB's own – sourced revenue (OSR) to ULB's expenditure (E). The ratio provides an indication of vertical fiscal imbalance between the state government and Urban Local Bodies. The lower the ratio, the greater the degree of vertical fiscal imbalance with the difference between own – sourced revenue and expenditure being largely funded by fiscal transfer from the state government.

$$FA = \sum_{i=1}^{p} OSRi \,/\, \sum_{i=1}^{p} Ei, \qquad 0 \leq FA \leq 1$$

Where OSRi and Ei represent own sourced revenue and expenditure for subnational government i.

$$FI = \sum_{i=1}^{p} Ei / TE, \quad 0 \leq FI \leq 1$$

Where, TE represents total public sector expenditure in TMC area by all government agencies and Ei is the ULB expenditure in Corporation area.

Fiscal decentralization Index (FDI) = (FA x FI) ^{½}

$$FDI = \sum_{i=1}^{p} \mathbf{OSRi} \,/\, \sum_{i=1}^{p} \mathbf{Ei} \ \mathbf{x} \ \left(\sum_{i=1}^{p} \mathbf{Ei/TE}\right)^{½}$$

Index value	**Indication**
FDI = 1	Perfect Fiscal Decentralization
0.5 ≤ FDI ≤ 1	Relative Fiscal Decentralization
0 ≤ FDI ≤ 0.5	Relative Fiscal Centralization
FDI = 0	Perfect Fiscal Centralization

The expenditure and revenue responsibilities of various levels of government in federal countries are constitutionally protected and clearly allocated to different tiers of government. As such, local self-governments are expected to exert more autonomy while making policy decisions in their respective jurisdiction. The assignment of service provision responsibilities and fiscal powers are fundamental to fiscal federalism. Along with fiscal autonomy, 'intergovernmental fiscal transfer' remains another significant variable in fiscal federalism. Inter-governmental fiscal transfer becomes more significant as and when there is a mismatch between the functional responsibilities and revenue assignment between higher tiers and lower tiers of government. The present study used the 'Fiscal Decentralization Index' developed by Australian Business School as an alternative approach to overcome the defects of existing measures for calculating the extent of fiscal decentralization. The Fiscal decentralization Index takes into account two main attributes of fiscal decentralization - Fiscal Autonomy and Fiscal Importance of local governments, to analyze the extent of fiscal decentralization.

V. FISCAL AUTONOMY: THIRUVANANTHAPURAM MUNICIPAL CORPORATION

Fiscal autonomy implies that the local self-governments can mobilize their revenues by exercising control over their own tax bases to cover the costs incurring in the provision of public goods and services (Duc Vo, 2008). The fiscal autonomy of the ULB provides an indication of the vertical fiscal imbalance between the higher tiers of government and local self-governments. When fiscal autonomy is high, inter-governmental fiscal transfers will no longer be a significant source of revenue for local self-governments. But even in the absence of fiscal transfers, the sub national governments will not enjoy full fiscal autonomy, as the tax bases and rates are determined at higher level. The necessary condition for high degree of fiscal autonomy is fulfilled as and when the sub national governments are having the power to set the tax base and rates in response to the demand for the provision of public goods and services. The dependency ratio- which measures the share of fiscal transfers from higher tiers of government to total revenue of the ULB, is also used to explain fiscal autonomy of local governments and the two variables are inversely related.

Fiscal autonomy is measured as;

$$FA = \sum_{i=1}^{p} OSR \,/\, \sum_{i=1}^{p} Ei$$

The fiscal autonomy and dependency ratio of ULBs are two sides of the same coin, that is, a higher dependency ratio shows low fiscal autonomy. A high dependency on state plan grants-in-aid or external financial support reflects the weak base of own sources of revenue of ULBs. The revenue dependency helps us to understand the dependence of urban local bodies on the higher levels of government to meet their expenditure needs. During the XIth Five Year Plan period, the dependency ratio in TMC is well above 50%, except for the year 2009-10. Even though the fiscal autonomy is showing an improvement with a compound average growth rate of 4.2% , still 53% of the total expenditure in TMC is in the form of plan grant-in-aid from state government(see table 6.1). This shows the higher dependency on the part of the TMC to meet its expenditure needs. The low level of fiscal autonomy can be attributed to constitutional imbalance between the functions and finances of Urban Local Bodies and inefficient application of existing fiscal powers.

