

economically profitable, even a direct distribution of development funds to the prospective beneficiaries would be better than committing the project. It is therefore recommended that IRDA and the evaluation committee introduce the profitability aspect as well as the financial and physical aspects into the evaluating process.

### 12.3 Peripheral Agencies in Development Administration

12.048 There are a couple of agencies which are not directly involved in development planning but can potentially assume more active roles in development administration; those are Provincial enterprises and the Regional Development Bank (BPD). Some light is shed on these agencies in the following discussion.

#### 12.3.1 Provincial Enterprises

12.049 The Provincial enterprises have often been criticized because of the discouraging performance so far achieved. Their poor performance is mainly due to the external factors which include the lack of their own source of supply of raw materials, restricted extent of the managers discretion in decision making, and the objectives given to the enterprises by the Province. Among these factors, the most crucial would be the restricted freedom given to the managers. As indicated previously the managers have little freedom in their decision making, but only the execution of routine activities.

12.050 In order to reform the Provincial enterprises into an effective part of the development administration, there are several alternatives. The first is to attain more economic efficiency. The enterprises can be reformed to a joint venture with private businesses based on a 50-50 share distribution between the Provincial Government and the private partners. Under this arrangement the managers can be brought either from the public or private sectors, and should be given complete freedom except for changes in major policies. Due to the inclusion of private sectors, objectives of the enterprises will shift towards attaining higher economic efficiency. The second alternative is to use the provincial enterprises for improving the skill level of workers and the technological level of manufacturing industries. With this alternative, the Provincial enterprises may not seek profits, but would function to promote training of workers, to induce new technologies to the indigenous enterprises. The third alternative is to use the enterprises as agencies for research and development of new products which can be produced in the Province. By this it is not meant that the enterprises should just concentrate on research and development for new products, but they are also expected to work on methods of quality standardization and quality control for the existing products. Fortunately there are many Provincial enterprises in the Province that the above three alternatives can be employed simultaneously, lock where it promises best results.

### 12.3.2 Provincial Development Bank (BPD)

12.051 BPD has provided credits to support the activities of the business community in order to attain the long term development goals. In principle, BPD tried to give more credits to the investment project which has a low rate of private returns but rather high social returns. However, to promote such business activities, BPD has to provide technical and management assistance as well as financial assistance. In this context, it must give prospective investors explicit information on the potential fields of business through extensive market surveys and feasibility studies. As a promotional activity, BPD can also give consultation services which are relevant to small- and medium-size businesses. Services may take the form of advice and instruction on financial and technical problems, and methods of making feasibility studies to obtain financial assistance. Through these kinds of activities, BPD can take an active role for provincial development by promoting small- and medium-size manufacturing industries in which the Province has a comparative advantage over the other provinces.

### 12.4 Evaluation and Recommendation

12.052 Most of the evaluations and recommendation are already described in each section. But there are still some important recommendations which remain untouched. In this section, all the major recommendations will be described in an organized form.

#### 12.4.1 Strengthening BAPPEDA in Multi-Sectoral Analysis and Planning

12.053 The present regional planning of the Province still inclined to be sectoral planning rather than multi-sectoral planning. BAPPEDA should strengthen its capability in multi-sectoral analysis and planning. For an example, the inadequacy of the arrangement might be removed if an office called "District Planning Office" or some equivalent is established above the sections in BAPPEDA and concentrates its efforts on multi-sectoral analyses. The BAPPEDA's function of drafting the comprehensive plan and resource allocation programs to secure the balance of sectoral and district development, which is the basic principle of Central Java Repelita II, should be upgraded.

#### 12.4.2 Planning, Implementation and Evaluation Process

##### (a) Description of Possible Sets of Strategies and Expected Results From Them for the Next Five Year Plan

12.054 Even though economic conditions in the Province are always changing, if the present plan explicitly gave priorities among alternative strategies to attain desired objectives, or if it described a set of weights for the objectives and targets, the whole process of annual planning, implementation and evaluation of the plan would be made

easier and consistent from one year to the next. For this reason, the possible sets of strategies, the importance attached to them and expected results from them should be spelled out clearly for the Third Regional Five Year Plan as far as possible.

(b) Coordination Among Dinas

12.055 As described in section 12.2.3 of this chapter, the coordination among closely related Dinas is recommended in order to utilize scarce resources more efficiently.

(c) Economic Feasibility of Projects

12.056 In the process of formulating plans, one of the most important aspects is the selection from among policies and projects those that attain social goals economically. But the concept of economic profitability has often been neglected in the Province. Without considering it, the planning becomes an arbitrary selection among the measures to attain specific objectives especially when an economy grows and the planning process becomes more difficult and more complicated. As the economy grows and becomes complicated, a development planning board, as a center of development administration, is encouraged to put greater emphasis on the concept of economic profitability along with the criteria presently used in the process of development planning. There are several methods to investigate profitability. It is therefore recommended that the Planning Board should analyze profitability of each project using several of the methods.

12.4.3 Training Program

(a) Self-Training System for Development Administration Officials

12.057 By applying criteria for plan evaluation, including economic feasibility, the Planning Board can better select plans and projects. The important process the planner should undertake here is to investigate whether or not plans and projects produced results and benefits as had been expected. Then the present experiences can be used when planning the next projects. Through repeating this process, planners can accumulate knowledge and experience. This process may be slow, but it may be the only feasible way to produce the many full-fledged planners that the Province requires.

12.058 Along with the above mentioned process, the study team recommends that some experts be invited from international organizations, foreign countries or the Central Government, but it is not recommended that officials be sent overseas unless the costs of training are covered by foreign aid. In this way, diffusion of planning expertise will be more efficient since numbers of officials in the planning

administration can get training by using examples of their own problems.

12.059 The programs include:

- (I) Project analysis program,
- (II) Sectoral analysis program, and
- (III) System analysis program.

Program (I) trains project analysts who specialize in designing, implementing and evaluating projects, while Program (II) provides analytical methods with a wider perspective than project analysis. At the beginning, this sector analysis should concentrate on the agricultural and manufacturing sectors which are very important now and will continue to be important in the future. Program (III) will concentrate on the analytical methods which integrate each sector of an economy, and investigate its interaction with others. The above three analytical methods provide basic as well as practical knowledge for planning. The specifications of the programs are presented in the following table:

Program	Duration of Program (Weeks)	Time of the Year	Costs (Rp. 1,000)
Program I	10	April - June	7,263
Program II	10	June - Aug.	7,263
Program III	15	Sept. - Dec.	10,895
Total	35	April - Dec.	25,241

12.060 To begin with, this sequence of programs should be used for two years and then should be evaluated. If the programs are producing expected results, then they should be continued for another three years.

(b) Provincial Government Official Training

12.061 For the officials other than development planners, other kinds of training programs are recommended since the nature of their work is different from that of planning officials. For training this type of officials, there are a number of programs provided by the Central Government. Two of them are the National Institute of Public Administration program and the National Institute of Planning Program. An interview with the officials who attended the National Institute of Planning Program revealed that the programs emphasize theoretical rather than practical subjects.

12.062 At the moment, there is no other comprehensive training program which matches those national training programs in the Province, so the Province should utilize those programs for its official training. But it should also ask the Central Government to provide the kinds of programs which the Province needs. The courses should also lay more emphasis on the problems faced by the Provincial and local governments. So far direct costs incurred to the Provincial and local governments for those training programs are minimal since the major costs are covered by the Central Government. Provided that 30 officials attend the programs, direct unit cost of this program approximately Rp.60,000 and accordingly the cost for the Province amounts to Rp.1.8 million a year.

(c) A Skill Improvement Incentive for Clerical and Technical Officials

12.063 Since there is a great volume of paperwork at any governmental level, clerical and technical workers are as important as the administrative and planning professionals; however, the improvement of clerical and technical officials' skills is often neglected. The necessity for their training cannot be satisfied with only the provision of short courses, since upgrading skills through practical work is more important. So a two weeks training course at the Provincial Government level is recommended for each group of clerical and technical officials, and the instructors can be secured from the Central Government, the Provincial Government or the private sector.

12.064 To upgrade their skill through practical work, the Provincial Government can sponsor periodic contests in speed-typewriting, speed-calculating, telephone-connecting, electrical-wiring, and other kinds of work and offer prizes to the winners. The same kinds of contest have not only upgraded skill levels of technical workers, but also induced new technical developments especially in the manufacturing sector in the developed countries, although the example may not directly apply to this case. Another common practice in many countries is that the governments offer prizes for farmers who produced the highest yields of the year in each region. This kind of incentive system can be applied to any sector of an economy and the costs of the system are minimal. The direct cost of a two week's training course for 30 officials is approximately Rp.150,000 if a trainer is invited from outside of the Provincial Government, but the direct cost is zero if he is already employed by the Government. If three courses are offered each year, total costs amounts to Rp.450,000 and still very small in comparison to total non-formal education funds of the Province (Rp.114,288,000).

12.4.4 Improvement of Provincial Enterprises

12.065 Three ways of improving performances of provincial enterprises were mentioned in the section on Peripheral Agencies (see section 12.3). As one measure, it was suggested to utilize provincial enterprises for

improving the skill level of manufacturing workers. Along this line, the study team recommends specifically the following reform. Some of the enterprises can be converted into on-the-job training institutions while their production activities are maintained as usual. An on-the-job training program would work as follows: (1) The public enterprises provide a six-month and an one-year training courses and accept applicants on a first-come-first-served basis; (2) the enterprises train them and also pay them Rp.100 a day; (3) the enterprises train them on production line and repair works and (4) the enterprises also provide job placement services to trainees. The number of trainees should not be increased beyond 3 percent of the regular workers. Provided that there are 600 trainees, the cost amounts to Rp.18 million a year, but they are paid from the revenues that the enterprises earn. In addition to the above alternative, the Provincial Government should investigate the feasibility of the other two alternatives mentioned in the same section.

#### 12.4.5 The Fiscal Relation Between the Central Government and the Provincial Government

12.066 Powers granted to the Province to raise revenues are limited. One result of this is that the revenue of the Province fall considerably short and the routine expenditure has to be supplemented by grants from the center. At the end of 1976/77, around 52 percent of investable public funds in the Province was spent directly by the Central Government, while the available funds for the Province was only 10 percent. Due to the limited resources, the planning at the Province may not be as influential as those by the Central Government.

12.067 Also, this fiscal relation may be causing inefficiency compared with other alternatives. The subject is beyond the realm of the mission for the study team. However, the study team strongly believes that the present arrangement should be evaluated and feasibility of other alternatives should be also investigated. Along with the above analysis, the present INPRES programs should also be thoroughly examined to find if they are producing expected results or they are creating a greater income disparity between land-holding and landless farmers.

## CHAPTER XIII

### DEVELOPMENT FINANCING





## CHAPTER XIII

### DEVELOPMENT FINANCING

#### 13.1 Introduction

13.001 When Repelita II started in 1974, a number of new national programs were created. Since then, these programs have been providing an important part of the funds available for regional and local governmental development programs. The establishment of these new programs is a clear indication of the Central Government's ever growing determination to develop rural areas. In response to this change, the economy of Central Java started growing at an accelerated rate. But as the economy grows, the planning and financing for regional development require more complicated institutions and refined human capabilities.

13.002 The purpose of this chapter is (1) to investigate private as well as public financial sources in the past, (2) to analyze the past resource allocation, (3) to draw policy implications from them, and (4) to suggest measures for further improvements. In this chapter the problems are viewed from the standpoints of economic efficiency on the one hand and equity on the other, which are often conflicting concepts in any economy.

#### 13.2 Mobilization of Private Resources

##### 13.2.1 Private Savings

13.003 From the standpoint of policy choice, the authorities can employ a range of fiscal and financial techniques to achieve a higher domestic saving rate. Even though no data on private savings of households and in the corporate sector are available, discussions with officials at state banks indicate that savings generated by the private sector were not enough to meet the private sector's investment demands. Investment by the private enterprise

sector is exceeding those of all the governments. For this reason, the private sector has to draw a substantial amount of investment not only from excess funds of the household sector, but also from savings of the public sector. One possible alternative would be to improve corporate savings through tax and price policies. However, it is not at all certain whether price and tax policies will insure the most efficient allocation of the resources.

13.004 Higher amounts of public savings will be also necessary to sustain a higher level of investment. But, too heavy reliance upon fiscal efforts could have adverse effects on private savings, without necessarily raising total savings to an adequate level. Also, for fiscal policies to heavily rely on saving mobilization may lead to a greater centralization of investment decisions by the governments. Hence the better system is that to be obtained by formulating a savings strategy in such a way that the fiscal policy measures should reinforce financial policies to channel private savings into financial assets. These two aspects of savings mobilization are not substitutes for each other but rather complementary policies.

13.005 Generally, during inflationary periods financial assets are likely to consist of currency and demand deposits, while financial assets bearing interests, such as time deposits, will increase during stable periods. It is only with reduced inflationary expectations in the face of high real rates of interest that the growth of liquid financial assets are encouraged.

13.006 This phenomenon may be supported by the fact shown in Table 13.1. During the high inflationary period of 1973 and 1974, liquid assets declined significantly and, especially, less-liquid time deposits declined most. In the team's visits to kabupaten officials and state bank managers, it was asked what they would do if they had Rp.100,000 extra money in their pockets. The majority of them said they would buy gold because they would not gain anything from saving their money in banks. The main reason for this answer was that the inflation rate of the Indonesian economy was still high. The results of those individual attitudes are reflected in the figures in the table.

13.007 The study team focuses upon time and savings deposits as the means for private savings mobilization in the form of financial assets since they are the only choice of financial assets open to the public savers and the principal alternative to physical asset holdings. Informations on the sources of deposits are only available for time and saving deposits held with state banks as shown in Table 13.2. The information indicates first that the people prefer financial assets yielding higher interest rates associated with longer maturities, and second the importance of deposits mobilized from individuals.

13.008 The Central Bank introduced the National Development Saving Scheme (TABANAS) and the Insurance Saving Scheme (TASKA) in August, 1971. By means of TABANAS the Central Bank recorded the total savings which reached Rp.5 million at the end of 1971 and more than 20 times of the 1971 savings by December, 1976.<sup>1/</sup> If the growth of TABANAS can be attributed mainly to the increase

Table 13.1 Liquid Assets Relative to GDP in Indonesia

(Unit: Percent)				
Year	Time Deposits	TABANAS	Demand Deposits	Annual Charge of Consumer Price
1971	3.2	0.1	1.6	2.6
1972	3.7	0.6	2.3	25.7
1973	2.2	0.5	2.5	27.4
1974	2.2	0.4	2.2	33.3
1975	3.2	0.6	3.0	19.7

Source: Bank Indonesia, Weekly Report, no. 926, January 27, 1977.

Table 13.2 Private Savings Through Time Deposits in Indonesia

(Unit: Rp. Million)					
Year	Time Deposits				TABANAS
	24 mths	18 mths	12 mths	Total	
1974	179,934	8,090	37,226	238,641	43,984
1975	335,476	10,281	27,372	386,312	70,131
1976	517,568	3,987	48,500	611,712	105,403

Source: Bank Indonesia, Weekly Report, no. 926, January 27, 1977.

<sup>1/</sup> Bank Indonesia, Weekly Report, No. 926, January 27, 1977, p. 21.

of small savers, this is an encouraging development. The policy implication which follows this analysis is that maintaining high real rates of interest of time deposits will contribute to mobilizing a significant share of private savings in the form of financial assets to satisfy investment needs.

13.009 Savings in TABANAS and TASKA accounts in Central Java have been growing as fast as the corresponding national figures. As shown on Table 13.3, the average savings per person are around Rp. 13,000 for TABANAS and Rp. 11,500 for TASKA. Those figures indicate both schemes attained the original objective: to mobilize small household savings into investable capital funds. However, domestic regional private investment which exceeds Rp. 50 million per project totalled Rp. 61 billion and Rp. 72 billion in 1974 and 1975, respectively. But the shares of TABANAS and TASKA were less than 10 percent in both years. Even though there are several other saving schemes in this region such as time deposits and demand deposits, the total savings of those deposits seem to be less than the private investment requirement.

13.010 An international comparison of gross fixed capital formation (Table 13.4) shows that the Indonesian ratio of gross fixed capital formation to GDP is still low in comparison to other East and Southeast Asian countries. This means that savings by both public and private sectors may not be large enough in Indonesia. If banks provide several more saving schemes with better term structures, the banks can mobilize more investable resources to business sectors. The necessary policy alternation which should attain a high resource mobilization and ensure the real resource requirements of the most productive sector is discussed in the recommendation sections.

Table 13.3 TABANAS & TASKA in Central Java

	TABANAS			TASKA		
	Savings (Rp. Million)	Persons	Average Savings (Rp. 1,000)	Savings (Rp. Million)	Persons	Average Savings (Rp. 1,000)
Jan. 31, 1974	2,553	356,989	7.15	7	1,580	4.54
Jan. 31, 1975	3,744	434,793	8.16	10	1,597	6.01
Jan. 31, 1976	5,864	484,612	12.10	19	2,001	9.51
June 30, 1976	6,997	538,120	13.00	20	1,952	11.52

Source: Kantor Sensus and Statistik, Indikator Ekonomi Jawa Tengah, various issues, Semarang, Indonesia.

Table 13.4 Ratio of Gross Fixed Capital Formation to GDP by Country

	Burma	Hong Kong	India	Indonesia	Japan	Korea	Malaysia	Pakistan	Philippines	Singapore	Thailand
1961	-	.22	.15	.10	.33	.12	.13	.14	.17	.13	.14
1962	.10	.25	.16	.06	.34	.14	.16	.14	.16	.14	.16
1963	.09	.29	.16	.08	.32	.14	.16	.16	.18	.16	.18
1964	.11	.30	.16	.12	.32	.12	.15	.17	.20	.20	.19
1965	.10	.29	.17	.07	.30	.15	.15	.14	.20	.21	.19
1966	.11	.23	.17	.05	.31	.20	.15	.14	.19	.20	.20
1967	.12	.18	.16	.08	.32	.22	.15	.14	.21	.20	.23
1968	.11	.16	.16	.09	.33	.26	.14	.13	.20	.23	.24
1969	.11	.16	.16	.12	.35	.27	.13	.14	.19	.26	.24
1970	.11	.20	.16	.14	.35	.25	.16	.14	.18	.33	.24
1971	.10	.23	.17	.15	.34	.23	.18	.13	.18	.36	.23
1972	.11	.23	.17	.19	.35	.20	-	.12	.18	.37	.21
1973	.09	.22	-	.18	.37	.24	-	.11	.18	.35	.21
1974	.08	.22	-	-	.34	.26	-	-	.21	.38	.22

Source: United Nations, Yearbook of National Accounts Statistics 1975 vol. III,  
New York: UN Publishing Service, 1976, pp.48-52.

### 13.2.2 Medium-Term Bank Loans

13.011 Even in recent years a considerable effort has been directed toward stimulating investment activities in Indonesia. Therefore, increased attention still has to be devoted to allocating the maximum amount of domestic financial resources to productive investments. Since April 1, 1969, the government started to implement Repelita I. In order to provide support to the development efforts, the state banks started to grant medium-term investment credits. A major part of this financing was secured from the Central Bank, while another part originated from the Budget of the Central Government.

13.012 Several major changes were introduced in 1972, 1973 and 1975 with respect to investment loans. One of the major changes was the introduction of new schedules for priority and non-priority projects. The Bank Indonesia Annual Report 1975/76 describes the latest changes as follows:<sup>2/</sup>

- (1) Generally the maximum credit is Rp.1 billion for 5 years; however, the big projects which need large investment credits will get some consideration on interest rates, liquidities and loan periods. The original credits are provided at 12 percent for 5 years, but the duration period can be longer than 5 years with the Government guarantee. For this kind of credits, the Bank Indonesia will give 90 percent of the total costs of investment at an interest rate of 9.5 percent a year.
- (2) Governmental agencies as well as private individuals who need more than 5 year duration periods can postpone their payments. In this case, the interest rates are 12 percent for classifications 1 and 2, and 15 percent for classifications 3 and 4 for the first 5 years.<sup>3/</sup> But after the first 5 years, the rate become 15 percent a year for all the classifications.
- (3) The second new investment credit will be given after 75 percent of the first credit is paid back. Also the third investment credit will be given after 75 percent of the second credit is paid back.

