A Critique of the Devolution Formula adopted by the VI State Finance Commission of Kerala[1]

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1. Introduction

Oxford Dictionary defines subsidiarity as a 'a principle that a central authority should have a subsidiary function, performing only those tasks which cannot be performed at a more local level.' In India, Kerala is in the forefront of decentralization with many functions carried out by the local governments (LG). COVID-19 and natural calamities of recent years showed that the scope for carrying out such functions is widening. Often LGs are the first responders and they are with the families for the longer term.

Like all federal structures the LG system in Kerala too is characterized by limited taxation powers and expansive expenditure responsibilities. The major taxation powers of the LGs are confined to property and profession tax with the advertisement tax going out of their hands with the implementation of GST. While the taxation powers have shrunk, the expenditure responsibilities have widened. Currently, the LGs in Kerala are expected to carry out the following functions:

Pre-primary, primary, and secondary education;
Primary, and secondary healthcare;
Civic services such as streetlighting, roads, parks etc.;
Planning for social justice with focus on SC, ST, poorest of the poor, women, children and differently abled and the elderly; and
Environment and disaster management.

Kerala has emphasized the subsidiarity principle by transferring functions and functionaries and by devolving large funds for strengthening the LGs. Further, the first SFC onward devolvement of funds was based on formulae. While the economy and society in Kerala has undergone tectonic changes over the last quarter of a century, the formulae and indicators have largely remained frozen. It is necessary to take a critical look at these formulae to see whether the indicators used are appropriate and whether the computational methods adopted serve the intended purpose. This paper seeks to carry out such an exercise. Some of the results are preliminary as more rigorous data analyses are called for.

2. Devolution Formula over six SFCs

Kerala has striven to devolve funds to the LGs since the Constitutional Amendments in 1992 and the passing of the enabling legislation by the state in 1994 to grant them statutory powers. The First SFC suggested the formula shown in Table 1 for the *inter se* distribution of Plan Funds. The government, however, decided to have a formula with 90% weightage to population and 10% to area. Later the government constituted a Working Group and its recommendation was accepted (see Table 2). The second SFC did not disturb the devolution formula for plan funds. The Third State Finance Commission recommended the same devolution formula. The Fourth SFC recommended a different formula to devolve plan grants (Table 3). The Fifth SFC did not suggest any change to the distribution of General-Purpose Fund. The Sixth SFC decided to change the devolution formula which is shown in Table 4. Further the Sixth SFC modified the formula for devolution of the General Sector Development Fund including the Union Finance

Commission grant as shown in Table 5. The Devolution Formula suggested in the First Report of the Sixth SFC was continued beyond the first year with a modification as shown in the Second Report. Under the Environment Vulnerability, in addition to high hazard zone area, medium hazard zone area was included with one-third internal weight with the weight of the high hazard zone being reduced to two-thirds (p. 109, II Report). As regarding the General-Purpose Fund, for the Village Panchayats, Municipalities and Municipal Corporations "the *inter se* distribution would be governed by a formula giving equal weightage to population and distance from highest per capita own income weighted with population" (p. 128, Sixth SFC- First Report).

Table 1. First State Finance Commission- Criteria for the *Inter Se* Distribution of Plan Funds

Sl. No.	Indicator	Weightage (%)	
		ULBs	RLBs
1	Population 1991 Census	75	70
2	SC/ST Population 1991	10	10
3	Total Workers excluding workers in Manufacturing, Processing, Servicing, and excluding Household Industry	15	10
4	Proportion of Agricultural workers among workers	Nil	10
5	Total	100	100

Source: Table 6.16, Sixth SFC Report I.

Table 2. Formula for Devolution of Plan Grants, Working Group

Sl. No.	Indicator	Weightage (%)			
		VP	BP	DP	Mun/Corp
1	Population (excl.SC/ST)	65	65	55	75
2	Geographic Area (excl. forest area)	5	10	15	5
3	Area under Paddy	5	-	-	-
4	Own Income	10	-	-	-
5	Composite Index of Agricultural Labourers, Persons Engaged in Livestock, Fisheries etc., Marginal Workers,	15	25	20	-
6	Composite Index of Backwardness, houses without electricity and houses without latrine			10	20
7	Total	100	100	100	100

Source: Table 6.17, Sixth SFC Report I.

Table 3. Formula for Devolution of Plan Grants, Fourth State Finance Commission.

Sl. No.	Indicator	Weightage (%)

		VP	BP	DP	Mun/Corp
1	Population (excl.SC/ST)	50	50	50	50
2	Deprivation Index	30	30	30	30
3	Tax Effort	10	-	-	10
4	Area	10	20	20	10
5	Total	100	100	100	100

Source: Table 6.20, Sixth SFC Report I.

Table 4. Distribution of Funds under General Sector, Sixth SFC

Sl. No.	Indicator	Weightage (%)				
		VP	BP	DP	Municipality	Mun. Corporation
1	Population (excl.SC/ST)	50	50	50	50	50
2	Deprivation Index	30	30	30	30	30
3	Tax Effort	10	-	-	10	10
4	Area	10	20	20	10	10
5	Total	100	100	100	100	100

Table 5. Formula for *Inter Se* Distribution of General Sector Funds

Sl. No.	Indicator	VP	BP	DP	Municipality	Mun. Corporation
		weightage				
1	Non-SC ST Population (As per 2011 Census)	40	50	50	40	40
2	Area (in sq.KM)	10	10	10	10	10
3	Environmental Vulnerability 1. Flood Plain Area (in Ha), 2. Coastal line Length (km), 3. High Hazard Zone (In Ha)	10	10	10	10	10
4	Deprivation Index 1. Households without LPG Connection 3. Households without electricity 4. Households without water connection 5. Antyodaya Anna Yojana and Priority Households 6. Distance from highest Per capita Own Revenue weighted with Population	25	30	30	25	25
5	Incentive For Revenue Mobilisation	15-	-	-	15	15
	Total	100	100	100	100	100

Source: Table 6.17, Sixth SFC Report I.

