FISCAL DECENTRALISATION AND REVENUE OF URBAN LOCAL BODIES: EMPIRICAL EVIDENCE FROM MANGALORE CITY CORPORATION-INDIA

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ABSTRACT

With rising challenges such as unemployment, illiteracy, inadequate infrastructure among others confronting central governments as well local bodies, one major policy initiative that has been suggested is fiscal decentralisation. Thus by fiscal decentralisation, local bodies can enact laws to collect their own taxes and engage in investment activities independent of the central government which empowers them financially and hence would be able to take initiatives to solve most of the challenges at the local level and hence taking some burden from the central government. Based on this, various countries including India have adopted fiscal decentralisation at varying degrees. This study therefore employed time series data from 1987-2015 as well as the OLS regression technique to examine the effect of fiscal decentralisation on the revenue or receipts of Mangalore City Corporation in India. The study among others found that, fiscal decentralisation had statistically positive significant effect on receipts and capital receipts of Mangalore City Corporation. In addition, gross domestic income was found to have a positive significant effect on receipts of Mangalore City Corporation. Therefore factors that enhance fiscal decentralisation and economic growth need to be encouraged by policy makers in India.

Keywords: Fiscal Decentralisation; Revenue; Reciepts; Mangalore City Corporation; India

1.0 INTRODUCTION

Governments all over the world are being confronted with several challenges spanning from unemployment, illiteracy, poverty, inadequate access to potable drinking water, poor sanitary and hygienic conditions, poor roads, insufficient supply of health facilities among others. This has resulted in central governments empowering local bodies to undertake certain functions given that, the central government alone would not be able to solve all these challenges. Among

local bodies that are given such delegated powers are Urban Local Bodies (ULBs). Thus, the argument has been that, local bodies such as ULBs are much more closer to the local people and hence have a better understanding of their preferences and challenges relative to central governments and hence the need to provide local bodies with some level of autonomy with respect to taxes, investment and other activities or responsibilities.

This has therefore resulted in the concept of fiscal decentralisation through which local bodies are given the power to collect their own taxes, embark on investment activities among others independent of the central or state government. However, it must be noted that the degree of autonomy varies from country to country.

Concerning ULBs, it is argued that, the quest for fiscal decentralisation is very essential given that they are confronted with lots of challenges-unemployment, inadequate access to potable drinking water, poor sanitary and hygienic conditions, poor roads, and insufficient supply of health facilities among others- due to rising population.

Given the above, several countries including India have embarked upon some levels of fiscal decentralisation.

Therefore in 1992 via the 74th Constitutional Amendment Act (CAA), India commenced devolution of powers to ULBS. Thus the CAA offered the status of the third level of government to local bodies and hence giving them some sort of power to embark upon financial and administrative duties- to raise their own revenues and make investment decisions.

Moreover, since the 74th CAA has been enacted for more than twenty years now, it becomes very essential to find out the financial performance of ULBs due its enactment.

However, it was very startling to note that, there was paucity of research (see Gaur, 2015; Paul, 2014; Govil, 2014; Mohapatra, 2012; Jha, Kang, & Nagarajan, 2011; Kalirajan & Otsuka, 2010; Bahl, Sethi & Wallace; 2010; Babu, 2009; Rao, 2000) regarding its-fiscal decentralisation-effect on the revenue or receipts of ULBs, especially Mangalore City Corporation.

This study therefore filled a major gap in the literature by being the first to the best of the authors' knowledge to use a relatively recent data (1987-2015) as well as a time series econometric approach to analyse the effect of fiscal decentralisation on the revenue or receipts of Mangalore City Corporation (ULB) in India.

2.0 LITERATURE REVIEW

Theoretically, the Classical theory argues that the size of government shows demand for public goods by citizens and hence both tax competition and decentralisation between various tiers of government would reduce the quality of public goods and, in the end, decrease social

welfare (Makreshanska & Petrevski, 2016). Notwithsatnding, the Neoclassical theory sees subnational bodies as small-open economies whose interests and capabilities are not automatically the same as those of central government. Hence, the proximity of decentralised governments to electorates leads to a more sensitive designing of public services taking in to consideration the interregional variations in preferences as well as ensuring a higher responsiveness and accountability of policymakers (Musgrave & Musgrave, 1976 as cited in Beer-Tóth, 2009).

Empirically, Soejoto, Subroto and Suyanto (2015), Devkota (2014), Suwandi and Warokka (2013), Moche, Monkam and Aye (2014), Samadi, Keshtkaran, Kavosi and Vahedi (2013), Jumadi, Pudjiharjo, Maski and Khusaini (2013), Valaris (2012) Jiménez-Rubio (2010), Freinkman and Plekhanov (2009) and Feld, Kirchgässner and Schaltegger (2003), have conducted related studies in other countries.