Table 13.5 summarizes the latest amount of short-and medium-term credits available from the Bank Rakyat Indonesia (BRI), the Bank Negara Indonesia, 1946 (BNI), the Bank Pembangunan Daerah (BPD) and the Bank Pembangunan Indonesia. Their main function is to provide credits mainly to the agricultural and manufacturing sectors.

<sup>2/</sup> Bank Indonesia, Annual Report 1975/76, Jakarta, March 31, 1976.

<sup>3/</sup> Classification 1 covers the investments under Rp.25 million; classification 2, from Rp.25 million to Rp.100 million; classification 3, from Rp.100 million to Rp.300 million; and classification 4, over Rp.300 million.

Table 13.5 Credits Provided by BRI, BNI 1946, BPD and BAPINDO<sup>1/</sup>

System <sup>2/</sup>	Purpose	Maximum Loans	Interest Rate (%)	Duration	Offering Banks
Small-Scale Credit	Investment & working capital	Rp.10,000-100,000	12/yr for investment 15/yr for working capital		BRI
KCK	Candak Kulak	Rp.15,000	12/yr	3 months	BRI
KIK <sup>2/</sup>	Investment credit	Rp.5 million	12/yr	5 years	All the four banks
KMKP <sup>2/</sup>	Working Capital	Rp. 5 million	15/yr	3 years	All the four banks
BIMAS	Working Capital for agriculture	Rp.30,000/ha	12/yr	7 months	BRI
Investment Credit	Priority program	Rp.1 billion	12/yr	5 years	All the four banks
Investment Credit	Investment for non-priority program	Rp.1 billion	1.5-2.0/months	5 years	All the four banks
BKK Credit	Agriculture, trade and manufacture		0.5/month for ag. & manuf. 1.0/month for trade	3-5 years	BPD
General Credit	All-Purpose	Negotiable	Greater or equal to 1.5/month	Negotiable	All the four banks

Sources: Compiled from the information collected through the Study team's visits to the four banks (BRI, BNI 1946, BPD and BAPINDO).

Notes: <sup>1/</sup> For the exact names of these banks, see Section 13.2.2.

<sup>2/</sup> For the exact names of these programs, see Section 13.2.2.

13.013 The share of investment credit allocated to the agricultural sector by all the banks has been declining on the approval basis since 1969 and is extremely low relative to the sector's contribution to total outputs as shown on Table 13.6. The allocation of total medium-term credits to various economic sectors on the commitment basis also shows the same characteristics as those of investment credits as shown on Table 13.7. According to the planned framework of Repelita II, the share of agricultural output was 40.1 percent in 1973/74 and the target growth rate of the agricultural sector during the period is 4.6 percent per annum. To attain this growth rate, the sector may need a larger share of the credit allocated to it. Because it is unlikely that foreign funds are to be made available to the agriculture sector, the consequence is an apparent trend towards a reduced net flow of investments to agriculture, while the mining sector receives an increasing share.

13.014 With the above observations, one may advise state banks to take steps to increase their lendings for the agricultural sector. However, there are several fundamental differences between investments in agriculture and those in other sectors. Large investments in the agricultural sector take place in irrigation systems, experimental stations, extension services and development of new technology by public bodies. Due to the large externalities of the investment, few private funds are invested in these areas. Also farmers are in general conservative and invest their retained funds in new livestock, new plants, machinery and production facilities. So the figures shown in the previous tables do not tell the whole story of investment activities in the agricultural sector of the nation.

13.015 The Second Five Year Plan has at several objectives. To create a large number of employment opportunities and then to attain a more equitable distribution of income are two of the objectives, while another is to allocate scarce resources such as investable funds to productive sectors of the economy to attain an improved level of national income with limited resources. For whatever reasons, if the resource allocation was implemented disregarding economic efficiency, the allocation scheme itself will not last very long. But on the other hand if there is no strong public intervention, productive resources will flow into the most productive economic sector. Based on the available data, the Study team calculated internal rates of returns for the agriculture sector, the manufacturing sector, and the trade and service sector of the Indonesian economy. Results indicate that the trade and service sector has the highest internal rates of return, while the agricultural sector marks the lowest one. Hence, the credit allocation shown in tables 13.6 and 13.7 should not be attributed to the distortions against the agricultural sector by public intervention, but rather to the level of economic efficiency.

13.016 The manufacturing sector is still a relatively small sector in the province's economy and accounts for a little more than 10 percent of the gross regional product with 7.5 percent of the total



Table 13.6 Investment Credits and Shares by Sector in Indonesia

Sector	(Unit: Rp. Million)					
	1970	1971	1972	1973	1974	1975
Credits Actually Used	40,431 (100.0) <sup>1/</sup>	73,302 (100.0)	86,560 (100.0)	96,804 (100.0)	119,272 (100.0)	177,928 (100.0)
Agriculture	11,594 (28.7)	18,335 (25.0)	7,045 (8.1)	7,901 (8.2)	9,704 (8.1)	26,997 (15.2)
Mining	108 (.3)	109 (.1)	270 (.3)	242 (.2)	168 (.1)	143 (-)
Manufacturing	15,132 (37.4)	32,944 (44.9)	51,242 (59.2)	57,453 (59.3)	61,002 (51.1)	78,307 (44.0)
Service	12,950 (32.0)	21,266 (29.0)	26,483 (30.6)	29,271 (30.2)	41,178 (34.5)	62,221 (35.0)
Other	647 (1.6)	648 (.9)	1,520 (1.8)	1,937 (2.0)	7,220 (6.1)	10,260 (5.8)
Credits Approved by State Banks	63,944 (100.0)	110,072 (100.0)	128,341 (100.0)	146,740 (100.0)	175,316 (100.0)	255,065 (100.0)
Agriculture	16,293 (25.5)	31,256 (28.4)	9,466 (7.4)	11,826 (8.1)	18,247 (10.4)	34,354 (13.5)
Mining	259 (.4)	136 (.1)	465 (.4)	470 (.3)	513 (.3)	153 (-)
Manufacturing	27,432 (42.9)	43,767 (39.8)	64,559 (50.3)	75,161 (51.2)	84,143 (48.0)	108,658 (42.6)
Service	19,055 (29.8)	32,766 (29.8)	50,772 (39.6)	54,184 (36.9)	62,321 (35.5)	96,763 (37.9)
Other	905 (1.4)	2,147 (2.0)	3,079 (2.4)	5,099 (3.5)	10,092 (5.8)	15,137 (5.9)
						15,135 (5.6)

Note: <sup>1/</sup> Figures in parentheses are shares of each sector in percentage term.

Source: Bank Indonesia, Annual Report, several issues from 1969/70 to 1975/76, Jakarta.

Table 13.7 Percentage Shares of Approved Bank Loans by Sector in Indonesia

Sector	(Unit: Percent)			
	1973	1974	1975	1976
Agriculture	8.7	8.3	8.0	8.7
Mining	.6	.5	28.3	28.4
Manufacturing	25.6	28.5	25.1	24.7
Trade	44.3	35.0	27.6	26.4
Service	7.3	7.6	6.2	6.7
Other	13.5	20.1	4.8	5.1
Total	100.0	100.0	100.0	100.0

Source: Bank Indonesia, Annual Report 1975/76, Jakarta, March 31, 1976, p. 24.

employment, and has grown slightly faster than the agricultural sector in recent years. In the coming years, the manufacturing sector should grow rapidly not only because this sector plays a leading role in economic development, but also for the utter need of expanding employment opportunities for the unemployed in rural areas. In order to promote manufacturing investments of small scale and household industries, there has been a significant development in the financial sector.

13.017 To help small investors, major state banks offer credits which are shown on Table 13.5. Among those, two major credits have been KIK (Small Investment Credit) and KMKP (Small Working Capital Credit) both for small scale entrepreneurs since 1973.<sup>4/</sup>

13.018 The KIK scheme provides Rp.5 million investment credits at 1 percent interest per month for 5 years, while KMKP provides Rp.5 million working capital credits at 1.25 percent per month for 3 years. In addition to the two basic schemes, the state banks provide additional medium-term credits.<sup>5/</sup>

13.019 Reflecting the large share of the agriculture sector in GRDP in Central Java, the bank credits provided to the sector is the largest as shown in the following table.

Shares of Bank Credit from State Banks,  
Central Java, 1976

(Unit: Percent)					
	Agriculture	Manufacturing	Trade	Other	Total
Central Java	41.5	20.9	8.4	29.2	100.0

Source: Bank Indonesia in Semarang.

Unfortunately, a complete set of data to generalize credit situation is not available in Central Java. However, the only available data from the Bank Pembangunan Daerah in Semarang indicates that the agriculture sector's share in short and medium term credits has been declining significantly as shown in table 13.8, while the other two sectors have been gaining their shares. The bank offers four different kinds of credit--general credit, co-financing credit, investment credit and BKK credit--at different interest rates and duration as shown in Table 13.9. In the table it is also shown how each sector utilized the four different credits. Most of the credits to the agricultural sector were financed through the investment credit scheme with the lowest interest, while the other two sectors used

<sup>4/</sup> Bank Pembangunan Indonesia, Annual Report 1975, Jakarta, March 1976.

<sup>5/</sup> In addition to KIK and KMKP, Small-Scale Credit is provided for investment and for working capital. This credit ranges between Rp.10,000 and Rp.100,000 and has been provided by the Bank Rakyat Indonesia since 1974. The investment interest rate is 12 percent per year and the working capital interest rate is 15 percent a year. The funds for this credit scheme is entirely supplied by the Central Government.

mainly the general credit scheme with higher interest rates. This fact indicates that internal rates of return in manufacturing and trade sectors are higher than that in the agricultural sector. Average interest rates paid by investors in the agriculture, manufacturing and trade sectors were 8.3, 17.0 and 17.7 percent a year respectively. The consequence of this arrangement of interest rates are; (1) investment activities in manufacturing and trade sectors are discouraged, and (2) expansion of employment opportunities through the development of the manufacturing sector is prevented. Clearly, the basic shortcoming is found in the inadequate use of interest-rate policy to secure effective allocation of resources to relatively productive users.

13.020 This is also a problem associated with collateral requirements. The high and rigid collateral requirements for general and investment credits and the lenient requirements for BKK credit also distort effective allocation of resources. Co-financing credits require collateral which amounts to 100 percent of the loans provided. This collateral requirement is lower than those of general credit and investment credit; however, the rate is higher than that of BKK credit. In consequence the present system might have prevented small- and medium-scale enterprises from obtaining easy access to credit in comparison to the agricultural sector. Discussions with the state bank managers revealed that defaults amounted to around 30 percent of the total medium-credits outstanding in the agricultural sector. It is likely that this high default rate is related to the inadequate use of interest rate and collateral requirements policy. Even though national objectives such as provision of sufficient and better food and clothing have to be attained through investment activities, higher economic efficiency has to be given consideration in allocating resources.

Table 13.8 Medium-Term Credits for Major Sectors From  
Bank Pembangunan Daerah in Central Java

(Unit: Percent)						
Sector	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76
Agriculture	61.6	53.4	33.5	18.2	21.2	13.2
Manufacturing	24.3	32.0	35.6	40.7	42.8	50.6
Trade	14.1	14.6	30.9	41.1	35.8	36.2
Mining	-	-	-	-	.2	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank Pembangunan Daerah in Semarang.

Table 13.9 Interest Rate and Share of Credit by Credit Scheme  
From Central Java's Provincial Development Bank,  
1970/71 - 1975/76

	Interest Rate and Share of Credit				Lending Conditions	
	Agriculture	Manufacturing	Small Trade		Ceiling (Rp.Mil.)	Duration
General Credit	Interest Rate (%)	1.5/month	1.5/month	2.0/month		
	Credit Share (%)	-	83.4	46.3		
Co-Financing Credit						
KIK	Interest Rate (%)	1.0/month	1.0/month	1.0/month	5.0	5 years
KMKP	Interest Rate (%)	1.25/month	1.25/month	1.25/month	5.0	3 years
	Credit Share (%)	6.5	10.4	7.5		
Investment Credit <sup>1/</sup>	Interest Rate (%)	12/year	12/year	-		5 years
	Credit Share (%)	70.1	5.9			
BKK Credit	Interest Rate (%)	0.5/month	0.5/month	1.0/month		3-5 years
	Credit Share (%)	23.4	.3	46.2		
Weighted Average Rate of Interest (%)		8.28	17.02	17.68		

Note : <sup>1/</sup> For more detailed specification of the credits see the first part of Section 13.2.2 and Table 13.5.

Source: Bank Pembangunan Daerah in Semarang.

13.021 The small-scale industry sector, while probably accounting for a smaller proportion of value added in industry than the large- and medium-scale industry sector, could offer job opportunities at much lower costs per worker than in the other. The two credit schemes (KIK and KMKP) mentioned above, which are specially designated to aid small-scale entrepreneurs, are addressed only to the financial aspect, but not to the technical and management aspects of the problems that these entrepreneurs face. Some of the objectives for providing these credits are to promote regional dispersion of industries, and to assist indigenous small-scale entrepreneurs. In pursuit of these objectives, the provincial government has to continue to encourage private initiatives, by providing necessary infrastructure and maintaining favorable investment climate for these sectors.

13.022 On the Study team's trips to kabupaten offices, frequent complaints were made on the complicated paperwork required of kabupaten officials. But from what was told to the team by the manager of Bank Indonesia at Semarang, the Bank is going to review the entire lending process with the assistance of World Bank experts. It is expected that this problem should be solved in near future through this effort.

### 13.3 The Financing Institutions for Public Development

#### 13.3.1 Sources of Development Finance During Repelita I and the First Four Years of Repelita II

13.023 There are several kinds of development funds for the governments at regional and local levels. The major characteristics of the funds are (1) frequently revenue sharing systems among governmental levels are employed, and (2) the Central Government exercises over-riding power on the finance of regional and local development. Since authority for collection of tax provided to regional and local governments are small in comparison to that of the Central Government, regional and local governments do not have enough resources of their own to make fiscal policies effective. Consequently the Central Government provides some of its revenues to lower governments and tries to develop their administrative abilities of the latter. Some of the funds are completely for use at the discretion of the regional and local governments, while other parts are strictly dedicated for the projects designated by the Central Government. In addition to the revenue sharing, the Central Government executes large projects for development purposes. Table 13.10 shows the sources and amounts of funds in Central Java during Repelita I and the first three years of Repelita II. The figures for 1976/77 and 1977/78 are planned figures provided by the responsible departments and the Provincial government. Brief explanations of the sources are given below:

- (1) Central Government Project Expenditures: Direct expenditures for the project by the Central Government in the Province. These expenditures are directed to the projects either directly through the Central Government's project offices in Central Java or indirectly through various Dinas and Kanwils in the region.
- (2) Provincial Development Expenditures: Development expenditures by the Provincial Government. Their main source need to be SPP-ADO (Sumbangan Pemerintah Pengganti Alokasi Devisa Otomatis) and the Province's own revenues during Repelita I; now they are from INPRES Daerah Tingkat I (INPRES/D.T. I) and the Province's own revenues.<sup>6/</sup> No province receives less than it did under the SPP-ADO, and no province receive less than Rp.500 million. Additional funds are allocated on the basis of the provincial infrastructure.
- (3) KB/KDY Development Expenditures: Development expenditures by kabupaten/kotamadya governments. The sources of the expenditure (a) IPEDA revenues, which are collected by the Ministry of Finance and turned over to kabupaten and kotamadya governments after the deduction of collection costs, (b) several retributions, and (c) several taxes such as land tax (Pajak Bumi).
- (4) INPRES/D.T.II: The Central Government's subsidy to kabupaten/kotamadya governments. The projects to be undertaken under this program are rehabilitation and construction of roads, bridges, minor irrigation system, waterworks, markets, bus stations and public utilities in urban areas, and terracing and reforestation in rural areas. The Central Government provides the funds based on the number of inhabitants. The amount of fund allocated per person was Rp.50 in 1970/71, Rp.75 in 1971/72, Rp.150 in 1972/73, Rp.200 in 1973/74, Rp.300 in 1974/75 and Rp.400 in 1975/76. But if it did not reach minimum level, the minimum amount was allocated. The minimum level was set at Rp.5 million in 1970/71, Rp.7.5 million in 1971/72, Rp.10 million in 1972/73, Rp.12 million in 1973/74, Rp.16 million in 1974/75 and Rp.20 million in 1975/76. The projects are formulated by the kabupaten administrations and are submitted to the Provincial and the Central Government. After approval, they are executed by the kabupatens.

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<sup>6/</sup> SPP-ADO was an allocation called Sumbangan Pemerintah Pengganti Alokasi Otomatis or Central Government's grants which was the automatic foreign exchange allocation.

- (5) IMPRES/SD: The Central Governments subsidy for elementary school construction. The amount of subsidy for a project having 3 classrooms and one teacher's room is Rp.4.5 million in Kotamadya Semarang and Rp.4.0 million in other parts of Central Java in 1976/77. If the amount sanctioned is not sufficient, it can be supplemented by Kabupaten and Kotamadya Governments from their own budget or by Gotong Royong local community contributions.
- (6) INPRES/Health: Central Government's subsidy for buildings of public health centers (Puskesmas), drinking water facilities and public toilets. The amount of subsidy per project is Rp. 5 million for a medical center, Rp. 5,000 for a public toilet, and Rp. 100,000 for drinking water facilities. If the amount sanctioned is not sufficient, it can be supplemented by Kabupaten and Kotamadya budgets and Gotong Royong.
- (7) INPRES/Desa: Central Government subsidy given to desas for village improvement. The fund is provided in lump sum. The projects that can be undertaken under this program includes rehabilitation and construction of roads, bridges, small dams, small canals, markets, food storage facilities, facilities and buildings for social purposes. The schemes are formulated by village communities and submitted to the kecamatan and kabupaten governments and the Provincial Government. After they are approved, they are executed by the village community. The Central Government extends financial support to the program by transferring a flat amount, which was Rp. 100,000 during Repelita I, Rp. 200,000 in 1974/75, Rp. 300,000 in 1976/77 and now is Rp. 350,000 in 1977/78. The Central Government's subsidy is supplemented by village communities through Gotong Royong in terms of labor and materials.
- (8) INPRES /Pasar: Central Government's credits to kabupaten/kotamadya governments to develop and to restore market places for small traders in kotamadyas and kabupatens centers. The developed or restored market places will be rented out to traders who pay low fee to the local governments. The credits provided to kabupatens and kotamadyas have to be paid back through Bank Rakyat Indonesia within eight years after a two years' grace period.
- (9) INPRES/Greening: Central Government's subsidy to kabupaten/kotamadya governments through the Directorate General of Forestry, Department of Agriculture. The main purpose of the program is to protect permanent natural forest and to secure water resources. The program consists of tree planting and grass raising to prevent soil erosion,



Table 13.10 Sources of Development Expenditures in Central Java<sup>8/</sup>  
1969/70 - 1977/78<sup>9/</sup>

	(Unit: Rp. Million)										
	Public Sector						Private Sector/ Approval Basis				
	Central Gov't Projects <sup>1/</sup>	Provincial Resource <sup>2/</sup>	KB/KDV Resource <sup>3/</sup>	D.T. I <sup>4/</sup>	D.T. II <sup>4/</sup>	SDA <sup>4/</sup>	Desa <sup>4/</sup>	Health <sup>4/</sup>	Market <sup>4/</sup>	Greening <sup>4/</sup>	Total
1969/70	8,596	862	650*	-	-	-	847	-	-	-	623
1970/71	9,148	684	859*	-	1,074*	-	847*	-	-	-	809
1971/72	9,231	1,340	1,316*	-	1,645*	-	887	-	-	-	5,291
1972/73	11,500	2,004	2,264	-	3,347*	-	897	-	-	-	14,114
1973/74	16,336	1,628	3,299	-	4,519*	2,632*	900*	-	-	-	31,443
Total for Repelita I	54,811	6,518	8,388	-	10,585	2,632	4,378	-	-	-	87,312
Share in Public Sector (%)	62.8	7.5	9.6	12.1	3.0	5.0					100.0
1974/75	20,092 <sup>4/</sup>	1,983	5,113	4,287	7,575	2,665	1,693	531	-	-	61,417
1975/76	40,161 <sup>4/</sup>	3,599	7,000	4,823	10,284	8,449	2,540	2,233	-	-	72,045
1976/77	56,723 <sup>4/</sup>	5,502	8,000*	4,923	10,920	9,762	2,650	2,639	2,000	1,835	na
(Planned) 1977/78	63,249 <sup>4/</sup>	4,375	9,049*	5,627 <sup>4/</sup>	11,857 <sup>4/</sup>	14,168 <sup>4/</sup>	3,066 <sup>4/</sup>	3,515 <sup>4/</sup>	2,580 <sup>4/</sup>	3,085	na
Total for 1974/75 - 1977/78	180,225	15,459	44,621	19,660	40,436	35,044	8,949	8,418	4,580	4,920	362,312
Share in Public Sector (%)	49.7	4.3	12.3	5.4	11.2	9.7	2.5	2.3	1.3	1.4	100.0

Note and Sources: 1/ Source: Propinsi Daerah Tingkat I Jawa Tengah, Rencana Pembangunan Daerah/Modernisasi Desa Tahun II 1974/75 - 1978/79, Semarang, November 15, 1974.  
2/ Source: Propinsi Daerah Tingkat I Jawa Tengah, Realisasi Anggaran Pendapatan dan Belanja Pembangunan, Semarang.  
3/ Source: Kantor Sensus and Statistik, Indikator Ekonomi Jawa Tengah, various issues, Semarang.  
4/ Source: BAPPENAS.  
5/ Source: The Provincial Government of Central Java, Regional Development of Central Java with Special Emphasis on the Policies Results and Constraints, Semarang, 1976.  
6/ Private investments listed here are those larger than Rp.50 million for domestic cases and US\$300,000 for foreign cases. Also foreign investments are converted into Rupiah at the rate of Rp.415 a dollar.  
7/ Source: B.K.M.P. Daerah Tingkat I JATENG, Laporan B.K.P.M. Daerah TK. I Jawa Tengah 1974, Semarang.  
8/ \* indicates estimated figures.  
9/ The figures for 1974/75 and 1975/76 are preliminary figures for the actual expenditures, whereas those for 1976/77 and 1977/78 are figures from the budgets.

primarily on public land; however, the subsidy can be directed to private landowners for greening and terracing. The amount of funds allocated to Central Java was Rp. 1,834,571 in 1976/77.