The Working Group on the Devolution Formula made some important contributions by bringing together indicators of fiscal need (population, area, and index of backwardness) and fiscal capacity (own revenue,) in the devolution index. Its recommendations continued to guide the Second and Third SFCs. The Fourth SFC brought about two changes which, in a sense, was setting the clock back on some theoretical grounds (to be elaborated in the later sections). One was that of going back from the geographical area less forest area to geographical area, and the second was removing the own income as a proxy for fiscal capacity. The deprivation index that was relevant at the point at which it was being used by the first or second SFC has become largely irrelevant by the mid-2010s as values for many LGs are fairly close to zero (electricity, sanitation). Further, the use of own revenue distance is highly problematic when the maximum is 20 or 30 times the minimum. We are fighting this at the national level when the multiple is only 10 or 12!

3. Critique of the Devolution Formula

The fiscal devolution formulae generally combine indicators of fiscal needs and fiscal capacity with weighting diagrams. As the provision of public services is the objective of any fiscal transfer, population must necessarily appear in the formula. It is seen that the weight of population varies from 40% to 75% across different Commissions and also across levels of LGs. Characteristics of population too appears as we find the inclusion of SC/ST population, and index of backwardness or deprivation index in some formulae. The reasoning behind the inclusion of SC/ST population is that the LGs are bound to meet the special needs of these population groups and their share varies across the LGs. Going by this argument it seems to me that elderly population needs to appear in the formula. Social support, social care and provision of health care services is very much part of a welfare society and LGs cannot shun this responsibility. This shall be elaborated in a later section (Section 7).

Another indicator which appears in almost all formulae is area. The reasoning for the inclusion of area is that for the same extent of population residing in a larger geographic area would involve higher costs. This dimension of cost is known in public finance as cost disability. But what area measure should be used as an indicator is an issue. It is especially so when the variation in geographic area of the LG could be 1 to 200-fold, and largely accounted for by the extent of forest area in the LG. As is evident from the area measure used in the different formulae, it could be geographic area, or geographic area excluding forest area or some other measure. Whatever measure used must be based on sound foundations. This issue is elaborated in the next section (Section 4) with detailed computations.

On the side of fiscal capacity two important indicators that appear in all the formulae are, own revenue. The Union Finance Commissions use per capita income distance as a proxy for fiscal capacity which has been subjected to criticisms on theoretical and empirical grounds. In the case of State Finance Commissions in Kerala proxy for fiscal capacity is not an issue; it is the capacity as expressed by own revenue that is taken. But own revenue is an outcome of the collection effort made by the LGs which suffers from multiple infirmities. The observed

revenue is an outcome of various factors, such as efficiency of collection, fixation of tax rates, variation in exemptions etc. These factors do not permit the observed revenue to serve the intended purpose of it becoming a measure of fiscal capacity "at comparable tax rates." This issue is taken up for detailed analysis in Section 5.

Section 6 examines the use of deprivation index where indicators such as houses without electricity and houses without water connection are used. Such indicators would have truly reflected the backwardness of an LG in the late 1990s. But how good are they now? Electricity and sanitation coverage is close to 100% now and such indicators will fail to measure the degree of backwardness. What was good 30 years ago may not be good now. The changed reality needs to be factored in. Recent SFCs fail to do it. This subject is discussed in Section 6.

4. Geographic Area

One of the indicators used for the devolution of General- purpose funds to the LSGs is the geographical area with a weightage of 10%. The Union Finance Commission has been using the geographic rea as an indicator to capture cost disabilities. It is said that the same population residing in a LSG unit spread over a larger geographic area would incur a higher cost for providing a unit of public service as compared to one with a lower geographic area. Does geographic area as an indicator in the devolution formula capture this dimension of cost disability well? The same geographic area could be characterized by different combinations of area inhabited by people and forest area, or area with numerous small and large water bodies and inhabited area etc. Will it make a difference to cost of providing services?

Relating cost disabilities to geographic area is complex as it would be inextricably linked to the pattern of residence. Suppose there are two LSGs with equal area and equal population. In one the population is spread over the entire area equally whereas in the second the residences are confined to just ten percent of the area in one corner. Costs will be higher in the first as multiple facilities might have to be constructed with staff located in the many facilities. In the second it might be possible to have facilities confined to the location where bulk of the population resides and costs would be lower for setting up facilities as well as servicing them. This is basically an extension of the principle of same population residing in a smaller area suffering less cost disabilities. While Alappuzha will fall in the first category Idukki may best be put in the second category where 75% of the geographic area is forest. Thus, taking geographic area as a proxy for cost disabilities may not be fair.