(Rs. in Lakh)

Year	Grants Received by TMC (Rs.)	Own sources of revenue(Rs)	Total Expenditure (Rs.)	Dependency Ratio (%)	Fiscal autonomy (%)
2007 -08	6374.47	4093.29	10467.76	0.61	0.39
2008 – 09	5957.37	5484.48	11441.85	0.52	0.48
2009 – 10	3963.33	5409.35	9567.68	0.43	0.57
2010 – 11	6425.70	6063.45	12489.15	0.51	0.49
2011 -12	9192.14	8287.21	17479.35	0.52	0.48
Total	**31913.01**	**29337.78**	**61445.79**	**0.53**	**0.47**

Source: Estimated from Budget documents of TMC (2007-2012)

Table 1: Fiscal Autonomy And Dependency Ratio In The Tmc (2007-12)

During the XIth Five Year Plan period, the state government earmarked only 22% of the state plan outlay as plan grant in aid to local self-governments in Kerala in contrast to 26.8% during Xth Five Year Plan period. During the XIth Five Year Plan period, the grants received from higher tiers of governments contribute more than 53% of the total expenditure in TMC, which shows low level of fiscal autonomy. A higher ratio of own sources of revenue as percent of total expenditure or fiscal autonomy is the corner stone of any fiscal decentralization policy as it can explain the self-reliance of the Municipal Corporations in public service delivery. The low fiscal autonomy at the sub national level may lead to the problem of 'soft budget constraints'. The problem of 'soft budget constraint' arises when subnational Government's spending and borrowing decisions are influenced by the expectation of receiving additional resources from higher tiers of Government (Kornai, 1986). This has not become a major issue in Kerala, as the subnational governments in the state have less autonomy in external borrowing and they are statutorily not permitted to have deficits in their budgets (RBI, 2007).

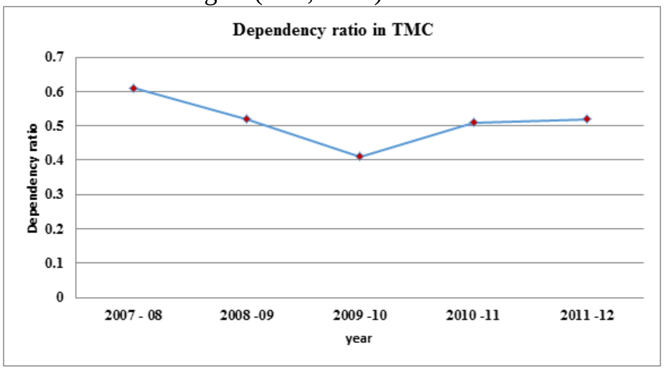

Figure 1

Bardan (1996) observed that the higher dependency on plan grant in aid from higher tiers of government discourages the own resource mobilization of sub national governments. The successive fiscal autonomy ratio in TMC shows that as the plan grant in aid increases over the period, the own sources of revenue is not showing a corresponding increase and where 53% of total ULB expenditure is met from plan grants-in-aid devolved by state government. More over the state governmet releases the plan grants-in-aid in 10 equal instalments and this conditionality reduces sub national autonomy is fiscal matters. The measure of fiscal autonomy helps to capture the extent to which local bodies can raise their revenue independently. The analysis show that fiscal decentralization in TMC has led to increased sub national responsibilities and spending while at the same time ULBs have become more depend on higher tiers of governments for financial resources evidenced by high dependency ratio. On the revenue side, the fiscal autonomy measures the extent to which the TMC can raise their revenue independently and on the expenditure front it reflects the extent and capacity of the ULB to allocate its resources. On the revenue side the fiscal autonomy is determined by the capacity of the ULB to raise financial resources by its own efforts such as introducing new taxes, changing the tax rates, levying user charges and fees for the services, collection efficiency of taxes etc. It is inferred from the data that the power to introduce new taxes and non-tax sources, change in tax rates are vested with the state government and it limits the fiscal autonomy at subnational level. The fiscal autonomy of ULBs on the expenditure matters is detailed in subsequent sections

VI. FISCAL IMPORTANCE: THIRUVANANTHAPURAM MUNICIPAL CORPORATION

The fiscal importance of subnational governments represents the ratio of total public sector expenditure by all levels of governments or government agencies to that of sub national governments. The concept measures the relative importance given to ULBs as an institution of local economic development and public service delivery or how the public expenditure in a sub national area is channelized through various parallel agencies and government line departments. It helps to understand the importance given to TMC as an institution of local governance and elicit the functional autonomy enjoyed by ULBs in the context of fiscal decentralization. Since this study measures the fiscal decentralization of one Sub national government, the working definition on the fiscal importance represents the fiscal activities of TMC on infrastructure development and service delivery as a ratio to the total fiscal activities of all government agencies on infrastructure development and service delivery in the municipal area.

