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9. ABSTRACT
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In order to examine development planning in Indonesia and the roles major cities can play in development efforts, a study was conducted from 1971 to 1974 to collect and analyze data on the administration of services by five major cities: Surabaya, Medan, Ujung Pandang, Semarang, and Pedang. Each city is the capital of its province and is the social and economic center of its region. Data for each city were collected concerning the following services: power, water and sewerage, roads and bridges, education, terminals, health, communications, markets, public safety, social welfare, and recreation. Tables in this report display aggregate amounts of expenditures, usage, charges, the administrative agencies involved, and their budgets. Conclusions from the study are: (1) If the national government is to decentralize development responsibility, the cities need increased taxation power or guaranteed transfers of funds from higher governments, so the city governments can plan and implement long-term development projects. (2) City government officials are in need of training in the administrative sciences. (3) A key ingredient of a national policy that will utilize the potential of the cities for contributing to development is a unified strategy of national development.

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SERVICES AND DEVELOPMENT IN FIVE INDONESIAN MIDDLE CITIES

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JUNE 1974

P R E F A C E

The research project of which this report is the product was supported by a research grant of the United States Agency for International Development (USAID/Indonesia) to the Center for Regional and Urban Studies of the Institute of Technology Bandung. In the course of the work the services of a geographical advisor were also provided by the USAID. The research planning and field work were begun in autumn 1971, and the first stage completed in the summer of 1972. The second stage of field data collection and the final analyses were carried out in the spring of 1974.

The objective of this effort has been first to find in the maze of municipality and provincial government offices and those of independent authorities in five case Middle Cities the basic statistics and views that would enable the analysts to assess the quantity and quality of government provided services and their administration extant in those cities in the early 1970's - the period of the greatest activity of the First Five Year Plan and the beginning of the Second Five Year Plan. Such data and analyses would be related, in turn, to the regional and national development roles of the five Middle Cities and to the larger development problems that Indonesia faces in the 1970's and beyond. It must be emphasized that the primary goal has been to collect hitherto centrally unavailable information on this important subject and to present it in a coherent tabular form. Comparative conclusions and policy recommendations, as well as suggestions for further research are assayed with the hope the reader will bear in mind the inherent difficulties of pioneer Development Policy Research in Indonesia at this time.

The project was under the direction of Ir. Abukasan Atmodirono, Director of the Department of Regional and City Planning of I.T.B. (1970-1973). Additional staff members and advanced students who gave

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Dr. James Osborn assisted with the initial planning and undertook the final drafting, the latter as a Consultant from the USAID.

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Abukasan Atmodirono
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June, 1974.

CONTENTS

P R E F A C E	iii
Tables and Illustrations	vii
I. INTRODUCTION	3
A. The Setting	3
B. Services and Development	6
C. Mode of Analysis	7
II. MIDDLE CITIES IN INDONESIAN DEVELOPMENT	10
A. National Development Policy	10
B. The City System	13
C. The Case Cities	16
III. SERVICES IN THE DEVELOPMENT OF FIVE CITIES.	21
A. Surabaya	21
1. The City as a Unit and Center	21
2. The Services System	32
3. City Conclusions	43
B. Medan	49
1. The City as a Unit and Center	49
2. The Services System	59
3. City Conclusions	64
C. Ujung Pandang	69
1. The City as a Unit and Center	69
2. The Services System	77
3. City Conclusions	81
D. Semarang	85
1. The City as a Unit and Center	85
2. The Services System	90
3. City Conclusions	94
E. Padang	97
1. The City as a Unit and Center	97
2. The Services System	102
3. City Conclusions	105
IV. CONCLUSIONS	107
A. City Comparisons and Local Development Policy Conclusions	108
B. National Development Policy Recommendations.	114
C. Further Research Recommendations	117
APPENDICES	
A. Master Services Tables and Maps	
B. Central Government Structure and Functions	
C. Quantitative Analysis of Regional and City System Data, by James Osborn	
D. Important Sources	