What difference would the two categories of area – geographic vs geographic less forest – make to the distributive shares of the districts in the total in Kerala? A look at Table 6 will tell us that it would make a vast difference. Take Alappuzha and Idukki for example. If resources are allocated based on geographic area, then while the share of Alappuzha is 3.64% that of Idukki would be 11.21%, that is over three times that of Alappuzha. Kasaragod's share at 5.12% would be lower than that of Wayanad at 5.48%. The differences in allocation are quite large. Instead of geographic area if we were to take the geographic area less the forest area

(GA-FA), then the shares of the districts look very different. Alappuzha's share more than doubles to 7.67% and that of Idukki falls by about 40% to a level well below that of Alappuzha. Similarly, Kasaragod gains slightly and Wayanad loses significantly.

Table 6. Distribution of Geographic Area less Forest Area (sq. km) by Districts, Kerala

District	Geographic Area (GA)	Forest Area (FA)	%GA	Geographic Area Less Forest Area (GA-FA)	%(GA-FA)
Alappuzha	1415	79.9	3.64	1335.1	7.67
Ernakulam	3063	1365.71	7.88	1697.29	9.75
Idukki	4356	3150.65	11.21	1205.35	6.92
Kannur	2961	1653.97	7.62	1307.03	7.51
Kasaragod	1989	966.48	5.12	1022.52	5.87
Kollam	2483	1322.51	6.39	1160.49	6.67
Kottayam	2206	1104.29	5.68	1101.71	6.33
Kozhikode	2345	1436.97	6.04	908.03	5.22
Malappuram	3554	1981.33	9.15	1572.67	9.03
Palakkad	4482	2083.59	11.54	2398.41	13.78
Pathanamthitta	2652	1955.52	6.83	696.48	4.00
Thiruvananthapuram	2189	1303.93	5.63	885.07	5.08
Thrissur	3027	1159.22	7.79	1867.78	10.73
Wayanad	2130	1580.32	5.48	549.68	3.16
Kerala	38852	21444.29	100	17407.71	100

The real impact of these changes on allocation of resources needs to be seen by taking the population into account. Computation of per capita receipt from out of a transfer of Rs 100 crore from the state to the local governments is shown in Table 7. It shows that if geographic area is used, then when Alappuzha receives Rs 16 per capita Idukki would receive six times that amount at Rs 97, and Wayanad at four times that at Rs 64. Do such huge differences in cost disabilities exist between these districts? It is doubtful. Changing the criteria to GA-FA brings about a significant change. Alappuzha would be receiving Rs 35 in per capita terms which is comparable to that of Wayanad. Idukki would still receive almost twice that of Alappuzha. The large differences observed while using geographic area have disappeared and the differences have become more reasonable.

Table 7. Devolution of Resources by Geographic area share and Geographic less Forest area share

District				Per capita distribution of Rs 100 crore by	
	%GA	%(GA-FA)	Population 2025, Lakh	GA	GA-FA

Alappuzha	3.64	7.67	22.1	16.48	34.70
Ernakulam	7.88	9.75	34.09	23.13	28.60
Idukki	11.21	6.92	11.52	97.32	60.11
Kannur	7.62	7.59	26.2	29.09	28.66
Kasaragod	5.12	5.87	13.58	37.70	43.25
Kollam	6.39	6.67	27.37	23.35	24.36
Kottayam	5.68	6.33	20.51	27.68	30.86
Kozhikode	6.04	5.22	32.06	18.83	16.27
Malappuram	9.15	9.03	42.72	21.41	21.15
Palakkad	11.54	13.78	29.19	39.52	47.20
Pathanamthitta	6.83	4.00	12.44	54.87	32.16
Thiruvananthapuram	5.63	5.08	34.29	16.43	14.83
Thrissur	7.79	10.73	32.42	24.03	33.10
Wayanad	5.48	3.16	8.49	64.57	37.19
Kerala	100	100	346.99	28.82	28.82

The unfairness becomes acute when the formula is applied for the distribution of resources among village Panchayats. Kerala has village Panchayats with geographic area as large as 795 sq kms (Kumily) and area as small as 3.36 sq. kms (Anchutengu). Area per capita in Kumily is 22134 sq.m in comparison to 193 sq. m in Anchutengu. When converted into resource flow this results in Kumily receiving Rs 115 per capita for every rupee received by Anchutengu. This difference is unimaginatively high. It becomes even higher when Edamalakudy is compared with Anchutengu; the former getting Rs 330 per capita for every rupee received by Anchutengu. Instead of geographic area if we take geographic area less forest area the differential drops to 1:12 between Anchutengu and Kumily taking that 90%% of the geographic area in Kumily is covered by forests.

In sum, using geographic area as a proxy for cost disabilities is not appropriate. In a state where the composition of geographic area ranges from almost null forest area share to more than 90% forest area the resource allocation in per capita terms could be varying from Rs 1 to more than Rs 300. Such an allocation is inadmissible. One of the reasons for such vast differential is the large proportion of forest area in some LSGs. Hence, removing the forest area from the geographical area and using the rest as a proxy for cost disabilities would considerably moderate the differentials and may be adopted. One could refine the measure by accounting for water bodies and other factors affecting cost disabilities.

5. Own Revenue as part of deprivation index

The problem with the use of own revenue as a measure of income (low income as one indicator of backwardness or deprivation), or a measure of fiscal capacity as used by the Working Group and the Sixth SFC is that the observed value is an outcome of the rate of tax, exempted properties, efficiency of collection and numerous other factors. It could also be the result of the disincentive in the face of large transfers under various central and state schemes.

Leaving the different factors and focusing just on the rate of taxation, let us recall the basic tenet of fiscal transfer. Transfers are made to enable the LGs ***"to provide public services to its residents of comparable volume and quality at comparable rates of taxation."*** But the observed values of revenue are a result of vastly different rates of taxation by different LGs. How different are they?