For measuring the fiscal importance of TMC, the public expenditure incurred on service delivery and infrastructure development activities by paraststal agencies like Kerala Water Authority(KWA), Kerala State Electricity Board(KSEB), Public Works Department (PWD), Trivandrum Development Authority (TRIDA), Kerala Road Fund Board (KRFD), Basic Urban Services to Poor (BSUP) , Kerala State Urban Development Project (KSUDP), Jawaharlal Nehru Urban Renewal Mission(JNNURM) , Member of Parliament Local Area Development fund (MPLAD), Member of

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Legislative Assembly Local Area Development Fund(MLALAD), Kudumbasree are altogether taken for calculating total public expenditure in TMC area. Since the data on actual expenditure incurred by these parallel agencies are not available, the project outlay approved under each scheme entrusted to different agencies during 2007-12 is estimated to calculate the fiscal activities on urban capital and infrastructure development. The public expenditure on civic services and infrastructure in TMC area are incurred on project basis for a fixed time period and the year wise total outlay is apportioned equally over the years during the study period.

The fiscal importance of Trivandrum Municipal Corporation is measured as:

$$FI = \sum_{i=1}^{p} Ei / TE, \qquad 0 \leq FI \leq 1$$

Rs. in Lakh

Year	expenditure on civic servicesand Infrastructure development by TMC(RS)	expenditure on civic services and Infrastructure development by all govt. agencies in TMC area(Rs)	Fiscal importance(ratio)
2007-08	6732.00	31612.00	0.21
2008-09	7441.00	32321.00	0.23
2009-10	5616.00	32313.00	0.17
2010-11	7095.00	33792.00	0.20
2011-12	11112.00	37809.00	0.28
Total	**37996.00**	**167847.00**	**0.22**

Source: Computed from Budget documents of TMC (2007-2012)

Table 2: Fiscal Importance in TMC (2007-12)

The analysis show that the public expenditure incurred by TMC on service delivery and infrastructure development is only 22% of the total public expenditure in TMC area by all government agencies and line departments. This shows the poor fiscal importance given to TMC during 2007-12 period as an institution of local self-government. It also reveals that even after various fiscal decentralization initiatives like transfer of plan grants in aid, transfer of well-defined functional domain to ULBs, constitution and implementation of the recommendations of four State Finance Commissions etc., still 78% of the total public expenditure on infrastructure and public service delivery activities in TMC area are undertaken by agencies outside the control of the Municipal Corporation.

The functioning of parallel agencies have a separate system of decision making which is independent and delinked from the local governance framework. In order to ensure effectiveness in decentralized public services delivery, the public expenditure should be channelized through sub national governments and a match between responsibility and authority provided becomes imperative. Even though the Constitution mandates that planning for local economic development and implementation of such plans is the responsibility of ULBs, the public expenditure coming from various parallel agencies like State sponsored schemes and Centrally Sponsored schemes in TMC area undermines its importance in service delivery. In most of the centrally sponsored and state sponsored schemes, the role of TMC is limited to that of an agency function by selecting the beneficiary or location. It has to be admitted that the parallel agencies pose a serious threat to the growth of local self-government institutions as shown by the poor fiscal importance in TMC area.

VII. FISCAL DECENTRALIZATION INDEX: TMC (2007-12)

Fiscal autonomy and fiscal importance of sub national governments provide two important but distinct measures of fiscal decentralization. Individually these values does not provide a holistic picture on the extent of fiscal decentralization. Hence the fiscal decentralization index is calculated as the geometric mean of Fiscal Autonomy and Fiscal Importance measures. The fiscal Decentralization index is measures as

$$FDI = \sum_{i=1}^{p} OSR / \sum_{i=1}^{p} Ei \text{ x } \left(\sum_{i=1}^{p} Ei / TE\right)^{½}$$

(Rs in Lakh)