TABLES AND ILLUSTRATIONS

TEXT

1.	Indonesia	:	Map	1
2.	Surabaya	:	Map	20
3.	Surabaya	:	Basic Data	24
4.	Surabaya	:	Government Finances	30
5.	Medan	:	Map	48
6.	Medan	:	Basic Data	50
7.	Medan	:	Government Finances	56
8.	Ujung Pandang	:	Map	68
9.	Ujung Pandang	:	Basic Data	70
10.	Ujung Pandang	:	Government Finances	75
11.	Semarang	:	Map	84
12.	Semarang	:	Basic Data	86
13.	Semarang	:	Government Finances	88
14.	Padang	:	Map	96
15.	Padang	:	Basic Data	98
16.	Padang	:	Government Finances	100

APPENDICES

17.	Master Services Tables	-	Surabaya	A- 2
18.	Master Services Tables	-	Medan	A-17
19.	Master Services Tables	-	Ujung Pandang	A-33
20.	Master Services Tables	-	Semarang	A-51
21.	Master Services Tables	-	Padang	A-63
22.	Master Services Tables		A-77
23.	Procedure for establishing Development Budget for Local Government Project Development			B-24

1 : MAP

INDONESIA



Chapter I

INTRODUCTION

A. The Setting

Indonesia covers an equatorial archipelago south of mainland Southeast Asia of 5,110 km in breadth and encompassing 3,000 islands in a total land area of two million km². The six larger islands of Sumatra, Kalimantan, Sulawesi, Java, Madura and Bali are the most important ones. The first three along with the rest of the "Outer Islands" are relatively less densely populated and are the major sources of primary products production for export, such as oil, tin, rubber, wood, tobacco, copra and spices. Two-thirds of the 1971 population of 119,232,499 lived in Java, Madura and Bali (the "Inner Islands") on 6.9 per cent of the land area at a density of about 560/km². The Inner Islands produce most of the food, but will have increasing food deficits as the national population continues to grow perhaps with an annual net increase of as much as 2.26 per cent (the 1961-1971 rate).

Urbanization is at a relatively low level (17.4 per cent of the population residing in urban areas in 1971, 14.8 per cent in 1961), which befits a traditionally self-sufficient poor economy in which the average monthly *per capita* living expenditure in even the more prosperous cities was no more than about US\$ 5 in 1969, with little saving. Among the Inner and Outer Islands the urban percentage and sectoral composition of employment, though not income levels, are quite similar. In 1971, 63.2 per cent of employment was in agriculture, 23.1 per cent in manufacturing. Eighty per cent of the total population was rural. Fifty-seven per cent of the population was illiterate.

Indonesia's present and future development problems (stability and reconstruction after 1965 having been substantially achieved by the early 1970's), put simply are ones of raising incomes and welfare levels, producing sufficient subsistence commodities, especially food, and maintaining a politic and cultural unity among the diverse and dispersed segments of the population in the course of reducing income

disparities among regions and between urban and rural areas. Vastly increasing foreign exchange earnings and continuing availability of foreign credits make financial resources not the main constraint on development at this time. ¹⁾

Two basic problems are more important. First, the government is the main mechanism for promoting development, even in the fields of foreign and domestic private investment, which it channels. But the administrative system, while large and complex, has been slow to achieve adequate efficiency. One cause is a basic lack of socio-economic information and monitoring of activity at fine enough levels. Another is inferior training and poor rewards.

The second problem is conceptual. Certain facts of Indonesian life portend dire crises, of which a principal one is the declining ratios of food and employment to population in the Inner Islands. Other realities involve significant assets. Most striking are the government's stability and commitment to progressive, flexible development policies, and the prospects for burgeoning revenues from raw materials exports. The challenge is to joint assets and liabilities in a long-range development policy concept such that opportunities are not missed and processes are set in motion that will ease the impact of the negative forces.

The development strategy of Indonesia for the rest of the century will have to confront two negative trends we foresee, both related to population growth. First, even as agricultural production is increased by the application of "green and blue revolutions", which is still problematical, rural inhabitants in the Inner Islands will be unemployed in increasing numbers. Millions will be forced to move to towns and

1) *The World Bank calculates, for example, that with a stabilizing of oil production at the level of the end of 1973, the net 1974 production value will be 66 per cent greater than that of the previous year. Future increases are expected, and also in other primary products -- both from rising world prices and increased production.*

cities, in which the development of manufacturing and services jobs can be expected to lag behind their numbers for a very long time. Second, food production in traditional areas will not be able to keep pace with Inner Island population growth. One means of attacking this problem will be opening of food production areas in the Outer Islands. Another is increased high yield applications in the Inner Islands with high technology inputs. If these are to satisfy Indonesia's growing food requirements, they will have to be carefully conceived, and better organized around regional centers.