Table 8. Distribution of LGs by Property Tax Rates for Residential Purpose

Tax Rate (Rs per sq. ft)	VP	Municipality	Mun. Corporation
3	87		
4	187		
5	269		
6	233	14	
7	128	6	
8	37	14	
9		4	
10		19	
11		1	
Greater than 11		29	6
Total	941	87	6

Source: Appendix 2.2 Second Report of SSFC.

As per the data provided in Appendix 2.2 of the Second Report of the Sixth SFC (reproduced here as Table 8), out of the 941 Village Panchayats 87 (9.2%) levy property tax of Rs 3 per square feet of floor area and at the highest 37 (3.9%) LGs levy Rs 8. Assuming that property tax is the main component of own revenue and for simplicity taking a uniform population and same fiscal capacity for LGs, it is seen that per capita own revenue of LGs will be proportional to the tax rate. That is, when the 37 VPs in the top bracket collect Rs 8 per capita as own revenue those 87 VPs at the bottom collect only Rs 3 per capita. Then the revenue distance for the VPs at the top will be zero, the distance for next group Re 1, and for the third group Rs 2 and so on. If the allocation is proportional to the distance, then when the VPs just below the top receive Re one per capita the VPs below them will receive twice that amount and the VPs at the bottom will receive five times that amount. Such an award is completely inadmissible - those who collect less are given more! - as the unfairness of it is palpable. Those who are lax in levying tax or collecting it are rewarded more.

The problem of observed revenue is serious as there are discernible regional patterns in the revenue collected. We begin with the municipalities. A look at Table 9 suggests the following:

Table 9. Distribution of Municipalities by Per Capita Own Revenue 2014-20

District	Number of Municipalities by Own Revenue Class (Rs.)								
	1	2	3	4	5	6	7	8	9
	<400	400-800	800-1200	1200-1600	1600-2000	2000+	Total	%Share 1200+	%Share <400
Tvm		2	1	1			4	25	0

Klm		2	2				4	0	0
Alpz		2	2	2			6	33.3	0
Pta	1			1	1	1	4	75	25
Ktym		2	1	2		1	6	50	0
Idki		1		1			2	50	0
Ekm		1		4	2	6	13	92.3	0
Tcr		1	4	2			7	28.6	0
Pkd		3	2	2			7	28.6	0
Mlpm	4	4	2	2			12	16.7	33.3
Kzkd	3	3	1				7	0	42.9
Wyd		2		1			3	33.3	0
Knr	2	3	2	2			9	22.2	22.2
Ksgd		1	1	1			3	33.3	0
Kerala	10	27	18	21	3	8	87	36.8	11.5

Table 10. Distribution of Village Panchayats by Per Capita Own Revenue 2014-20

District	% of Village Panchayats by Own Revenue Class										
	<100	100-150	150-200	200-250	250-300	300-350	350-400	400-800	800-1200	1200-1600	Total
Tvm	1.5	7.4	23.5	35.3	14.7	7.4	4.4	5.9			100
Klm		7.4	25.0	26.5	14.7	10.3	8.8	7.4			100
Alpz		8.3	18.1	41.7	19.4	5.6	2.8	4.2			100
Pta		0	1.9	15.1	24.5	18.9	20.8	17.0	0	1.9	100
Ktym		4.2	9.7	12.9	27.8	12.5	11.1	20.8			
Idki		1.9	13.5	23.1	17.3	15.6	11.5	13.5	5.8		
Ekm		1.2	6.1	14.6	19.5	22.0	8.5	23.2	3.7	1.2	
Tcr		2.4	11.8	30.6	15.3	18.8	9.5	11.8	1.2		
Pkd	1.1	14.8	27.3	27.3	11.4	5.7	4.5	8.0			
Mlpm		13.8	38.3	28.4	8.0	9.1	4.5	1.1			
Kzkd		20.0	27.1	32.9	7.1	2.9	2.9	7.1			
Wyd		8.7	21.7	17.4	26.1	8.7	4.3	8.7	4.3		
Knr		2.8	22.5	36.6	12.7	12.7	5.6	5.6	1.4		
Ksgd		18.4	21.1	28.9	21.1	2.6	5.3	2.6			
Kerala											

Majority of Municipalities in the region spread over Kottayam, Pathanamthitta, Idukki and Ernakulam (Group 1) report per capita Own Revenue (OR) of more than Rs 1200 and no municipality reporting OR less than Rs 400 (See Column 8, Table 9). This proportion is less than one-third of the total for the municipalities in rest of the districts of the state. The northern districts of Malappuram, Kozhikode, Kannur, and Kasaragod (Group 2) report in addition to lower proportion of municipalities collecting OR more than Rs 1200, high proportions of municipalities with OR less than Rs 400 (Column 9, Table 9). A third group of districts consisting of Thiruvananthapuram, Kollam, Alappuzha, Trichur and Palakkad (Group 3) report low proportion of municipalities in the top OR class of more than Rs 1200 and no municipality in

the OR class of less than Rs 400. The bulk of the municipalities in the districts of Group 3 collect revenue between Rs 400 and Rs 1200. A higher proportion of commercial properties in the municipalities of Group 1 districts as an explanation is difficult to sustain because out of the six municipal corporations only one is in Group 1 districts and urbanization is also not higher in these districts. Collection efficiency as an explanatory factor is also not sustainable as the rules are the same all over the state and the civil bureaucracy is highly mobile.

