1989

Intergovernmental Grants

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This chapter provides an overview of a major revenue source for all local government levels in Bangladesh: transfers from the central government. The material presented in this chapter was gathered and pieced together from a variety of sources since no single, comprehensive description of the Bangladesh grant system existed before this study.

The first section describes the general features of the grant system in Bangladesh and reviews its revenue importance. A detailed analysis and evaluation of each component of the system follows, and then an evaluation is provided of the overall impact of the system. Most of the analysis focuses on the system that existed before 1984. Important changes in the grant system have taken place since 1984, but many features of the previous system were retained. In the absence of data and analyses to call on to evaluate the most recent changes, the present description will nevertheless provide the reader with a good sense of the basic structure of the system and an evaluation of its operation within the entire local government framework at the time of our research.

General Features

Local governments in Bangladesh may be divided into a rural and urban sector. Under the pre-reform system, each rural local body -- zilla, upazila and union parishad--was entitled to receive a grant for development projects, called Rural Works Programme grants. Both the zillas and unions also received "normal" grants which were primarily for employee compensation. Under the post-reform system, the Rural Works Programme grants have been replaced as a source of revenue for the upazilas and the unions by the Development Assistance Fund grant and a special Infrastructure Fund grant. The zilla parishads continue to receive the Rural Works Programme. Normal grants continue to flow to zillas and unions. In addition, a large portion of the Food for Work Programme (FFWP) is carried out through union and upazila parishads and involves transfers mainly in the form of wheat to local governments for payment of development project laborers.

Urban local governments include 77 paurashava (municipalities) and two municipal corporations (Dhaka and Chittagong). These urban local bodies receive four types of grants: a grant to compensate for the loss of the octroi tax (which was abolished by the government in 1981), Urban Works Programme grants for development projects, normal grants which are primarily for compensation of employees, and special project grants.

The relative importance of these grant programs (excluding FFWP) is shown in Table 3-1. The dominant pattern in these data, prior to reform, is the emphasis on Works Programme grants which account for more than three-fourths of the total. This emphasis would be reinforced if FFWP grants in wheat were

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1 Data on the reforms since 1984 are from Larry Schroeder, Rural Development Grants to Local Governments in Asia, Metropolitan Studies Program Monograph No. 19, The Maxwell School (Syracuse, NY: Syracuse University, March 1987).

2 The term "normal" grants refers to most of those grant programs which do not fall under the heading of public works. In the case of rural local governments, this is a group of seemingly unrelated grant programs.
included here in cash equivalents. To give some idea of relative magnitudes, the "local initiative" portion of the FFWP (CARE, BOG, and an estimated 20 percent of WFP allocations) authorized the movement of

| COMPONENTS OF THE BANGLADESH GRANT SYSTEM: REVISED ESTIMATES FOR 1982/83 AND 1984/85a |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                             | Total (in millions of takas) | Percent of Total | Per Capita (in takas) |
| Urban Grants                | 238.4   | 303.0   | 100.0   | 100.0   | 22.7b   | 17.9    |
| Octroi Compensation         | 63.2    | 75.0    | 26.5    | 24.8    | 6.1     | 4.4     |
| Works Programme             | 70      | 91.5    | 29.4    | 30.2    | 6.7     | 5.4     |
| Special Projects (Dhaka)    | 96.9    | 128.2   | 40.6    | 42.2    | 24.5c   | 7.6     |
| Normal                      | 8.3     | 8.3     | 3.5     | 2.7     | 0.8     | 0.5     |
| Rural Grants                | 549.1   | 4,380.5 | 100.0   | 100.0   | 6.6     | 53.6    |
| Works Programme             | 434.9   | 36.5    | 79.2    | 0.8     | 5.2     | 0.4     |
| Normal                      | 114.3   | 114     | 20.8    | 2.6     | 1.4     | 1.4     |
| Development Assistance      | --      | 2,300   | --      | 52.5    | 28.1    |
| Special Infrastructure      | --      | 1,930   | --      | 44.1    | 23.6    |

a Excluding FFWP grants.
b Denominator is estimated total urban population (municipal corporation plus paurashava.
c In computing this figure, only Dhaka Municipal Corporation (DMC) population was used because Special Projects grants are given exclusively to DMC. In calculating the per capita amounts for other urban grants, the entire urban population was used.


281,000 metric tons of wheat in 1982. At the January 1982 average retail price of wheat in Bangladesh, this translates to the equivalent of about Tk. 960 million, or an amount equal to 1.5 times the total amount of grants to local governments in the 1981/82 budget, and 2.26 times the amount budgeted under the Rural Works Programme.

There has been an erratic pattern in the growth of grants to local governments in recent years. Between 1973/74 and 1982/83 there was no growth in real per capita grants, and grants to local governments fell as a proportion of GDP and of total central government outlays (Table 3-2). From the mid-1970s to

3 “Local initiative” refers to FFWP activity carried out through the local government rather than directly by the Central Government.
4 The January 1982 average retail price was 127.2 takas per maund (one maund equals 82 pounds). See Directorate of Supply, Distribution and Rationing (DFDR), Ministry of Food, Government of Bangladesh. Compiled by A.S.M. Jahangir, USAID/Bangladesh, April 6, 1982.
5 FFWP grants are not included.
1983, grants did not increase with overall central government tax effort. In years when central government resource mobilization increased, the local government sector was not typically awarded a commensurate share of this increase. Conversely, the grant share of total central taxes was sticky downward and did not appear to suffer noticeably when government resource mobilization fell off. One might infer from this that the grant needs of local governments were viewed as more of a fixed amount than a "targeted" share of GNP. The ratio of grants to GDP more than doubled with the introduction of the new upazila grant scheme in 1983/84 (Table 3-2).

The increased flow of grants in 1983-1984 also changed the urban-rural distribution. Prior to the reform, about two-thirds of all grants were distributed to the rural sector but the per capita bias was strongly in favor of urban areas. For every one taka grant per person flowing to the rural sector, 3.43 takas in grant were given to the urban sector. As may be seen from Table 3-2, this pro-urban bias was replaced by a pro-rural bias with the creation of the upazila. If the FFWP grants were included, an even greater distributional bias in favor of rural areas would be apparent.

Unfortunately, little data are available to document the extent of local government reliance on central grants. Our fieldwork, which surveyed the finances of 75 local governments for the 1977-1981 period, sheds light on this question. The answer, in general terms, is that local governments in Bangladesh have long been dependent on the central government for virtually all of their revenues. Prior to the reform, thana parishads had no own-source revenue and were totally dependent upon grants for their financing. The union parishads have traditionally relied on grants for about half of their total revenues and the paurashavas received about one-fourth of total revenues from the central government.

Our data show that the zilla parishads receive only about one-third of revenues from central grants (Table 2-2); however this finding is deceptive because the property transfer tax—which is reported as an own-source revenue—has its rate set by the central government and its administration is a central government responsibility. In effect, the property transfer tax is a central government levy which is returned to the district councils on a derivation basis, i.e., it is a type of grant. If matters are viewed this way, the zillas are almost exclusively dependent on central government transfers.

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6 A more systematic analysis of the impact of GNP growth, tax effort, and discretionary changes is contained in Roy Bahl, "Intergovernmental Grants in Bangladesh," Metropolitan Studies Program, Occasional Paper No. 87, 1be Maxwell School (Syracuse, NY: Syracuse University, May 1984), pp. 7-14.
### TABLE 3-2

**TRENDS IN GRANTS TO LOCAL GOVERNMENTS**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Urban&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Rural&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>Taxes</th>
<th>Expenditures</th>
<th>Central Government Taxes as Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972/73</td>
<td>0.146</td>
<td>0.339</td>
<td>0.485</td>
<td>22.21</td>
<td>4.60</td>
<td>6.03</td>
<td>12.26</td>
<td>2.59</td>
<td>3.95</td>
</tr>
<tr>
<td>1973/74</td>
<td>0.029</td>
<td>0.215</td>
<td>0.244</td>
<td>4.70</td>
<td>3.34</td>
<td>3.46</td>
<td>5.83</td>
<td>1.61</td>
<td>4.19</td>
</tr>
<tr>
<td>1974/75</td>
<td>0.014</td>
<td>0.106</td>
<td>0.120</td>
<td>2.31</td>
<td>1.77</td>
<td>1.82</td>
<td>2.95</td>
<td>0.95</td>
<td>4.09</td>
</tr>
<tr>
<td>1975/76</td>
<td>0.036</td>
<td>0.210</td>
<td>0.246</td>
<td>5.20</td>
<td>3.14</td>
<td>3.33</td>
<td>3.29</td>
<td>1.19</td>
<td>7.49</td>
</tr>
<tr>
<td>1976/77</td>
<td>0.039</td>
<td>0.238</td>
<td>0.277</td>
<td>5.20</td>
<td>3.38</td>
<td>3.55</td>
<td>3.86</td>
<td>0.91</td>
<td>7.15</td>
</tr>
<tr>
<td>1977/78</td>
<td>0.020</td>
<td>0.189</td>
<td>0.209</td>
<td>2.70</td>
<td>2.84</td>
<td>2.82</td>
<td>2.63</td>
<td>1.23</td>
<td>8.95</td>
</tr>
<tr>
<td>1978/79</td>
<td>0.019</td>
<td>0.208</td>
<td>0.227</td>
<td>2.47</td>
<td>3.09</td>
<td>3.03</td>
<td>2.66</td>
<td>1.25</td>
<td>8.54</td>
</tr>
<tr>
<td>1979/80</td>
<td>0.024</td>
<td>0.242</td>
<td>0.266</td>
<td>3.05</td>
<td>3.63</td>
<td>3.57</td>
<td>3.75</td>
<td>1.31</td>
<td>7.10</td>
</tr>
<tr>
<td>1980/81</td>
<td>0.020</td>
<td>0.216</td>
<td>0.236</td>
<td>2.44</td>
<td>3.20</td>
<td>2.13</td>
<td>3.36</td>
<td>0.96</td>
<td>7.02</td>
</tr>
<tr>
<td>1981/82</td>
<td>0.036</td>
<td>0.103</td>
<td>0.134</td>
<td>4.89</td>
<td>1.74</td>
<td>2.09</td>
<td>1.71</td>
<td>0.83</td>
<td>8.09</td>
</tr>
<tr>
<td>1982/83</td>
<td>0.037</td>
<td>0.104</td>
<td>0.141</td>
<td>5.09</td>
<td>1.82</td>
<td>2.12</td>
<td>1.71</td>
<td>0.79</td>
<td>8.28</td>
</tr>
<tr>
<td>1983/84&lt;sup&gt;c,d&lt;/sup&gt;</td>
<td>0.050</td>
<td>0.586</td>
<td>0.635</td>
<td>6.56</td>
<td>10.12</td>
<td>9.71</td>
<td>8.23</td>
<td>2.25</td>
<td>7.72</td>
</tr>
<tr>
<td>1984/85&lt;sup&gt;e&lt;/sup&gt;</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>9.43</td>
<td>2.78</td>
<td>--</td>
</tr>
</tbody>
</table>