Both future problems suggest important roles for Middle Cities in Indonesia's long-range development — functions beyond the industrial and services ones ordinarily associated with urbanization. That is why this study attempts to assess the present capacity and problems of governments in providing a wide range of social and productive services in cities of the middle echelon between the primate city of Jakarta on the one hand and the regional (provincial) settlements and distributions systems of which they are the centers on the other. These Middle Cities will bear the major responsibility, theoretically, for maintenance of the redundant former rural population at the same time that they, as centers of regional government and economy, will be key to more productive rural development, which seeks to expand food production on a large scale through the application of sophisticated modern technical and managerial methods whose source is the modern urban economy and society.

Meanwhile as decentralization of economic dynamism proceeds as a policy objective, these Middle Cities modernizing development functions will increase in national importance. The services challenge will be simultaneously to carry out in a complementary fashion both modern urban and rural economy support functions and the function of supporting redundant rural-urban migrants by providing them with as much employment, even in low-level services that can be disruptive to the modern economy (e.g. becaks as viewed by the Jakarta government), as possible, along with efficient distribution of welfare necessities such as food, shelter and health maintenance.

B. Service and Development

Public authorities and companies in Indonesia provide a wide spectrum of services. Services range from those with the greatest bearing on production and employment, like utilities, roads and ports, to those confined to the spiritual well being of the citizenry, e.g. sports, entertainment facilities and family planning. The system of government-provided services is most highly developed in cities because of the center functions of cities, the complexity of life and the wealth there, and because of the generally greater absence of the mutual cooperation and support interdependence among dwellers that characterizes traditional villages. Such support interdependence, it may be noted, retains greatest importance in cities among the lowest income groups, which are also the ones that have benefitted least from modern services provision.

As phenomena, urban services are perhaps most interesting because they represent the interface between government and socio-economic development at all levels. In this their form, dynamics and development not only are the manifestations of governmental concern for local economic and personal welfare but may be believed, too, to be the means or tools through the use of which individuals and corporations can hope to realize their aspirations.

The basic questions about the services system are : Is it adequate ? Is it indeed falling behind need and demand; or is it leading development and welfare needs? And how do developments in certain services relate to one another and the economic and social structure of the city region? Pressures of population growth combined with deterioration of older facilities in many Indonesian cities would suggest a possibly increasing services deficit. At the same time, large investments in productive facilities in some cities might mean that for certain kinds of services and customers the service capacity is intentionally being kept ahead of demand to spur development of a particular sort. This would already seem to be the case with some transportation facilities, for example, in Jakarta. Adequacy of services, the balance among types and emphasis on certain ones may be summed up as the "Services Identity" of a city.

This is affected directly by the development strategy of city and regional governments and the center functions of the city as perceived by development policy administrators. The objective in this study is to relate the changing quantitative and qualitative provision of a range of services to the functions of Middle Cities in Indonesian Development.

Services necessarily involve administrative complexities. In Indonesia services are provided by three or more levels of government and numerous statutory bodies. The flow of routine and development budget resources and the monitoring of development are intricate. From the basic issue of local versus higher control over and responsibility for local change have evolved sets of countervailing, complementary, and cooperating agencies whose policy requisites differ from one another according to the scale and source of their authority. Another objective of this study is to sort out responsibilities, resources, and actions, coming to a better understanding of how the services administrative system (mainly the governments) works in Middle Cities and what adjustments could desirably be made in the light of present and future development needs.

C. Mode of Analysis

Five Middle cities were selected for intensive data collection on services and their administration in 1971/2 and 1974 : Surabaya, Medan, Ujung Pandang, Semarang and Padang. Each is the capital of its province and the regions's principal social and economic center. The provinces containing the cities have significance to national development that is emphasized in national development policy. The five cities are good examples of what is meant here by Middle Cities, as contrasted to just middle-sized cities : they possess a distinct middle function in development policy flows between the Center (Jakarta and the central government) and the smaller regional settlements in economic, social, governmental and generally modernizing respects.