Turning to the Village Panchayats, the distribution of VPs in the districts by OR is shown in Table 10. A preliminary look at the Table suggests that the pattern is very similar to that observed with the municipalities. A slightly higher proportion of VPs in Group 1 districts report ORs above Rs 400. A very small proportion of VPs in Groups 2 and 3 report higher ORs; VPs tend to cluster around the lower ORs. To get a clearer picture, Table 11 presents the proportions of VPs reporting ORs below Rs 250 and above Rs 400. It may be seen that between 60 and 80 percent of VPs of Group 2 and Group 3 districts report OR below Rs 250. It is below 40 percent in the case of VPs of Group 1 districts.

The important difference between the municipalities and Village Panchayats is that districts in Groups 2 and 3 show almost similar distribution of Village Panchayats by ORs unlike in the case of municipalities. It is as it were one group rather than two unlike in the case of municipalities. The message that comes out clearly is that the central Travancore region collects more local taxes in the Municipalities and Village Panchayats and the rest of the regions collect considerably less taxes. Between Group 2 and Group 3 the latter collects significantly less taxes per capita.

Table 11. Share (%) of Village Panchayats in Low and High ORs across Districts

District	% Share of Village Panchayats by OR	
	Less than Rs 250	More than Rs 400
Tvm	67.7	5.9
Klm	58.9	7.4
Alpz	68.1	4.2
Pta	17.0	18.9
Ktym	26.8	20.8
Idki	38.5	19.3
Ekm	21.9	28.1
Tcr	44.8	13.0
Pkd	70.5	8.0
Mlpm	80.5	1.1
Kzkd	80.0	7.1
Wyd	47.8	13.0
Knr	61.9	7.0
Ksgd	68.4	2.6

The Sixth SFC making an award based on observed revenue is surprising as elsewhere in the Report there is discussion of the unwillingness of LGs to levy tax rates at the higher band: "There is a general unwillingness to impose tax rate at a higher band, on the part of Local Governments, even in relatively prosperous areas. Most of the Local Governments go for the lower end of the permissible tax band, which is prescribed by the Government, even in the case of flourishing non-commercial properties." (p. 40, Second Report of SSFC). The data presented in Tables 9 to 11 confirm it. Further, the state government makes undue delay in carrying out periodic revision of tax bands. Then, the LGs take their own time: "Even after Government decisions, many Local Governments showed an inordinate delay in revising the tax. It is understood that even after five years, 29 Municipalities and one Corporation have not completed tax revision till date." (p.42, Second Report). Various other deficiencies in collection too are mentioned in the Second Report: "(1) Lack of transparency in tax assessment. (2) Lack of citizen involvement in assessment of taxes. (3) Sin of silence or collusion on the part of the officials. (4) Manipulation of data regarding age of the building, the width of roads, etc. (5) Lack of accountability in assessment and collection. (6) Poor oversight in assessment and collection." (p. 45). Around ten pages are devoted for the discussion of the poor collection of revenue by LGs. How does one justify rewarding such poor performers with such a huge bounty?

Another problem has arisen with the computation of income distance. It is taken as the distance from the global maximum (that is the highest value observed for the state as a whole). When the maximum value is ten or fifteen times the smaller values, the absolute distance loses the power to adequately differentiate between the LGs at the bottom. This dimension is shown by presenting the frequency distribution of LGs by per capita OR and comparing it with the frequency distribution of LGs by percentage share in distance from highest per capita income (as shown in Appendix 6.2). The exercise is carried out for only a few districts as it is time consuming.

Tables 12 and 13 present the frequency distribution of LGs by average per capita own revenue and % share in distance from highest per capita income respectively. It may be seen from Table 9 that in Thiruvananthapuram the VPs show OR ranging from below Rs 100 to more than Rs. 500 (max Rs 672). While almost 70% of the VPs lie in just three income classes, the distribution is over a wide range. Similar is the case with Kollam and Pathanamthitta where income levels are different.

Appendix 6.2: Local Government wise Distribution of General Purpose Fund using Revised Proposed Formula

Appendix 6.2.1: Village Panchayat wise Distribution of GPF using the Revised Proposed Formula

LG Code	Village Panchayats	Average Per Capita Own Revenue (2014 to 2020)	Population	Criteria for inter se distribution of GPF	
				% Share in distance from highest per capita income	% Share in Population
G010101	Chemmaruthy	151.98	32444	0.1148	0.1257
G010102	Edava	193.96	25994	0.1119	0.1007
G010103	Elakamon	197.69	25307	0.1116	0.0981
G010104	Manamboor	216.95	23198	0.1103	0.0899
G010105	Ottoor	235.82	16085	0.1090	0.0623
G010106	Cherunniyoor	226.36	18114	0.1097	0.0702
G010107	Vettoor	179.88	18704	0.1129	0.0725
G010201	Kilimanoor	222.32	20515	0.1099	0.0795
G010202	Pazhayakunnummel	426.51	24608	0.0961	0.0954
G010203	Karavaram	180.59	30660	0.1128	0.1188
G010204	Madavoor	164.33	21091	0.1140	0.0817
G010205	Pallickal	199.07	16900	0.1116	0.0655
G010206	Nagaroor	190.77	26512	0.1121	0.1028
G010207	Navaikulam	214.74	40702	0.1105	0.1578