<sup>a</sup> The deflator used in the calculation is the CPI for Dhaka Government Employees/Middle Income Class.

<sup>b</sup> Urban grants are Works Programme/Urban Development, normal, and Octroi Compensation which began in 1981/82. Special Projects grants which accrue exclusively to Dhaka and Chittagong are excluded. Rural grants include Works Programme/Development Assistance and normal grants.

<sup>c</sup> Revised budget estimates.

<sup>d</sup> 1983/84 GDP is provisional.

<sup>e</sup> Budget estimates

-- not available

Rural Local Government Grants

Rural Works Programme

The Rural Works Programme in Bangladesh has been referred to by the government as "... a unique experiment in grass roots planning and the mobilization of energies of the people for projects of local importance."\(^7\)

The Government states four objectives for Works Programme grants\(^8\): the development of rural infrastructure for transportation, irrigation, flood control, community development; the creation of off-season employment opportunities for the poor and for landless farmers; nation-building goals which are achieved through local participation in development projects and through local leadership in carrying out these projects; and strengthening the capacity of rural local government institutions to lead rural development. Clearly, both "relief" and development goals are included in these four objectives. One continuing issue to be faced in the RWP (and FFWP, see below) is how far either relief or development should be emphasized as a priority.

The program is based on the concept of putting underutilized labor resources to work on projects that have identifiable, localized benefits and drawing out some voluntary labor and material contributions from beneficiaries. The strategy is to generate public enthusiasm by allowing project selection, implementation and administration to be handled at the local government level. In this sense, the Works Programme is a highly decentralized approach to rural development. Though this grant program was replaced in 1983-1984 by the Upazila Development grant, the general Rural Works Programme approach has been largely retained. It seems useful, then, to study and evaluate the Rural Works Programme grants as they functioned before the reform.\(^9\)

Rural Works Programme activities are focused on road construction and maintenance, irrigation and flood control. The Programme is implemented through local governments, heavily weighted toward rural roads and irrigation projects and provides a substantial amount of support for staff salaries. It has a "regular" component primarily funded by the Government of Bangladesh, and a "special project" component supported mainly by foreign aid. In total, the government-supported share in 1981/82 was about 80 percent.

Because more than 5,000 local government units are potentially involved, the administration of the Rural Works Programme is quite decentralized. Its operation involves much local participation in project selection and implementation in conjunction with central government direction in the distribution and disposition of the grant amounts. Unlike grant systems in many countries, the Bangladesh system gives a substantial amount of operational discretion to local officials. In theory, the identification of projects for the Rural Works Programme is a highly decentralized process. Suggestions for projects originate at meetings held within different areas of the unions; from these suggestions initial planning and project rankings are made at the union parishad. The union then formalizes its proposal and passes it to the Circle Officer (CO)-Development at the thana for preliminary examination and cost estimates. The CO brings the proposal before the thana parishad for consideration, since the thana parishad is the

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\(^8\) See Chowdhury, Performance Report on Works Programme, 1977-78, p. 3.

\(^9\) In spite of the fact that thana parishads have been replaced by upazilas, since many of the salient features of the RWP remain in place today, I use the term thana extensively here and also use the present tense.
approving body for union projects. The thana technical committee works out the final plans for approved projects.

Larger schemes originate at the thana parishad level. These projects are presented at a meeting which includes all of the union chairmen (who are members of the thana parishads), the thana technical staff, and certain officers from line ministries. Thana parishad projects must be approved at the district level. Zilla projects originate in a district level meeting chaired by the Deputy Commissioner. This group establishes priorities, plans projects, and presents the proposal to the approving Divisional Board.

Though project selection is highly decentralized, formal central constraints are placed on the establishment of priorities. For example, the next higher level of government must approve projects to assure coordination of projects. Moreover, criteria are given for project selection which are meant to guide local selection of schemes. The first priority is the maintenance of completed schemes, to which 25 percent of the "normal" budget must be assigned. The completion of ongoing schemes has second priority and the initiation of new schemes has third priority. With respect to the latter, Circular No. 5 gives the following priorities for ranking schemes under the Rural Works Programme:

- schemes which provide greater employment opportunities, particularly those which increase agricultural or fish production
- schemes which are supplementary or complementary to completed or ongoing schemes
- schemes which generate production for export
- schemes, such as earthmoving, which may provide employment for the most disadvantaged groups
- income generating projects for local governments
- schemes which ensure utilization of local resources

There are other constraints on project selection and implementation. Projects at the union and thana levels must be consistent with the Thana Plan Book and the central government lays down a detailed set of specifications for the construction and design of projects.

In short, the Works Programme is a decentralized strategy for rural development, but it possesses some significant elements of central direction. It is important to note that the principal thana and zilla officers are central government employees. The degree of "local" participation thus may be controlled to a greater extent than the procedures indicate.

One of the goals of the 1984 reform was fiscal decentralization in the sense of giving local governments more responsibility in defining their expenditure programs. Under the upazila development assistance program, local governments are in theory given even greater discretion in their spending choices. However, there are centrally mandated guidelines. Schroeder argues that the nature of the guidelines is
sufficiently broad that they do not place severe constraints on the budgetary flexibility of upazila parishads.\textsuperscript{13} For example, the guidelines state that from 25 to 35 percent of the grant was to be spent for infrastructure purposes and 30 to 40 percent could be allocated to agriculture, irrigation and industry (see Chapter 2).

Works Programme schemes are implemented through the local bodies and usually monitored by the approving authorities. Union and thana schemes involving earthworks are implemented through the union-ward project committees. Each committee selects a secretary who is charged with organizing the labor, disbursing payments, and keeping records, for which he receives compensation equivalent to two percent of the amount of the project. Projects are monitored according to the guidelines set out in the \textit{Manual for Rural Works Programme}. The thana technical staff monitors the union projects while the thana parishad projects are monitored and approved by the executive engineer's office. All pucca construction work above Tk. 20,000 and all zilla parishad schemes are executed through approved contractors. Monitoring at the district level is done by the executive engineer.

Under the pre-reform Rural Works Programme, three factors determine the grant amount that flows to each local government: the total allocation made to each category of public works (e.g., roads, irrigation, etc.) by the central government; the distribution of that amount among types of local government (i.e., some percent to zillas, some to thanas, etc.); and the distribution of that amount among individual local units. The first decision is made by the Planning Commission of the Ministry of Finance in consultation with the Ministry of Local Government. Total allocations were made in 1982 for five "regular" categories of rural works support: rural roads, irrigation, drainage, thana training and development center, and union community center construction. Rural roads and irrigation projects were clearly emphasized in the early 1980s.

The distribution of these totals across types of local government is a decision of the Ministry of Local Government. In the case of some functions, a first decision is how to split the total available amount among types of local government. By convention there is an approximately 45/25/30 percent split in rural roads funding among zilla, thana, and union, and a 50/50 split in drainage assistance between thana and union. These allocations reflect the various service responsibilities of the local governments but no formula basis is evident. The overall sharing of Works Programme grants shows about 60 percent going to the thana parishad level.

The final step in the process is the distribution of these amounts among individual zilla, thana, and union parishads. Distributions to zillas for rural road projects are made by formula: two-thirds according to population and one-third according to land area.\textsuperscript{14} The full amount of the thana and union allocations for roads, irrigation and drainage is made by the same formula. The thana parishad allocation is passed to the SDO who acts as the disbursing agent. The allocations to be made are prepared in Dhaka and reported in Circular No. 5. The union allocation is passed through the thana parishad with instructions to allocate set amounts for the various functions and to distribute funds among unions on a basis of population and land area. At least in theory, each of the more than 5,000 local government units

\textsuperscript{13} Schroeder, Rural Development Grants to Local Governments in Asia, pp. 21-22.