13.024 As shown in Table 13.10, the total public development funds increased more than seven times at current price between 1969/70 and 1975/76, or at an average annual growth rate of about 16 percent. As a result, per capita public investment increased approximately from Rp. 500 in 1969/70 to Rp. 3,600 in 1975/76.

13.025 As shown on Table 12.1, the Central Government's project expenditures accounted for 62.8 percent of the total development funds, provincial development expenditures for 7.5 percent, kabupaten and kotamadya development expenditures for 9.6 percent and INPRES/D.T. II, INPRES/SD and INPRES/Desa for 20.1 percent taking the Repelita I period as a whole.

### 13.3.2 The Provincial Development Revenues

13.026 More detailed investigation on provincial budgets reveals several points. Before 1970, realized development revenues were small relative to planned development ones. One of the reasons for this was the relatively small development budget grants from the Central Government. As a matter of fact, the Central Government had sometimes made small additional transfers to the provinces for development expenditures, but this was fairly rare. These transfers to the provinces were based on the approved number of civil servants employed by the provinces and their kabupatens. However, they increased after Repelita I started in 1969. Also the ratio of development expenditures to routine expenditures had increased steadily from 0.07 in 1968 to 0.40 in 1974. These ratios show both the intention and efforts of the central and Provincial Governments for an accelerated economic development. Total development subsidies by the Central Government to Central Java Province amounted to Rp. 2,854 million in 1970/71 and this amount was the seventh largest among all the provinces.<sup>7/</sup> But on the per capita basis, it was Rp. 130 per person, which is the smallest among the provinces. More recent data indicates that the contributions to Central Java were equal to Rp. 30,895 million which was the second largest after East Java. However, it was Rp. 1,413 per person and still the third smallest among the provinces.

13.027 The provincial revenues comprise taxes and retributions. In spite of their increases during Repelita I, the revenue sources are still limited with regard to both kinds and objects, whereas the needs of the regional government for both the routine and the development budgets tend to rise. The result is that the budget still depends largely on the

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<sup>7/</sup> The amount includes every subsidy to the province except the subsidy for routine expenditures.

subsidies from the Central Government. The routine and development budgets during Repelita I are shown in Table 13.11. The routine budgets had increased by 25 percent a year at current prices on average. This increase was mainly caused by the policy of increasing salary of governmental officials and the increase of maintenance expenses which took place along with the expansion of development budgets; however, the entire expenditure on governmental officials' salary was financed by subsidies from the Central Government. During the last two years of Repelita I, a restriction had been introduced in such a way that the proportion between routine and development expenditures should be about 5 to 1.

13.028 The development funds were usually spent on physical programs which had been planned before. Targets of Repelita I were to increase food production, rehabilitate infrastructure, and expand employment opportunities in order to support national development. Reflecting these objectives the regional development budget was directed in such a way as to supplement and support the national departmental programs to be executed by the Central Government. Aids from the Central Government to *desas*, *kabupatens* and *kotamadyas* also have been increased steadily. These aids were intended to stimulate greater participation of all regional governments in their efforts to expand employment opportunities and to strengthen regional economic activities. During the team's trips to *kabupaten* offices, many officials maintained that the INPRES/*Desa* program has mobilized the contributions of village people in money and in kinds, and these contributions were almost two times as large as the aid from the Central Government.<sup>8/</sup> In addition to the above direct aids, development funding through investment credits by banks and participation of government capital in vital projects had also helped the progress of economic growth. At current price, the planned development budgets indicated an increase of 20 percent a year during Repelita I, whereas the realized expenditures had increased by 15 percent. There would be several reasons for this rather slow growth of expenditures, but the most significant one would be a decline of ADO subsidy to the province from the Central Government.

13.029 The ADO system was instituted to give a greater share of the foreign exchange earnings to the regions producing exports; and it provided a simple method of calculating the share of each province in total funds available. But it had a number of shortcomings which led to a rather unfair distribution of funds and other unfavorable side effects. In the first place, ADO accrued to the Province from which exports took place, not to the producing province. Regions with significant export production without harbors received little ADO. Besides this, there were many arguments over the ADO subsidy system. At last, this subsidy ended at the end of Repelita I and INPRES Daerah Tingkat I started from the beginning of Repelita II.

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<sup>8/</sup> This account was also consistent with Konsultasi Nasional BAPPEDA Jakarta, November 1976, by BAPPEDA, Jawa Tengah.

Table 13.11 Provincial Routine and Development Budget  
During Repelita I in Central Java<sup>1/</sup>

(Units: Rp. Million and US\$ Million)

Year	Routine		Development		Total	
	Planned	Realized	Planned	Realized	Planned	Realized
1969/70	5,306	4,978	800 (US\$ 2 mil.)	861 (US\$ 1 mil.)	6,106 (US\$ 2 mil.)	5,839 (US\$ 1 mil.)
1970/71	7,410	5,925	939 (US\$ 2 mil.)	684 -	8,349 (US\$ 2 mil.)	6,609 -
1971/72	9,690	7,554	1,250	1,340	10,940	8,894
1972/73	11,779	10,253	1,921	2,004	13,700	12,257
1973/74	16,242	14,293	1,979	1,758	18,221	16,051
Total	50,427	43,003	6,889 (US\$ 4 mil.)	6,647 (US\$ 1 mil.)	57,316 (US\$ 4 mil.)	49,650 (US\$ 1 mil.)

Note: <sup>1/</sup> The main source of the funds was the Central Government, but Central Java itself raised around 10 and 30 percent of routine and development funds, respectively.

Source: Propinsi Daerah Tingkat I Jawa Tengah, Realisasi Anggaran Pendapatan dan Belanja "PEMBANGUNAN".

13.030 Development revenue at the kabupaten level comes mainly from IPEDA which combines two land taxes formerly collected for the Central Government but turned over to kabupaten in 1968. From the total revenue raised from this tax, 10 percent is deducted for collection costs, 10 percent is turned over to the province and the remaining 80 percent goes to kabupatens. Of this 80 percent, a proportion is given to the Provincial Development Bank and the remainder is used for development projects. In 1970 the province abolished the requirements to deposit the 10 percent with the province and the 10 percent with the Provincial Development Bank; virtually, IPEDA disappeared from the revenue items of the Provincial development budgets. But the requirement was revived and 10 percent of IPEDA revenue became a source of provincial development revenue from 1975. Now out of the 80 percent IPEDA revenues, kabupatens allocate 40 percent for routine budgets and another 40 percent for development budgets.

13.031 The revenues from profits of regional enterprises such as the provincial enterprises and banks, and also from the compulsory operating-license fee payable by industrial establishments (SWIU) will depend upon the economic climate and management. But the share of revenues from the state enterprises had declined drastically as shown in Table 13.12.

13.032 Another important tax revenue for the development budget in recent years has been that from petroleum products. It amounted to Rp. 216 million and Rp. 237 million in 1973/74 and 1974/75, respectively, and its share was around 10 percent of the development budget. In 1967 and 1968, a number of taxes which were collected by the Central Government were turned over to the provinces: the most important source or routine revenues raised by the Province are now the household tax, the vehicle tax and the tax on ownership of motor cars. Another source of routine revenue is the retributions, or charges for services provided. These may be important sources of revenues although after deducting the cost of providing the services required, the net contribution to regional revenue is minimal, sometimes even negative. Profits from regional government enterprises are also generally of minimal significance.

13.033 One of the major characteristics of the Provincial and local government revenue systems is their heavy dependence on the Central Government's revenue sharing system. This will lead to the discussion over centralized vs decentralized development strategy. So far, the rather centralized development strategy of the nation produced many types of revenue sharing system such as INPRES programs which have little effect on lessening disparity among the provinces. This point is discussed in the latter part of this chapter.

Table 13.12 Share of the Revenues From Regional Enterprise in Development Budget

	(Unit: Rp. Million)					
	1969	1970	1971	1972	1973	1974
Total Revenue	887	1,290	2,612	4,182	4,174	12,584
Revenue From Provincial Enterprises	61	10	184	143	143	102
Revenue From Provincial Forestry		14	26	26	62	-
Revenue From B.P.D.	10	-	9	8	12	24
Total Revenue of the Above Three	71	24	219	177	217	126
Share in Total Revenue (%)	(8.0)	(1.9)	(8.4)	(4.2)	(5.3)	(1.0)
						(1.5)

Source: Propinsi Daerah Tingkat I Jawa Tengah, Realisasi Anggaran Pendapatan dan Belanja "Pembangunan".

## 13.4 Allocation of Public Development Sources

### 13.4.1 Introduction

13.034 In the previous section, the sources of development funds were discussed. The next question is how those funds are allocated among the various uses. There are three aspects of fund allocations. One is concerned with the allocation among several projects within a sector. Within the agricultural sector, for instance, the funds may be invested in either irrigation systems, education for farmers, extension services or research and development. Another is the fund allocation among sectors. Funds can be invested either in the agricultural, the manufacturing, or the trade and service sector. Finally, the third is related to the spatial allocation of resources. In a narrow sense, the spatial allocation is distribution of resources in a geographical area within a province while it will be a distribution among provinces in a wider sense. The purpose of this section is to investigate the sectoral and spatial allocations of development funds in Central Java during Repelita I and reexamine the effectiveness of the plan in view of both short and long term objectives.

### 13.4.2 Resource Allocation During Repelita I

#### (a) Sectoral Allocation of Resources

13.035 Tables 13.13 and 13.14 show the sectoral allocations of the central Government projects and the Provincial Development Expenditure in Central Java during Repelita I and the first four years of Repelita II. The figures are realized expenditures unless otherwise noted. The Tables show that during Repelita II the sectoral allocation of the Central Government development expenditures was made in line with the sectoral priorities of the plan, namely rehabilitation of physical infrastructure to support agricultural development. In the Province, 75 percent of the total funds is allocated to public works and the communication sectors. In addition to these figures, at least 50 percent of kabupaten and kotamadya government development expenditures, and all of INPRES/D.T.II should have gone into physical infrastructure construction. As a whole, a conservative estimate indicates that the total figure for the infrastructure construction amounts to Rp.52.6 billion.

13.036 Production sectors such as agriculture and industry received less emphasis relative to the infrastructure investment. But since a large amount of investment for the physical infrastructures probably has gone into irrigation system, one should not underestimate the amount of public expenditures in the agriculture sector. Also since there is a large externality for the construction of physical infrastructure, a large share of public investment in the agriculture sector is a reasonable allocation.

Table 13.13 Development Expenditure by the Central Government  
in Central Java

(Unit: Rp. Million)

	Repelita I		Repelita II (First 4 Years Only)						
	Total	Share (%)	1974/75	1975/76	1976/77 <sup>1/</sup>	1977/78 <sup>1/</sup>	Total	Share (%)	
Family Planning	-	-	-	-	969	1,209	2,178	1.21	
Attorney General	35	.06	15	36	43	48	142	.08	
Government Institutional									
Non-Departmental	218	.39	29	35	62	86	212	.12	
Dept. of Home Affairs	424	.76	99	289	396	530	1,314	.73	
Dept. of Justice	353	.63	141	231	324	561	1,257	.70	
Dept. of Information	9	.02	85	95	153	285	618	.34	
Dept. of Finance	2,042	3.67	204	286	615	657	1,762	.98	
Dept. of Trade	-	-	9	25	82	82	198	.11	
Dept. of Agriculture	3,188	5.72	1,076	1,797	2,842	3,512	9,227	5.12	
Dept. of Industry	598	1.07	37	10	165	53	265	.15	
Dept. of Mining	253	.45	85	310	335	300	1,030	.57	
Dept. of Public Works									
Electric Power	35,714	64.11	14,084	28,490	41,024	43,288	126,886	70.40	
Dept. of Communication	6,318	11.34	1,867	3,525	2,533	3,615	11,540	6.40	
Dept. of Education									
Culture	3,764	6.76	1,345	2,666	3,427	4,164	11,602	6.44	
Health	1,558	2.80	509	1,238	1,246	1,316	4,309	2.39	
Dept. of Man Power									
Transmigration	749	1.34	374	985	2,000	2,816	6,175	3.43	
Dept. of Social	227	.41	58	143	293	457	951	.53	
Dept. of Religion	262	.47	75	-	215	270	560	.31	
Total	55,712	100.00	20,092	40,161	56,724	63,249	180,226	100.00	

Note: <sup>1/</sup> Planned budget.

Sources: Repelita I, Propinsi Daerah Tingkat I Jawa Tengah, Rencana Pembangunan Daerah/Modernisasi Desa Tahap II 1974/75 - 1978/79, Semarang, Indonesia, November 15, 1974.

Repelita II, BAPPENAS.



Table 13.14 Provincial Development Budget by Sector in Central Java

Sector	(Unit: Rp.Thousand)									
	Repelita I			Repelita II (4 Years Only)			Planned Expenditures during Repelita II 1974/75 - 1978/79			
	Share (%)	1974/75	1975/76	1976/77 (Planned)	1977/78 (Planned)	Total	Share (%)	Total	Share (%)	
Infrastructure	1,763,057	7.1	2,332,097	4,142,378	2,399,932	2,550,602	11,425,009	33.6	17,872,830	39.4
Production	824,240	12.6	1,381,668	1,060,284	3,773,722	4,050,959	10,266,633	30.2	9,428,840	20.8
Irrigation			(1,081,893)	(36,811)	(2,588,750)	(2,678,683)	(6,386,137)	(18.8)	( na. )	-
Agriculture	(397,053)	(6.1)	(64,275)	(160,943)	(186,147)	(217,051)	(628,416)	(1.8)	(1,242,300)	(2.7)
Estate Plantation	(60,683)	(0.9)	(45,000)	(185,898)	(221,491)	(223,053)	(675,442)	(2.0)	(1,242,300)	(2.7)
Forestry	(41,284)	(0.6)	-	(16,779)	(29,500)	(44,010)	(90,289)	(0.3)	(90,670)	(0.2)
Animal Husbandry	(99,791)	(1.5)	(75,000)	(184,775)	(230,205)	(237,056)	(727,036)	(2.1)	(1,242,300)	(2.7)
Fishery	(162,261)	(2.5)	(76,000)	(222,470)	(222,009)	(237,056)	(757,535)	(2.2)	(1,242,300)	(2.7)
Industry	(44,659)	(0.7)	(5,000)	(74,514)	(107,260)	(156,037)	(342,811)	(1.0)	(905,400)	(2.0)
Rural Electricity			-	(139,907)	(140,000)	(200,000)	(479,907)	(1.4)	( na. )	-
Transmigration			(34,500)	(36,500)	(46,526)	(54,013)	(171,539)	(0.5)	(258,540)	(0.6)
Cooperatives	(18,510)	(0.3)	-	(1,687)	(1,834)	(4,000)	(7,521)	-	(9,060)	(-)
Welfare & Education	1,013,461	15.6	663,197	673,026	696,505	760,180	2,792,908	8.2	5,161,620	11.4
Health			251,362	242,189	356,273	390,092	1,239,916	3.6	2,050,140	4.5
Government	365,492	5.6	197,138	347,036	383,869	405,096	1,333,139	3.9	1,373,680	3.0
General	391,949	6.0	777,962	429,176	1,041,757	1,095,259	3,344,154	9.8	2,606,800	5.7
Subsidy	2,159,148	33.1	667,063	1,527,720	685,563	750,177	3,630,523	0.7	6,845,830	15.2
Total:	6,517,347	100.0	6,270,487	8,421,809	9,337,621	10,002,365	34,032,282	100.0	45,339,740	100.0

Note: 1/ Numbers in parentheses are breakdowns of the Production Sector.

Sources: Repelita I, Propinsi Daerah Tingkat I Jawa Tengah, Realisasi Anggaran Pendapatan dan Belanja PEMBANGUNAN, Semarang, Indonesia.

Repelita II, BAPPEDA Jawa Tengah, Konsultasi Nasional BAPPEDA, Semarang, November 5, 1976.  
Propinsi Daerah Tingkat I Jawa Tengah, Rencana Pembangunan Daerah/Modernisasi Desa  
Tahap II 1974/75-1978/79, Semarang, Indonesia, November 15, 1974.

13.037 Even though, industrial and agricultural production sectors can be left for private investment activities, the present level of public investment in the manufacturing sector may not be appropriate from the long-run perspective. In Central Java, where the majority of industrial establishments are small and household-industries. No individual manufacturing owner can spend much money to get information, improve managerial skill, standard products, control quality, investigate prospective markets, and provide funds for research and development. During the Study team's to kabupaten offices, officials of many kabupatens indicated mineral deposits in their kabupatens and told that the mining sector had good possibilities for the future; however, neither kabupaten nor the Province had made any deposit estimation so far. This kind of research activity is expensive and risky, so private individuals seldom invest funds into it.

13.038 As indicated in section 13 2.2, the Study team's rough calculation show that the internal rate of return in the manufacturing sector is higher than that of the agricultural sector. From this point of view, more public investable funds should have moved into the manufacturing sector. But infact the public funds which went into the sector were minimal both in the central and the Provincial budgets. Without appropriate assistance from the public sector, a rapid expansion of the private manufacturing sector can not be expected. Due to the large capital-output ratio in the industrial sector, public investment will not expand employment opportunities in the short run in comparison to the agricultural sector. But, in the long run, the majority of the workers have to be absorbed in the manufacturing sector, as the experiences of developed countries suggests. For these reasons, the manufacturing and mining sectors require a reasonable amount of public expenditures for the activities mentioned above. However, the allocated funds for these two sectors during Repelita I were Rp.85 million and Rp.44 million from the Central Government projects and the Provincial Development Expenditure, respectively. These figures amounted to less than one percent of the public expenditures, whereas the sector employed more than 10 percent of the total workers in Central Java in 1971.

13.039 As to the allocation of public investment to social development, the share of the sector from the Central Government project funds is 11.8 percent which is slightly higher than the planned share, 10.7 percent. On the other hand, the share of this sector from the provincial development expenditure, 15 percent, is far less than that of the original allocation, 33 percent, as shown in tables 12.1 and 13.4. Even though the realized share of this sector in the Central Government project funds for all provinces is almost the same as the planned one, the share had declined over years during Repelita I. This is especially the case with the educational sector. At the end of Repelita I this declinkd share was compensated probably through the Central Government INPRES/SD fund, Rp.2.6 billion, to the Province.

