

## CHAPTER - 7

### EFFECTS OF GRANTS ON LOCAL EXPENDITURE

Like its effect on local revenue, the impact of grant on local expenditure also carries significance in various ways. This aspect has been explored by academicians like Gramlich (1970), Waldauer (1973), Pogue - Sgontz (1968), Osman (1966) among others. In this Chapter, we devote our analysis to expenditure effects of grants. The analysis is carried in several sections.

#### **A) Expenditure Effect of Grant via its Revenue Effect**

Grant may affect local expenditure via its impact on local revenues and also through its higher expenditure propensity characteristics. In this section, we shall deal with the former and the latter will follow next. As we have earlier covered local revenue effect of grants, there is no intent to reproduce the same at the risk of monotony. Now it is only to underline the point that the impact of grants on total revenues is very much similar to that on total expenditure, provided such revenues are expended entirely and not leaked into saving. We now consider below three possible effects of grants on local expenditure :

##### **i) Positive effects on both local revenues and expenditure**

In this case, one Taka extra grant, for example, will induce a growth of One Taka own revenues, leading to a growth of two Taka total revenue/expenditure. This is typical of an high income elasticity of demand for local public goods corresponding to the equilibrium point 'K' in Figure 7.

##### **ii) Neutral impact on local revenues but positive on local expenditure**

In this instance, one Taka grant, without causing any change in the level of own revenue, will simply add one Taka to total revenues/expenditure. This is natural with an unitary income elasticity of demand for local public goods, referring to point 'J' in Figure 7.

iii) **Negative impact on local revenues with zero, positive or negative impact on Expenditure**

When income elasticity of demand for public goods prevails at lower than unitary level, one Taka grant is likely to reduce local revenues by one Taka or more or less and total revenue/expenditure will remain static, decrease or increase depending upon the extent of reduction in local revenues.

**Empirical Findings**

In both of our studied jurisdictions, grants and local revenues increased remarkably which caused an increase in both total revenue and expenditure (Annexure 1, 2 and 3). In order to identify the nature of grants effect on local expenditure, expenditure was regressed against grant on the basis of both time series and cross-section data. Time series data were for 15 years for Manikganj Pourashava and 11 years for Kaultia UP and cross-section data related to 10 selected Pourashavas. In both estimations, simple linear equation of  $Y = a_1 + b_1 X$  was applied where Y stands for total expenditure (dependent variable) and X for total grant (independent variable). Results of these exercises are recorded in Table 14.

In Table 14, the coefficients of both the time series and cross section data regressions indicate that the impact of grant on local expenditure is quite significant. These regression results also indicate positive measures of grant elasticity of expenditure. Such an information is vital as a reference point for formulation of grant allocation policy. Because an insignificant regression results (often implying a sub-unitary elasticity coefficients) would bear indication of revenue substitution effect of grant for which incremental distribution of grant may be undesirable. On the contrary, an above-unitary elasticity may be treated as a green signal for grant distribution because such grant is not likely to affect local revenues adversely.

Table - 14

RESULTS OF EXPENDITURE REGRESSIONS

Model : Expenditure (Y) =  $a_1 + b_1 \cdot x$  (Grant)

Local Units	Intercept $a_1$	Regression $b_1$	T-Statistics	$R^2$	N
1. Manikganj Pourashava	216	1.28	4.96*	.96	15
2. Kaultia Union Parishad	249	1.00	3.33*	.98	11
3. Selected Pourashavas	620	1.11	3.47*	.15	10

- N.B :**
- i. Regression(s) for Manikganj Pourashavas and Kaultia UP are based on time-series data while it is based on cross section data for the selected Pourashavas.
  - ii. Star marks denote significance at .05 level.
  - iii. Grant and expenditure data in Annexure 2, 3 and 11.