\textsuperscript{14} It is not completely clear which land area and population numbers are used in the final allocations. The basis is the 1974 Census, but each District Commissioner is asked by the ministry for the latest estimates for his district, thanas, and unions. These figures are "taken into account" at the ministry level.
receives a grant earmarked for each of the three specified purposes. The implication of this design is that the capital projects to be financed by these grants are quite small.

The salary and contingency portion of the Rural Works Programme grants is allocated on a pure cost reimbursement basis. The approved staffing and salary levels are known, at the Ministry, for all levels of the Rural Works Programme.

With the creation of upazilas, the formula-driven Rural Works Programme grant was replaced with a "development assistance fund" grant and a "special infrastructure fund" grant. These were allocated on a flat basis: during 1983/84, each of the 212 upazilas received five million taka; another 185 upazilas received three million taka; and the remaining 63 upazilas were allocated one million taka. Equal shares were used again in 1985, despite the intention to build "need" factors into the formula.

Evaluating Rural Works Programme Grants

The impact of Rural Works Programme grants could be assessed by asking whether the desired objectives have been achieved, that is, by how much it has stimulated rural infrastructure construction and maintenance, whether the program has generated increased employment, whether it has strengthened local government institutions. One might also ask if it has some of the other features of a "good" grant program: Has the revenue flow been adequate for development activities? Has local government financial planning been enhanced or harmed? Are the distributions among local governments fair? Each of these objectives is discussed below.

In assessing rural infrastructure development, we face a scarcity of statistics on the outcome of Works Programme grants. The report, Performance Report on Works Programme, which shows project activity and manpower usage for local governments, is out of date and subject to substantial underreporting. The difficulty in reporting is compounded by the fact that the Rural Works Programme is oriented toward small, labor intensive projects. To understand better the activities carried out under this program, we administered a nationwide mail questionnaire and received 131 responses from thana parishads. The sample includes at least one thana from every district. The average population of a thana included in the sample is 202,000, compared to a nationwide average population of 184,000. The results of the analysis show that Rural Works Programme activities were predominantly in earthworks and that the schemes tend to be small. The average scheme was about Tk. 15,000 and the average thana received about Tk. 100,000 in all. It is difficult to estimate a capital-labor ratio in these projects, but the labor component is obviously high given that embankment and excavation schemes are almost entirely labor-intensive projects. The 1978 Performance Report showed that about 70 percent of all Rural Works Programme expenditures were for labor, suggesting a low capital-labor ratio.

An important issue concerning the pre-reform grant program is how conducive it is to developing rural infrastructure. This problem raises the following questions: whether there is a likelihood that grant monies will be diverted to nondevelopment purposes, whether adequate provision is made for

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16 These results are discussed more fully in Roy Bahl, "Intergovernmental Grants in Bangladesh," Metropolitan Studies Program Occasional Paper No. 87, The Maxwell School (Syracuse, NY: Syracuse University, May 1984).
maintaining completed projects, and whether the level of funding is either insufficient to carry out capital projects or too large for local government units to absorb.

The first question, whether Works Programme grant funds get spent for other purposes (e.g., general government compensation), does not seem to raise a problem, for three reasons. First, the Works Programme grant funds are highly visible. Second, employee compensation is already provided for in the grant program, in a separate budget line. Third, there is little else for local government to do with these funds since they have few other functions. If decentralization proceeds in Bangladesh and if local governments are given some additional service responsibilities, the "displacement" of capital funds could become a problem. In anticipation of such a problem, an effective means of tracking and monitoring Works Programme activities needs to be developed.

The maintenance problem is more bothersome. There is a provision that 25 percent of "normal" budget revenues be spent for maintenance. Local governments, however, have interpreted this ruling in various ways. Some have taken it to mean 25 percent of total local government income, some as 25 percent of budgeted works expenditures, and some as 25 percent of average works expenditures during the past two years. In any case, local governments have few resources beyond those provided in the Rural Works Programme grant; hence, the amount spent for maintenance will be 25 percent of a very small base. Whatever the interpretation, there does not seem to be any monitoring of whether the requirement is being met, or even whether maintenance is being carried out at an adequate level. In order to monitor the maintenance provision, one would have to face the underlying problem of how to define "maintenance" and clarify the fuzzy distinction between maintenance and reconstruction.

Finally, one might ask whether more could be accomplished by targeting the funds on fewer jurisdictions, and funding larger projects. This strategy could produce a more permanent project, permit a tighter maintenance schedule, and make more effective use of short materials and skilled engineering resources. On the other hand, it would "cost" a spreading of Works Programme employment benefits across all rural areas. This issue is directly related to whether the grant program has primarily relief (distributional) or development goals.

The upazila development fund and the special infrastructure fund could be more successful at achieving the goals of promoting capital investments by rural local governments. Because the development fund is a block grant, the local governments have some control over determining the size and composition of projects. On the other hand, the central government has issued some guidelines regarding the maximum and minimum percentages that can be spent for various purposes and has mandated that the upazilas allocate the funds in a way that" ... in character and magnitude should be, as far as possible, similar to the Rural Works Programme carried out so long by the national government." It is also required that one-third of the amount spent for rural works will be allocated to the union parishads. The special infrastructure fund is meant to allow upazilas to upgrade local government facilities. Therefore, the funds are not to be spent for pure development purposes but rather to improve government buildings

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17 Planning Commission, Ministry of Finance, Guidelines for Upazila Parishads for Utilization of the Development Assistance Provided by the National Government through the ADP (Dhaka, July 1983), pg. 8.
18 A monitoring cell has been established within the Ministry of Local Government with the express purpose of insuring that the guidelines are followed.
and to provide improved housing for local government personnel. The intention is to abolish this grant once the facilities have been sufficiently improved.

The employment generation objective of the RWP is also complex. Unfortunately, there are neither accurate nor current data that enable us to make a firm estimate of the job generation benefits of Rural Works Programme grants. Some optimistic estimates reported that in early years the Rural Works Programme generated direct employment for between 600,000 and 1 million persons per year.\(^{19}\) The World Bank has reported an estimate of 223,000 workers in 1970/71 and between 28,000 and 68,000 person-years per annum between 1971/72 and 1976/77.\(^{20}\) Our rough estimates agree with the World Bank assessment. Using the partial data from the 1978 Performance Reports to make a first approximation, we may estimate that some 35 person-days of work were created for every Tk. 1,000 spent.\(^{21}\) Assuming a continuation of this pattern and that 316 person-days are the equivalent of a single full-time calendar year job, the Tk. 324 million actually spent on the Works Programme created about 36,000 jobs in 1982. This amount is equivalent to about 1.3 percent of the economically active population. If we consider only the off-season (say 60 days), then nearly 200,000 jobs annually might be created through the program. In percentage terms the amount is not so great, but in the absolute it is clearly a substantial relief program.

One cannot argue against this kind of accomplishment, especially in a country as impoverished as Bangladesh. Moreover, the other avenues open to job generation in rural areas are not clearly better. Consider the alternatives. The government could provide direct tax relief in amounts equivalent to the size of the Works Programme grant. This option would inject the same amount of taka into the spending stream, but the same amount of money would not be devoted to generating rural employment opportunities, and multiplier effects would likely be smaller. The taxpayer relief would fall to higher income families, a substantial amount would go to the urban areas where taxing capacity is greater, and much of the urban to rural redistribution of income could be lost. A second possibility would be for the central government to undertake larger projects in rural areas, generating employment benefits, but concentrated regionally rather than spread around the country. Moreover, the costs of administration might be greater if projects were larger.

We have no evidence about the employment generation impact of the upazila development fund and special infrastructure projects. On the one hand, the stated intention is to maintain the character and objectives of the Rural Works Programme grants. On the other hand, the development fund is focused more on construction, gives the local government some latitude in defining larger projects, and appears to be less oriented to providing jobs than to stimulating capital investment.

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\(^{21}\) This number was obtained by dividing person-days by total expenditures for rural local governments for those schemes shown on the 1978 Performance Report, pp. 12-14.
Does the Works Programme strengthen local governments as an institution?\textsuperscript{22} The answer here depends on how one defines "strengthen." We suggest two definitions: increased citizen participation in local projects, and increased local government fiscal autonomy. On the first count the Rural Works Programme would appear to be a success. On the second, it would not.

The RWP's decentralized approach to project selection and implementation clearly involves local residents and local officials. However, one must draw a distinction between "involvement" and responsibility. For all their involvement in project selection and implementation, local governments are not accountable to the central government for how well these projects are carried out or maintained, or to local residents for how their contributions are spent. The upazila grant system may improve accountability. It gives local governments some discretion in choosing their portfolio of projects; hence there is an increased accountability to the local constituency. Moreover, the central government has put in place a monitoring cell which can lead to better accountability to the central government.

The second aspect of strengthening local governments is whether the Rural Works Programme grant encourages fiscal autonomy, i.e., whether local governments are encouraged to become more self-reliant. This goal is accomplished in many countries by structuring the grant program to require local governments to mobilize own resources (taxes, fees, charges, voluntary contributions) as a condition of receiving and spending the grant. Neither the Works Programme grants nor the development fund block grant have such "matching" provisions, and neither provides an incentive for local governments to increase their revenue effort.\textsuperscript{23} How much local "involvement" really takes place when no local revenue effort is involved in financing the projects? Local governments in such a system are still very much financial appendages of the central government.