13.040 Another aspect of resource allocations is one between the public and the private sectors. As shown in Table 13.10, the public investment during Repelita I amounted to Rp.78.8 billion, whereas the private sector invested Rp.138 billion on approval base. Since the investment which was less than Rp.50 million for domestic cases and US\$300,000 for foreign cases was not included here, definite inference. May not to be made here. If we assume that total investment in the region is 10 percent of gross regional product, the public investment, Rp.78.8 billion, amounts to around 30 percent of the total investments. This may be rather high and may raise a question about investment efficiency; however, we have to investigate this subject from the standpoint of resource allocations of the private and public sectors, and decentralized and centralized decision making systems in the future.

13.041 The above investigation suggests that the overall sectoral allocation of resources in public sectors in Central Java during Repelita I was not quite satisfactory in the long run. This allocation might be a cause for the very slow development in the manufacturing sector relative to the other sectors of the Province.

#### (b) Spatial Allocation of Resources

13.042 As far as spatial resource allocations are concerned, the analysis should be undertaken from two aspects. One of the aspects is interprovincial resource allocation, while the other aspect is intraprovincial resource allocation.

13.043 As for the interprovincial resource allocation, the past allocation of Central Government project funds is discussed in section 1.3.1 and the pattern of the allocation is shown in Table 1.14, to which reference should be made.

13.044 As Table 13.15 shows, Jakarta and the West Java Province are growing very rapidly, and the growth of Riau and West Sumatra also were substantial. However, Central Java is rather stagnant. Although The factors which make the Central Java economy stagnant are not easily identified, it would be fair to say that the disparity was resulted partly from the small per capita expenditure by the Central Government.

13.045 The economies of individual provinces can be compared in various ways, but the most common and easily understood index is the per capita regional income. But, the figures available are only for the gross regional products and they are available only for some provinces, it is, therefore, not possible to derive an estimate of the income retained in a province. For half of the all provinces where the regional product data are available per capita gross regional products fall in the range of Rp.25,000-50,000 in 1971 as shown in Table 13.16. While per capita regional products of Riau and East Kalimantan were well above this range, those of West and Central Java were a little below the range. There are considerable disparities among the provinces and these disparities might have been growing as a result of the Policy of Repelita I.

Although one of the main objectives during Repelita I had been a more equitable distribution of income and a more even distribution of the gain of development among the various regions of the country, the above findings show the progress attained in this period had not benefited the Central Java Province in comparison to the other provinces.

13.046 On the other hand, it is more difficult to identify the resource allocation within the province. The largest problem which is faced in analyzing effects of the resource allocation during Repelita I is lack of adequate data. The data on total resources invested in Central Java is easily available; however, there is difficulty in obtaining the development resource allocations among kabupatens and kotamadyas. The method employed here is rather a loose one, but even a loose method might reveal some important inferences.

Table 13.15 Index of Gross Regional Domestic Product of Several Provinces in Indonesia at 1969 Constant Price

(Unit: Index 1969=100)

	1969	1970	1971	1972	1973	1974	1975
D.K.I. Jakarta	100.00	109.28	121.18	132.01	148.75	172.42	
Sumatra Barat	100.00	102.66	112.61				
Jawa Barat	100.00	108.78	120.03				
Jawa Tengah <sup>1/</sup>	100.00	104.62	108.09	114.1*	117.4*	121.6*	129.0*
Jawa Timur	100.00	113.41	110.72				
Nusa Tenggara Barat	100.00	106.14	108.13				
Riau	100.00	115.78	118.86				
Kalimantan Barat	100.00	103.06	116.88	134.19			
Indonesia <sup>2/</sup>	100.00	107.53	115.07	124.68	138.77*	148.79*	156.59*

Note: Asterisk (\*) indicates estimated figures.

<sup>1/</sup> Source: Kantor Sensus of Statistik in Central Java.

<sup>2/</sup> Source: Biro Pusat Statistik, Statistik Indonesia 1974/1975, Jakarta, Indonesia, December 31, 1975.

Sources: Kantor Sensus dan Statistik, Pendapatan Regional D.K.I. Jakarta 1969-1974, Jakarta, Indonesia, February 1, 1976, if there is no indication otherwise.

Table 13.16 Per Capita Gross Regional Domestic Products of Several Provinces

	(Unit: Rp. at the Current Prices)						
	1969	1970	1971	1972	1973	1974	1975
D.K.I. Jakarta	52,480	62,502	72,168	86,005	111,772	179,880*	
West Sumatra	22,541	24,050	28,445				
West Java	16,383	20,019	21,740				
Central Java <sup>1/</sup>	17,319	19,616	22,064	23,223*	31,320*	41,441	50,665*
East Java	20,156	24,912	25,604				
West Nusa Tenggara	14,796	15,628	13,594				
East Nusa Tenggara	11,222	13,171	13,000				
Riau	114,334	151,674	183,314				
West Kalimantan	22,690	26,486	28,621	37,198			
South Kalimantan	26,692	28,682	32,226	35,424	51,082		
North Sulawesi	26,192	30,688	35,959	40,596			
Central Sulawesi	11,134	13,397	15,937	21,591	36,587		
Maluku	22,434	25,567	33,225	35,374	54,734		
Irian Jaya (Rp.IJ)	1,296	1,328	1,516				
East Kalimantan	38,957	75,940	90,541				
Bali	20,975	25,541	29,611	32,815			
North Sumatra	28,141	32,361	37,608				
Indonesia <sup>2/</sup>	23,659	28,426	30,562	37,071	53,583	83,408*	92,372*

Notes: \* indicates estimated figures.

<sup>1/</sup> Source: Kantor Sensus & Statistik in Central Java.

<sup>2/</sup> Source: Central Bureau of Statistics, Central Government.

Source: Kantor Sensus dan Statistik D.K.I. Jakarta, Pendapatan Regional D.K.I. Jakarta 1969 - 1970, Jakarta, February 1, 1976, p. 34, if there is no indication otherwise.

13.047 Central Java is divided into two area for this method: relatively wealthy urban and lowland sawah farming areas and rural highland farming areas. The main characteristic of the areas in the latter category is the low population level in comparison to the other areas of the Province. This fact may be due to the sterik, barren rocky soil there, and the KB.lack of water. These areas consist of Wonogiri, part of KB.Karanganyar, KB.Sragen, KB.Boyolali, KB.Sukaharja, KB.Rembang, KB.Blora, KB.Demak, KB.Grobogan and their vicinities<sup>9/</sup>. Other regions which have similar problems are the southern part of KB. Pekalongan, KB.Purbolinggo, KB.Banjarnegara and some districts in KB. Semarang.

13.048 As shown in tables 13.13 and 13.14, most Central Government projects as well as Provincial development expenditures have been allocated to infrastructure such as highways and irrigation systems, and to the agricultural sector. In addition to the two expenditure sources mentioned above, there are some other expenditures from kabupaten and kotamadya budgets, and the village development program. They are also primarily allocated to improve infrastructure. Even though how much resources were allocated among the regencies and how much income was created are not known exactly some inference can be made from investigating performance of the agricultural sector. Table 13.17 shows changes in paddy planted areas and total production by karesidenan. As shown in the table, paddy planted areas increased by 33.6, 4.6 and 27.5 percent in karesidenan Banyumas, Kedu and Surakarta, respectively. On the contrary, paddy planted areas declined remarkably in karesidenan Pekalongan and Semarang. On the production side, karesidenan Pati, Banyumas, Kedu and Surakarta made remarkable progress, while the production declined drastically in karesidenan Semarang.

13.049 The areas which made a rather remarkable progress in paddy production include so called minus areas which were identified in the previous paragraph: i.e., karesidenan Pati includes Rembang and Blora; karesidenan Banyumas contains Purbolinggo and Banjarnegara and karesidenan Surakarta includes Wonogiri, Karanganyar, Sragen and Boyolali. Among these areas, paddy production increased due to the increase in production per hectare in karesidenan Pati and Kedu, while, in karesidenan Banyumas and Surakarta, the production increase was due to the increase in both planted areas and production per hectare.

13.050 If changes in paddy planted areas and production are investigated more thoroughly, some parts of the Province which did not get benefits from the economic progress during Repelita I would be identified. (see Table 13.18).

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9/ The selection of these areas was based on Rencana Pembangunan Daerah Modernisasi Desa Tahap II 1974/75-1978/79 published by Propinsi Daerah Tingkat I Jawa Tengah.

Table 13.17 Changes in Planted Area and Production of Paddy by Karesidenan  
1970 - 1975

	Planted Area (ha)		Increase in Percent	Production (tons)		Increase in Percent
	1970	1975		1970	1975	
Pekalongan	227,056	131,273	-42.2	714,798	773,581	8.2
Semarang	232,017	181,985	-21.6	855,629	543,414	-36.5
Pati	190,180	192,267	1.1	476,046	686,149	44.1
Banyumas	164,174	219,274	33.6	497,009	767,199	54.4
Kedu	207,712	217,415	4.6	655,252	872,217	33.1
Surakarta	187,325	238,889	27.5	718,429	1,105,136	53.8
Total	1,208,464	1,181,103	-2.3	3,917,163	4,747,696	21.2

Source: Dinas Pertanian Rakyat Propinsi Daerah Tk I, Jawa Tengah, Laporan Tahunan 1975,  
July 2, 1976.

Table 13.18 Changes in Paddy Production and Planted Areas by Kabupaten and Kotamadya

	Production			Planted Area		
	1972-73 Average (tons)	1974-75 Average (tons)	Change (%)	1973 (ha)	1975 (ha)	Change (%)
1. Pekalongan	84,654	106,553	25.8	47,633	56,372	18.0
2. Batang	79,013	58,819	-25.6	37,782	30,464	-19.4
3. Pemalang	167,665	158,568	-5.5	65,546	75,266	14.8
4. Tegal	129,272	185,217	27.8	53,269	67,684	27.1
5. Brebes	207,895	273,087	31.4	105,062	97,650	-7.1
6. K.M. Semarang	7,660	4,375	-42.9	2,728	2,165	-20.6
7. Salatiga	116,273	116,693	0.4	47,945	42,896	-10.5
8. Kendal	148,717	124,490	-16.3	56,722	48,480	-14.5
9. Demak	133,243	168,962	26.8	92,337	86,582	-6.2
10. Grobogan	161,545	190,975	18.2	83,426	112,094	34.4
11. Pati	220,291	262,543	19.2	95,654	114,324	19.5
12. Kudus	67,377	67,001	-0.6	23,363	27,285	16.8
13. Jepara	94,804	111,510	17.6	37,902	40,699	7.4
14. Rembang	71,626			40,279	57,522	42.8
15. Blora	143,712	142,349	-1.0	64,115	83,042	29.5
16. Banyumas	187,561	209,095	12.7	92,219	93,317	1.2
17. Cilacap	325,053	315,757	-2.9	161,769	160,890	-0.5
18. Purbalingga	103,336	128,264	24.1	47,600	42,980	-9.7
19. Banjarnegara	70,869	104,385	47.3	29,690	31,294	5.4
20. Magelang	172,042	226,104	31.4	68,291	81,057	18.7
21. Temanggung	98,471	171,209	73.9	37,211	41,237	10.9
22. Wonosobo	45,226	79,703	76.2	28,906	29,025	0.4
23. Purworejo	140,836	183,046	33.5	70,043	75,442	7.7
24. Kebumen	217,919	237,399	18.1	93,377	94,274	1.0
25. Sukoharjo	131,189	155,301	18.4	48,723	53,965	10.8
26. Karanganyar	109,122	129,791	18.9	44,939	48,792	8.6
27. Wonogiri	103,363	151,783	46.8	41,990	54,046	28.7
28. Sragen	221,473	245,296	10.7	80,853	96,924	19.9
29. Klaten	288,787	315,606	9.3	80,540	84,921	5.4
30. Boyolali	98,427	128,449	30.5	37,596	39,993	6.4

Sources: 1. Dinas Pertanian Rakyat Propinsi Daerah TK I Jawa Tengah, Laporan Tahunan 1973, Semarang, October 7, 1974.  
2. Dinas Pertanian Rakyat Propinsi Daerah TK I Jawa Tengah, Laporan Tahunan 1975, Semarang, July 2, 1976.



One such area is the rural areas between kotamadyas Semarang and Pekalongan. The Study team's income estimate shows the per capita income in this area is low in comparison to its environs and, also, paddy production did not keep pace with the development in other areas of the Province.

13.051 Even though there may be a few exceptional areas, the above-mentioned results show that the resource allocation during Repelita I might not widen the income disparity between lowland sawah areas and highland agricultural areas, but it is likely that the gap between two areas decreased. The following example also shows a decreasing disparity within the province. Before 1969, KB.Klaten was the most prosperous kabupaten, while Bojolali was the most poverty-stricken one.<sup>10/</sup> However, between 1972 and 1975, paddy production grew 30 percent in Bojolali, while it grew only 9 percent in Klaten as shown in Table 13.18. This observation is also supported by a recently published study (Soejono, 1976).<sup>11/</sup> There might be several alternative resource allocations: however, none of them could attain completely even distribution of the gains of development among various regions of the Province. For this reason, it is only said that the intraprovincial resource allocations might not be the best one, but at least helped the highland agricultural areas to increase their rice production.

#### 13.4.3 Development Finance During Repelita II

13.052 According to Central Java Repelita II the total provincial development expenditure is expected to be Rp.45.5 billion for the five-year period. Even though Central Java Repelita II do not indicate any definite figure for the Central Government projects, the Study team's estimate shows that they would amount to Rp.253.1 billion for the five years. The two together amount to Rp.298.6 billion and are nearly 5 times as large as the corresponding figure for Repelita I, which was Rp.61.3 billion. If other governmental development funds such as INPRES funds are included, the growth will probably be more than 5-fold. The share of the Central Government projects for the first four years of Repelita II is 51.7 percent (see Table 12.1). When this figure is compared with the respective figure for Repelita I, the Central Government projects' share decreased by 11 percentage points from 62.6 percent. The main reason for this change is increased subsidies from the Central to the Provincial Government through INPRES programs.

13.053 Examination of the planned annual figures and actual figures for the first two years of Repelita II shows that the Provincial government had underestimated Provincial revenues. For example, according to the Realisasi Anggaran Pendapatan dan Belanja PEMBANGUNAN, the Provincial development revenues were to be Rp.6,092 million and

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<sup>10/</sup> Partadiredja, Atje, "An Economic Survey of Central Java," Bulletin of Indonesian Economic Studies, vol. 5, no. 3, November 1969, p. 45.

<sup>11/</sup> Irlan Soejono, "Growth Distributional Changes of Incomes in Paddy Farms in Central Java," Bulletin of Indonesian Economic Studies, vol. 12, no. 2, July 1976, p. 80-89.

Rp.7,873 billion in 1974/75 and 1975/76, respectively, but the realized figures actually amounted to Rp.12,854 in 1974/75 and Rp.14,632 in 1975/76. For fiscal year 1976/1977, the planned Provincial development revenues were Rp.9,337 million. However, the realized revenue was already Rp.7,427 million at the end of 1976. One source of these differences are savings from the previous year and transferred funds from the surplus of routine budgets. Also there are some other revenue items which were underestimated. Among all causes of the differences, the most important factor is the rise of general price index. During this period, the price index rose by more than 80 percent.<sup>12/</sup>

13.054 Due to the factors indicated above, the planned Central Government project expenditure for 1976/77, Rp. 56.7 billion, was much larger than the Rp.39.6 billion which was estimated by the Provincial planners. They projected three different sectoral allocations of the Central Government projects for 1977/78 which amounted to Rp.45.6 billion, Rp.49.5 billion and Rp.116.3 billion. However, the first two estimates seem to be underestimations, while the third one seems to be an over-estimation. As the matter of fact the figure released from the Central Government at early 1977 was around Rp.63.2 billion.

13.055 A revised estimate of these two funds was made on the basis of the realized expenditures during the first two years of Repelita II and the assumption of varying growth rates for different funds derived from the past trend. The results are shown in Table 13.19. The total development funds from the Central Government projects and the Provincial development revenues will amount to Rp.298.6 billion for the Repelita II period.

13.056 More detailed investigation on development funds raises several questions about relationship between the Central and the Provincial Government revenue sources. Important sources of routine revenues available to the provincial government are:

- (1) Household tax,
- (2) Vehicles tax,
- (3) Tax on charge of ownership of motorcars,
- (4) Retributions or charge for services provided, and
- (5) Profits of provincial government enterprises.

These sources provide less than 10 percent of the routine expenditure and the rest of the routine expenditure is financed by a grant from the Central Government.

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<sup>12/</sup> The rate of inflation was 33.3, 19.7 and 14.2 percent in 1974, 1975 and 1976, respectively.

<sup>13/</sup> BAPPEDA Jawa Tengah, Konsultasi Nasional BAPPEDA II, Jakarta, November 1976.

Table 13.19 Revised Estimates of Development Expenditures in Central Java

	(Unit: Rp. Million)				
	Central Govern't	Provincial Govern't	KB/KDY Govern't	INPRES excluding D.T.I & D.T.II	Total
1974/75	20,092	6,270	12,488	4,889	43,739
1975/76	40,161	8,421	17,283	13,222	79,087
1976/77	56,724	9,338	18,920	18,886	103,868
1977/78	63,249	10,002	20,906	26,414	120,571
1978/79	72,900	11,505	24,482	30,456	139,343
Total	253,126	45,536	94,079	93,867	486,608
Share (%)	52.0	9.4	19.3	19.3	100.0

Note: During the first three years, prices are the current prices; however, the 1977 price is used for the last two years.

Source: Estimation by the Study Team.

13.057 Sources of development revenues to the provincial government are:

- (1) Revenue from Dolog rice,
- (2) Radio tax,
- (3) Profits from the Provincial Development Bank,
- (4) Revenue from agricultural equipment credits,
- (5) Revenue from wood sales,
- (6) Revenue from land ownership,
- (7) Revenue from investment,
- (8) Returns from BKK,
- (9) Motor car payments,
- (10) IPEDA, and
- (11) Profits of Provincial Government enterprises.

These revenues have provided around 30 percent of the total development expenditures of the Provincial Government. As far as the development resources are concerned, the Provincial Development Budgets are very minor parts of the total development budgets as shown in Table 13.10. During Repelita II, the share of provincial controllable funds is expected to be around 9.4 percent of the total budgets excluding kabupaten and kotamadya, and INPRES budgets as shown in Table 13.19. With this relatively small amount of resources, the Provincial Government may not be able to exercise its discretionary policies such as to narrow the intraprovincial disparity between wealthy urban and rural highland farming areas. One of the major objectives during Repelita II is to raise the level of income, attain a more equitable distribution of income and attain a more even distribution of the gains of development. For example, the Study team's estimate shows that for the poorest three kabupatens per capita incomes are around 55 percent of those of the most wealthy kabupatens. To remove this income disparity within the Province, the Provincial Government has to invest intensively in the relatively poor areas. An estimation was undertaken on the required public investments to raise the per capita income in those region to a level of 65 percent of that of the most wealthy kabupatens within the next six years, keeping all other variables constant. The result shows that the Provincial Government alone has to spend around another Rp.17 billion in the three kabupatens each year. This amount is well over the present Provincial Government expenditures. The Central Government may be able to reallocate project expenditures to raise income of the above stated areas; however, this kind of planning should be left for the Provincial Government responsibilities. To allow more discretion in making policies to the Provincial Government there are several approaches. One of them is to transfer tax collection authority from the Central Government to the Provincial Government. For instance, sales taxes on imports, sales and excise taxes are primarily tax revenues for the Provincial Government. Hence, the transfer of the authority to collect those taxes to the province will create more room for policy-making in its discretion. The second method will be to improve the present revenue sharing system. Even now the Central Government provides development funds through INPRES/Daerah Tingkat I, the amount may not be large enough

for making the provincial planning effective as stated in the above paragraph. A large transfer of funds from the Central to the Provincial Government will improve the effectiveness of the provincial planning. However, transferring more funds through a revenue sharing system will reduce the discretionary power of the Central Government and may reduce the effectiveness of the central planning from the point of view of national economy. So the optimal or more desirable resource allocation among provinces and within a province have to be investigated in the future.