As far as possible a comprehensive approach to the services

systems of the cities has been taken, with the duration of this study allowing for a certain amount of time series analysis, but with the comprehensive coverage limiting the possible depth of analysis of individual services. The varying degrees of completeness in the Master Tables reflect the administrative competence of the various local agencies and city governments in recording their activity and achieving clarity of policy and implementation. It was not possible during these field surveys to quantify sufficient services patterns among enough sub-areas of the cities to permit the cities as areal systems in development to be explored. However, some data on this matter are presented in Appendix A. Further elaboration and analysis of this is an obvious next step in research.

The complete aggregate city services list for each city taken as a single unit is as follows, ordered from the most to the least important in national development and administrative complexity.

1. *Power* — electricity, gas.
2. *Water* — drinking water, sewerage, waste disposal, storm drainage.
3. *Roads & Bridges*
4. *Education* — elementary, secondary, vocational, universities, special training.
5. *Terminals* — Bus, harbor, airport, rail.
6. *Health* — clinics, hospitals, public health precautions and improvement, doctors and paramedics.
7. *Communications* — telephone, telex, radio/TV.
8. *Markets* — markets, regulations and licensing.
9. *Public Safety* — police, fire, jails, reform schools.
10. *Social Welfare* — the poor, disaster relief, invalids, aged, orphans.
11. *Recreation* — sports fields, parks, cinemas, theatres.

For these, Master Tables in Appendix A display aggregate amounts, usage, charges and administrative agencies involved with their respective budgets, as available. Combined indicators of efficiency and

coverage are also computed where possible as well as change since about 1970. As clear a picture as possible is rendered of the sources and amounts of funding for the development of these services.

The analysis proceeds from a description of each city and its functions as a unit and a regional center of population, manufacturing, trade and commerce, and government. Each city is described briefly in aggregate terms as a social, economic and governmental unit, with these quantities then related to the provincial totals. The services and their administration of each city are discussed in relation to the city's functions in development and compared among them on matters of coverage, and cost, and problems of efficiency, along with the relations of these to national, provincial and city development policy and governments. Lastly, the five cities are compared as service and development centers in relation to national development policy.

The conclusions suggest policy choices and opportunities at the various levels of administration. As the data base is far from complete, the most crucial gaps in information are identified, together with suggestions for further useful academic and policy research.

Chapter II

MIDDLE CITIES IN INDONESIAN DEVELOPMENT

A. National Development

The First Five Year Development Plan (Repelita I), 1969/70 - 1973/74, had as its objectives completion of price stabilization, rehabilitation of infra-structure and productive facilities, and increasing production in agriculture and basic industries. This led to a planned and realized development investment of about 30 per cent in agriculture and irrigation (counting half of the realized regional development investment in this total) and about 21 per cent in communications infra structure, with about eight per cent and three per cent respectively going to education and health. Agriculture continued to be the leading sector of the economy, yielding 40 per cent of the national product and employing 60 per cent of the manpower. Of the planned expenditures about 35 per cent were aimed at purely rural activities, while 43 per cent were devoted to strictly urban and urbanizing activities, including industry and mining, electric power, and communications.¹⁾ Roughly 40 per cent of the Pelita I (first five years of development) expenditures can be said to have gone to urban and urbanizing services specifically. And in the 1971/2 development project budget 40.4 per cent of location-specific development expenditures went to 31 Middle Cities. From 1961 to 1971, however, according to the World Bank, urban manufacturing declined absolutely, while rural manufacturing in Java grew rather rapidly. So in one respect, that of

1) *For supportive documentation and further details of Repelita I development policy patterns referred to here and below, see James Osborn, Area Development Policy and the Middle City under the Indonesian Repelita as Compared to the Malaysian Case : A Preliminary Analysis, SEADAG Report (New York: The Asia Society, January, 1974). For additional quantitative analysis of regional and urban indicators of 1972 - 1974, see Appendix C. to this report.*

small-scale manufacturing, urban development declined relative to rural development despite the heavy investment in urban and urbanizing sectors, including services.

In the Pelita I period, the time in which this survey was carried out, great strides were made, especially in the rehabilitation of irrigation and introduction of high yield crop varieties, and in bringing a large part of the infra-structure in Java up to a reasonable level of adequacy. However neither the food, population, modernization nor regional and class distribution of income problems were solved. So the Repelita II (Second Five Year Development Plan, beginning 1974/5) continues to stress agriculture (20 per cent of total planned expenditures, with 19 per cent additionally devoted to regional development which may be largely agricultural) and communications (19 per cent). Education and health investments retain approximately their same proportions as before. The overall planned five year development is almost five times the planned and about three times the actual investment magnitude of the Repelita I. With newly increased earnings from oil and other exports the final expenditures may be far higher.