Our next area of assessment involves revenue adequacy - has the flow of revenues from Works Programme grants been adequate to meet infrastructure needs? Adequacy requires us to define these "needs," i.e., to determine if grants are increasing in step with expenditure needs. Without a measure for needs, one might argue that a growth that kept pace with population and prices (constant real per capita grants) would pass the adequacy test. The growth in real per capita amounts of RWP grants has been erratic, quite slow and, at best, a constant real per capita performance has characterized them. Certainly, the amounts have not increased faster than population and the general price level in recent years; for example, the real per capita amount of budgeted Works Programme grants is the same in 1982 as it was in 1976, while the per capita allocations have fallen.

Another approach to measuring the adequacy of revenue growth is to treat Works Programme grants as a tax, and to evaluate its income elasticity - does its yield increase at least in proportion to GNP? For the 1974-1982 period, for every 1 percent increase in GNP, there was a 0.96 percent increase in Works Programme grant revenues. If income growth is a rough indicator of the increased demand for local public services, we might conclude that Works Programme grants have not quite kept up with income.


\textsuperscript{23} There was an option under the RWP grant program where local participation projects were financed by a combination of central grants, union parishad taxes and voluntary contributions by individuals. See Barbara D. Miller and Shaukat Hayat Khan, "Incorporating Voluntarism into Rural Development in Bangladesh." Third World Planning Review, 8, (2) (1986): 146.
growth. One might take yet another view, that Works Programme grants are for construction purposes, and that the growth in grant revenues should be related to the growth in construction costs. Between 1973/74 and 1980/81, grant revenues increased by 144 percent, but the general index of building construction increased by 171 percent. In other words, whereas a given amount of Works Programme grants would purchase 100 units of "construction" in 1974, they would purchase only 84 units in 1981.

No matter how the revenue adequacy of the Rural Works Programme grant is measured, it cannot be said that revenue growth has exceeded needs. The development assistance grant might get better marks in that the total amount of grant assistance was increased significantly immediately after the decentralization policy was implemented. However, this may well have been a one-time increase and the real year-to-year growth in grant revenues may be no greater than in the past. The same flat amount allocation per upazila was made in 1985 as in 1984 - the real per capita amounts fell. By the late 1980s amounts allocated to upazila development grants fell even in nominal terms. Moreover, the special infrastructure grant was phased out after upazila facilities were improved.

Yet another important issue is financial planning. Financial planning at the local government level in Bangladesh is not well developed. There are plan books, but no capital budgets or long term plans for generating funds to maintain public works projects. Since local governments are so heavily dependent on central government grants, their fiscal planning is almost wholly dependent on their ability to predict central grant receipts. The question at hand is whether the annual flow of Rural Works Programme grants provides enough certainty to enable effective financial planning.

There are two potential problems with grant programs in all countries in this regard. The first is that actual allocations by the central government may not match the amounts budgeted. This creates an important problem because the budgeted amount is the planning target used by the local government. The second is that the releases of the allocated amounts may not be timely, thereby resulting in delays in project implementation.

Both of these problems plague the Rural Works Programme in Bangladesh, but the first is more serious. The total allocation to this program has been erratic (Table 3-3). Such fluctuations are not unusual in grant systems where the total allocation is determined annually on an ad hoc basis. As other national priorities emerge, and as central government budgets grow tight, local government grant distributions are often an early casualty. The difficulty is compounded in Bangladesh because these local units have virtually no resources of their own on which they may fall back. Multi-year fiscal planning is discouraged by this uncertainty and, as a result, it is difficult to gain much continuity in Works Programme activities.

Another source of uncertainty, also arising in many developing countries, is that the central government may release a grant amount which is far less than what it had originally budgeted for that fiscal year. In other words, the fourth quarter release by the central government may be delayed until the following year because of some budget exigency. The result is that local governments can face serious fiscal shortfalls. It is difficult to know how much of a problem this is in aggregate, because of the lack of good data. Though the data in Table 3-3 suggest a reasonably good record (relative to other countries) of distributing 90 percent or better of amounts budgeted, the problem can still be serious for individual local governments.

For example, in our survey data on 132 thana parishads, it was reported that an average of 79 percent of amounts allocated were actually received. Even the "average" shortfall of 20 percent can be a serious problem for local governments with very little of their own revenues. During its first two years of operation the upazila development assistance grant did not encounter the same problem, probably due to central government concern that this centerpiece of its domestic program not fail due to delays and revenue shortfalls. It remains to be seen whether, in the face of national resource constraints, this improved performance can be maintained.

**TABLE 3-3**

**RURAL WORKS PROGRAMME ALLOCATIONS AND SPENDING**

**AS PERCENT OF AMOUNT'S BUDGETED, 1974/75 - 1984/85**

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>Total Budgeted Amounts (in millions of takas)</th>
<th>Allocation as Percent of Budgeted Amounts</th>
<th>Spending as Percent of Budgeted Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974/75</td>
<td>173.7</td>
<td>66.2</td>
<td>59.5</td>
</tr>
<tr>
<td>1975/76</td>
<td>192.8</td>
<td>107.4</td>
<td>140.3</td>
</tr>
<tr>
<td>1976/77</td>
<td>237.2</td>
<td>86.4</td>
<td>91.5</td>
</tr>
<tr>
<td>1977/78</td>
<td>172.4</td>
<td>102.4</td>
<td>104.0</td>
</tr>
<tr>
<td>1978/79</td>
<td>251.2</td>
<td>90.1</td>
<td>90.1</td>
</tr>
<tr>
<td>1979/80</td>
<td>321.1</td>
<td>99.5</td>
<td>99.3</td>
</tr>
<tr>
<td>1980/81</td>
<td>335.7</td>
<td>96.7</td>
<td>96.4</td>
</tr>
<tr>
<td>1981/82</td>
<td>404.3</td>
<td>92.4</td>
<td>--</td>
</tr>
<tr>
<td>1982/83</td>
<td>498.3</td>
<td>87.3</td>
<td>--</td>
</tr>
<tr>
<td>1983/84</td>
<td>28.0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1984/85</td>
<td>36.5</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**SOURCE:** Government of the People's Republic of Bangladesh, Ministry of Finance and Planning, Demands for Grants and Appropriations (Development) (Dhaka, various years); Unpublished data from the Ministry of Local Government and Rural Development.

-- Not Available

Our next criterion of assessing the RWP is its pattern of grant distributions. The distribution of Rural Works Programme grants is the result of a complicated mixture of government decisions about project priorities, the choice of which level of government to emphasize, a population and land area formula, the choice of a population number for use in the formula, and ad hoc decisions about special needs. Is the resulting allocation somehow appropriate or fair? Of course, defining what is "fair" involves a normative judgment. We might take the two most common rules for the distribution of grants—equalization of resource capacity and straight per capita distribution—and compare these against the present distribution in Bangladesh. In effect, we ask whether the distribution of grants equalizes taxable capacity or is on a straight per capita basis. If the answer is affirmative in either case, then we may say there is a kind of "fairness," or at least objectivity, in the distribution. To investigate this question, we developed a test with data drawn from fieldwork in 16 zillas, 11 thanas, and 27 unions. Simple correlations between population size and Rural Works Programme grants have been estimated, separately, for this sample. As may be seen from Table 3-4, the simple correlation between Rural Works Programme grants and population size is significant at the .05 level only in the case of unions (r = 0.76).

A separate question is whether there is a population size bias in the distribution of grants. If grants were distributed without a population bias, the correlation between per capita grants and population would be zero, i.e., there would be no significant difference among local governments in the per capita amounts received. As may be seen in Table 3-4, zillas and thanas with smaller populations tend to receive significantly greater amounts of per capita Works Programme grants.

Ideally, we would also like to determine whether wealthier jurisdictions receive less in grants per capita, i.e., whether the grant system is somehow "equalizing." Unfortunately, there are no data on personal income or wealth that allow us to make such a computation. What we have done, however, is examine the relationship between per capita revenues raised from own-sources and per capita grants, on grounds that the former variable is a general indicator of financial capacity. carrying out such an analysis for unions - since unions are the only local government body with any appreciable amount of autonomy in mobilizing own-source revenues - indicates no significant relationship for any of the years between 1977 and 1981. From this evidence, we might conclude that RWP grants are generally distributed on a per capita basis for unions and that there is a bias in favor of less populated zillas and thanas.

### Table 3-4

**Simple Correlations of Grants and Population Size, By Type of Local Government and Type of Grant for 1980/81**

<table>
<thead>
<tr>
<th></th>
<th>Works Programme</th>
<th>Normal</th>
<th>Combined</th>
<th>Normal</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zilla (16)a</td>
<td>-0.49*</td>
<td>-0.13</td>
<td>-0.49*</td>
<td>-0.10</td>
<td>0.88</td>
</tr>
<tr>
<td>Thana (11)</td>
<td>-0.68*</td>
<td>--b</td>
<td>-0.57c</td>
<td>0.12</td>
<td>--b</td>
</tr>
<tr>
<td>Union (27)</td>
<td>0.26</td>
<td>-0.43*</td>
<td>-0.38*</td>
<td>0.76*</td>
<td>0.25</td>
</tr>
<tr>
<td>Paurashava (15)</td>
<td>-0.29</td>
<td>0.17</td>
<td>-0.26</td>
<td>0.98*</td>
<td>0.66*</td>
</tr>
</tbody>
</table>

* Denotes significance at .05 level.

a Excludes Chittagong Hill Tracts which does not receive any property transfer tax.

b Not applicable because thana parishads do not receive any normal grants.

c This correlation coefficient is for the Rural Works Programme grants combined with other occasional specific project grants, e.g., for such purposes as haats and bazaars, food godowns, workshops, farmers' training, etc.