13.058 The third method is the intensification in collecting the existing taxes and extension of kinds of regional retribution. Several studies including Rencana Pembangunan Daerah/Modernisasi Desa Tahap II 1974/75 - 1978/79 indicate a tax leniency in Indonesia.<sup>14/</sup> These studies have stressed the revenue potential of IPEDA and have pointed out the fact that the yield of this tax has not kept pace with the rise of prices and land productivity. The factors listed for the low achievements in tax collection include the unrealistic targets, poor timing of collections, lack of understanding on the part of collectors, absence of the visible link between tax payments and receipt of benefits, and separation of tax collecting authority from the ultimate recipients. It has also been observed that other taxes such as household tax and motor vehicles tax are not being collected to the possible extent. Since these taxes are relatively easy to assess and collect, it seems that, with a somewhat greater effort, revenues from these taxes can be considerably augmented. For the present study, available resources did not allow investigation of the point mentioned above. So the Provincial Government should investigate further if there is any possibility to increase tax revenues for the Provincial Government within the existing tax system. At the same time, the Provincial Government has to improve its published statistic information, since the evaluation in the present tax system is not possible without reliable statistical information.

### 13.5 Evaluation and Recommendations

#### 13.5.1 General

13.059 The present policy in the nation's system of public finance is the regional government's heavy dependence on subsidies from the Central Government for both routine and development expenditures. Also the Central Government takes a major part in the banking and financial sector, and to some extent the manufacturing sector. These conditions will raise the following questions.

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<sup>14/</sup> Anne Booth, "IPEDA-Indonesia's Land Tax," Bulletin of Indonesian Economic Studies, vol. 10, no. 1, March 1974, p. 55-81.

13.060 The Indonesian way of development planning and fiscal policies can be characterized as a strongly centralized system. Powers granted to the provinces are limited. The administrative authority granted to the provinces to exploit their fiscal resources is also limited. The result is that the revenues of the provinces fall considerably short even for the routine expenditures and have to be supplemented by grants from the Central Government.

13.061 Public development resources are expended at the central, provincial, kabupaten and desa levels, and the relative size of the resources follows this order. For the four years starting in fiscal 1974/75, 52 percent of all public development resources was allocated to the Central Government and 10 percent (Provincial own resources and INPRES D.T.I.) to the Provincial Government. Thus 38 percent was left for kabupaten and desa governments (see Table 12.1).

13.062 The Central Government projects are generally large and may create undesirable income disparity within the Province. With a relatively small amount of public resources, the Provincial Government may not be able to reduce the disparity. Due to this limit to resource, planning at the Province level may not be as effective as planning at the Central Government level. Thus, public resource allocation depends primarily upon the policy of the Central Government.

13.063 This concentration of power in the center is not only seen in the public financial sector, but also in finance and banking, and manufacturing sector to some extent. In the case of the banking and financial sector, major parts of it are owned or controlled by the Central Government. In consequence, the allocation of investable resources primarily depends on the discretion of the Government. Some production facilities like textile factories are owned by either the Central or the Provincial Governments and managed by governmental officials. The three factories that the Study team visited presented typical examples of public enterprises. Restrictions on decision making at managers' discretion, unbelievably low efficiency and the low morale of laborers were observed by the Study team. Only three observations will not tell the whole story; however, it is conceivable their situation will be different if they are managed by private entrepreneurs.

13.064 Observing these facts, firstly what is needed for a more dynamic economic development is an areal pluralism in the political structure. Pluralism is inherent in the multitude and variety of local, provincial and national organizations. Each is the center of initiatives. The initiatives may be exercised independently through functions performed at three levels. They should be exerted competitively to attract industries and resources directly or to develop the infrastructure which serves to attract industries and resources. Secondly, what is needed is a more clear functional structuralization between public and

private sectors. The public sector should enter areas where large externalities exist, where the private sector is not active because its inherent emphasis on economic efficiency. And private sector should concentrate their efforts on increasing economic efficiency in their activities.

13.065 The basic model employed to evaluate the existing system is the two frameworks mentioned above. There will be some deviations on some points; however, basically these frameworks will be used.

### 13.5.2 Evaluation and Recommendations

#### (a) Resource Allocation in Terms of the Long-Run Planning

13.066 Due to the large capital-output ratio of the industrial sector, the investment in the sector will not expand employment opportunities in the short run in comparison to the agricultural sector. But in the long run, as the economy progresses, the majority of workers have to be absorbed in the manufacturing sector. Central Java's economy will also experience structural change. At present the largest sector is agriculture, but in the future the manufacturing sector will be the leading sector. And then the service sector will grow. Also a calculation by the Study team shows that the internal rates of return in the manufacturing sector is apparently higher than in the agricultural sector. From the viewpoint efficiency, a relatively large amount of investable funds should be caused to flow into the manufacturing sector.

13.067 Primarily, investments in the manufacturing sector should be left to private individuals and entrepreneurs. However, small manufacturing owners, the majority of Central Java's manufacturing owners, are notable to spend much money to get new information, improve managerial skills, control quality, standardize products, market products, and do research and development. These activities cost too much for an individual manufacturing owner; the public investment should be directed into these activities and promote the manufacturing sector indirectly. More concrete programs and required funds have been discussed in the industry and manufacturing sector in this study.

#### (b) Resource Mobilization in the Public Sector

13.068 There were provincial tax reforms in 1962, 1968, 1975 and 1976; however, there was little change in the system. These four reforms were just concentrated on motor vehicle taxes and rate of tax on changing ownership, and effective tax rates on changing car ownership seems to have declined by the 1975 tax reform.

13.069 Major efforts to increase tax revenue were in the field of tax collection system. Those efforts resulted in: (1) increased numbers of branch offices, from 6 to 17; (2) establishment of a due date for tax payments and imposition of a charge of 100 percent additional taxes if

not paid by the due date; (3) increase in tax collections personnel from 7 to 275 persons and (4) establishment of incentive payments utilizing 2 percent of the tax revenue which could be paid for extra operating costs.

13.070 There will be a couple of ways for increasing tax revenue in the present system. One of them is to reevaluate property values to increase the tax revenue from the household tax--one of the main provincial revenue sources. Due to the large inflation rates in last several years, property values must have changed drastically and also changes have been different from place to place. From an equity point of view, property values should be reevaluated and the household tax should be on the new, higher values.

13.071 Another method is to reduce tax evasions on motor cars. Officials told us they often lost track of vehicle ownership after cars changed hands two or three times. However, a method to prevent that tax evasion may not be difficult if the license plate on a car belongs to the owners, but is not associated with the car itself. Also, to prevent tax evasions by vehicle owners, Dinas Revenue may need strong cooperation from other governmental agencies such as the Police Department in the Province.

13.072 Another measure to increase the provincial development revenue is to revitalize the provincial enterprises. As indicated previously, the share of profits from the enterprises to the total provincial development funds has declined steadily. To increase the revenue, the Provincial Government has to make them more efficient. One way to make them more efficient is to induce the entrepreneurs from the private sector and to create joint venture enterprises with them. In these enterprises, the public and private sectors would own 50 percent of shares and managers can be brought in from either sector. This system will shift them towards efficiency oriented agencies.

13.073 Even though the present study did not investigate sources of revenue additional to the existing ones, several studies indicate that the legal extent of taxation available to the region is wider than is being currently exploited. All regions are entitled to levy additional taxes provided that the relevant regulations are properly enacted and that the tax has not been specifically prohibited to these regions by Central Government regulations. The studies also indicate that the low yield from IPEDA (Regional Development Contribution) may be attributed to various reasons, including unrealistic targets, poor timing and collections, and lack of understanding on the part of collectors. It is often said in the province that raising additional tax revenue is not feasible. But some of the points mentioned above can be executed within the framework of existing tax system.

13.074 Also it is recommended that a comprehensive study should be done by a governmental agency to investigate if there is any possibility to raise tax revenue either through the existing system or tax reform.



(c) Statistical Information

13.075 If one tries to investigate feasibility of collecting more tax revenue through the existing or reformed tax system, one of the very difficult problems is unavailability of statistical information and their inaccuracy if ever published. The most serious problem is that such statistical information as is (or was) available is considered to be the province of a specific official, and if he moves to a different position, either or no one can identify what kinds of and where data are. During the preparation of the present, many times the following statement has been heard: such a statistical information is available since the official in charge resigned from the office. Without continuous collection and preparation of statistical information, neither can we evaluate the present tax system nor undertake regional development planning. Without continuous statistical information, the Regional Planning Board, BAPPEDA, can not formulate any efficient plans even though it possesses well trained officials.

13.076 Another problem is the inaccuracy of the statistical informations presently published. These inaccuracies may result from inefficient compiling processes. Some of agricultural statistics the Study team used contains so many mistakes, that a process of correction was needed before use. Some information is available for the number of manufacturing workers; however, the definition of them changes from year to year. Thus, to improve the statistical information, it is recommended that the whole data collecting and processing systems have to be studied so as to establish a wider range and more accuracy. Errors in compiling processes can be reduced by introducing 15 large electronic calculators which print results on paper. An arrangement can also be made to print data books in kabupaten Kudus, which specializes in offset printing. By these measures, some of the presently existing errors which result from miscalculations and the stencil printing will be removed. The costs of introducing 15 large electronic calculators and costs for training of officials would be approximately Rp.2.2 million and this will be a very small share of the presently planned governmental sector's budget during Repelita II, Rp.1,373 million.

(d) Private Savings

13.077 As stated in the banking sector study, people with small amounts of money try to hold them in more or less liquid form. Or people will buy gold to hedge their asset losses due to inflation. During the trips to kabupaten offices, the Study team observed quite often that people have a very strong preference toward gold. Even a manager of a state bank said that buying gold was better than saving money in the banks. There may be several ways to mobilize investable money from small individuals' holdings; however, the only available measure in Indonesia are regular savings accounts, time deposit accounts and TABANAS. Due to the high rate of inflation, those saving system do not suffice to collect money to transfer into productive sectors.

13.078 There are several methods to increase deposits given this situation. One method, the most difficult method for the Provincial Government, is to control inflation. If inflation comes down to a reasonable rate in Indonesian sense i.e., less than 10 percent, individuals will start saving money in time deposits or in regular savings accounts. The Provincial Government is not able to control inflation; but it can at least strongly urge the Central Government to do so. Another method, also difficult for the Provincial Government, is to establish a stock exchange market or to let private banks handle stocks, and then to make stocks available to public individuals. The reason for making stocks available is as follows: People in this country perceive large inflation in recent years and want to buy gold instead of saving money in banks. The problem with saving money in banks during inflation is the net loss of its value. Stock values will keep pace with inflation since nominal revenues or profits of manufacturing factories also increase as the general price rises; then dividends on each stock go up and stock prices go up. For this reason, holding stocks is almost the same as holding gold. If either a stock market or stock dealers are operating in this province, many people who are presently buying gold will switch to buying stocks. As a result, a large amount of funds, which has been diverted into non-investable funds, can be collected and invested in the manufacturing sectors.

13.079 Another advantage of establishing a stock exchange is that it will provide credits with very long terms to corporations which want to invest funds in large scale capital assets. Promoting stock sales will encourage private savings on the one hand and private investment into productive assets on the other. For this reason, the establishment of stock markets and stock dealers is urgently recommended.

13.080 A third possible method to draw private funds is to institute compulsory accident insurance policies for car owners. The discussions with several car owners indicate that some of car owners in the Province do not buy any insurance policies to cover damages caused by the car owners. If the drivers injured other individuals and their property there is little means to compensate for them. If purchase of insurance policies by car owners is rigorously enforced by law, private financial institutions can draw more investable funds from the wealthy class who can afford to buy cars. Also it will ease settlements of many accidents and will increase the welfare of the poor who tend to be the losers in accident cases.

(e) Promotion of Small and Medium Scale Manufacturing Industries

13.081 The small-scale manufacturing sector, while probably accounting for a smaller proportion of value added than the large and medium-scale sector, could offer job opportunities at much lower cost per workers. The two credit schemes (KIK and KMKP) which are specifically intended to aid small-scale entrepreneurs provide only financial and no technical and management assistance. As stated in the sectoral allocation system, the small-scale sectors need adequate and comprehensive programs for further progress. Along with the financial assistance, it is recommended for the Provincial Government to provide schemes of technical and managerial assistance.

13.082 In addition to the two points mentioned above, the Study team heard many complaints on complicated paperwork needed to receive loans. To identify problems, an effort was made to obtain application forms from the state bank but, they were not available. An investigation is recommended to identify problems in the whole system application process and to design a new form if there is any room to simplify the paperwork.

13.083 It was also found that the present interest rate policy from a state bank shows an obvious bias against the manufacturing sector. Unfortunately, it was not confirmed if there were the same biases toward the manufacturing sector from other banks, because enough data about loans those banks were not available to the Study team. The interest rate arrangement from the bank indicates (1) the whole arrangement is favorable to the agricultural sector, and unfavorable to the manufacturing sector and (2) the arrangement may prevent an expansion of employment opportunities through the manufacturing sector. This type of arrangement might benefit economic progress in the short run; however, the arrangement may hinder economic progress sooner or later. Hence the arrangement should be reexamined in relation to the national and provincial objectives of the Indonesian economy. And it is recommended to adopt an adequate use of interest rate policies for better allocation of resources in favor of the most productive use.

13.084 Presently the major parts of the banking sector in this region are owned by either the Central or the Provincial Government. As long as the substantial part the banking system is owned by these governments, the allocation of investable resource mainly depends on the governmental policies. The policy objectives can be (1) an even distribution of economic benefits, (2) a greater emphasis on helping the poor, or (3) a greater emphasis on strategic sectors of the economy. However, the most likely objective of economic efficiency assumes less weight in resource allocations.

13.085 To attain a greater economic efficiency, the private banking sector has to be vitalized. Even in the present system, if the private banks exert more efforts at dealing in stocks, they would get a larger share of banking activities. It is recommended that the whole present structure of the banking system has to be reformed to vitalize the private sector effectively; however, whether or not the private banking sector will be vitalized depends largely on the policy of the Central Government.



## CHAPTER XIV

### DEVELOPMENT STRATEGIES



## CHAPTER XIV

### DEVELOPMENT STRATEGIES

#### 14.1 Development Potentialities by Sector and Geographic Area

##### 14.1.1 General

14.001 The economic productivity of resources within the Province is examined below through analysis of data on productivity for various geographic areas and over time. First, differentials in labor productivity by sector is examined.

##### (a) Sectoral Productivity and Employment

14.002 The figures available for GRDP by sectoral origin (Table 1.17) and for the employment by sector (Table 1.18) are used to estimate average labor productivity in 1971, 1973 and 1975, which are shown in Table 14.1. It is known from it that the "public utilities and construction" and the "trade and finance" sectors are high productivity sectors, being followed by the "transportation and communication" sector, and then, as low productivity sectors, "agriculture" and the "services and others". The pattern of sectoral labor productivities which emerges from the estimates are not very different from those observable in other regions or countries, with a possible exception that the labor productivity in the "mining and manufacturing" sector is not particularly high, reflecting a notable characteristic of the manufacturing sector in the Province which is labor-intensive. However, the growth rate of productivity is generally inversely related to the level of labor productivity as shown in Figure 14.1. In this figure, the transportation and communication sector does not follow this general rule. The implication of this exceptional behavior is examined subsequently.

04.003 The general trend observed above implies that the productivity differentials among sectors have been narrowing during the past several years. From this trend, it can be said that the economy is approaching an equilibrium from a state of disequilibrium. A notable exception is the "transportation and communication" sector. This sector is further

Table 14.1 Labor Productivity by Sector in Central Java

	Labor Productivity (Rp.1,000/Person)			Percentage Change (%)
	1971	1973	1975	1971-1975
Agriculture, Hunting, Forestry & Fishery	41.1	36.5	49.1	19.5
Mining, Quarrying & Manufacturing	49.7	55.0	56.9	14.5
Electricity, Gas, Water Supply & Construction	76.2	83.7	81.1	6.4
Trade, Restaurants, Hotels, Finance & Real Estate	73.4	72.3	71.8	-2.2
Transportation, Storage & Communication	60.4	65.8	75.6	25.2
Social, Communal, Individual Services & Others	40.0	49.2	49.9	24.8
Total	47.5	53.3	55.6	17.1

Sources: Tables 1.17 and 1.18.



Figure 14.1 The Growth Rate of Labor Productivity  
as Related to Labor Productivity

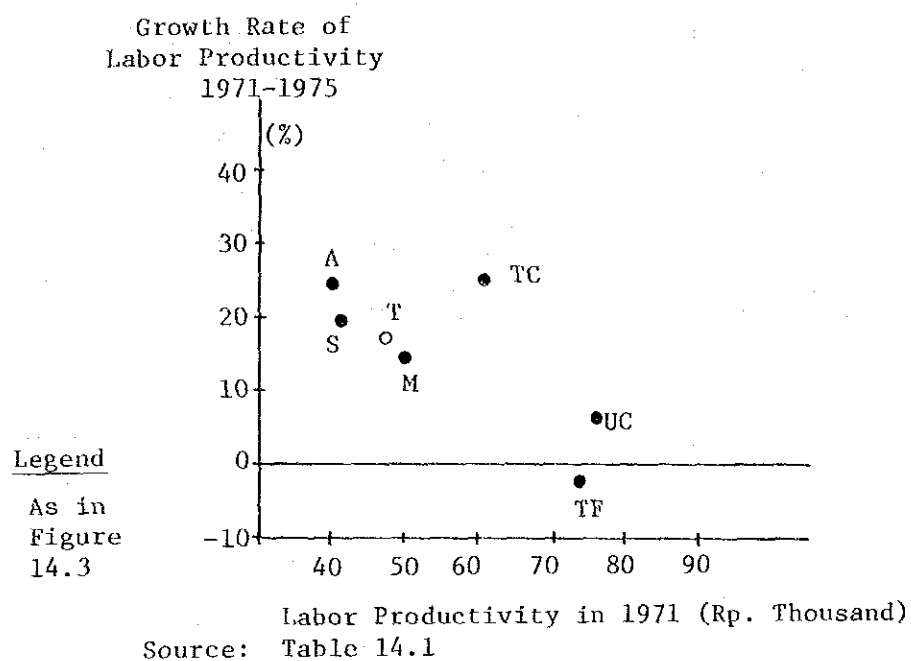
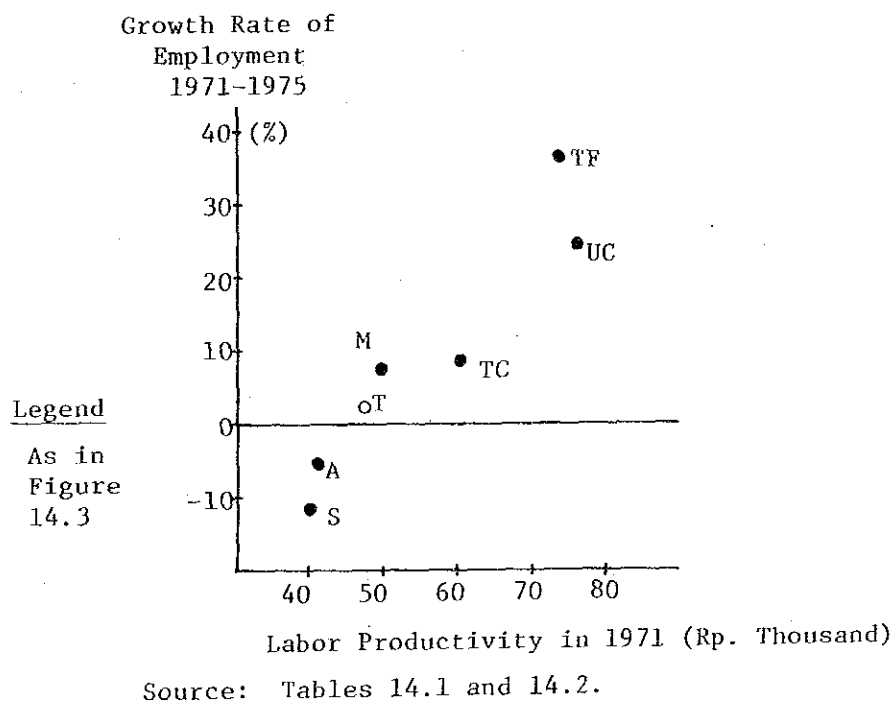


Figure 14.2 The Growth Rate of Employment as  
Related to Labor Productivity



improving its productivity relative to others despite its already high level of labor productivity. Therefore, this can be called the leading sector in the economy of the Province.