Specifically on India, Gaur (2015) using cities in Rajasthan found that, in 2010-11, 82% of urban financial resources were from non-tax revenue and grants. In addition, the study revealed that most of the grants had limited scope and therefore were not easily modified to suit local needs. Paul (2014) conducted a study in West Bengal using descriptive statistics and deprivation indices and found that, most ULBs are gaining less revenue surplus with less resource gaps whiles spending less than needed in providing civic amenities at the minimum level. Govil (2014) examined fiscal decentralisation in rural India and revealed that, village governments chose to spend their fiscal resources in various ways conditioned on the source of the money, even if the monies were wholly 'untied' and hence could be spent fully at the volition of the village governments. Similarly, Mohapatra (2012) examined challenges of local governance and fiscal decentralisation in India. Jha, et al. (2011) at the village level using three stage least square estimator found that, giving additional autonomy to village authorities to expend without making them account for tax collection tend to perverse intentions which led to lower tax collection. Kalirajan and Otsuka (2010) found that, decentralisation led to rural development using data from 1993/94 to 1999/2000 and employing the fixed effects estimator. Bahl et al. (2010) found in West Bengal that expenditures were very high in more backward gram and less populated panchayats. Babu (2009) found that Panchayats have very low fiscal autonomy with negligible locally raised revenues. Rao (2000) revealed that, structural deficits can be blamed on fiscal mismanagement both at state and central levels.

However regarding the studies on India, none of the above solely concentrated on Mangalore City Corporation (ULB). Also most of the studies used descriptive or conceptual analysis which may not depict the actual effect of fiscal decentralisation while those who used econometric models used relatively older data. This study therefore filled a major gap in the literature by being the first to the best of the authors' knowledge to use a relatively recent data (1987-2015) as

well as a time series econometric approach to analyse the effect of fiscal decentralisation on the revenue or receipts of Mangalore City Corporation (ULB).

3.0 METHODS

This study employed data from Mangalore City Corporation and the World Development Indicators of the World Bank (2018). Thus, the study used time series data from 1987-2015. Regarding the empirical estimation techniques, since the data was time series, the study used the Ordinary Least Square (OLS) regression as the empirical estimation approach with the Breusch-Pagan / Cook-Weisberg test used to test for heteroskedasticity. However, in case there existed heteroskedasticity, we used robust standard errors to deal with it (heteroskedasticity). Therefore the empirical models used by the study were specified below:

$$lnRL_t = \alpha_0 + \alpha_1 FD_t + \alpha_2 lnGDI_t + \alpha_3 lnINF_t + \alpha_4 lnPOP_t + \varepsilon_t \qquad (1)$$

$$lnCRL_t = \alpha_0 + \alpha_1 FD_t + \alpha_2 lnGDI_t + \alpha_3 lnINF_t + \alpha_4 lnPOP_t + \varepsilon_t \qquad (2)$$

$$lnTRL_t = \alpha_0 + \alpha_1 FD_t + \alpha_2 lnGDI_t + \alpha_3 lnINF_t + \alpha_4 lnPOP_t + \varepsilon_t \qquad (3)$$

Where the dependent variables were receipts (*ln*RL), capital receipts (*ln*CRL) and total revenue (*ln*TRL), all obtained from Mangalore City Corporation. Thus we used (*ln*RL), capital receipts (*ln*CRL) and total revenue (*ln*TRL) as proxies for revenue.

Further, the main independent variable-fiscal decentralisation (FD)-was a dummy variable (1/0). Hence 1 represented during fiscal decentralisation (1992-2015) while 0 represented pre- fiscal decentralisation (1987-1991) period.

Regarding the control variables- population size (*ln*POP), gross domestic income (*ln*GDI), and inflation (*ln*INF) - were obtained from the World Development Indicators of the World Bank (2018). Also α_0 represented the intercept of the regression equations, αs represented the coefficients of their respective variables and ε_t showed the error term at time t.

In addition, all the variables except financial decentralisation that was a dummy variable were expressed in natural logarithm (*ln*) forms in order to bring them to the same unit.

4.0 RESULTS AND DISCUSSION

This section tackled the OLS regression results regarding the effect of fiscal decentralisation on the receipts, capital receipts and total revenue of Mangalore City Corporation.

Table 1: Regression Results on Effect of Fiscal Decentralisation on Receipts of Mangalore City Corporation

Variable	Coefficient	Standard Error	P-value
FD	.6624511	.134371	0.000
*ln*GDI	3.175484	.9554097	0.003
*ln*INF	-.0251702	.0745608	0.739
*ln*POP	6.32455	5.421366	0.255
Constant	-116.8	48.98549	0.025

Source: Authors Computation from World Bank (2018) and Mangalore City Corporation. **N=29**, **Prob >F= 0.0000**, **R-squared =0.9872, Adj R-squared = 0.9851**

Concerning the effect of fiscal decentralisation on the receipts of Mangalore City Corporation as shown in Table 1, the results showed that, fiscal decentralisation had a 1% significant coefficient of .6624511 since its p-value of 0.000 was less than 0.01. Therefore, a 1 percent rise in fiscal decentralisation was revealed to lead to a 0.66% rise in receipts of Mangalore City Corporation.