**Source:** Computed by author from financial data collected from local governments and census data compiled by Bangladesh Bureau of statistics.

**Normal Grants**

A second type of grant to rural local governments is referred to as normal grants. Rather than a single program with a single objective, this cluster of grants includes 12 specific transfers which are allocated in various ways and earmarked for various purposes. In aggregate, these grants are important, accounting for an amount equivalent to about one-fourth of total Works Programme grants. The total amount allocated under these programs, however, declined in real terms during the period of our analysis.
The three largest of these programs are special purpose grants, grants to union parishads for member honoraria and officers' salaries, and grants to union parishad for rural police force salaries. The special purpose grant is allocated, by historical tradition, 45 percent to municipalities, 7 percent to zilla parishads, and 48 percent to union parishads. It is then distributed through the subdivisions on a per capita basis. The total national amount of the grant is fixed on an ad hoc basis and has been declining. A second large component of "normal" grants is the honorarium paid to chairmen, council members, and secretaries in about 4,500 union parishads. One-third of the chairmen's (1982) Tk. 300 per month honorarium, one-half of the members' Tk. 100 per month honorarium, and one-half of the salaries of the secretaries are paid by government grants. The third major component of normal grants is shown in the budget as a grant to union parishads for half the salary of the rural police force. In fact, in recent years nearly half of this amount has been allocated among union councils as a general budget deficit grant. The allocation is made on a population basis with the subdivision passing the grant funds through to the unions. The remainder is also distributed by the subdivision to the unions based on the number of union parishad policemen and their salaries.

Though there are no clearly stated objectives of the normal grant program, the intent is clear. These grants are meant to support the general operations of the local government sector, i.e., they are in some sense a substitute for general revenues that might be locally generated. In evaluating these grants, many of the same issues as above may be considered: Have local governments been induced to mobilize more resources? Has revenue growth been adequate? Are the grant distributions among local governments fair? Is the program costly to administer?

In theory, some components of this program of normal grants provide an incentive for local government resource mobilization. By paying only a portion of the salary of local officials, it has a built-in requirement that local governments must mobilize matching resources on their own. Though the grant amount, and therefore the potential impact, is small, this is one component of the Bangladesh grant system that would seem to encourage increased local government revenue effort. In practice, the grant program is probably not stimulative of local revenue effort. One problem is that local governments are not required to match the government contribution as a condition of receiving the grant. Our interviews with local officials suggest that the local share often goes unpaid. Moreover, while the salary grants carry a matching provision, many of the other normal grants do not; hence they tend to offset the local resource mobilization impacts of salary grants. For example, a deficit grant is given to cover general budgetary shortfalls.

Second, the revenue adequacy test is not passed. Normal grants have not grown in real per capita terms; one might argue that they have not increased adequately to meet either the general subsidy or special purpose needs of rural local governments.

Third, the allocation of some components of normal grants across local governments is "fair" in the sense that allocations are made on a basis of approved salary levels. However, most other components are distributed on an ad hoc basis. Our data suggest that, in total, normal grants are distributed among zillas approximately according to population, and are distributed among unions with a bias in favor of those with smaller populations. There is one final, important disadvantage to normal grants. Because it involves so many programs, it is likely to be costly to administer, and the possibilities for monitoring and coordination are less than would be the case with a smaller number of grant types.
There would seem to be little to recommend the normal grants program. It is a collection of categorical grants which provides some earmarked support for local activities. It is a transfer that probably does not stimulate local revenue effort, it has not grown to keep different criteria. It is somewhat surprising, therefore, that the system of normal grants remained intact with the 1984 reform.

The Food For Work Programme

The Food For Work Programme (FFWP) seems a logical approach to rural development in Bangladesh: make use of surplus labor in rural areas to carry out public works projects and compensate this labor with wheat. At once this program would provide jobs for the rural poor, distribute food, and improve the infrastructure. In fact, FFWP turns out to be an effective relief program. It produces a substantial number of rural jobs for unskilled workers in the season of high unemployment. On the other hand, the FFWP is not without problems some of which stem from the fact that, until recently, there was uncertainty among policy-makers involved in the FFWP about whether the primary goal was development or relief.

Proper reform of the Bangladesh grant system cannot be taken apart from consideration of the Food For Work Programme. There are a number of reasons for this. First, the local initiative portion of FFWP is in fact a grant to local governments. Second, there is the sheer size of the FFWP program—in 1982/83 it was considerably larger than the Rural Works Programme grant. Third, there is a complementarity between the two programs—both are used for rural public works projects, both contain a heavy employment generation element, there is some evidence that they are alternative sources of support for projects already in the Thana Plan book, and both carry the same stated objectives of infrastructure improvement and rural income subsidy. As opposed to RWP, FFWP is administered by the Ministry of Food.

There are three sources of financing (mostly through wheat) for the government's program: The World Food Program (WFP) component, the USAID financed/CARE administered component (referred to hereafter as the CARE program), and the BDG component (financed by various bilateral donors and the BDG). In total the estimated 1982 disbursements were: 121,512 MT (metric ton) under the WFP component; 90,754 MT under CARE; and 166,860 MT under the BDG. If we assume that all BDG and CARE distributions are "local initiative,"25 that 20 percent (24,300 MT) of the WFP is "local initiative," and that wheat could be properly valued at Tk. 127.2 per maund in 1982,26 then we may place the value of the local initiative FFWP at Tk. 960 million in 1982.27 This amount is more than twice the budget estimate for the Works Programme grant in 1982, making the FFWP the major financial component of Bangladesh's rural development program.

The FFWP involves substantial community participation in project identification and implementation, and has been changing in the direction of even more decentralization with the creation of upazilas. Before 1983, the procedure was as follows: a project implementation officer (PIO) was appointed to work at the thana level as the representative of the Ministry of Food. He reported to the CO, SDO and his

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25 As reported in WPP, "World Food Programme-assisted Food For Work Programme in Bangladesh," November, 1982.
26 One maund equals 82 pounds. The January 1982 price of wheat is taken from "average retail price of coarse rice and wheat in Bangladesh." Compiled by USAID/Bangladesh from Directorate of Supply, Distribution and Rationing, Ministry of Food, April 6, 1982.
27 In addition, 75,000 MT were converted to cash for the "appurtenant structures" program in 1983 and 70,000 MT were programmed for this purpose in 1984.
SD ministry representative. Along with union parishad officials and thana technical staff he was a member of the thana committee which considered alternative projects to be financed from the Food For Work Programme. Ultimate approval of the projects, however, rested with the Ministry.

CARE provides technical assistance to and monitoring of projects under the USAID-financed part of FFWP. This activity includes assistance in scheme preparation, book audits of proposed schemes, on-site evaluation of proposals, and post-project audits of physical accomplishments. While approval rests with the Ministry of Food, CARE has the authority to reduce inflated wheat requirements and reject schemes that are either technically unsound or that face land disputes. In spite of this oversight, considerable decentralization in the local-level project approval process has been taking place. As of the time of the creation of upazilas in 1983, more authority was passed to the local level. In the upazilas, the TNO replaced the SDO as the approving official and may issue the delivery order to remove grain from the local supply depot. The CARE role has remained much the same, with three exceptions: the monitoring of the appurtenant structures program, an improved system of measuring and reporting project and employment accomplishments, and project review in more of an advisory than an approval/rejection role.

There are criteria about what kinds of projects are acceptable and priorities are established by the requirement that the projects be drawn from the Thana Plan Book. As of 1983/84, the Ministry of Food had instructed local bodies to prepare WFP and USAID/CARE schemes only for earthwork on roads, embankments and simile drainage canals. Tanks and irrigation canals would not be considered. Accordingly, most projects are of the reconstruction nature - substantially upgrading existing alignments including reconstruction and resurfacing of rural roads, re-excavation of canals for irrigation and drainage. There is relatively little new construction, in part because of problems of land acquisition. Still, the distinction between "upgrading and reconstruction" on the one hand, and "new construction" on the other is often indistinct. Though no brick surfaces are involved, the FFWP projects may lead to a substantial upgrading of a roadway over a period of years, e.g., from an embankment-pathway for walking to a surface with a large enough dimension to carry a rickshaw. In the long run, such upgraded embankments may be linked together as part of the area road system.

The distribution of FFWP wheat is done on a combination of a formula basis and an assessment of project accomplishments. In contrast to what had been the practice in recent years, the present method of allocation across thanas is objective and the distributions under the three programs are integrated. The first step in the procedure is the establishment of a notional allocation for the overall distribution among thanas. This is done according to the following formula: 0.1 maund per capita based on 1981 thana population with an additional 10, 25, and 50 percent depending on the degree of distress. The measure of distress has been arrived at on a basis of judgment and familiarity with individual thanas, rather than on a basis of straightforward statistical manipulation. Factors considered in deriving the degree of distress include the level of rice prices, unemployment, and "susceptibility to disasters." After the notional distribution is established, the allocation to each thana is divided into CARE, WFP (local

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28 Ministry of Food memoranda of March 17, 1983, and April 20, 1983, respectively.

29 Before 1983, the allocation of funds across thanas was not done by any specified formula. In a May 1982 interview, the Joint Secretary in the Ministry of Food reported that about 80 percent of the allocation was done on a straight population basis with the remainder depending on disasters, special needs, etc. However, no data could be obtained to examine the pattern of the actual distribution.
initiative and Water Development Board) and the general government allocation. This involves several steps:

- the WDB projects are selected, country-wide, on a basis of project-worthiness;
- CARE allocates its wheat on the formula basis, reducing the amounts in thanas where WDB projects are operative. CARE operates in 14 districts;
- WFP allocates 20 percent of its wheat on the formula basis for the local initiative program it operates in five districts. In some cases, reductions are made to account for heavy WDB activities;
- the difference between the notional allocation, and the sum of the CARE, WFP local initiative, and WFP-WDB allocations, becomes the government's general allocation.

