MADHU DANDAVATE   DEPUTY CHAIRMAN
                                         PLANNING COMMISSION
                                         NEW DELHI – 110001
                                         INDIA

D.O.NO.4/9/96-FR/DCH/3670   February 24, 1997.

My dear Badal Ji,

        You are aware that the normal Central Assistance for State Plans has been allocated among the States on the basis of revised Gadgil Formula approved by the National Development Council in 1991. This revised formula has been adopted for the distribution of normal Central Assistance in 1997-98 also.

        During my discussions with the Chief Ministers for the finalization of the Annual Plan 1997-98, some of the Chief Ministers have pointed out that the formula adopted in the Eighth Plan should be further revised. One view was that States which do relatively better in fiscal management and resource mobilization should be suitably rewarded. An alternate view was that since developed States are able to attract more private investment, backward States should be given more consideration in Central assistance by giving higher Weightage to backwardness.

        A revision in the formula requires the approval of the National Development Council. In order to enable the Planning Commission to take a holistic view on the matter, I would like to have your observations, especially, on the following two points, namely whether you would like to have the formula in operation currently further revised and if so, what are the areas of revision you would like to consider. I hope that you will be able to send your considered views on these in a couple of weeks. Based on your views and those of other Chief Ministers, we propose to prepare a note which can be circulated among all Chief Ministers for consideration. If there is a sufficient measure of agreement on the approach to be adopted, we can consider the matter further in a subsequent meeting of the NDC.

        I am enclosing a background note on Gadgil formula for ready reference.

        With regards,

                                              Yours sincerely,

                                                 SD/-
                                          (MADHU DANDAVATE)

Shri Prakash Singh Badal
Chief Minister
Government of Punjab,
Chandigarh.

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Planning Commission
(Financial Resources Division)
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A Background Note on Gadgil Formula for distribution of Central Assistance for State Plans.

Prior to Fourth Five Year Plan, the allocation of Central Assistance to the State Plans was based on a schematic pattern and there was no definite formula for allocation In view of the general demand for an objective and transparent formula for allocation of Central assistance for State plans, a formula known as Gadgil formula was evolved in 1969 which was adopted for distribution of plan assistance during the Fourth and Firth Five Year plans. This formula was modified in 1980 and the modified formula became the basis for allocation during the Sixth and Seventh Five Year Plans. The modified formula was again revised in 1990 and formed the basis for allocation of Central Assistance for 1991-92 only. Following representations, the formula was further revised in 1991. The Gadgil Formula (1991), has been in operation during the Eighth Plan period. Only the details of 1991 formula are discussed below, as others are only of historical value. However for comparision purposes all the 4 formulae with criterion and weight in respect of distribution among Non-Special Category States are given at the Annexure.

Gadgil Formula (1991)

The formula is known as **Gadgil-Mukherjee Formula**. The main features of the formula are the following :-

I-   From the total Central assistance, set apart funds required for externally aided schemes.

II-   From the balance, provide reasonable amounts for Special Area Programmes viz.
      (a)   Hill Areas;
      (b)   Tribal Areas;
      (c)   Border Areas;
      (d)   N.E.C.
      (e)   Other Programmes

III- From the balance, give 30% to the Special Category States.

IV-   Distribute the balance among the non-Special Category States as per the following criteria and weights.

	Criteria	Weight (%)
1.	**Population (1971)**	60
2.	**Per Capita Income**	25
	(a) 'Deviation' method-covering States with per capita SDP below the national average	20
	(b) Distance method-covering all states	5
3.	**Performance**	7.5
	(a) Tax effort;	
	(b) Fiscal Management; and	
	(c) Progress in respect of national objectives.	
4.	**Special problems**	7.5

Under the criterion of the progress in respect of national objectives, the approved formula covers four objectives viz; (i) population control and maternal and child health; (ii) Universalisation of primary education and adult education; (iii) on-time completion of externally aided projects; and (iv) success in land reforms. Weights have been assigned separately for each of these within the overall weight of 7.5 percent as under :-

	Items	Weights
a.	Tax policy	2.5%
b.	Fiscal management	2.0%
c.	National Objective	3.0%
	i) Population control	1.0%
	ii) Elimination of illiteracy	1.0%
	iii) On-time completion of Externally aided projects	0.5%
	iv) Land reforms	0.5%

In respect of Special problems, there was no specific criteria, and it was left to the Planning Commission to use its discretion in the allotment.