14.004 The changes which are taking place within the economy can be examined also through analysis of employment expansion by sector. Table 14.2 presents employment by sector since 1971. Although the consistency of employment figures for 1971 with those of 1973 and 1975 is in doubt, as they are taken from different sources, the table shows clearly that in the agriculture and service sectors employment is declining, whereas in the public utilities, construction, trade and finance sectors employment is rising rapidly. By relating the growth of employment with the level of labor productivity (see Figure 14.2), it is known that the sectors with high labor productivity are generally gaining employment rapidly and those with low labor productivity are gaining marginally. This is again a sign of movement toward an equilibrium. More specifically, these figures together imply that the relatively slow growth in labor productivity in the high productivity sectors is perhaps due to a high rate of labor absorption into the sectors.

14.005 The negative relationship between the growth of employment and the rate of increase in labor productivity is shown directly in Figure 14.3. Again, the transportation and communication sector is an exception. This is, in all likelihood, due to the growth in the air transportation subsector within it (see Chapter VIII). This subsector requires a large proportion of highly skilled labor and the entry of labor to the subsector is very much restricted.

#### (b) Investment Efficiency by Sector

14.006 The above analysis refers to the average productivity of labor and, therefore, does not tell anything about the productivity of capital investment. Investment efficiency by sector could be known if the amount of investment by sector, the increment in the value added and the wage payment are known. For the economy of Central Java, only the second is available. A close substitute for measuring the efficiency of investment which is the internal rate of return is the capital-output ratio. However, for this also, the amount of investment must be known.

14.007 Consequently, the efficiency of investment by sector is estimated below on the basis of microscopic data. One group of sources is feasibility studies for public investment. It is generally known that the internal rate of return is not particularly high with irrigation projects and varies widely with highway and other transportation projects. For those irrigation projects which have either been undertaken or planned, the internal rate of return is reported in the range of 10 to 12 percent.

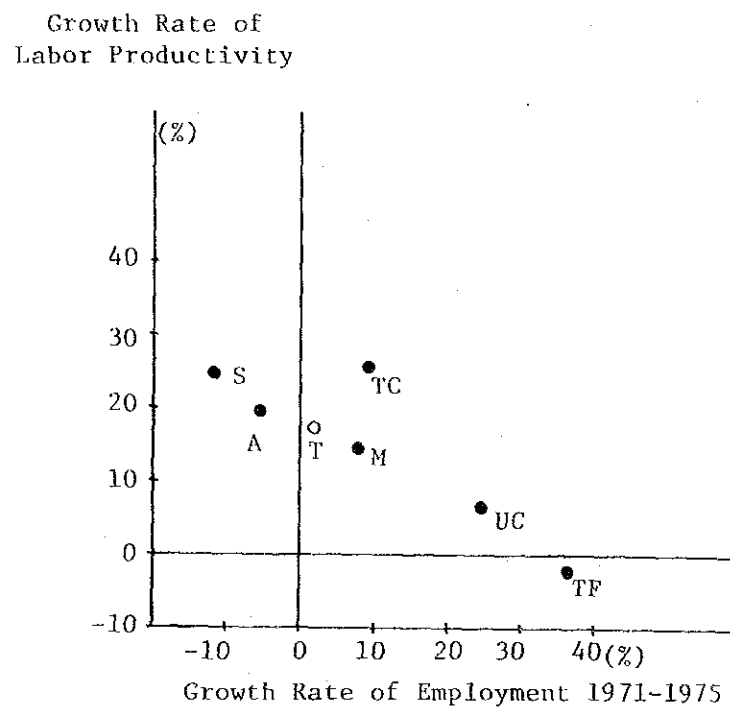
14.008 Another group of sources is the interest rates charged for loans by banks. The average interest rate charged by sector is estimated

Table 14.2 Employment by Sector in Central Java

Sector	Employed Workers (in 1,000 Persons)			Percentage Change (%)
	1971	1973	1975	1971-1975
Agriculture	4,762	4,462	4,497	-5.6
Mining & Manufacturing	1,080	1,080	1,162	7.6
Electricity, Gas, Water Supply & Construction	122	128	152	24.6
Trade & Finance	1,161	1,335	1,583	36.3
Transportation & Communication	149	152	160	8.8
Services & Others	982	840	867	-11.7
Total	8,255	7,997	8,422	2.0

Sources: For 1971, BPS, Population Census 1971.  
For 1973, 1975, Provincial Governor's Speech Before  
the Students, Semarang, July 5, 1976.

Figure 14.3 The Growth Rate of Labor Productivity as  
Related to Growth Rate of Employment



Legend: A - Agriculture Sector  
M - Mining & Manufacturing Sector  
UC - Public Utilities & Construction Sector  
TF - Trade & Finance Sector  
TC - Transportation & Communication Sector  
S - Services & Others Sector  
T - All Sectors

in Chapter XIII and can be summarized below:

(1) Agriculture	8.28%
(2) Manufacturing	17.02%
(3) Small Trade	17.68%

The rank order of these interest rates is consistent with the rank order of labor productivities presented in Table 14.1. From these, it can be said that the efficiency of investment in the manufacturing and trade sectors is higher than in the agricultural sector for the present level of investment for each sector. This fact implies that reallocation of investment from the agricultural sector to the manufacturing and trade sectors will lead to an increase in regional product.

(c) Productivity Differentials by Geographic Area

14.009 One way of measuring productivity differentials by geographic area is to use per capita GRDP by kabupaten/kotamadya. Per capita GRDP depends on labor force participation rate as well as labor productivity and, therefore, does not truly represent even the average productivity. But, the participation rate in agricultural areas is frequently high due to a high labor participation of women. This implies that easy access to employment opportunities encourages people to take low productivity jobs. Therefore, a per capita productivity measure can be used for comparing productivity among different areas.

14.010 Per capita GRDP by kabupaten or kotamadya in 1973 is estimated and presented in Appendix D. The pattern of its geographic distribution is shown in Figure 1.7. The following observations can be made:

- (1) All kotamadyas have a relatively high per capita GRDP, all above Rp.40,000.
- (2) There are three high productivity areas: 1) on the slope of Mt. Merapi to the Solo River basin including Klaten, Sukoharjo and Karanganyar, 2) the Jratunseluna River basin and east of it including Kudus, Pati, Rembang and Blora, and 3) the coastal area on the north including Kendal, Batang and Pekalongan.
- (3) Areas with least productivity are Wonogiri and Banjarnegara.

However, GRDP estimates by kabupaten/kotamadya do not necessarily represent the true geographic pattern of productivity differentials. Take, for example, Pekalongan. This kabupaten has a fertile and urbanized half in the north and the other half in the south which is mountainous and hardly accessible. This is true with other kabupatens along the northern coast.

14.011 From discussions with government officials and analysis of various data, it is apparent that labor productivity is very much related

to the sectoral composition and topography of the area. Labor productivity differentials among sectors are already discussed above. To summarize, urban-oriented sectors have a higher labor productivity. This is a major reason for kotamadyas having a relatively high income.

14.012 Topography affects labor productivity in a number of ways. For one, topography largely determines the feasibility of paddy cropping which is a high-yielding and high-value crop. Second, topography largely determines the easiness of access. In addition, topography is very heavily related to the soil characteristics. Alluvial soil is deposited only in flat areas. The other factors also favor plains rather than mountainous areas. The effects of above factors are particularly true with respect to the productivity of land. As far as labor productivity is concerned, they are less so because high productivity of land attracts people. High population density in flat areas in part cancels the productivity advantage when labor productivity is considered. Nonetheless, such productivity differentials appear to persist. The geographic division of the Province shown in Chapter I (Figure 1.8) is based on this consideration.

#### (d) Geographic Differentials in Prices

14.013 The trend of the Provincial economy can be examined through an observation of changes in geographic price differentials. As stated in Chapter V, the movements of prices in different geographic areas during the past few years indicate that the economy of the Province is approaching an equilibrium.

14.014 First, urban-rural price differentials within kabupatens have been shrinking during the past few years, as shown in Table 5.8. Second, price differentials among kabupaten centers are also showing a definite sign of shrinking with respect to rice. Prices of textiles also appear to the following a similar trend (see Table 5.8).

14.015 This price differentials to shrink is not restricted to within the Province. As can be known from Table 5.11, a narrowing trend of price differentials is also observable between Semarang and Yogyakarta and between Semarang and Surabaya. However, price differentials between Semarang and Jakarta are not showing such a sign of shrinking.

14.016 The above observations can be interpreted as follows: within the eastern half of the Java Island and also within the Province of Central Java, there are definite movements toward economic integration, i.e., the different geographic parts of the area are more closely related with each other now than before. This trend of unification may be attributable to improvements in communication and transport access and also institutional improvements in marketing.

14.017 Nevertheless, this trend can also be interpreted from another angle. The movement toward an equilibrium also implies that the economy lacks dynamism, i.e., there is no significant growth sector or growth

center within the economy. If there is any dynamic force which transforms resource allocation faster than the speed of adjustment in resource allocation, there should be a diverging trend in price differentials.

(c) Intraprovincial Migration

14.018 Differentials in population growth rate by kabupaten (see Table 2.3) should be explained mainly by the rates of immigration. A cross-section analysis of the differential reveals that private investment is a significant determinant of the differential. The result can be shown below:

$$\begin{aligned} & \text{A Change in Population Growth Rate (in percent)} \\ &= 0.01818 \times \text{Approved Private Investment per Kabupaten} \\ & \quad (\text{in Rp. billion}), \end{aligned}$$

where the population growth rate is an average rate during the five-year period of 1971 to 1976 and the investment is the cumulative amount from 1969 to 1974. The above equation implies that for a typical kabupaten with a population of 800,000 persons an investment of Rp.1 billion will attract 727 migrants from other areas over and above natural increases in population during a five-year period. This implies a capital intensity of Rp.1.38 million for each migrant and Rp.6.9 million for each worker directly employed with the assumption that one out of five migrants is employed directly by the investment. This is not a small figure and, therefore, can be interpreted that the population-absorbing influence of new investment is not particularly large in Central Java.

14.2 Development Prospects

14.2.1 Geographic Distribution of Development Potentialities

14.019 An examination of the geographic pattern of activity within the Province reveals the following:

(a) Semarang as the Development Center

14.020 Although the Province might lack coherence when compared with East Java, there is a definite administrative, commercial and industrial center, which is Semarang, the capital of the Province. Although its population is less than 800,000, the city dominates all other centers in the Province and is growing steadily. No other kotamadya can compete with Semarang even in the growth rate of the population. In terms of approved private investment, 44 percent of foreign and 49 percent of domestic investment projects which were approved from 1969 to 1974 would be located in Semarang.

(b) The Development Belt

14.021 Another dominant geographic feature is the existence of the development belt which is roughly along the national highway from Brebes, Tegal, Pekalongan through Semarang, Salatiga to Surakarta and the east. In the south of Semarang, this belt stretches toward Yogyakarta through Magelang and Klaten. The belt and the major trunk route of Java linking Jakarta with Surabaya are parallel, but it also goes through major productive agricultural areas which lie along the northern coast and the upper Solo basin (see Figure 14.4).

14.022 This development belt has Semarang in its center, but also has a number of secondary growth centers which are growing on the basis of manufacturing and trade. They are:

- (1) Tegal: metal manufacturing, trade;
- (2) Pekalongan: textile manufacturing, trade;
- (3) Salatiga: agro-industries;
- (4) Surakarta: tobacco manufacturing, textile manufacturing, tourism;
- (5) Magelang: agro-industries, tourism; and
- (6) Klaten: basic metal processing.

(c) Isolated Growth Centers

14.023 In addition to the above, there are two isolated growth centers, Cilacap-Banyumas and Kudus.

(i) Cilacap-Banyumas

14.024 Cilacap-Banyumas is a rich agricultural area in the Serayu River basin. But, its significance is also due to the designation of Cilacap as a growth center. Pertamina and others already have made considerable investment in the area. In addition, Banyumas would be able to supply forestry products for shipment through the port of Cilacap. Although its growth is not yet guaranteed, there is a good prospect for growth if necessary preparations are completed.

(ii) Kudus

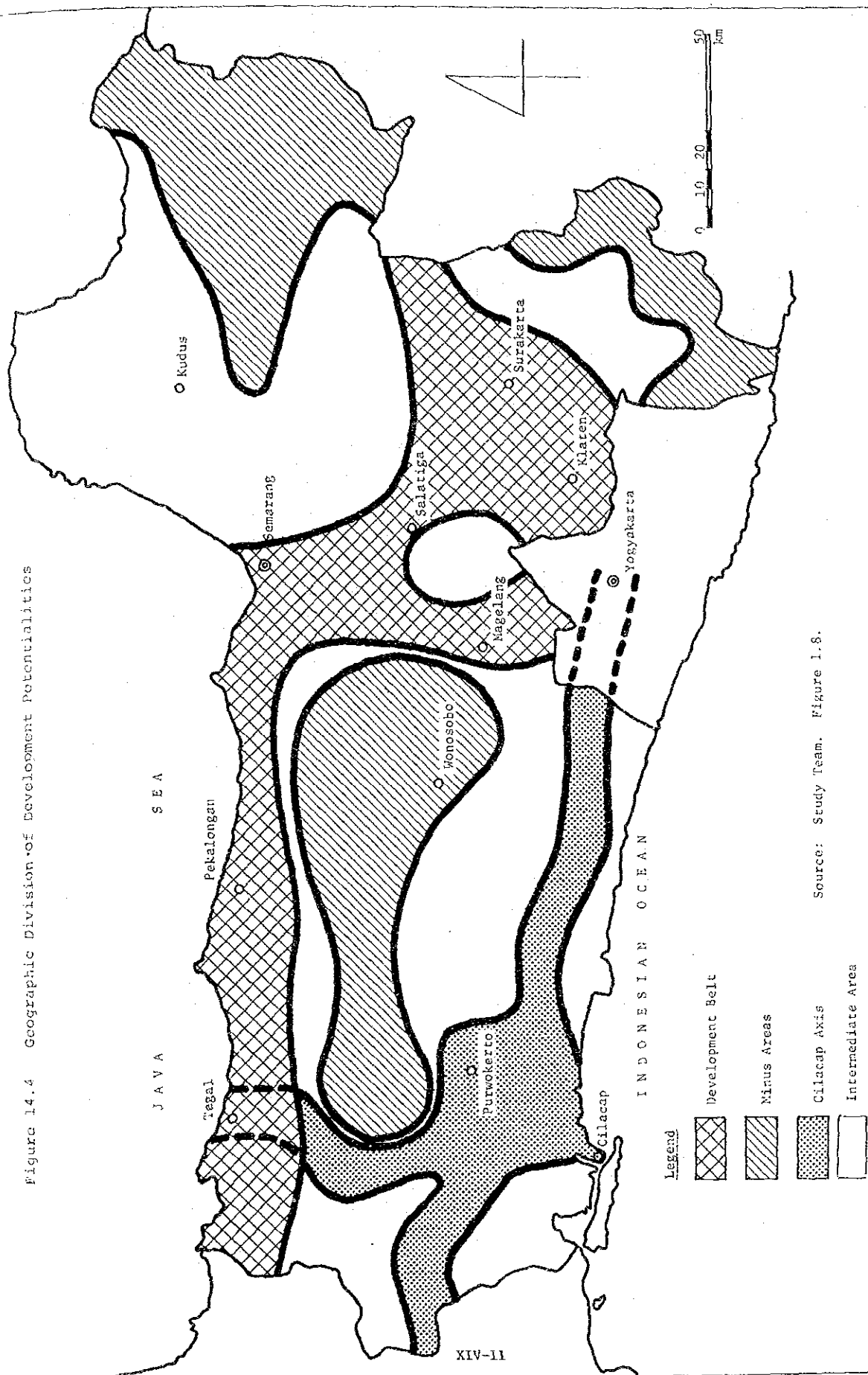
14.025 Kudus, located in the east of Semarang, is a center of a fertile agricultural area, but its development prospect derives from the kretek cigarette factories and associated printing activities. Demand for kretek cigarettes is increasing rapidly and the printing industry is growing in association with it. There is good likelihood that the printing industry will grow independent of cigarette production. The growth of this area would further be accelerated by the pending development of water resources in the area between Semarang and Kudus.

(d) Minus Areas

14.026 Of the remaining areas, some areas are less promising than others. If those areas are called "minus areas", there are two large



Figure 14.4 Geographic Division of Development Potentialities



Source: Study Team. Figure 1.8.

and one small blocks of minus areas. One large block is the highland area ranging from Temanggung to Mt. Slamet and the other large block is the very eastern end of the Province comprising Rembang, Blora and Purwodadi. The small block is the very southeastern part of the province bordering East Java and Yogyakarta.

(e) Intermediate Areas

14.027 The remaining areas can be called intermediate areas, and they represent the average characteristics of the Province.

14.2.2 Development Prospects of Productive Sectors

14.028 Of the major productive sectors, agriculture is dominant in terms of the number of workers engaged. In this sector, the scarcity of land has led the people to intensify land use through double cropping and heavy fertilizer utilization. In addition, there are a number of programs which are currently going on and contributing to the development of this sector. The development prospects of this sector can be discussed in terms of two major crops: paddy and upland crops.

14.029 Paddy production has particularly attracted the attention of policy makers in the country. The currently available programs have undoubtedly contributed to increases in the production of paddy. The major bottlenecks to further increases are the amount of land served with irrigation. There are a number of studies which are currently being carried out for the purpose of increasing irrigated areas, but, as this takes time and resources, expansion of such areas would not be rapid. Nonetheless, with the expected schedule of major irrigation works and tertiary and terminal facilities, a reasonable rate of progress can be expected.

14.030 Upland crops have been largely confined to maize and cassava. However, diversification of upland crops would be needed if income of upland farmers are to be increased. New crops which could profitably be introduced or expanded would include soybeans, groundnuts, sorghum, vegetable, and sunflower. There are, however, a number of problems which need to be solved before these become income-augmenting crops. Livestock is another prospective sector in non-paddy areas. For successful development in these areas, basic infrastructure for marketing needs to be improved.

14.031 Another prospective field of development is highland agriculture. High value crops such as vegetables and fruits can be developed at selected locations.

14.032 In the field of mining and manufacturing industries, there are some promising industries. Most small-scale and cottage industries would not be able to expand rapidly, but some of the food processing industries can grow by introducing selective mechanization in the production process.

14.033 More prospective industries than the above are metal processing, chemical, rubber and plastic industries. As they are, to a varying degree, agglomeration-oriented industries, potential locations of these industries are largely limited to the development center (that is Semarang) and the belt. Much of new growth in metal processing would be absorbed in Tegal and Klaten, and much of the remaining in the vicinity of Semarang. However, petro-chemical industries will be located in Cilacap as it is the port through which crude oil for the entire region enters.

14.034 Other potential productive sectors include tourism and construction. Despite the existence of the famous Borobudur within the Province most tourists are currently go to and stay at Yogyakarta to visit the temple. This pattern cannot easily be changed, but an establishment of a wider tourism complex, international and domestic, around Yogyakarta up to Semarang would help the development of the Province.

14.035 The construction industry has been helped by stepped-up spending for public works projects and for a variety of INPRES programs. Although INPRES programs have helped to increase employment opportunities in rural areas, they by themselves would not be able to maintain momentum for sustained growth.

#### 14.3 Alternative Development Strategies

##### 14.3.1 General

14.036 Alternative development strategies can be conceived with respect to intraprovincial resource allocation and interprovincial resource allocation. The former refers to concern with alternative ways of resource allocation within the Province and the latter refers to concern with alternative ways of resource allocation between Central Java and the rest of the nation. Within the former, emphasis in our analysis will be placed on geographic distribution of resource allocation as it also implies sectoral resource allocation. In addition, intraprovincial resource allocation refers to a strategy which tries to alter the growth of population itself. Interprovincial resource allocation is essentially a question of the share which this Province will have in the allocation of development resources within the nation.

##### 14.3.2 Alternatives With Respect to Intraprovincial Resource Allocation

###### (a) Differential Growth Strategy

14.037 As we have described above, there is the development belt along the northern coast, through Semarang and south toward Surakarta and further east and toward Yogyakarta (see Figure 14.4). This development belt will continue to be the area which has the highest development potential. Differential Growth Strategy is intended to further

encourage the economic growth of this development belt. First of all, Semarang in its center will be the major engine which will promote the growth of the belt. In addition, paddy production has been increasing significantly in the Pemali-Comal river basins through improvement in the irrigation systems. Within the area, Tegal has a good development potential as a specialized manufacturing center for metal works which will complement agricultural development through the supply and repair of agricultural machinery.