The final distributions may not match the notional allocation for two reasons. The first is that good information on WDB projects may be late in coming and cannot be "plugged into" the formula. The second is that CARE allocations may not match CARE disbursements. Actual disbursements against these initial allocations depend on post-audits of project completion, amount of earth moved, etc. In any given year, the distribution of final disbursements across thanas may differ markedly from the initial allocation. For example, in 1981, the average disbursement among 373 thanas was only 85 percent of the proposed amount.  

The distribution of FFWP grants among unions turns out to be a much more subjective matter. Our interviews with officials at the union and the thana levels in Faridpur, Rangpur and Sylhet districts produced many different views on how projects are selected. In some cases they were said to be distributed among local governments on a population basis, in others on a basis of project worthiness, in others on a "political" basis, and some thought it was simply based on the previous year's allocation.

**Evaluating the FFWP as a Grant Program**

How does FFWP measure up as an intergovernmental transfer? In assessing the performance, we consider the same criteria as were considered above for the Rural Works Programme grants: infrastructure development, employment generation, strengthening local governments, revenue adequacy, financial planning, and distributional equity. A related issue is the interaction between the RWP and FFWP. It is important to remember that, while the FFWP was originally designed as a temporary relief program, it now functions as a major part of the intergovernmental grant system and therefore can and should be assessed as a part of that system.

Has the FFWP led to a substantial improvement in the rural infrastructure? The question is very difficult to answer. One can point to the number of schemes completed per year, or to the cubic feet of earth moved, but such figures do not provide good information on how the quality of the rural infrastructure has been improved—whether the schemes were originally sound in design and construction, whether they were the "right" projects to enhance development, and whether they have been adequately maintained. Some evidence of a positive development impact may be obtained from one evaluation of the FFWP. The study concludes, on the basis of respondent interviews and field visits, that the FFWP "...

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30 Derived from thana-wide data supplied by CARE. There was no correlation between the ratio of disbursements to allocations, and population size.
appears to have stimulated rural development in positive social and economic directions since 1980 through major improvements in local transportation and communications.\textsuperscript{31}

The primary objective of the FFWP has been to generate employment for the rural poor. An evaluation of the job creation success of this grant program would ask if significant numbers of jobs have been created, and could another design of the FFWP grant, or even another type of grant program, have done better?

Using data generated by CARE and by the WFP, a rough estimate can be made of the employment impact of FFWP.\textsuperscript{32} A first approach is straightforward deduction. Valuing the total local initiative program at Tk. 960 million in 1982, and assuming that the average worker earned about five kilos of wheat per day\textsuperscript{33} (17 taka per day), the program could have generated about 350,000 jobs during the 1982 season.\textsuperscript{34} This amount is equivalent to about 57 person-days per 1000 taka of FFWP resources. Second, according to CARE data, one maund of wheat purchased 13 man-days, and 53 cu. ft. of earth was moved per man-day purchased. If we assume a six month, 158 working day season, we reach the conclusion that the care component alone generated 320,000 seasonal jobs. If this estimate is taken as correct and applied to the 53 percent of the local initiative portion operated by BDG and WFP, the total estimated jobs would be about 600,000 per season. The World Bank has estimated more than 500,000 jobs in 1982. By all of these estimates, the FFWP is a powerful job generator.

A different question is whether the FFWP is more effective than alternative ways of generating employment through grants to local governments, e.g., than the Rural Works Programme. The 1978 Performance Report indicates that about 35 man-days of work is created for every 1000 taka spent on the Rural Works Programme, far less than the 57 man-days estimated above. Again, the answer seems clear: there is no readily identifiable program in the Bangladesh grant system which can provide the same level of employment benefits as FFWP.

The FFWP, in achieving its employment generation goals, has sacrificed some development potential in its projects. This shortcoming has led to two important adjustments in the program. The first was a program to monetize wheat assistance in order to make cash grants for appurtenant structures. The second is the BDG initiative to reduce the number of schemes in each thana in order to improve the technical design and implementation of each scheme. Moreover, the BDG has also moved to limit the earthworks component of the Rural Works Programme. These steps are in the direction of a development orientation, and further underline the need for closer coordination between FFWP and Rural Development grants.

How has the FFWP affected the development of local government institutions? Like the Rural Works Programme grants, FFWP has required no matching contribution from the local government. As a result, FFWP has not stimulated the mobilization of more local resources nor has it led to increased local

\textsuperscript{31} Bat Associates, The Development Impact of Title II, Food For Work Roads in Rural Bangladesh draft report to USAID, (January 1984), p. 51.

\textsuperscript{32} Good data on the job creation power of FFWP projects are not available. The projects are implemented during a six-month work season and the size of the work crew varies from day to day. Since wheat is distributed according to cubic feet of earth moved rather than per hour or per day of work, it is very difficult to get a firm estimate of the number of jobs created.

\textsuperscript{33} Estimate supplied by CARE.

\textsuperscript{34} Assuming 158 working days in a six month season.
government fiscal autonomy. So long as it was primarily a relief program, a no-matching block grant was an appropriate strategy. Improving the income position of the rural poor is not a proper responsibility of local governments and not the sort of activity for which their residents would likely be willing to tax themselves. FFWP as a relief program could not contribute substantially to local government revenue mobilization. As a development program, on the other hand, it has such potential.

A first step in the direction of using FFWP to develop local government financial performance has come with the recent program of cash grants to be used for construction of appurtenant structures such as bridges, culverts, etc. Each upazila is required to match the cash-FFWP allocation with an amount equivalent to five percent of that allocation. For 1984-85, the matching share was supposed to rise to 10 percent. Unfortunately, the general idea behind this matching provision may be better than the actual practice. Three caveats are apparent. First, the matching amounts are quite small and will not lead to a substantial mobilization of local tax resources. Second, if the local match can be drawn from the central government Development Assistance grant, no truly local resource mobilization will be required. Finally, own-source revenue mobilization is new to the upazilas with the revenue sources provided quite limited in scope; hence the matching requirement may not stimulate increased local taxation. But, with the appurtenant structures program in place and with increased upazila revenue autonomy, such potential for local resource mobilization now exists.

To evaluate the revenue adequacy of FFWP grants, one must ask whether the overall flow of revenues has exceeded the rate of growth in prices and population. To make such an estimate, we convert wheat allocations to taka amounts, deflate, and analyze the trend. The results show that the real per capita amounts have fluctuated considerably and in 1982 were below the 1979 level (Table 3-5).

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Metric Tons Disbursed</th>
<th>Wheat Price per Maund (in takas)</th>
<th>Total Program Value (in million takas)</th>
<th>Real per Capita Amount (in 1977 takas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975/76</td>
<td>150,000.2</td>
<td>90.40</td>
<td>365.35</td>
<td>5.07</td>
</tr>
<tr>
<td>1976/77</td>
<td>115,648.0</td>
<td>78.00</td>
<td>242.02</td>
<td>3.27</td>
</tr>
<tr>
<td>1977/78</td>
<td>115,316.6</td>
<td>94.80</td>
<td>293.31</td>
<td>3.37</td>
</tr>
<tr>
<td>1978/79</td>
<td>314,140.0</td>
<td>96.80</td>
<td>815.87</td>
<td>8.36</td>
</tr>
<tr>
<td>1979/80</td>
<td>208,479.0</td>
<td>131.60</td>
<td>736.10</td>
<td>6.39</td>
</tr>
<tr>
<td>1980/81</td>
<td>275,898.2</td>
<td>124.00</td>
<td>917.89</td>
<td>6.98</td>
</tr>
<tr>
<td>1981/82</td>
<td>256,960.4</td>
<td>127.20</td>
<td>876.95</td>
<td>5.80</td>
</tr>
<tr>
<td>1982/83</td>
<td>---</td>
<td>153.44</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1983/84</td>
<td>272,000.0</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

* Sum of 20 percent of WFP disbursements, BDG general allocation disbursements, and CARE reimbursements.
* Excludes 17,337 MT distributed under FFW Rainy Season Programme.
* Programmed amount.

SOURCE: Bangladesh Bureau of Statistics, Economic Indicators of Bangladesh (Dhaka: Bangladesh Bureau of Statistics, January, 1982); Unpublished data supplied by Ministry of Food, Directorate of Supply Distribution and Rationing as well as by the World Food Programme and CARE.

There are, of course, caveats to this kind of measurement. First, WFP disbursements are sometimes not fully made in the year shown, lending some irregularity to this pattern. Second, cash disbursements
under the appurtenant structures program are not shown. Third, under this measurement the size of the program is affected by changes in the amount of work done and changes in the price of wheat. How does the FFWP affect the financial planning abilities of local governments? In the past, the FFWP has created some problems in terms of certainty of receipts, similar to those for the RWP. One problem stems from local officials not knowing the total amount to be expected in a given year. A second problem is that in some cases, the full amount of allocation has not been received during the fiscal year, and therefore the completion of some projects is delayed or cancelled.