Table 12. Distribution of Village Panchayats by Per Capita Own Revenue

Per capita Own Revenue Class (Rs)	Thiruvananthapuram	Kollam	Pathanamthitta
Less than 100	1	0	
100-150	5	5	
150-200	16	17	1
200-250	24	18	8
250-300	10	10	13
300-350	5	7	10
350-400	3	6	11
More than 400	4	5	10
Total	68	68	53

Table 13. Distribution of VPs by %Share in income distance

%Share in income distance	Thiruvananthapuram	Kollam	Pathanamthitta
Less than 0.0950	1	4	8
0.0950-0.1000	4	5	10
0.1000-0.1050	9	9	13
0.1050-0.1100	18	20	18
0.1100-0.1150	36	26	4
0.1150-0.1200	5	4	
More than 0.1200			
Total	68	68	53

Table 12 presents the distribution of VPs by the share in income distance. Just observe the clustering of VPs in just one or two classes. In Thiruvananthapuram, it is acute as the incomes are low and far removed from the highest value for the state. Kollam is comparable to

Thiruvananthapuram. In Kollam, the distribution of VPs by per capita OR is more uniform but income share is highly concentrated. Pathanmthitta is slightly different (but only slightly) and the share values are lower as the income levels are higher and hence closer to the highest value bringing down the distances.

The problem may be articulated with arithmetical examples. Imagine a universe with three VPs, namely A, B, and C all with uniform population taken as one. Assume per capita own revenue to be 10,000 for A, 2500 for B and 1600 for C. Income distances from the highest incomes are 7500 for B and 8400 for C and percentage share in income distances (and share of devolved resources) are 47% and 53%, that is fairly close to each other even when own revenue of B is almost 60% higher than that of C.

A measure of fiscal capacity is no doubt needed to be included in the devolution formula. The observed data of own revenue must be normalized for rates. They need also, be normalized for the share of property tax in the total as higher property tax rate will lead to higher share of it in the total. Other methods might also have to be arrived at to correct other factors. These require detailed analysis of data. Note that per capita Own Revenue of B is almost 60% higher than that of C but the shares of both are very close. This has arisen because the highest income is far removed from both and hence the distances are only around 10% apart. Now, suppose the highest income is only 3000. Distances come down to 500 for B and 1400 for C and shares change to 26% for B and 74% for C. This would explain the clustering of % shares in income distance of VPs. The conclusion drawn is that absolute distances from highest own revenue does not serve the intended purpose.

The question that needs to be answered in this context is, if not absolute distance, then what would be a better measure? One of the approaches suggested by a Union Finance Commission is to take the distances after transforming the values into their square roots. A log transformation could also be tried. The square root transformation would give values of 100, 50 and 40 for A, B and C. The distances then become 50 and 60 and shares 45% and 55%. A log transformation and distances yield 43% and 57%. These are indications suggesting that there are problems in taking absolute values when the highest own revenue values are far removed from the rest. The issue calls for rigorous examination before a decision could be taken.

6.Deprivation Index

All the SFCs have used index of backwardness (first to third), or deprivation index (fourth onwards) with weights ranging from 15 to 30 percent. The reasoning behind using such indices is that the needs of population are not uniform and hence taking population alone as an indicator treats them as the same. Some segments of population require higher levels of support compared to the others. For instance, the recommendations of the Working Group to include ‘composite index of agricultural labourers, persons engaged in livestock … etc.,’, or ‘composite index of backwardness’ are grounded in the reasoning that these groups are

economically or socially marginalized, or to use another coinage popular in Kerala, they are "outliers." Larger resources must flow to LGs more populated by them to ensure which their characteristics should get into the index with substantive weights. Such an argument made lot of sense and upheld the concern of social justice in the 1990s when the LGs as the third tier had come into being.

The LGs worked on these from the very beginning and achieved great success as argued by me in a paper in the Handbook of Decentralised Governance and Development in India (Ed. Rajasekhar, 2022). As regards electricity, the paper argued that, "The lack of access to basic amenities such as electricity, sanitation and water was glaring in Kerala till the early 1990s. For instance, only about 50 per cent of the households had access to electricity. Among the disadvantaged groups, access was significantly lower compared to the others. The gradient was steep. Whereas access to electricity in 1991 among all groups was 50.4 per cent, it was 25.3 per cent for Scheduled Castes and 14.1 per cent for Scheduled Tribes. The period between 1991 and 2001 witnessed a remarkable change in access to electricity. For all groups, the improvement was from 50.4 per cent to 70.75 per cent, for Scheduled Castes from 25.3 per cent to 53.31 per cent and for STs from 14.1 per cent to 37.74 per cent. It may be seen that the gains for the disadvantaged groups were higher than those for other groups." (page 188). The role of LGs in this achievement must be appreciated.

The efforts begun in the 1990s continued beyond 2001 and by 2011, electrification had reached close to 100 percent for all segments of population. The situation with regard to sanitation is more praiseworthy: "The situation with regard to access to sanitation is slightly different compared to that of the electrification of houses. The levels were lower compared to electrification and the gradient was steeper in 1991. The change that occurred between 1991 and 2001 was simply unbelievable: there was an over-40 percentage point increase for almost all social groups. It was over 40 percentage points for the Scheduled Castes and Scheduled Tribes and slightly lower for the others. The result is that the gradient came down. This trend continued into 2011 with almost all social groups inching towards 100 per cent coverage of sanitation. No wonder the state could be declared 'Open Defecation Free' (ODF) in 2016. It is in recognition of the great work done by all the Gram Panchayats." (page 189).