14.038 Semarang itself can be given a strong development impetus if its port is improved as scheduled. The port is particularly important as an importing port of commodities for distribution in the Province. Then, if the city is restructured to accommodate greater manufacturing activities commensurate with the expanded port capacity, the growth of the city is practically guaranteed. The city can accommodate a diversity of activities corresponding to the diversity of its natural and historical setting. It would continue to be the administrative and cultural center of the Province as well as of its center of manufacturing and trade. The development of Semarang would further be stimulated by water resources development, largely flood control and drainage improvement, in the east of the city toward Kudus.

14.039 South from Semarang, Salatiga and Magelang will be able to capture the advantage of being close both to the marketing and trading centers and crop-producing highlands. They would be able to become centers of agro-processing.

14.040 Surakarta will be able to develop on the basis of textile and other labor-intensive manufacturing industries. The traditional urban character of the city would be an asset for attracting new investors. When the Upper Solo Multi-Purpose Project is completed, Surakarta would favorably be affected by the intensified agricultural and related activities resulting from the project. In addition, Surakarta will be an important part of the tourism complex which includes Yogyakarta and Semarang.

14.041 Klaten would be another specialized manufacturing center, for metalworking. The basic skills are already there, and the government's further encouragement will improve prospect greatly.

04.042 This alternative development strategy would be economically very efficient, i.e., the greatest economic growth can be achieved for a given amount of investment resources. The major components of public investment required for the strategy would be as follows:

- (1) Substantial upgrading of the national highway along the northern coast from Brebes to Semarang and south to Surakarta and to the east, and of the other stretches of the national highway going through Magelang and Klaten toward Yogyakarta.
- (2) Semarang Port development with restructuring of certain areas in the city for industrial estate development.

- (3) Industrial estates development at Tegal, Pekalongan, Magelang, Salatiga and Klaten along with labor training centers. Proper scheduling of these estates is essential.
- (4) Strengthening of industrial support services at these cities.
- (5) Irrigation rehabilitation and flood control/drainage improvement in the Pemali-Comal basin.
- (6) The development of water storage schemes and drainage improvement for the Semarang-Demak-Kudus area.
- (7) Development of housing sites and improvement of existing communities at those urban centers.

14.043 A possible adverse impact of this strategy is widening of development gap between the development belt and the rest of the Province. It is possible to make a few comforting comments on this issue.

14.044 First, available information on the movement of the population indicates that people in the Province are quite mobile. It is well known that some people migrate spontaneously as far as to Sumatra and Kalimantan and many have been attracted to Jakarta by its economic advantages. Therefore, if information is given, many people will be able to migrate readily to one of those centers. In addition, due to the shape of this development belt, no part of the Province would be more than 150 km away from the belt.

14.045 Second, information should be systematically provided to those people in the hinterland on the availability of job openings and training opportunities. In addition, the provision of migrant reception facilities will ease the obstacles to migration.

#### (b) Minus Areas Strategy

14.046 The objective of this strategy is to improve the living standard of those living in rural low income areas, with emphasis on minus areas, directly through a comprehensive attack on the source of poverty. If successful, this strategy would enable achievement of a major objective of Repelita II, i.e., the redistribution objective.

14.047 The minus areas within the Province can be broken down into two. As far as the present Study is concerned with the mountainous area from Mt. Ungaran to Mt. Slamet, difficulty in marketing and insufficient knowledge about the kinds of crops suitable to the area are major causes of underdevelopment. Therefore, when highway improvement is combined with appropriate extension services and development of marketing systems, the area will be able to command higher income. Typically such a rural development package will include the following elements:

- (1) Improvement of highway access to target rural areas from market towns such as kabupaten centers.

- (2) Provision of agricultural extension services with emphasis on farming of upland cash crops such as soybeans and groundnuts combined with poultry and beef fattening.
- (3) Organization of effective and efficient marketing systems.
- (4) If appropriate, the establishment of agro-processing facilities on cooperatives.

14.048 The prospects for this kind of development in those highland areas is not necessarily assured. First, the investment requirement per unit-increase in value added is generally high. This is so not only for capital investment but also for human skill input. Organizational and marketing improvements would require substantial skilled manpower as the number of people involved would be enormously large. Second, there are a number of uncertainties which have not yet been clarified regarding the methods of rural development. Although agricultural programs have been tested well in predominantly paddy areas, similar programs have not been proved to be successful in sparsely developed highland areas. What can be recommended at this time is to start pilot schemes where a good development prospect is known to exist.

14.049 The eastern block of minus areas is different from the highland areas discussed above. The major problems here are the undependable supply of water coupled with poor soil characteristics. Although market access is also poor, its improvement alone would not help development of the block. The area requires extensive water management measures and soil improvement. As stated, this area is less promising than the highland. Any serious effort for its development should be based on a thorough examination of the area's potentialities.

#### (c) Cilacap Axes Development Strategy

14.050 Cilacap has been designated as a growth center at the national level. But, despite its attractive port capability, the growth of this industrial city has been slow. Nevertheless, the potential benefit of the development of Cilacap is great. First, the entire southern coast of Java would be given encouragement if Cilacap prospers as it would be the only major city along the southern coast which is far less developed than the northern coast. Second, its development will certainly remove the constraint from which Central Java has been suffering, i.e., the lack of a port comparable with Tanjung Priok or Perak. Thus, if the Cilacap growth center succeeds in achieving intended development, Central Java would be able to develop comparably with East Java or West Java. Third, its development implies the emergence of a counter-development pole to the existing development belt in the Province. As a result, access to a development pole in the Province will be greatly improved.

14.051 The slow progress of Cilacap's development is, for one thing, due to slow progress in infrastructure development and, for another, due to the lack of urban activities on which new industrial activities can

be added. Development of infrastructure is currently going on within Cilacap. A power transmission line will soon be brought into service, but the development of other infrastructure such as water supply and telecommunication are less certain.

14.052 Another important measure needed for Cilacap's development is the improvement of access with other parts of the island. Both highway and railway links are poor at the moment. Bina Marga is currently undertaking works for upgrading the highway from Bandung to Purworejo via Wangon and the access road between Cilacap and Wangon. When this improvement is completed, the development prospect of Cilacap will greatly be improved. Such a highway improvement will do two things at the same time: improve the needed infrastructure and supplement the supporting urban activities which are insufficient within Cilacap itself and at the moment are provided by nearby cities such as Pruwokerto.

14.053 The idea of improving the access of Cilacap to the east and west is justifiable and is an indispensable step for the development of Cilacap, but it would not be sufficient for quick development of the growth center. The north-south link to Tegal should also be improved. This highway stretch of less than 150 km will effectively links Cilacap to the growing northern development belt of the Province. This link would be the most efficient way of linking Cilacap to a larger market and, therefore, should be given high priority.

14.054 The necessary measures for prompt development of Cilacap and the Cilacap axes, i.e., those two links of the east-west and the north-south, would be as follows:

- (1) Reliable power supply,
- (2) Water supply for industrial use,
- (3) The provision of land for industries in greater quantity and with greater bearing capacity,
- (4) Upgrading of highways directly north to Tegal, to Bandung to the west and to Yogyakarta to the east, with a new link which would be needed between Purworejo and Yogyakarta,
- (5) Interagency coordination for implementation of development programs, and
- (6) Technical and financial assistance from the Central Government to the Provincial and kabupaten governments.

(d) Population Strategy

14.055 This strategy has two elements, one aims at reducing the population of the Province by encouraging transmigration to outer islands and emigration to other provinces in Java, mostly to Jakarta. Historically,

transmigration programs have been going on with Governmental assistance. However, due to a large resource requirement,<sup>1/</sup> the rate of transmigration has been less than the net natural growth of population of the Province. Therefore, a possible course of action is to expand enormously transmigration projects in outer islands so that a substantial reduction in population can be achieved.

14.056 The other element in the strategy is to strengthen family planning. Although the natural growth rate of population started to decline in the 1970's, there will be an upswing in the growth rate during the 1980's due to the baby boom which took place during the 1950's and the 1960's. Unless swift action is taken now, the population of the Province and, for that matter, of the nation as a whole will become unbearably large. Once it gets large, not much can be gained no matter where they can be located. If the present transmigration programs lead to greater natural increases of population, they would not help much to solve the population problem in the long run. In addition, the cost of family planning is relatively less than transmigration and, therefore, it would deserve high priority.

#### 14.3.3 Alternatives With Respect to Interprovincial Resource Allocation

14.057 In 1969, per capita income of Central Java was about 73 percent of that of the nation. Since then, this proportion declined and it stood at 55 percent in 1975 (see Table 1.10).<sup>2/</sup> Such widening of interregional income disparity is contrary to the objectives set forth in Repelita I and II. In particular, Repelita II places emphasis on achieving more equal distribution of the fruits of development. Therefore, alternatives we shall consider in this section refers to the degree of income equality to be achieved at the end of Repelita III between Central Java and the nation. The degree of equality or disparity is considered to be dependent largely upon the amount of development resources to be allocated within Central Java. Specifically, the following two alternatives will be considered:

- (1) To maintain the current level of disparity, i.e., per capita income of Central Java being 55 percent of the national level; and
- (2) To reduce the gap by raising per capita income of Central Java to 65 percent of the national level.

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<sup>1/</sup> According to a World Bank report, the cost of transmigration is estimated to be US\$4,700 per family. See 11.5.3.

<sup>2/</sup> Discrepancy in per capita GRDP between the national and the Central Java Province is smaller based on the estimation made by the Research Group for Regional Income (Kelompok Penelitian Pendapatan Regional) of University of Indonesia. According to them, in 1972 per capita GRDP in Central Java was 73 percent of the national average, while our data shown in Table 1.10 indicates it was 63 percent based on current prices or 70 percent based on constant prices.



These resource alternatives are referred to by Resource Alternative I and II, respectively. In addition, we shall examine Basic Resource Alternative which has been derived by extrapolating past trends of resource availability into the future.

14.058 Naturally, a higher income level can only be achieved by increasing the amount of development resources to be allocated to Central Java. Naturally, the second alternative is most desirable from the viewpoint of Central Java, but the availability of resources determines its feasibility.

#### 14.4 Comparative Evaluation of the Alternatives

14.059 To estimate available development funds from all sources for Central Java, we estimated the relationships among gross domestic product (GDP), Central Governmental revenues and resource allocations for development expenditures of Indonesian economy in terms of the 1977 constant rupiah. The growth rate of GDP during the Repelita II period is estimated to be 7.5 percent and that during the Repelita III period is assumed to be 7.0 percent. The total revenue of the Central Government was Rp.3,623 billion in 1976 and it was 23 percent of the 1976 GDP. This share will grow to 25.3 percent by the end of Repelita III and the 1983 total revenue will be around Rp.6,459 billion.

14.060 At the beginning of Repelita I, the share of development expenditures in the total revenue was very small, but the share has increased gradually and now it is slightly more than 50 percent of the total revenue. However, we think the share will not go far beyond the 50 percent level since development expenditures require large maintenance expenditures which are parts of routine expenditures. For this reason, it is assumed that the share of the development expenditure would not be much more than 50 percent.

14.061 Table 14.3 shows three sets of alternative resource allocation for Central Java by year and by source for the coming six years. Provided that the spatial pattern of resource allocation in the Province is the same as before, Resource Alternative I is the public investment which is required for maintaining the 1975 level of per capita income disparity between Central Java and the nation as a whole, while Resource Alternative II is the required public investment for raising the level of Central Java per capita income from 55 percent to 65 percent of the national average. On the other hand, if Basic Resource Alternative were taken, the relative income level of Central Java would keep falling as in the past. It is estimated that per capita income of Central Java would fall to about 40 percent of the national level by 1983 if this alternative is chosen. Although the precise requirement varies depending on the pattern of resource use, which is called here "strategy," the required amount has been estimated by assuming a conventional pattern of resource usage as a hypothesis.

14.062 For the 1978/79 to 1983/84 period, those requirements amount to Rp.1,347 billion and Rp.1,737 billion, respectively for Resource Alternatives I and II. For these two levels of resource availability, consequences have been predicted for each of the four different development strategies discussed in previous section. Before presenting the consequences predicted, let us summarize below the bases which are employed for estimating the implications of each alternative strategy:

Table 14.3 Alternative Projections of Required Development Funds by Source

	(Unit: Rp. Million)				
	Central Government	Provincial Government	INPRES Programs	KB/KDY Own Funds	Total
Basic Resource Alternative					
1978/79	72,900	11,505	45,567	10,090	140,033
1979/80	81,529	12,847	49,501	10,961	154,838
1980/81	88,325	13,677	52,451	11,615	166,068
1981/82	95,679	14,903	55,401	12,268	178,251
1982/83	106,851	16,630	60,647	13,429	197,557
1983/84	115,705	17,748	64,252	14,228	211,933
1978/79-1983/84					
Total	560,989	87,310	327,819	72,591	1,048,709
Resource Alternative I					
1974/75	20,092	6,270	12,264	5,113	43,739
1975/76	40,161	8,421	23,506	7,000	79,088
1976/77	56,724	9,338	29,806	8,000	103,868
1977/78	63,249	10,002	38,271	9,049	120,571
1978/79	118,816	12,386	45,567	10,192	186,961
1979/80	129,073	13,217	49,501	11,072	202,863
1980/81	136,766	14,247	52,451	11,732	215,196
1981/82	144,460	15,364	55,401	12,392	227,617
1982/83	158,136	17,144	60,647	13,565	249,492
1983/84	167,539	18,487	64,252	14,372	264,650
1978/79-1983/84					
Total	854,790	90,845	327,819	73,325	1,346,779
Resource Alternative II					
1974/75					
1975/76					
1976/77					
1977/78					
	Same as Alternative I.				
1978/79	169,846	13,192	45,567	10,577	239,182
1979/80	184,509	14,280	49,501	11,635	259,925
1980/81	195,507	15,608	52,451	13,031	276,597
1981/82	206,504	17,064	55,401	14,856	293,825
1982/83	226,055	18,692	60,647	17,233	322,627
1983/84	239,496	20,442	64,253	20,335	344,526
1978/79-1983/84					
Total	1,221,917	99,278	327,820	87,667	1,736,682

- Notes:
1. The 1974/75-1977/78 figures are realized ones.
  2. The 1978/79-1983/84 figures are at the 1977/78 prices.
  3. For Alternative I, the development funds are estimated on the basis of the projected governmental revenue which is in turn estimated by assuming a fixed elasticity ratio with respect to GDP or GRDP.
  4. GRP is assumed to grow at 7.5 percent per year during the Repelita II period and at 7 percent during the Repelita III period.
  5. For Alternative II, local government development funds are projected on the basis of the required growth of the Provincial GRDP and the Central Government development fund is set to the level required to achieve the targeted growth of GRDP.
  6. Basic Resource Alternative has been estimated on the basis of projecting the trends.

- (1) For every strategy, per capita public investment in the strategic areas is set to be twice as large as that in the non-strategic areas. The strategic areas are defined to be the areas on which emphasis is placed in the allocation of development resources. These areas are shown for each alternative in Figure 14.4.
- (2) When the family planning program is intensified, population growth rates in the next several years are estimated to be as follows:

#### Annual Population Growth Rates

Alternative	(Unit: Percent)	
	1976-1981	1981-1986
With Current Family Planning	1.685	1.902
With Intensified Family Planning	1.553	1.623

To attain the low population growth rates in the second row in the table above, the Central and the Provincial Governments have to allocate Rp.64 billion for family planning activities for the coming six years.

- (3) The transmigration program will enable 110,000 families to transmigrate to other provinces and the total costs will amount to Rp.13.7 billion for the Province.
- (4) If the Province executes either Differential Growth Strategy, Minus Areas Strategy or Cilacap Axes Development Strategy, the 1983 population of the Province will be 26,851 thousands, while it will be 26,189 thousands if Population Strategy is adopted which is a combination of family planning and transmigration programs. When Population Strategy is adopted, the population growth rate would be as follows:

#### Population Growth Rate

##### Under the Population Strategy

	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
Population Growth Rate	1.553	1.366	1.366	1.428	1.298	1.217

- (5) Migration will take place in response to private investment as described in 14.1 (e). The following relationship between population growth rates and the amount of private investment by KB/KDY has been used:

$$\frac{\Delta \text{ population growth rate (in percent)}}{\Delta \text{ private investment (in Rp. billion on approval basis)}} = 0.01818$$

Population growth rates in the strategic and non-strategic areas are modified by employment of this coefficient.

- (6) The amount of private investment are assumed as simple functions of public investment. The assumed proportions are based on the 1969 to 1974 data of private and public investments and are shown below.

Areas	Private Investment
Development Belt	152 percent of public investment
Cilacap Axes	60 percent of public investment
Minus Areas	20 percent of public investment
Other Areas	40 percent of public investment

- (7) Sectoral composition of combined public and private investment for each strategy is designed to maintain the existing sectoral shares of the GRDP in strategic and non-strategic areas. To simplify our projections, the economy is divided into three major sectors: (1) the agriculture sector, (2) the mining and industry sector and (3) the services sector. In this case, the mining and industry sector includes mining, quarrying, manufacturing, construction, electricity, gas and water sectors, whereas the services sector consists of transportation, communication, trade, banking, public administration and other services sectors.
- (8) GRDP consists of two elements: returns to capital, and wages to labor. As it is usually observed in a short period, wage income is assumed to be a fixed proportion of the returns to capital. The returns to capital by sector are assumed as follows regardless of the location of investment:

Sector	Rate of Return (Percent Per Year)
Agriculture	6.0
Mining and Industry	16.0
Services	20.0

14.063 Based on the above assumptions, we estimated the 1983 population, gross regional domestic products, per capita income and per capita public investment in the strategic as well as the non-strategic areas with respect to the first two resource alternatives. The results are shown in Table 14.4 through 14.7. Only for the Differential Growth Strategy, the predicted consequences of the Basic Resource Strategy are shown (see Table 14.4).

04.064 The consequences of different alternative strategies are summarized in Figures 14.5 and 14.6 for Resource Alternative I and Resource Alternative II, respectively. For Resource Alternative I, which is based on the availability of public investment resources of Rp.1,348 billion, 28.5 percent greater than the Basic Resource Alternative, the fastest growth of GRDP of the Province can be attained by Differential Growth Strategy. In fact, with this strategy, per capita GRDP of the Province will increase from the current level of 55 percent of the national average to 61 percent of it by 1983. Also with the Differential Growth Strategy, the per capita GRDP will be kept at 53 percent of the national level, up from the 40's with other strategies, as shown in Table 14.4. With Cilacap Axes or Population Strategy per capita GRDP of the Province will be maintained more or less at the present level relative to the national average and is predicted to be 58 percent in 1983. With Minus Areas Strategy, the relative level of the Provincial per capita GRDP will decline slightly from the current level.

14.065 As far as the minus areas are concerned, Minus Areas Strategy will lead to a reversal of the income gap; the per capita GRDP of the minus areas relative to the Provincial average will increase from the present level of 79 percent to 105 percent in 1983. With any of the other strategies, the relative level of the minus areas will decline to the range of 63 percent to 71 percent by 1983, although there will be an appreciable increase in absolute terms.