The distribution of FFWP grants is made partly on an objective basis—some combination of population level of distress, and the merit of projects. Does this system lead to any biases, e.g., in favor of the poorest thanas, or against the smallest thanas? In fact, there is no evidence of a population bias in this distribution, the correlation between per capita allocation and population size is not statistically significant. There are, however, two biases in the distribution system which may result in a differential treatment of some local governments. One is the fact that where WDB projects are located, the local government receives a significantly smaller overall share. In the 1983/84 FFWP allocations, the average maunds per capita received in those 210 thanas which have no WDB project is 0.11 whereas the average in those 213 thanas which do have WDB projects is 0.05. As a result, the project accomplishments by these local governments may be low by comparison with local governments in the rest of the country. The second bias is that not all districts are covered by the CARE program and therefore not subject to more careful monitoring of project accomplishments. If these projects do not pass the monitoring test, actual disbursements may depart from the BDG "notional" allocations. To determine whether this potential bias is important, the 1981 estimates of CARE allocations and reimbursements across 373 thanas have been analyzed. The simple correlation between reimbursements and population size is significant\(^{35}\), indicating that CARE reimbursements are distributed in proportion to population size. This sample also shows that 47 percent of the thanas received 90 percent or more of the proposed allocation, and 25 percent received less than 70 percent. The simple correlation between the amounts initially allocated, and that actually reimbursed, is 0.89. We could not find evidence of any particular biases according to physical or economic conditions of the thana.\(^{36}\) Can we, in sum, say that the FFWP leads to a "fair" distribution? Certainly forcing the overall distribution to a BDG notional allocation is a major step in the right direction, but there remain important biases. Local governments in some districts receive less because of WDB projects, in CARE districts they receive less because projects are more closely monitored for reimbursement.

\(^{35}\) The simple correlation coefficient is 0.18, and that between per capita reimbursements and population size is -0.29, which are significant at the 0.01 level.

\(^{36}\) We estimated the following relationship:

\[
PCT = a + b_1 P + b_2 A + b_3 D_1 + b_4 D_2 + b_5 D_3
\]

where

- PCT = the percent of total allocation reimbursed
- P = population
- A = land area (in square miles)
- D\(_1\) = very high distress (dummy variable)
- D\(_2\) = high distress
- D\(_3\) = above average distress.

None of the independent variables were significant at the .05 level.

In a country like Bangladesh where resources are so scarce, different grant programs should reinforce rather than offset one another's impacts. Thus, it is important to consider the coordination of the FFWP with the RWP (now the Development Assistance grants). The former is administered by the Ministry of Food and the latter by the Ministry of Local Government. Allocation formulae are not coordinated between the two programs, even though they are meant to serve similar goals. As far as we could learn, the two responsible Ministries did not scrutinize each other's lists of approved projects in order to achieve conformity. Information gained in field visits, from the questionnaire to 132 thanas, and from the Ministries of Food and Local Government suggests that local units see the FFWP and the RWP as different methods of financing similar projects. In both cases the projects are supposed to be drawn from the same plan books, the local planning and implementation committees are similar groups, the constituencies are the same and even the same local labor pool is used.

Data from our sample of 132 thanas have been used to estimate the relationship between the distribution of the RWP and FFWP distributions prior to the 1984 reforms. The results for 1981/82 show:

\[
\text{RWP}_p = 1243.6 + 0.0057 \text{FFWP}_p - 2.323 \text{POP} \\
\text{R}^2 = 0.10
\]

\[
(0.028) \quad (-3.083)
\]

where

- \( \text{RWP}_p \) = per capita Rural Works Programme grants
- \( \text{FFWP}_p \) = per capita Food For Work Programme grants (in maunds)
- \( \text{POP} \) = population

(t-statistics in parenthesis).

These results show that after correcting for the population size bias in allocations of per capita RWP grants, there is no apparent relationship between FFWP and RWP allocations. The food grant is used neither as a substitute or a supplement to the monetary grants. While each are distributed by different bodies, the allocations are essentially similar.

What is to be said overall about FFWP as an intergovernmental grant? It has been in the past a very good relief program, a powerful job generator in rural areas. Not surprisingly it has been less effective in achieving other goals. It may not do as good a job of infrastructure development as would a grant program that involved more capital, less labor, and larger projects, and that made some provision for maintenance. It does not encourage local government revenue mobilization as much as would a matching grant aimed at financing projects with localized benefits. Moreover, there is some evidence that the targeting of FFWP grants on more distressed areas probably "costs" some positive development impact.\(^{37}\) The biggest problem is to increase recognition among government officials that the FFWP is a grant program, should be evaluated and reformed as such, and should be coordinated in an effective way with other rural local government grant programs.

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\(^{37}\) Bat Associates, *The Development Impact of Title II, Food/Work Roads in Rural Bangladesh*, p. 50.
Central grants to urban local governments - paurashavas and municipal corporations-are of three types: Urban Works Programme grants, urban "normal" grants, and Octroi Compensation grants. As may be seen in Table 3-1, the Works Programme and Octroi Compensation grants account for over half of total grant revenues, and special project grants to the Dhaka Municipal Corporation for almost all of the remainder.

**Urban Works Programme Grants**

The general objectives of the Urban Works Programme grants are the same as that for the Rural Works Programme grants: to generate jobs, promote development projects, and decentralize government decision-making. There are a few differences in procedure between the urban and rural systems. First, the approving authority for larger (Class I) paurashavas is the Ministry level and for all others it is the division level. Second, the paurashava’s own technical staff implements and oversees the works projects. Third, the allocation of grants across paurashavas is supposedly made according to population, rather than population and land area as in the case of Rural Works Programme grants.

### TABLE 3-6
TREND IN REVENUES FROM URBAN WORKS PROGRAMME GRANT\(^a\)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Budgeted</th>
<th>Revised Estimate</th>
<th>Actual</th>
<th>Actual in Real 1980 Takas(^b)</th>
<th>Actual as Percent of the Budgeted</th>
<th>Actual Per Capita in Real 1977 Takas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974-75</td>
<td>10.0</td>
<td>10.2</td>
<td>10.2</td>
<td>12.5</td>
<td>101.1</td>
<td>5.6</td>
</tr>
<tr>
<td>1975/76</td>
<td>10.0</td>
<td>30.0</td>
<td>30.0</td>
<td>48.3</td>
<td>300.0</td>
<td>6.1</td>
</tr>
<tr>
<td>1976/77</td>
<td>26.7</td>
<td>35.0</td>
<td>35.0</td>
<td>58.3</td>
<td>131.1</td>
<td>2.1</td>
</tr>
<tr>
<td>1977/78</td>
<td>15.8</td>
<td>17.2</td>
<td>17.2</td>
<td>22.0</td>
<td>109.2</td>
<td>1.9</td>
</tr>
<tr>
<td>1978/79</td>
<td>18.5</td>
<td>--</td>
<td>18.5</td>
<td>21.0</td>
<td>100.0</td>
<td>2.6</td>
</tr>
<tr>
<td>1979/80</td>
<td>31.4</td>
<td>24.0</td>
<td>31.4</td>
<td>31.4</td>
<td>100.0</td>
<td>2.1</td>
</tr>
<tr>
<td>1980/81</td>
<td>30.0</td>
<td>30.0</td>
<td>30.0</td>
<td>27.2</td>
<td>100.0</td>
<td>2.7</td>
</tr>
<tr>
<td>1981/82</td>
<td>50.0</td>
<td>48.0</td>
<td>48.0</td>
<td>38.6</td>
<td>96.0(^c)</td>
<td>3.6</td>
</tr>
<tr>
<td>1982/83</td>
<td>70.0</td>
<td>70.0</td>
<td>70.0</td>
<td>53.6</td>
<td>100.0(^c)</td>
<td>3.0</td>
</tr>
<tr>
<td>1983/84</td>
<td>100.0(^d)</td>
<td>73.1</td>
<td>73.1</td>
<td>48.1</td>
<td>73.1</td>
<td>--</td>
</tr>
</tbody>
</table>

\(^a\) The Works Programme budget figures for 1979-83 were available in both sources quoted here (the MLG and the Bangladesh Budget) and there was discrepancy between the two for some of the years. For the sake of consistency the former was chosen because this source provided most of the Works Programme data used in other tables.

\(^b\) The deflator used in the calculation is the deflator for GDP. The reason for choosing this from among alternative indexes is that it exists for the entire time period.

\(^c\) Revised estimate as percent of budgeted amount.

\(^d\) Only Tk. 50 million of this amount will be allocated to Municipal Corporations and paurashavas.

-- Not Available.

SOURCE: Government of the People’s Republic of Bangladesh, Ministry of Finance and Planning, Demands for Grants and Appropriations (Development) (Dhaka, various years); Unpublished data from the Ministry of Local Government and Rural Development.

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\(^38\) The more recent data and discussion in this section are drawn from Larry Schroeder, "Bangladesh: Urban Government Finance and Management," June 1985, unpublished paper.
There was little growth in real revenues under the Urban Works Programme grant from the mid-1970s to the early 1980s, but a substantial growth in real terms occurred after 1983 (Table 3-6). Furthermore, when it is recognized that, as a municipal corporation, Dhaka has not shared in the funds since 1983, it becomes clear that the per capita amount available to the remaining urban jurisdictions has risen.

In comparison to rural local governments, paurashavas tend to be less reliant on Works Programme grants. Our estimates show that paurashavas received about one-fourth of their revenues from Works Programme grants in 1980-81, about the same percentage as in 1976-77. The design of the Urban Works Programme grant does not, however, encourage a reduced reliance on grants, since there is no matching required of urban governments.