Also, gross domestic income had a 1% significant coefficient of 3.175484 given that its p-value of 0.003 was less than 0.01.Therefore a 1 percent rise in gross domestic income was revealed to lead to a 3.18% rise in receipts of Mangalore City Corporation.

Further, both population and inflation had respective coefficients of 6.32455 and -.0251702, though they were statistically insignificant. Thus both population and inflation were revealed to have no statistically significant effects on receipts of Mangalore City Corporation.

Table 2: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance	
Chi2(1)	**Prob > chi2**
0.01	0.9213

Source: Authors Computation from World Bank (2018) and Mangalore City Corporation

The findings of the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity in Table 2 showed the absence of heteroskedasticity in the effect of fiscal decentralisation on receipts of Mangalore City Corporation model in Table 1.

Table 3: Regression Results on Effect of Fiscal Decentralisation on Capital Receipts of Mangalore City Corporation

Variable	Coefficient	Standard Error	P-value
FD	.767509	.2151041	0.002
*ln*GDI	2.619269	1.529441	0.100
*ln*INF	.1517503	.1193585	0.216
*ln*POP	4.968747	8.678641	0.572
Constant	-95.57077	78.41704	0.235

Source: Authors Computation from World Bank (2018) and Mangalore City Corporation. **N=29**, **Prob >F=0.0000**, **R-squared = 0.9595, Adj R-squared = 0.9528**

Concerning the effect of fiscal decentralisation on the capital receipts of Mangalore City Corporation as shown in Table 3, it was revealed that, fiscal decentralisation had a 1% significant coefficient of .767509 since its p-value of 0.002 was less than 0.01. Hence, a 1 percent rise in fiscal decentralisation was revealed to lead to a 0.77% rise in capital receipts of Mangalore City Corporation.

In addition, inflation, gross domestic income and population had respective coefficients of .1517503, 2.619269 and 4.968747, yet none of them was statistically significant. Thus inflation, gross domestic income, and population were revealed to have no statistically significant effects on capital receipts of Mangalore City Corporation.

Table 4: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance	
Chi2(1)	**Prob > chi2**
0.86	0.3550

Source: Authors Computation from World Bank (2018) and Mangalore City Corporation

Also, the findings of the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity in Table 4 revealed the absence of heteroskedasticity in the effect of fiscal decentralisation on capital receipts of Mangalore City Corporation model.

Table 5: Regression Results on Effect of Fiscal Decentralisation on Total Revenue of Mangalore City Corporation

Variable	Coefficient	Robust Standard Error	P-value
FD	-.0512964	.0301058	0.101
*ln*GDI	.1661856	.3143022	0.602
*ln*INF	.0512924	.0193021	0.014
*ln*POP	-1.217807	1.871304	0.521
Constant	6.840694	16.4433	0.681

Source: Authors Computation from World Bank (2018) and Mangalore City Corporation **N=29**, **Prob >F=0.0000**, **R-squared = 0.9381**

Regarding the effect of fiscal decentralisation on total revenue of Mangalore City Corporation, the results had challenges with heteroskedasticity and thus we controlled for it-heteroskedasticity - employing robust standard errors as shown in Table 5.

Therefore in Table 5, it was revealed that fiscal decentralisation had statistically insignificant effect on total revenue of Mangalore City Corporation given that its p-value of 0.101 was more than 0.05.

Also, both population and gross domestic income had respective coefficients of -1.217807 and .1661856 though they were insignificant statistically.

Notwithstanding, inflation had a 5% significant coefficient of .0512924 since its p-value of 0.014 was less than 0.05. Therefore, a 1 percent rise in inflation was revealed to lead to a 0.05% rise in total revenue of Mangalore City Corporation.

5.0 CONCLUSION

This study investigated the effect of fiscal decentralisation on the revenue (receipts, capital receipts and total revenue) of Mangalore City Corporation from 1987-2015 using the OLS regression technique. The study found fiscal decentralisation to have statistically positive significant effect on receipts and capital receipts of Mangalore City Corporation. In addition, gross domestic income and inflation were found to have positive significant effects on receipts and total revenue of Mangalore City Corporation respectively. Therefore it can be concluded that, as fiscal decentralisation increased, receipts and capital receipts of Mangalore City Corporation also increased. Additionally, it can be concluded that, as gross domestic income

increased, receipts of Mangalore City Corporation increased. Therefore, factors that enhance fiscal decentralisation and economic growth need to be instituted by policy makers in India.

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