## B) Higher Expenditure Propensity of Grants

It is often theoretically held that local authorities are inclined to spend more of grants than their own revenues. Foster et. al, (1980), for example, indicated this by hypothesising that a local body, other things remaining equal, would like to spend of Tk. 10 per head of population if that involves a matching combination of grants Tk. 7 plus own revenue Tk. 3 in preference to a combination of grants Tk. 2 and own revenue Tk. 8 (p. 288). Empirical findings of Gramlich (1977) suggest that the marginal effect of non-matching grants on local spending was well above the marginal spending propensity out of own-source revenue (quoted in Meiszkowski-Stein, 1983). Such a propensity to spend more of grant relative to own revenues appears to be a representative local fiscal behaviour. The basic assumption underlying this theory is the lower perceived cost (in both monetary and real terms) of achieving unconditional grants (compared to own revenues) which makes the local representatives less careful in spending them qualitatively. The local tax payers also naturally do not see grants as costing them anything for which they may not be agitated if the money is spent with less than maximum efficiency.

Unconditional (categorical) grant in most cases happens to be an easier channel of local income, as it does not engage much of efforts as are required in mobilising local revenues. Generally, the following factors are contributive to such cost differentials :

1) **Monetary Cost** : At the local level, there is no procurement cost of grants, since these are transferred from national to local level of government, more or less automatically and without any cost implication for the latter. In mobilising local revenues, on the contrary, both men and money are engaged involving some monetary cost which must be a positive percentage of collected revenues in the minimum and there is no limit to the maximum except the limit set by the break-even point i.e. 100%.

ii) **Real Cost :** We have already given an account of how fuller application of revenue power may make the local leaders unpopular, leading to an erosion in their political base. Apart from this political cost, there is also general hazards and strains of collecting taxes from remote corners of the locality, particularly in an environment of tax delinquency. All these elements of real cost are not measurable in concrete terms but they subjectively weigh much in the cost consciousness of local public leaders, as equivalent to some definite percentage of collection cost in money terms. Such element of real cost is almost non-existent in case of receiving grants.

Under these circumstances, procurement cost of grants is perceived to be almost zero in the eye of local spenders while it is positive (in both money and real terms) in case of local revenues. Though grants in the form of national revenues are collected at some positive national costs, this cannot be felt by the local administrators. This is mainly because of 'quid pro quo' character of national taxes delinking the receivers of grants from payers of taxes and also because of equity approach to grants distribution involving transfer of national taxes (collected from rich region) to the poor locality (in the form of grants). As a natural consequence of zero cost perception about grants, local spending authorities find it worthwhile to spend grant monies on any activity that is likely to produce only more than zero benefit and therefore they are not supposed to be earnest in utilising grants in the most possible productive manner. Ultimate result is that the grant fund tends to be used up easily and quickly but not properly and productively in the maximum sense.

In case of local revenues, on the other hand, the monetary and real costs of collection (which are not only positive but also substantial) are likely to be balanced against the prospective benefit from their uses. In using such hard-earned money, local spenders will naturally become calculative and be inclined to use fund selectively for the purposes that promise return favourably comparable with

the cost of investment. Obviously, not all projects or uses of local income can satisfy this selection criterion. Hence, in local spending policy, qualitative use of local revenue is much more weighted than the aspect of their quantitative use. Theoretically, this contributes to the lower expenditure propensity of local revenues relative to grants.

### **Empirical Evidence**

The findings of this study suggest the positivity of cost differentials in procurement of grants and local revenues by local governments in Bangladesh. National government disburses grant fund to the local government in an act of transfer to a local bank account of local unit and the latter is only to draw the cash. This amounts to almost zero cost of availing grants. Local revenues, by contrast, are collected at about 20% to 22% cost of tax proceeds (Annexure 7). The problems of political cost of mobilising such revenues are also there. Quite aware of this, elected leadership of Manikganj Pourashava, in one occasion in 1984, made a general remission of holding tax reassessment conducted neutrally by official assessors. For similar reason, democratic executive of Kaultia Union Parishad never did (during study period) administer any Distress Warrent (attachment) which is believed to be an effective means of improving collection rate.

Given zero procurement cost of grants perceived locally vis-a-vis substantive local revenue collection cost, the local public behaviour is likely to effect higher expenditure propensity for grants and lower for own revenues. This matter was investigated into and the results furnish some evidences in usual direction (Table 15).