Year	Own sources of revenue (TMC) (Rs)	expenditure on civic services and Infrastructure (by TMC)(Rs)	expenditure on civic services and Infrastructure development by all govt. agencies in TMC area (Rs)	Fiscal autonomy (ratio)	Fiscal Importane (ratio)	FDI (ratio)
2007-08	4093.29	6732.00	31612.00	0.39	0.21	0.28
2008-09	5484.48	7441.00	32321.00	0.48	0.23	0.33
2009-10	5409.35	5616.00	32313.00	0.57	0.17	0.30
2010-11	6063.45	7095.00	33792.00	0.49	0.20	0.31
2011-12	8287.21	11112.00	37809.00	0.48	0.28	0.36
Total	**29337.78**	**37996.00**	**167847.00**	**0.47**	**0.22**	**0.32**

Source: computed from table 6.1&6.2

Table 3: Fiscal decentralization index (FDI) of TMC (2007-12)

The computed values of fiscal autonomy and fiscal importance during the XIth Five Year Plan period are 0.47 and 0.22 respectively. The value of fiscal autonomy during XIth Five Year Plan shows that only 47% of the total TMC expenditure is financed through own sources of revenue. On the other hand during the same period, the fiscal importance of TMC is only 0.22. It shows that the TMC depends more on fiscal devolution from higher tiers of government for its expenditure responsibilities and at the same time a major part of the public expenditure in TMC area is channelized through parallel agencies leaving lesser opportunity for the ULB to improve its public service delivery. A benchmark of 50% or higher is considered as a standard level of fiscal autonomy and fiscal importance for sub national governments. The overall fiscal decentralization index in TMC during 2007- 12 period is 0.32. The calculation of the fiscal decentralization index value shows that the TMC represents ‘relative fiscal centralization’ rather than well set fiscal decentralization in fiscal matters. There is a need to improve fiscal decentralization in TMC by augmenting the fiscal autonomy and fiscal importance measures. As the fiscal importance shows relatively low level, the schemes which are implemented via parallel agencies need to be channelized through TMC by empowering them institutionally.

While analyzing the two aspects of fiscal decentralization index in TMC, the fiscal autonomy shows a relatively better position. This is mainly due to the initiatives of state government with a larger devolution of own fiscal domain- tax revenue and non-tax revenue. The fiscal decentralization of the state government to improve the fiscal position of ULBs

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have helped to improve the fiscal autonomy of TMC but still 53% of total public expenditure is financed through external sources of revenue . The poor fiscal importance is the major concern of ULBs in Kerala as most of the public expenditure in urban areas is still financed through various parallel agencies and line departments of the state government. The parallel agencies are those setup by the state or central government to plan or execute development projects which are in the functional domain of local governments.

As the constitution mandates that the local economic and infrastructure development is the responsibility of local governments, the large number of parallel agencies in the Municipal corporation area reduces the fiscal importance of TMC. The studies such as Alderman (2002), Saito (2000), Azfar et al (2004), Faguet (2004) etc. have shown that fiscal decentralization have positive impacts on effective public service delivery and it needs more fiscal autonomy at sub national level by enhancing the own sources revenue and expenditure responsibilities of the local governments. An effective fiscal decentralization process with more fiscal autonomy and fiscal importance at sub national level is necessary for effective decentralized public service delivery.

VIII. CONCLUSION

As part of the research question, the study used the ‘fiscal decentralization index’ as the measure to estimate the extent of fiscal decentralization happened in the study area. The Fiscal Decentralization Index takes into account two main attributes of fiscal decentralization- the Fiscal autonomy and Fiscal importance of subnational government to find out the extent of fiscal decentralization

The low level computed value of ‘fiscal autonomy’ (0.47) found in TMC exhibits the relatively weak autonomy in raising resources of its own and inefficient implementation of assigned fiscal powers. On the other hand, the own expenditure directly incurred by TMC on service delivery and infrastructure development as defined in terms of ‘fiscal importance’ during XI^{th} five year plan period is estimated as only 0.22. As the functional domain of TMC is showing a declining trend in terms of fiscal importance, the control over governance and its efficiency in discharging basic services are also getting reduced.

The combined value of fiscal autonomy and fiscal importance of TMC gives its Fiscal Decentralization Index as 0.32. It reveals that the devolution of finance in TMC shows a case of ‘Relative Fiscal Centralization’.

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