Details in regard to Working out individual share of States in regard to population, income criteria and performance are as under:

Special Category States

There is no objective criteria and weight for distribution among the special category States. The main considerations were the level of allotment in the previous years, resource position of States and also development needs etc.

Non-Special Category States

1. Population Criterion
60% weight is given to population. The population as per 1971 Census is taken into consideration. 1971 population has been adopted on the basis of a Statement of Policy issued in June 1977. Each of the 15 States is given Central assistance in proportion to the share of its population to total population.

2. Income criteria

25% weight has been assigned to this. This has two components namely 20% on the basis of Deviation criterion, and 5% on Distance criterion.

(a)   Deviation criterion -   Weight 20%

The States are identified on the basis of per capita comparable State domestic Product compared to the corresponding national average. The States which are below national average are identified and 20% of the assistance is exclusively allotted to them. 1% band is also permitted so that a State with per capita SDP higher than the national average but within one percent variation (upper side) from the national average is also given the benefit of being within the group of States below national average. For the purpose of calculating the per capita SDP, an average of per capita SDP for the latest three years for which actuals are available is taken into

consideration. The C.S.O. has been entrusted with the task of providing comparable per capita SDP of the States. For 1996-97, the relevant years are 1990-91, 91-92 and 92-93. Once the States are identified, their relative weights are determined on the basis of distance of per capita income of a State from the per capita income of the State which has the highest per capita income. For calculation purpose, income of Punjab has been adopted for 1996-97. Though Goa has higher income, it was not taken because of its small size and substantial difference from other States. These values were multiplied with 1971 population of each State. The product, so derived of each State is divided by the total product and multiplied by the population.

(b)   Distance Method – Weight 5%

In this case, the comparable per capita State Domestic Product prepared by C.S.O. as in the case of Deviation Method is used. The distance of per capita income of each State from per capita income of that State which has the highest per capita income, is measured. These values were multiplied with the population of each State. The percentage share of each State is obtained by dividing the product so arrived at by the total products and multiplied by 100. Punjab and Goa has been assigned in 1996-97 a weight equal to the weight of that State, which has the next highest per capita income.

An important point to be noted is that in both Deviation and Distance method, the distance from the highest per capita income, to the per capita income of each State is measured to arrive at the share of each State. In the case of deviation method, deviation from the National average has been used to identify the States eligible for allocation of assistance of 20%.

Performance

1.   Tax Effort

The basis of the criterion is the tax- SDP ratio of a State. The ratios are calculated based on the annual average tax receipts and comparable SDP of the State for the latest 3 consecutive years. After computing the tax – SDP ratio, the share of each State is arrived at by converting the total of these percentages to 100. For 1996-97 data relating to 1990-93 were used.

2.   Fiscal Management

The criterion is based on the difference between State's Own Resources (comprising of BCR, ARM, contribution of public enterprises, small savings excluding UTI loans, Provident Funds, Miscellaneous Capital Receipts (Net), adjustment of opening/closing balance) as provided in the financing pattern approved for the State plan outlays and the actuals. A time period of 5 years (latest available) is taken into consideration. More precisely, the steps involved in the calculation for determining the share of each State are:

(i) the difference between the State's own resources as per the Annual Plan estimate and the actual is calculated as percentage of the Annual Plan estimate of State's own resources, (ii) the distance of each state from the lowest performance is calculated and (iii) the share of each State is derived as percentage of the total distances. The lowest State is also given a weight equivalent to the State which is nearest to it. Data relating to 1989-94 were used for determining the share in 1996-97.