Table 15 shows that in Manikganj Pourashava expenditure propensity of grants is higher than that of local revenues (ie. 99.96% as against 89.03% on an average). Similarly, in Kaultia Union Parishad, average propensity to spend grants is higher (96.83%) compared to local revenues (86.31%). Relatively higher expenditure

Table - 15

**EXPENDITURE PROPENSITY OF GRANTS AND LOCAL REVENUES  
IN TWO LOCAL BODIES**

Year	Manikganj Pourashava		Kaultia Union Parishad	
	Grant %	Own Revenue %	Grant %	Own Revenue %
1973-74	100	95.78	-	-
1974-75	100	66.15	-	-
1975-76	100	57.08	-	-
1976-77	100	105.38*	-	-
1977-78	100	74.98	100	151.76*
1978-79	100	97.93	100	143.78*
1979-80	100	71.95	68.47	59.87
1980-81	100	92.76	100	84.16
1981-82	100	90.60	100	81.47
1982-83	100	89.50	100	102.00*
1983-84	100	59.02	100.05*	92.55
1984-85	100	112.86*	100	50.24
1985-86	100	89.94	100	88.99
1986-87	90.10	100.03*	96.56	29.73
1987-88	109.32*	131.35*	100	64.90
Mean	99.96	89.02	96.83	86.31

**N.B.:** i) expenditure propensity implies utilisation as percentage of grants disbursed/own revenues mobilised.

\*ii) above one hundred percent expenditure is met out of previous unspent balance.

propensity of grants is partly attributable to the cost differential factor. It was gathered from both observation and objective queries that the very idea that grant has no procurement cost worked upon the local spenders a sense of indifference towards using grants in the best possible manner. This is why, they felt inclined to anyhow exhaust the grant monies while they would not like to use own revenues except on worthwhile purposes. Any unspent own-source revenues would be saved as closing balance to meet the first line of expenditure (i.e. salary etc.) needs in the opening year till arrival of grants. This lends higher expenditure propensity to grants rather than own revenues.

Another factor reinforcing such expenditure trend of grants is the very financial environment in which grant plays its role. There is official pressure for utilising grant within current financial year, in default of which a downward adjustment of grants in the following year is apprehended. A mad rush of spending grants is therefore observable towards the close of the year in order that no part of grant remains unutilised and hence refundable. The pace at which these grants are utilised is seldom disturbed by any financial provision or measure. To ensure compliance with local public expenditure norms, no external auditing was conducted for the Union Parishad since 1984 and for the Pourashava it was done yearwise merely as a routine affair, rather than being purposeful.

### **C) Towards Evolving an Optimum Quantity Theory of Grants**

One issue that is likely to come across the financial managers of the grantor government is how much of grants should be funnelled to local public sector. One normative approach to the problem, from the viewpoint of optimum utilisation of national resources, is considered below. The theoretical basis of this attempt is the law of Diminishing Marginal Productivity as expounded by Marshall (1961).

"An increase in the capital and labour applied in the cultivation of land causes in general a less than proportionate increase in the amount of produce

raised, unless it happens to coincide with an improvement in the art of agriculture" (Page 150).

This law obviously points to the possibility of marginal output of an additional input to be diminishing when other complementary inputs of the same production function remain constant. In our proposed theory, grant is also viewed as one such input that is used for producing goods and services in both national and local public sector and assumed to be subject to the same law of diminishing returns as more of it comes into use with other inputs remaining the same.

We have earlier seen that from the end of locality, grants do not look like costly for which their qualitative use may be affected. But the point is that from macro-economic view-point, procurement of grant is not without any cost implications for the society. Not only the national revenues (the origin of local grants) are collected by national government at substantial monetary and real costs, such collection also imposes some costs on the locality by depleting a portion of local taxable capacity. It is, therefore, an important policy matter to ensure productive utilisation of national resources at both national and local public sector through appropriate intersectoral sharing of such resources i.e. allocating optimum amount of grants to local sector.

Grant monies are not only procured at a cost, they also command high use values, as they can be used to produce goods and services in both the sectors. Being scarce and limited, national resources face competing demands from the both. In this situation if resources in any sector are handled at less than maximum efficiency, that will be a net loss to the over-all national economy or if profitability of investment in one sector is lower than that in the other, such investment will have high opportunity cost.