On nutritional status the paper has the following to say: "The situation has improved with regard to the nutritional status of children below 60 months as well with all the work that was done by the Gram Panchayats with the Integrated Child Development Scheme (ICDS). While the proportion of stunted people is close to 40 per cent in India it is less than 20 per cent in Kerala. More importantly, it is much lower among the Scheduled Castes compared to others suggesting that the gradient has disappeared. There is nothing like that to be seen in any other state. Especially pathetic is the situation in Gujarat where the overall level of stunting is high and the gradient is steep. The picture is the same regarding underweight people as well. Kerala has brought down the levels and the gradient has disappeared" (p. 190).

The paper concludes as follows: “The data presented in this section on access to electricity, sanitation, housing, and nutritional achievements may be viewed from the perspective of pre- and post-decentralisation. The data pertaining to 1991 reflects the before-decentralisation situation. The general level of access to basic services was low in Kerala and more importantly the social gradient was steep. With the thrust of decentralised planning since 1996 the levels went up rapidly and the gains made by the socially disadvantaged groups were relatively higher reducing the social gradient. The goal of ‘economic development with social justice’ has truly been achieved. Similar progress has not been made in other states as the comparison with all-India figures show.” (pp. 193-4).

While the achievements of the LGs on almost all constituents of deprivation index are laudable, most of the deprivation indicators have disappeared by the mid-2010s as indicated by the NITI Ayog report:

“Only 0.71% of the population in Kerala are multidimensionally poor, the lowest in the country, according to the baseline report of the National Multidimensional Poverty Index published by Niti Aayog.”
“The State registered low count on almost all the parameters of deprivation concerning child and adolescent mortality (0.19%), maternal health (1.73%), years of schooling (1.78%), school attendance (0.3), and sanitation (1.1). The deprivation parameters in nutrition, cooking fuel, sanitation, drinking water, electricity, housing, assets and bank accounts also had the State scoring low.” (The Hindu, Nov 26, 2021).

In such a situation there may only be a few isolated households who fall in the class of deprived but allocating such large funds to LGs at all levels on that basis may not be justified. Missions such as Life Mission may be serving the purpose better to identify the isolated households and address the problem. Deprivation index or index of Backwardness as indicators in the Devolution index has overlived their utility and best be avoided.

7. Population – New Indicators

As already indicated the needs of population are not uniform and hence taking population as such an indicator treats all of them on an equal footing. In the current Kerala context access to basic amenities is well taken care of and hence need not enter the devolution index to differentiate population groups. What has emerged as a major problem is the needs of elderly persons: old-age homes, end of life care, and palliative care.

As regards old-age homes, in 2024 Kerala reported 722 registered homes, including 35 paid, housing over 22,180 inmates. It is a substantial increase of 43 percent from 502 housing 14,642 in 2015. Despite such growth reports suggest that there is a serious shortage of old-age homes. It is expected that the demand is bound to up in the years to come as the proportion of elderly will cross 34% by 2031 and more and more students are migrating to developed countries for education, employment, and eventual residence. The local governments must shoulder this responsibility. The question is, which level of LG- Village

Panchayat, Block Panchayat, or District Panchayat- should do what? The VPs may be too small and there probably would arise issues of economic viability. If construction of old-age homes is entrusted to Block Panchayats, then what responsibility of funding the running cost could be entrusted to VPs and what should be the mechanism of funding them?

The second issue with the population in Kerala is the high health spending – both Government and out of pocket. As per the National Health Accounts released in 2024, Kerala spent about 9.7 percent of general government expenditure (GGE) on health in 2021-22 that is comparable to West Bengal (10.6%), Tamil Nadu (9.0%), Odisha (10.7%), Maharashtra (9.1%), Andhra Pradesh (9.4%), and Gujarat (10.3%). In per capita terms while the government in Kerala spends Rs. 4338, in West Bengal, it is only 57 percent of that in Kerala, in Tamil Nadu (79%), Odisha (71%), Maharashtra (66%), Andhra Pradesh (72%), and Gujarat (64%).

One generally expects expenditures directly made by households at the point of receiving health care (called out of pocket expenditure, or OOPE) to be smaller when government expenditure is high. But in the case of Kerala this has not been true. Households in Kerala spend Rs 7889 per capita compared to Rs 4010 in West Bengal, Rs 2280 in Tamil Nadu, Rs 2133 in Odisha, Rs 3184 in Maharashtra, Rs 3834 in Andhra Pradesh, and Rs 1942 in Gujarat. Private spending by households in these states are less than 50 percent of that in Kerala; only West Bengal spends about 51 percent of that in Kerala households.

Total health expenditure by Kerala in per capita terms rises to a whopping Rs 13,343 which is almost twice the amount spent by West Bengal, Tamil Nadu, Andhra Pradesh, and Maharashtra. One of the causes of high health expenditures is the cost of end of life care. It is well-known that people who die in the hospital undergo more intensive tests and procedures than those who die anywhere else. This intensity of services in the hospital shows a lot of suffering that is not probably in the end going to offer people more quality of life and may not offer them more quantity of life either. And there is a cost to this dying in the hospital. Spending on people who die in a hospital is about seven times that on people who die at home. In one study in America the costs were $4760 for their last month of life (42% of patients) who died at home compared to $ 32,379 for those who died in a hospital.