3. Population Control

The criterion to be adopted is the difference between the desired performance and actual performance in relation to birth rate and infant mortality rate (IMR). The desired performance rate is calculated as the difference between the goal to be achieved by 2000 AD and the actual rate of the base year divided by the remaining number of years. In this method, the difference between the desired performance rate and the actual is worked out for each State and the distance of each State from the lowest performing State is calculated. The lowest performing State is given a value equal to the net lowest State. The States which have accomplished the goal are given the value equal to the next best performing State. These values are converted into percentages to the total to determine the share of each State in the distribution. The methodology of calculation is the same for birth rate and IMR. Since both the considerations are given equal weight, the average of the two shares is calculated for each State and this determines its share in the total distribution. For the year 1996-97 data relating to 1993 and 1994 were used.

4. Elimination of Illiteracy

The indicator in this case is the performance relating to female literacy. We have chosen female literacy, as this focuses on an important segment of the population which needs special attention. The factors taken into consideration are the female literacy rate in 1991 and the decennial growth rate of female literacy during 1981-91. In case of female literacy rate, the share of each State is determined as a proportion of each State's performance to the total of all States. A similar method is followed with respect to decennial growth rate of female literacy. Since both the considerations are given equal weight, an average of the two shares is calculated for each State and this determines its share in the total distribution. For determining the share for 1996-97, the female literacy rate 1991 and Decennial growth 1981-91 were used.

5. On-Time Completion of Externally Aided Projects

This criterion takes into account available finance in the year for externally aided projects as indicated by the Ministry of Finance in the Revised Estimates and the actual utilisation. In this method, the utilisation of external aid as a percentage of available finance for each State as indicated in the Revised Estimates for the latest year for which information is available is calculated. These ratios are converted as percentages to the total which give the shares of individual States. For the year 1996-97 RE figures of Ministry of Finance for 1995-96 were used.

6. Land Reforms

The criterion for land reforms takes into account two indicators, namely area distributed as a percentage of surplus land declared by the State and area distributed by a State as a percentage of total area distributed by all States. Both are assigned equal weights. The share of each State under each indicator is Determined on the basis of each State's percentage to the total of all States. Since both the considerations are given equal weight, an average of the two shares is calculated for each State and this determines its share in the total distribution. For 1996-97 data of 1992 were used.

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Criteria and Weightage under Original Gadgil formula, Modified Gadgil formula and formulae as revised in October, 1990 and in December, 1991 for allocation of Central Assistance for States' Plan.

(Weightage %)

Criteria	Original Gadgil Formula (1969)	Modified Gadgil Formula (1980)	NDC Revised Formula (1990)	NDC Revised Formula (1991)
(1)	(2)	(3)	(4)	(5)
A. Special Category States (10)	30% share of 3 States excluding N.E.C	30% share of 8 States excluding N.E.C	30% share of 10 States excluding N.E.C	30% share of 10 States excluding N.E.C
B. Non-Special Category States (15)				
(i) Population (1971)	60.0	60.0	55.0	60.00
(ii) On-going major irrigation and power projects.	10.0	0.0	0.0	0.0
(iii) Per Capita Income of which	10.0	20.0	25.0	25.0
(a) According to the deviation method covering only the States with per capita income below the national average	10.0	20.0	20.0	20.0
(b) According to the distance method covering all the fifteen States.	0.0	0.0	5.0	5.0
(iv) Performance of which	10.0	10.0	5.0	7.5
(a) Tax effort	10.0	10.0	0.0	2.5
(b) Fiscal Management	0.0	0.0	5.0	2.0
(c) National Objectives	0.0	0.0	0.0	3.0
1. Population Control	0.0	0.0	0.0	1.0
2. Elimination of Female illiteracy	0.0	0.0	0.0	1.0
3. On-time completion of externally aided projects	0.0	0.0	0.0	0.5
4. Success in Land Reforms.	0.0	0.0	0.0	0.5
(v) Special Problems	10.0	10.0	15.0	7.5
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**

Note: Prior to Fourth Five Year Plan (1969-74) allocations varied from scheme to scheme. There was no formula as such for allocation of Central assistance for States' Plan. Thus schematic pattern was in vogue.

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