In case of grant fund, the standard of use will depend on, inter alia, its size i.e. the more the grant injected particularly in relation to functional

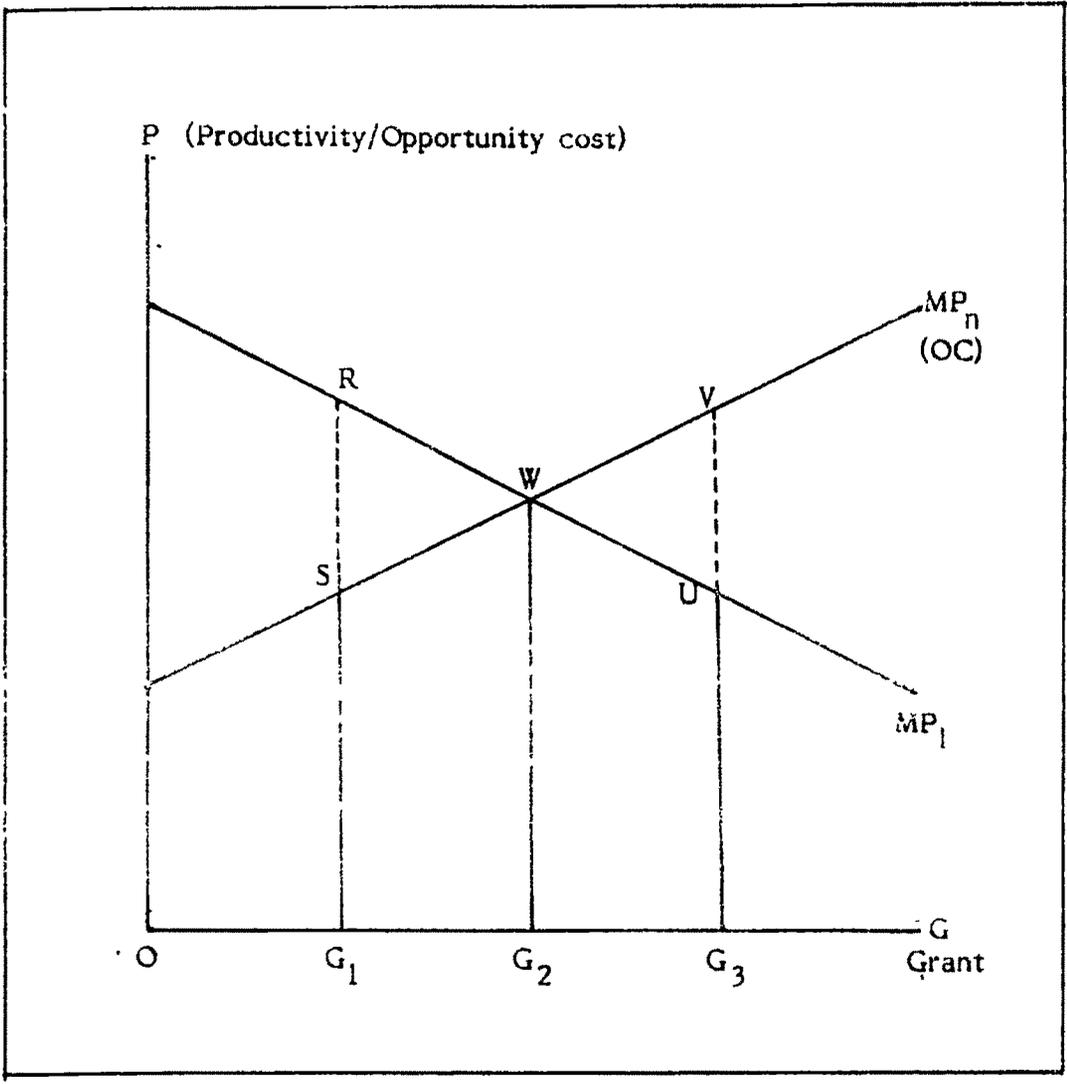
liabilities of a local government, the less is the productivity of its use. But what amount of local grant maximises overall national interest is to be conceived in terms of relative productivity of the local sector i.e. if the local sector is more productive than the national sector or not. If, as is the case in the initial stage of local development, return on local resources invested is greater than that on national investment, increasing doses of grant to local government will promote aggregate national output. Similarly, after a certain stage of local development is over, decreasing volume of grant will add to over-all national productivity. In this way, by making suitable trade-off between national and local public sector shares to national resources, a certain stage of grants quantity may be reached at which marginal productivity of national sector resources ( $MP_n$ ) and that of local grant resources ( $MP_l$ ) equilibrate. At this stage, over-all national productivity will be maximised and the quantity of grant corresponding to this stage will be the optimum.  $MP_l = MP_n$  is, therefore, a necessary condition for optimum quantity of local grant. This point is illustrated by means of Figure 11.