**Urban Normal Grants**

Urban normal grants are a small component of paurasha budgets (Table 3-1). In general, they are a collection of small grant programs earmarked for certain salary subventions and some general purpose assistance. In general, this grant program fails to meet the tests of revenue growth, equity and efficiency. The amounts have not grown, the amounts distributed to cities are not closely related to current spending needs, and the program does not promote additional mobilization of resources.

**Urban Special Project Grants**

Special capital grants to the Dhaka Municipal Corporation (DMC) provide a significant share (about 40 percent) of total urban grants (Table 3-1). These grants support multi-year schemes which are approved by the MLG and the Planning Commission, and ultimately included in the Plan. Those few loans which have been made to the DMC carry a 5-year forgiveness, a 12-year repayment schedule, and an 11 percent interest rate. In effect, however, these are grants since "repayments" supposedly will come from reduced future allocations for Plan projects. All Special Project grants have in the past gone to the Dhaka Municipal Corporation, but the Chittagong Municipal Corporation began to receive funding in 1984. A major problem with the special project financing schemes is that there is some uncertainty among local government officials about the total amount of funds that will eventually be distributed. For example, Schroeder reports that the amounts originally budgeted for Chittagong were reduced by half by the Planning Commission.  

**Octroi Compensatory Grant**

The government abolished the octroi tax in July 1981. It was replaced in 1981/82 with a compensatory grant equivalent to 75 percent of 1980/81 octroi collections, with the distribution across municipalities to be made in proportion to actual 1980/81 octroi collections. This formula implies a marked cut in the real level of these grants for 1982 and 1983. However, 1983/84 saw a dramatic increase in octroi grant funds distributed. It is not clear, however, whether or not the full budgeted amount of Tk. 7.50 million was actually disbursed. In each of the two previous years (1981/82 and 1982/83) only about half of the amounts shown were actually distributed.

**Evaluation of Urban Grants**
We consider three factors in evaluating urban grants: whether local government resource mobilization has been stimulated, whether revenue growth has been adequate and certain, and whether the distribution among urban governments is somehow fair. On the first count, there is no compelling reason to think that any of the transfers to urban local governments stimulates local resource mobilization. None of the grants require local matching of funds nor are the allocations based upon local revenue performance. Furthermore, the Octroi Compensation grant has resulted in an overall decrease in reliance on own-source revenues by urban local governments.

Concerning the second criterion, revenue growth, there has been no real growth in either Urban Works Programme or Octroi Compensation grant amounts. Indeed, if we assume an inflation rate of 10 percent, we can estimate a real decline of about 34 percent in these two programs between revised 1982/83 and budgeted 1983/84. Urban Special Project grant funding, by virtue of its constant taka amount between 1982/83 and 1983/84, also declined in real terms.

Third, distribution of the urban grants must be considered. Urban grants are actually distributed according to three different criteria: Urban Works grants according to population, Octroi Compensation grants on a derivation basis and according to previous collection level, and Urban Special Project grants principally to Dhaka. The first would seem to favor the most needy jurisdictions, the second would seem to favor the wealthiest cities, and the third favors Dhaka. To understand better the relationship between the first two of these criteria, we have estimated a simple correlation between population size and 1980/81 octroi collections for our sample of 16 paurashavas. The results show an almost perfect correlation, whether the Dhaka Municipal Corporation (DMC) is included (0.979) or excluded (0.984). Almost exactly the same relationship may be observed across paurashavas for the relationship between population and Works Programme grant revenues (Table 3-4). Another aspect of fairness has to do with the distribution of urban grants as between Dhaka and the rest of urban Bangladesh. We found that the DMC receives a disproportionate share of total urban grants – it has 37 percent of the urban population but receives about 60 percent of total urban grants.

**The Overall System**

More important than an assessment of each grant’s impact is an assessment of the impact of the entire grant system on development, especially rural development. Again, we may fall back to an evaluation based on what the evidence suggests about how well the system has accomplished the many diverse goals which have been set for it. The context, however, is clear. The fiscal system transfers resources from the urban to the rural sector. The contribution to central taxes made by urban areas far exceeds the amount they receive back in the form of grants. Moreover, the major intergovernmental grant changes introduced in 1984 dramatically accentuated this transfer.

First, there is the most important question: whether the grant system promotes rural infrastructure development. On the one hand, it clearly does in that an impressive list of small public works projects are carried out under the Food For Work Programme and Rural Works Programme grants. On the other hand, it is not clear that these small undertakings are the best way to develop a rural infrastructure. Some would argue that larger grants in areas with a greater development potential would be a far more productive use of the funds. It could also be argued that more money should be allocated to the

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40 While the initial 1983/84 budgeted amount on Urban Work Programme grants was Tk. 100 million, the actual allocation was Tk. 50 million.
maintenance of investment projects and that in any case such maintenance programs need to be carefully monitored.

It must be emphasized that the RWP and FFWP were originally designed for relief goals, and it has generated considerable employment for the rural poor. Using the rough estimates of RWP and FFWP allocations as discussed above, it is conceivable that the two programs together generated as many as 90 jobs per 1000 taka expended on each during the 1982 work season. The total flow of rural grants to local governments declined in real terms through the 1970s and early 1980s. Even if we monetize the FFWP grant, there appears to have been a decline in per capita real grants since 1978/79. A turning point was reached in 1983/84 with the introduction of the Upazila Development Assistance Fund and the Infrastructure grants. Real per capita grants to rural local governments increased by eightfold in one year and consumed a significantly greater proportion of GDP and central government taxes. This trend continued into fiscal 1985 and may signal the beginnings of a dramatic change in the role of intergovernmental transfers in the Bangladesh economy. On the other hand, we can also say that the basic structure of the new grant system is not designed for revenues to keep pace automatically with population growth or inflation.

Some estimate may be made of the overall distributional impact of the rural grant system. To make such an estimate, we converted proposed 1983/84 FFWP wheat grants into a taka equivalent, combined it with RWP grants in 1982/83, and studied the resulting distribution for 437 thanas. The linear regression results presented in Table 3-7 reveal several points. First, about one-half of the variation in per capita rural grants received may be attributed to population, land area, or degree of distress. Next, even though FFWP grants are not distributed by land area, those thanas with greater land areas do receive significantly more wheat per capita. And, finally, the FFWP "distressed" thanas, cet. par., tend to receive significantly less in RWP grants per capita and significantly more under FFWP. This is an example of an offsetting effect which results from a lack of coordination.

The 1984 reform of the rural grant system will not improve this situation. The development fund grants are allocated on a flat amount basis without regard to need, and the infrastructure grants appear to be distributed on an ad hoc basis. The need to rationalize the distribution of rural grants within the country is a high priority for the Bangladesh government.

Apart from revenue yield and distribution, it is difficult to quantify the impact of the rural grant system. It is possible, however, to discuss the potential effectiveness of this grant system, based purely on its design. That is, what tradeoffs among objectives result from this grant structure, and in what areas are the grant impacts offsetting rather than reinforcing? We can say that the Bangladesh grant system has been more relief than development oriented. As noted above, the grant programs create employment, spread these employment benefits across the country, and involve local residents in project selection and implementation. These choices, and successes, were made at the expense of other possible impacts. The spreading of benefits across all rural areas means that the government passes up the chance to target disproportionate amounts of money on either those local governments with the best "development potential" or on those which are most needy. The government also has chosen a grant program which does not encourage local government resource mobilization or foster increased local government fiscal autonomy. In addition, the revenue flow is not certain, in the past it has not been adequate, the program results are not monitored effectively, and there has been little coordination
among the major components of the grant system. It is not yet clear that the 1984 reforms have effectively addressed these structural problems.

**TABLE 3-7**

<table>
<thead>
<tr>
<th></th>
<th>Per Capita Food for Work Programme (in maunds)</th>
<th>Per Capita Rural Works Programme (in takas)</th>
<th>Per FFWP plus RWP (in takas)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constant</strong></td>
<td>0.11305 (51.574)</td>
<td>1.39084 (15.265)</td>
<td>17.66979 (51.509)</td>
</tr>
<tr>
<td><strong>Population (in thousands)</strong></td>
<td>-0.00006 (7.004) [-0.0995]</td>
<td>-0.00546 (15.260) [-0.8058]</td>
<td>-0.014148 (10.497) [-0.1506]</td>
</tr>
<tr>
<td><strong>Land Area</strong></td>
<td>0.00002 (1.825) [0.0251]</td>
<td>0.00815 (14.911) [0.7608]</td>
<td>0.011609 (5.640) [0.0782]</td>
</tr>
<tr>
<td><strong>Very High Distress</strong></td>
<td>0.04581 (13.598)</td>
<td>-0.23846 (1.703)</td>
<td>6.359001 (12.060)</td>
</tr>
<tr>
<td><strong>High Distress</strong></td>
<td>0.02892 (12.032)</td>
<td>0.17362 (1.738)</td>
<td>3.990075 (10.609)</td>
</tr>
<tr>
<td><strong>Above Average Distress</strong></td>
<td>0.01268 (5.244)</td>
<td>-0.18863 (1.877)</td>
<td>1.637132 (4.327)</td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>(0.4207)</td>
<td>0.4633</td>
<td>0.4354</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>438</td>
<td>438</td>
<td>438</td>
</tr>
</tbody>
</table>

*a Absolute t-values are in parentheses, beneath the coefficient values. Elasticities, at the mean are shown in brackets.*

**SOURCE:** Computed by author.