In Kerala, end of life medical care spending in a private facility at Rs 187000 is the highest among the Indian states. In the public facilities. It is less than Rs 11,000 (The National Sample Survey (NSS) 75th round (2017-18)). And the proportion of deaths in medical facilities is also high in Kerala as per the latest Sample Registration System Statistical Report 2020 brought out by the Census Commissioner of India (See Table 14).

It is evident that in Kerala 87.8 per cent of deaths in rural areas take place in hospitals and only 5.3 percent receive untrained care or no attention. It is 40 or more percentage points lower for the other states (see Table 14). In the urban areas too, Kerala reports a high proportion of 74.9 percent deaths taking place in hospitals. Most of the Indian states report only close to 60 percent of the deaths occurring in hospitals. One of the reasons Kerala finds

itself in such dire straits is also the very high burden of non-communicable diseases that require palliative care and end of life hospital care.

Table 14. Distribution of Deaths by Medical attention received before death, 2020

State	Hospital		Qualified Professional		Others, or no attention	
	Rural	Urban	Rural	Urban	Rural	Urban
India	44.6	61.5	33.9	31.1	21.5	7.5
Andhra Pradesh	45.4	60.9	32.4	32.4	22.2	6.7
Gujarat	39.4	59.8	47.9	39.3	12.7	0.9
Kerala	**87.8**	**74.9**	**6.9**	**23.3**	**5.3**	**1.8**
Maharashtra	45.6	64.3	38.8	32.2	15.6	3.5
Odisha	48.2	57.8	14.6	17.8	37.2	24.4
Tamil Nadu	39.5	58.5	21.3	22.7	39.3	18.8
West Bengal	40.5	60.1	40.7	39.8	18.8	0.1

Source: Office of the Census Commissioner, 2024.

It is claimed that Kerala has evolved a unique model in the delivery of palliative care services through the community-based approach free of cost for the patient. The services are provided in a home care model, and are holistic, which cover different aspects of the care of patients and families, including physical care, psychosocial, spiritual, and economic support. The palliative care model in practice in the state of Kerala may be considered fit for the resource-poor setting like India. Furthermore, it is claimed that the integration of palliative care into primary health care has also been successful in Kerala where the palliative care services are being provided by the rural panchayats (local government administration bodies) through earmarked funds from the state. But has Kerala moved beyond palliative care to end of life care? It is doubtful. If it has moved in that direction then there would not have been such large numbers dying in hospitals.

Supporting people at the end of their lives is a complex task. Individuals concerned may be highly vulnerable requiring support from varying services for a range of illnesses or conditions. Families and carers also need support. Palliative care may only be part of this complex set. Kerala may emulate the England experience of social care for people at end of life. A Nuffield Trust study of 2012 drawing data from seven sites (3.1 million population) with death rates ranging from 7 to 13 observed that some form of local authority funded social care was being given to around 28 percent of people who died. Use of social care may prevent the need for hospital care as shown by the study. It is seen that as the level of social care use in the final year of life increases hospital use comes down – number of IP admissions, number of IP days, number of OP attendance all fall. The study concludes that an understanding of the relative balance of health and social care provisions in the local area could help achieve better performance and the opportunities to achieve change (Georghiou, S Davies, A Davies, and M

Bardsley, 2012). In Kerala, there is a need to study these issues in greater detail to achieve better use of public resources and offer higher quality of death.

How much of public resources must be transferred to which level of LG calls for detailed analysis. What weight should population carry in the formula so that required resources flow to the right level of LG is a complex issue. An answer cannot be delayed any longer.

(This section draws heavily from the paper, D Narayana and Monalisha Chakraborty (2025))

8. Conclusion

The devolution formulae used by the Sixth SFC cannot be used because the current reality of Kerala is different from what it was even ten years ago. Populations need to be weighed by parameters reflecting the needs of elderly. Deprivation index must be dropped as most of the indices of backwardness or deprivation show a developed state in terms of human development or access to services. What needs to be incorporated is some indicators reflecting the needs of elderly. What indicators, what data, and what level of LG calls for detailed analysis. They, probably must be different at different levels of LGs because the issue of size is important. For example, is it economically viable to have old age homes in every Village Panchayat, or should it be Block wise? What about crematoriums? If not every VP, then how should the costs be shared? Who should manage them?

Area may be relevant as an indicator of cost disability. But which measure of area? It cannot be geographic area. Should it be geographic area less forest area? Should any other indicator related to environment be added? These call for some critical analysis.

Is there need for including a measure of environmental sustainability. Currently, environmental concerns are addressed by the state/ district disaster management authorities. Disaster management and mitigation plans have to be made at the state/district level. What role is assigned for LGs in such plans. If there is no mapping of functions at any level of LG, then why devolve funds? Without a proper integration of the LGs in district disaster management/ mitigation plans it may be futile to assign funds lest they be misused.

In the devolution formulae of the Sixth SFC own revenue is used as one of the indicators of backwardness, or deprivation and **not as a measure of fiscal capacity or own income**. In fact, none of the formulae of the previous commissions have an indicator of fiscal capacity (except the Working Group formula with 10% weight and the Sixth SFC formula where population and own revenue carry equal weight). How can we use the data on own revenue as a measure of fiscal capacity as the observed data is confounded by the varying tax rates, collection efficiency etc.? How do we derive own revenue at **comparable rates**? And what weight should be assigned to it as currently almost the entire weight is loaded in favour of fiscal need?

The argument against the Devolution Formulae of the Sixth SFC is clearly enunciated but the search for an alternative is not clear. Hard work lies ahead and we get only some directions from this critique.

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