In Figure 11, grant is measured through horizontal axis and its productivity/ national sector productivity (opportunity cost) along vertical axis. The marginal productivity curve for local uses of grant  $MP_l$  is sloping negatively to indicate that as more and more of grant is brought into use, less and less of productive projects are available for which  $MP_l$  of grant goes down. On the other hand, the marginal productivity curve of national revenues ( $MP_n$ ) (also opportunity cost curve of local grant) is moving up positively to demonstrate that with decreasing stock of national revenues due to their increased conversion into local grant,  $MP_n$  is increasing.

We note that at the initial stage, there are in the locality, a good number of potential projects which promise more marginal productivity of grant ( $MP_l$ ) than its opportunity cost (OC) or marginal productivity of national resources ( $MP_n$ ). At  $OG_1$  size of grant, this excess benefit amounts to  $RS$ . In this way increased funnelling of grant to the local sector till  $OG_2$  will be justified on the ground that greater

Figure - 11

OPTIMUM QUANTITY THEORY OF GRANT



marginal productivity of locally-used grant than that from their national uses (or of national resources) will make net contribution to the over-all national economy. After  $OG_2$ , extra increase of grant will be subject to lower marginal productivity than that of the national sector investment, causing thereby a wastage of resources from national point of view. So the national government policy should be to allocate grants upto  $OG_2$ , which is the optimum quantity of local grants.

### **Practical Significance**

The theory of optimum quantity of grant is not an utopian concept but it has a practical dimension in the real world. The law of diminishing marginal productivity which is the cornerstone of the theory seems to be applicable to the production function of the public sector in Bangladesh. Here at some levels of local government there is the requirement to maintain a schedule of projects prepared in order of local priority for execution according to that priority subject to availability of grant. Assuming that such priority reflects the order of project productivity, the more of grant flows to local governments, relatively the less productive projects will increasingly come up for execution, the result being an application of decreasing returns to grant's scale. For example, in a backward stage of rural development, a new road project will be highly productive particularly in providing marketing facilities. But as more and more of new road projects are undertaken in response to continuous flow of grants, a time ultimately may come when marginal productivity of such projects will fall steeply or even be negative if depletion of cropping land is accounted for. Similarly, an inverse relation between resource investment and its rate of return is also likely to operate in the national sector at least after a certain period. Thus the basic elements of the optimum grant theory are very much in existence.

So corresponding to any GNP level, there is an optimum amount of grant promising maximisation of overall national output at  $MP_l = MP_n$  (OC) level. Though this quantity can not be pinpointed exactly but this can be estimated roughly

which will serve the purpose. In order to reach this estimation, comparative project profitabilities in both sectors are to be reviewed through scrutinising project documents and observation. When this process would give the impression that investments are equally profitable in both the sectors, then the existing grant size may be treated as optimum. Otherwise, this may be arrived at through quantitative readjustment of national and local resources (grant). Such optimum equilibrium may, however, be changed if the area of local functional liabilities are statutorily expanded furthering the scope to undertake productive projects in new areas.

#### **D) Real Productivity of Local Expenditure**

This section focuses on the aspect of real productivity of local expenditure. In fact, efficacy of local expenditure in delivering real amount of goods and services depends mainly on three factors - (i) real per capita expenditure (ii) nature of expenditure distribution (iii) effective use of expenditure fund. Now these factors are discussed below in the light of empirical findings.