14.066 On the basis of the above, it is possible to eliminate some strategies as inferior. Compare first Cilacap Axes to Population Strategies. Both strategies will lead to more or less identical growth of the Province in terms of per capita GRDP, but the minus areas will be improved more with Population Strategy. Consequently, Cilacap Axes Strategy can be considered as inferior. By comparing Differential Growth Strategy with Population Strategy, it is not possible to conclude definitely, but the advantage for the minus areas of Population Strategy may be considered to be small relative to the advantage for the Province as a whole resulting from Differential Growth Strategy. Consequently, the remaining problem is to compare Differential Growth Strategy with Minus Areas Strategy. For Differential Growth Strategy, the main problem is the projected increase in the differential between the minus areas

Table 14.4 Predicted Consequences of Differential Growth Strategy

	1977		1983			
			Basic Resource Alternative		Resource Alternative I	
	Number	Growth Rate (%)	Number	Growth Rate (%)	Number	Growth Rate (%)
<b>Strategic Areas</b>						
Population	9,819,523	2.83	11,609,390	2.83	11,609,390	2.83
GRDP (Rp. Mil.)	751,380	10.20	1,345,702	13.31	1,906,205	16.78
Per Capita GRDP (Rp.)	76,519	7.17	115,915	10.19	164,195	13.57
Per Capita Investment (Rp.)	-	-	61,685	-	102,406	-
<b>Non-Strategic Areas</b>						
Population	14,329,642	1.03	15,241,286	1.03	15,241,286	1.03
GRDP (Rp. Mil.)	910,591	1.14	974,629	2.90	1,219,326	4.99
Per Capita GRDP (Rp.)	63,546	0.10	63,947	1.85	80,002	3.91
Per Capita Investment (Rp.)	-	-	30,843	-	50,925	-
<b>Total Area</b>						
Per Capita GRDP (Rp.)	68,821	3.87	86,416	6.34	116,404	9.15
<b>Minus Areas</b>						
Per Capita GRDP in Minus Areas (Rp.)	54,138	1.28	58,416	-	70,746	-

Table 14.5 Predicted Consequences of Minus Areas Strategy

	1977		1983	
	Resource Alternative I		Resource Alternative II	
	Number	Growth Rate (%)	Number	Growth Rate (%)
Strategic Areas				
Population	5,871,186	1.35	6,363,095	1.35
GRDP (Rp. Mil.)	346,335	10.01	725,515	13.12
Per Capita GRDP (Rp.)	58,989	8.54	114,019	11.61
Per Capita Investment (Rp.)	-	-	116,010	-
Non-Strategic Areas				
Population	18,277,978	1.92	20,487,581	1.92
GRDP (Rp. Mil.)	1,315,594	5.11	2,100,749	8.11
Per Capita GRDP (Rp.)	71,977	3.31	102,538	6.07
Per Capita Investment (Rp.)	-	-	57,712	-
Total Area				
Per Capita GRDP (Rp.)	68,821	4.37	105,259	7.34
Minus Areas				
Per Capita GRDP in Minus Areas (Rp.)	54,138		110,702	

Table 14.6 Predicted Consequencies of Cilacap Axes Strategy

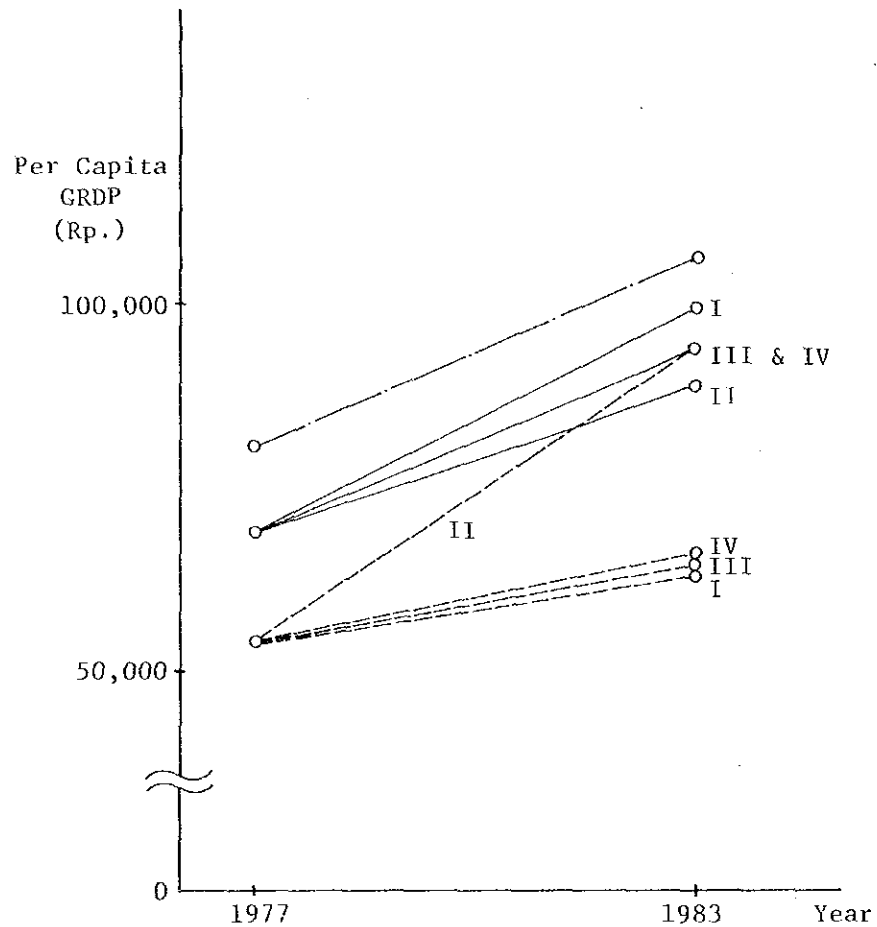
	1977		1983	
	Resource Alternative I		Resource Alternative II	
	Number	Growth Rate (%)	Number	Growth Rate (%)
<b>Strategic Areas</b>				
Population	3,522,175	2.06	3,980,093	2.06
GRDP (Rp. Mil.)	231,400	12.74	568,316	16.15
Per Capita GRDP (Rp.)	65,698	10.47	142,790	13.81
Per Capita Investment (Rp.)	-	-	97,000	-
<b>Non-Strategic Areas</b>				
Population	20,626,989	1.74	22,870,582	1.74
GRDP (Rp. Mil.)	1,430,564	6.11	2,357,897	8.68
Per Capita GRDP (Rp.)	69,354	4.30	103,097	6.83
Per Capita Investment (Rp.)	-	-	48,729	-
<b>Total Area</b>				
Per Capita GRDP (Rp.)	68,821	5.29	108,981	7.96
<b>Minus Areas</b>				
Per Capita GRDP in Minus Areas (Rp.)	54,138		72,431	



Table 14.7 Predicted Consequences of Population Strategy

	1977		1983	
	Resource Alternative I		Resource Alternative II	
	Number	Growth Rate (%)	Number	Growth Rate (%)
Total Area				
Population	24,149,165	1.36	26,188,622	1.36
GRDP (Rp. Mil.)	1,661,964	6.76	2,882,755	9.61
Per Capita GRDP (Rp.)	68,821	5.33	110,076	8.14
Per Capita Investment (Rp.)	-	-	68,698	-
Minus Areas				
Per Capita GRDP in Minus Areas (Rp.)	54,138		66,819	
			75,539	

Figure 14.5 Predicted Growth of Per Capita GRDP by  
Strategy Under Resource Alternative I

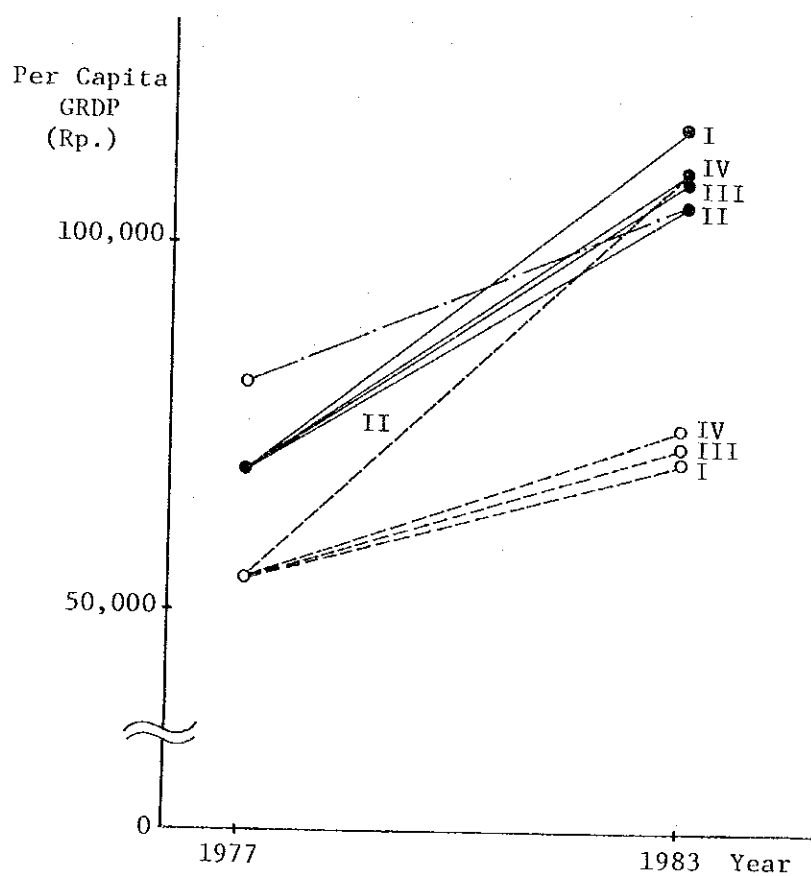


Legend

- Province
- - - Minus Areas
- . - 65% of Per Capita GDP of the Nation
- I: Differential Growth Strategy
- II: Minus Areas Strategy
- III: Cilacap Axes Strategy
- IV: Population Strategy

Source: Tables 14.4 to 14.7.

Figure 14.6 Predicted Growth of Per Capita GRDP by Strategy Under Resource Alternative II



Legend

- Province
- - - Minus Areas
- . - 65% of Per Capita GDP of the Nation
- I: Differential Growth Strategy
- II: Minus Areas Strategy
- III: Cilacap Axes Strategy
- IV: Population Strategy

Source: Tables 14.4 to 14.7.

and the rest of the Province; and for Minus Areas Strategy, the problem is the projected increase in the differential between the Province and the nation as a whole. For this level of resource availability, it can be said that it is more important to raise the income level of the Province as a whole relative to the nation than to reduce the intra-provincial disparity.

14.067 When Resource Alternative II is taken, i.e., a greater amount of resource availability is assumed, it is possible for the Province to exceed the 65 percent line (see Figure 14.6). With Differential Growth Strategy, per capita GRDP of the Province will reach 71 percent of the national average by 1983. Even with Minus Areas Strategy, per capita GRDP of the Province will approach near to the 65 percent level. Otherwise, the interrelationships among alternative strategies are identical as under Resource Alternative I. Therefore, the essential question is the choice between Differential Growth Strategy and Minus Areas Strategy.

14.068 As the relative position of the Province will improve anyway with the amount of public investment assumed, a crucial drawback of Minus Areas Strategy which existed under Resource Alternative I is removed in the case of Resource Alternative II. However, the particular components assumed for Minus Areas Strategy may be objectionable. The reversal in per capita GRDP between the minus areas and the average of the Province can be considered excessive for the purpose of improving the intraprovincial disparity. It would be better to reduce resource allocation to the minus areas by a certain amount and reallocate it instead to the development belt. In this way, a faster growth can be achieved while improving the distributional equity.

14.069 Now, let us compare Resource Alternative I to Resource Alternative II. The available public investment resources under Resource Alternative II is 30 percent greater than those under Resource Alternative I. However, the greater amounts of resources assumed available from Provincial and KB/KDY governments under Resource Alternative II are induced resources due to higher levels of economic activities within the Province by an increase in the resource allocation by the Central Government. Therefore, the real source of the difference in resource availability is the increase in resource allocation by the Central Government which is larger by 43 percent in Resource Alternative II than in Resource Alternative I. However, it should also be noted that the assumed resource allocation from the Central Government in Resource Alternative I is greater by 52 percent than in Basic Resource Alternative.

#### 14.5 Recommended Public Investment Program

14.070 In view of the rapid rate at which the Provincial per capita GRDP rises relative to the national average with the resource availability assumed for Resource Alternative II, it would not be realistic to ask the Central Government for the amount assumed in Resource Alternative II. Central Java evidently has all the reasons for asking a greater share

than assumed in Resource Alternative I: low income and relatively higher productivity of investment.<sup>3/</sup> Nonetheless, asking an increase of more than a double relative to Basic Resource Alternative would be too much. Taking the above factors into account, it is proposed here that the resource allocation from the Central Government should be in the order presented by Resource Alternative I. The recommended public investment program from 1978/79 to 1983/84 and private investment induced by this public investment are shown in Table 14.8.

14.071 As regards the choice among strategies, it would be appropriate to think of some mix of Differential Growth Strategy and Minus Areas Strategy. As the resource availability recommended above is rather scarce, a greater emphasis should be placed on Differential Growth Strategy than under Resource Alternative II. Therefore, a mix of 2 to 1 of the two strategies is recommended as a guideline (Mixed Strategy). The consequences of taking such Mixed Strategy can be summarized by per capita GRDPs in 1983 as shown below:

Province as a Whole	Rp.96,717
Minus Areas	Rp.74,732

These consequences are shown in Figure 14.7.a. The figure indicates that the Provincial GRDP per capita will approach gradually to the 60 percent level of the national average by 1983 and the per capita GRDP of the minus areas will grow at a faster rate than the national average. These can be achieved by a 33 percent increase in the resource allocation from the Central Government for development purposes inclusive of INPRES allocations if this mix of strategies is taken. Per capita investment during the period by area would be as follows:

Development Belt	Rp.68,132
Minus Areas	Rp.56,023
Other Areas	Rp.41,236

14.072 The analysis in the preceding subsection indicated that Population Strategy is not particularly attractive relative to Differential Growth Strategy. However, the pattern of resource allocation assumed under Population Strategy is a proportional distribution of investment resources to the present pattern. Therefore, if the available investment resources other than those needed for population programs were allocated in a pattern similar to Differential Growth Strategy, the growth of GRDP would have to be different.

14.073 Using the assumptions described above, the consequences of such Revised Mixed Strategy can be derived in the following way: the assumed population programs will absorb 5.8 percent of the total available public investment resources, that is Rp.77.7 billion out of Rp.1,347 billion, consequently reducing the GRDP increment by 5.8 percent, and the programs will reduce the total population of the Province by 2.5 percent by 1983 from the level projected without the population programs. Although the

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<sup>3/</sup> The incremental capital output ratio from 1970 to 1973 is calculated to be 1.70 for Central Java and 2.01 for the nation as a whole. This fact indicates that the productivity of investment in Central Java is substantially higher than the national average. See Appendix H for derivation.

Table 14.8 Recommended Public Investment and Induced Private Investment  
in Central Java, 1978/79-1983/84

(Unit: Rp. Million)						
	Central Government	Provincial Government	INPRES Programs	KB/KDY Own Funds	Total	Private Investment
1978/79	118,816	12,386	45,567	10,192	186,961	163,119
1979/80	129,073	13,217	49,501	11,072	202,863	176,993
1980/81	136,766	14,247	52,451	11,732	215,196	187,753
1981/82	144,460	15,364	55,401	12,392	227,617	198,590
1982/83	158,136	17,144	60,647	13,565	249,492	217,675
1983/84	167,539	18,487	64,252	14,372	264,650	230,900
Total	854,790	90,845	327,819	73,325	1,346,779	1,175,030

Source: Table 14.3 and Section 14.4.

Table 14.9 A Recommended Investment Program<sup>1/</sup> by Sector  
by the Central Government to Central Java,  
1978/79-1983/84

Sector	Amount (Rp. Billion)	Share (%)
Agriculture & Irrigation	240 <sup>2/</sup>	20.3
Industry & Mining	170	14.4
Electric Power	270 <sup>3/</sup>	22.8
Transportation & Communication	200	16.9
Education & Youth	70	5.9
Health & Family Planning	80 <sup>4/</sup>	6.8
Others	153 <sup>5/</sup>	12.9
Total	1,183	100.0

Notes: <sup>1/</sup> Includes the INPRES programs.

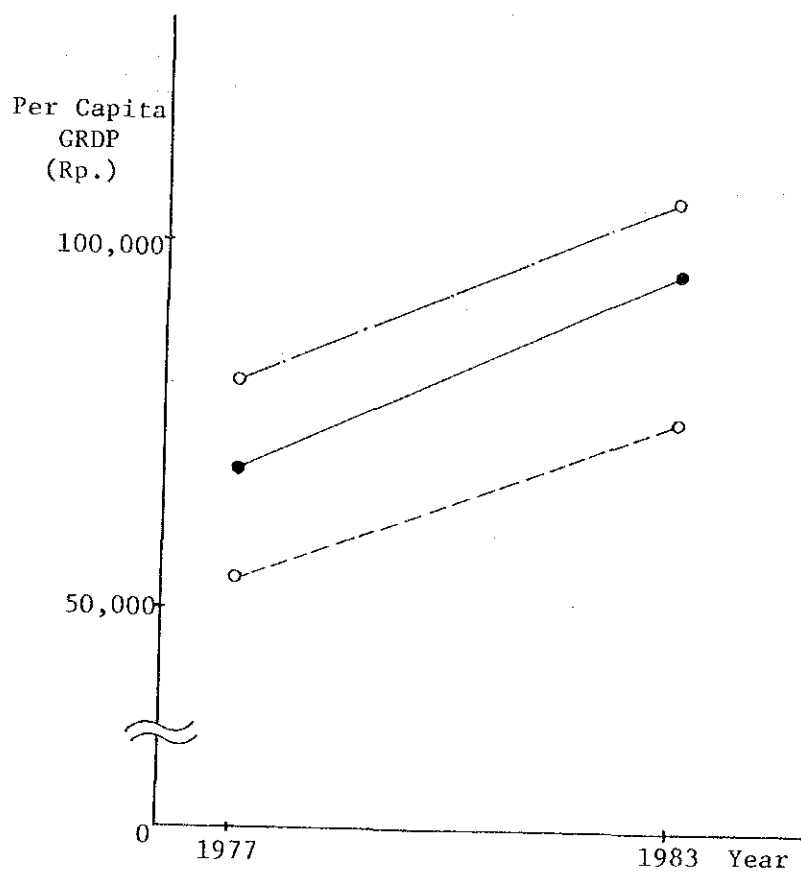
<sup>2/</sup> Includes the recommended investment to irrigation of Rp.244 billion (see Chapter III, Table 3.6), which is reduced to about Rp.210 billion.

<sup>3/</sup> Comprises solely the recommended investment (see Chapter IX, Table 9.12), which has been reduced for the period to the figure shown above.

<sup>4/</sup> Includes the recommended investment for family planning of Rp.64 billion (see Chapter XI, Table 11.23).

<sup>5/</sup> Includes the recommended investment in tourism of Rp.20 billion (see Chapter VII, Table 7.4).

Figure 14.7.a Predicted Growth of Per Capita GRDP When  
Mixed Strategy under Resource Alternative I is taken



Legend

- Province
- - - Minus Areas
- · - 65% of Per Capita GRDP of the Nation

Source: Study team.

actual process of projection is more complex (see Appendix F), the resulting per capita GRDP in 1983 would be as follows:

	(Unit: Rp. at the 1977 Constant Price)
Province as a Whole	Rp.95,814
Development Belt	Rp.123,108
Minus Areas	Rp.74,515
Other Areas	Rp.76,139

14.074 This result is shown in Figure 14.7.b. The above figures indicate that the additional of population programs does not make it particularly superior to Differential Growth Strategy for the time span considered, but does not lead particularly less desirable situation by 1983 relative to the original Mixed Strategy. True benefits of population programs will be realized beyond 1983 rather than before 1983 and our projections are not claimed to be particularly precise. Therefore, it is recommended here that Revised Mixed Strategy, including the Population programs, should be taken for the development of Central Java.

#### 14.6 Sectoral Allocation of the Recommended Public Investment

14.075 The recommended amount of public investment must be broken down into sectors according to the priority of each sector. We are presenting in Table 14.9 a suggested sectoral breakdown of the recommended investment from the Central Government to Central Java. The breakdown is based on the experience in the Province as well as in the nation and is made to accommodate specific recommended programs described in previous parts of this report.

#### 14.7 Priority Development Programs and Areas

##### 14.7.1 General

14.076 Preceding analyses of alternative development strategies have led to the conclusion that an appropriate mixture of the three strategies should be adopted for the Province of Central Java, i.e., Revised Mixed Strategy of (1) Differential Growth, (2) Minus Areas and (3) Population Strategies. In what follows, we shall try to identify priority development programs and areas which would be essential and consistent with Revised Mixed Strategy.

14.077 As to Cilacap Axes Strategy, the strategy as a whole has been considered as inferior to some others, but some elements within the strategy may be effective in achieving the objectives of development. Specifically, the kabupaten center of Cilacap has been designated as an industrial development center of the nation and infrastructure development has been going on for some time. In response to it, port activities have recently been intensified rapidly.

14.078 In response to it there is an increasing need to develop the hinterland of Cilacap, mainly in Kabupaten Banyumas. This kabupaten