##### **i) Real Per Capita Expenditure**

A knowledge of real productive capacity of expenditure can be more accurately derived from an estimate of real per capita expenditure (adjusted for inflation) in stead of similar estimate in monetary terms. In case of Bangladesh, our findings (Table 16) suggest an increasing trend of both nominal and real per capita expenditure. From these data it, however, cannot be decisively concluded that real amount of goods and services has increased over the study period. For this is needed to recognise other indicators cited below :-

##### **ii) Nature of Expenditure Distribution**

Real productivity of local expenditure programme also depends on ratio of fund allocated to service-oriented heads as against establishment expenses.

Table - 16

**PER CAPITA AND REAL PER CAPITA EXPENDITURE  
IN TWO LOCAL BODIES (IN TAKA)**

Year	Manikganj Pourashava		Kaultia Union Parishad	
	per capita	real per capita	per capita	real per capita
1973-74	5.53	-	-	-
1974-75	7.06	4.22	-	-
1975-76	9.72	10.61	-	-
1976-77	10.88	10.62	-	-
1977-78	18.74	16.64	1.79	1.59
1978-79	22.19	20.51	2.50	2.31
1979-80	15.87	13.40	0.87	0.73
1980-81	53.23	47.30	2.11	1.87
1981-82	24.24	20.84	2.24	1.93
1982-83	24.90	22.65	1.64	1.49
1983-84	37.21	33.93	5.18	4.72
1984-85	41.91	37.77	5.47	4.93
1985-86	57.07	51.97	5.45	4.96
1986-87	78.55	72.95	4.32	4.01
1987-88	88.20	-	3.67	-

Though the latter type of expenditure (i.e. salary etc.) is indispensable in the process of delivering goods and services and the same is also indirectly related with productivity through inducing development of human resources, there is plausible economic justification to minimise such expenses so as to release more funds for financing the service expenditures.

This study probed into this matter and the results are documented in Table 17 and fitted into Figure 12. All these data are amenable to several crucial observations:-

(a) The ratio of expenditure on administrative over-heads (26.06% for Manikganj Pourashava and 46.08% for Kaultia Union Parishad) was found to be excessive in both cases. Because our survey detected several possible avenues for minimising not only day-to-day variable costs but also fixed cost through administrative reorganisation. One example of the latter category is the retention of Octroi collection staff till date despite annulment of the tax in 1981. (b) The ratio of administrative cost is particularly higher for the Union Parishad. The explanation for this mainly lies with the 'economy of scale'. In this small unit, a minimum size of administrative set up is to be maintained, no matter how small the volume of its programme expenditure is. Given this constraint, any smaller amount of expenditure fund (natural with narrow tax base of the rural areas) manifests itself in the higher ratio of administrative expenses and lower for service heads. The reverse is the true for the urban (Manikganj) Pourashava where per capita local revenue and grant are not only higher but people's 'propensity to consume' municipal services is also stronger. (c) The ratio of administrative cost tends to decline overtime in both the local bodies. This has been possible because, with progressive growth of both local revenue and grant, distribution of fund to variable service head as a net of fixed administrative cost increased significantly. The right portion of the curves (Figure 12) are therefore, analogous to the decreasing portion of a typical U-shaped average cost curve.

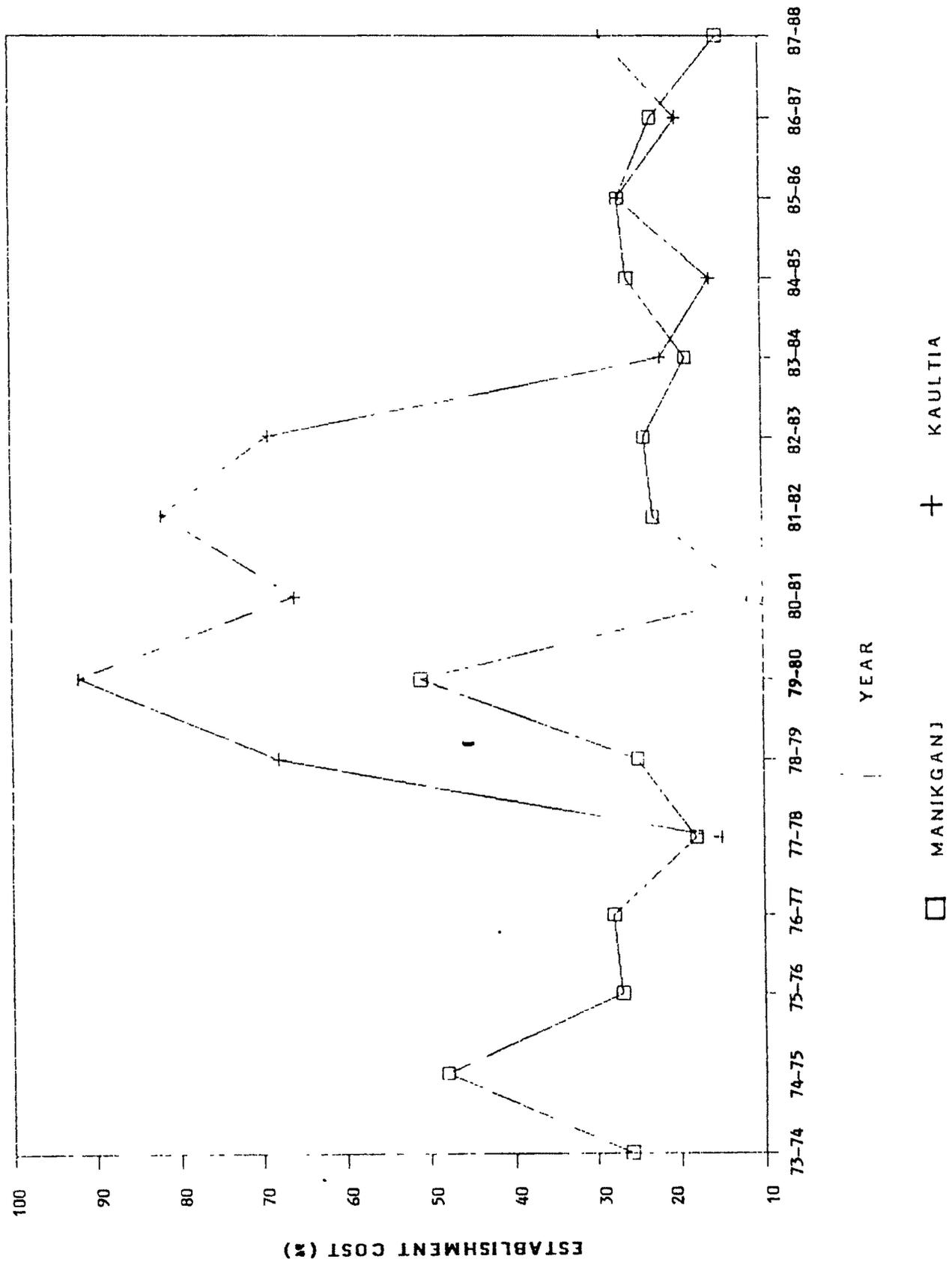
iii) Another factor determining real productivity of local expenditure is the

Table - 17

NATURE OF EXPENDITURE DISTRIBUTION IN TWO LOCAL BODIES

Year	Manikganj Pourashava		Kaultia Union Parishad	
	Establishment (%)	Service (%)	Establishment (%)	Service (%)
1973-74	26.14	73.86	-	-
1974-75	47.80	52.2	-	-
1975-76	27.29	72.71	-	-
1976-77	28.19	71.81	-	-
1977-78	18.17	81.83	15.21	84.79
1978-79	25.11	74.89	68.12	31.88
1979-80	50.55	49.45	92.29	7.71
1980-81	11.01	88.99	65.79	34.21
1981-82	22.64	77.36	81.78	18.22
1982-83	23.67	76.33	69.47	30.53
1983-84	18.98	81.02	22.49	77.51
1984-85	25.83	74.17	16.20	83.80
1985-86	27.41	72.59	27.03	72.97
1986-87	22.89	77.11	19.64	80.36
1987-88	15.26	84.74	28.91	71.09
Mean	26.06%	73.94%	46.08	53.92

ESTABLISHMENT COST RATIO TO TOTAL EXPENDITURE IN **INDIAN BUREAU**



effective use of its service head component. Inversely related with phenomena like misuse and misappropriation of fund, this is indeed a crucial factor but is extrinsic to the scope of our research enquiry.