Two points must be stressed about the trends of Indonesian development policy and as it bears on services and areal (geographical) patterns. First, increased development expenditures confront the constraint of project administrative absorptive capacity not increasing as fast as the money available. In Pelita I there was a certain emphasis on large infra-structure projects with a heavy equipment component and on the growing village and district assistance programs in which funds were turned over directly to local authorities for small development projects like roads for which the labor was donated locally. Such expenditures can be increased with efficient results. But development efforts that have more comprehensive goals and require more complex inputs cannot necessarily. In fields like health maintenance, education, family planning, and modern industrial development, professional staff development requirements and coordination and timing necessities may limit the possibilities for vastly increasing immediate and effective expenditures. This distinction between capital intensive services and

those that are very small-scale on the one hand and those which are intensive in professional and administrative inputs and broader in socio-economic scope and aim must be borne in mind in considering services development below.

The second point is that what may be an over centralization of development policy action has evolved in the course of the Pelita I. In that period the central government collected over 90 per cent of all government revenues (98.6 per cent in 1969/70). Its almost complete control of overall expenditures for development was understandable for that reason and because of the perceived necessity of maintaining a national unity centering on Jakarta. Three policy concerns arise in Repelita II planning that suggest a change in this of great potential importance to regions and cities. It was observed by the Indonesian government that the quality of development needs is shifting such that more complex ecological relationships must be manipulated. It was observed that while unity of administration and self-perception was achieved there were distressing disparities in the quality of development among regions. This is made more complicated by the fact that certain Outer Island provinces are large income earners; others are not; and the Inner Islands as a whole constitute a *poor ecumene*. And it was observed that disparities in income over the whole population were not being significantly reduced: people were not sharing equally in the fruits of development and the increased income from exports.

These observations have led to a decentralization policy in which special assistance programs devoted to regions and assistance to regional government budgets specifically will be greatly increased (the latter by from four to twenty times in the first years of Pelita II). More attention will be given to backward regions and to those with apparently unrealized developmental potentials. This means that regional development as a conceptual basis for development policy may assume greater importance. It should to a large extent center on the provincial capital cities as the organizing entities and growth centers within regional settlements hierarchies. And it should call attention to the differing provincial dynamics of development in a way not

likely in national economic sector policy planning, while assigning great development responsibility to regional and city governments for the reduction of intra-regional income disparities. That is, it should if the complicated development project planning and budgeting process is adjusted properly and specifically if provincial governments can effect more comprehensive development planning for their regions and can command sufficient monetary and staff resources. The problems with this are discussed below as related to specific services development in the Middle Cities and in Appendix B.

B. The City System

In economic and social terms, the regionalization of Indonesia is tri-partite. The Inner Islands, or the *poor ecumene*, contain the largest mass of poor agricultural population and most industrial production and services. Investment resources for development there and elsewhere are generated mainly through primary products exports from certain Outer Islands provinces (in addition to certain commercial taxes), which, excepting North Sumatra are otherwise undeveloped in infrastructure and modern productive capacity i.e. in Southern Sumatra, and East and Central Kalimantan and North Sulawesi. The other Outer Island regions are as dependent on central government redistributive largesse as the Inner Islands, except where food production for export to Java has and can be expanded. A factor analysis of regional population, economic, and development indicators makes clear the Inner-Outer Island distinction, and among regions of the latter, pinpoints North Sumatra (provincial capital : Medan) and South Sulawesi (provincial capital: Ujung Pandang) as growth areas.

Jakarta must be considered in any regional as well as urban system analysis because of the city's unique status equivalent to that of a province and its primate character. It has an importance in the present national economy that is difficult to minimize. Through 1972 Jakarta received 60 per cent of the imports, and 26 per cent of

the private investment. It contained 50 per cent of the currency in circulation and grew in population the fastest of any province or city (4.6 per cent annually, 1961-1971), while contributing 8.5 per cent to Gross Domestic Product, and supporting 4.58 million people (or about 22 per cent of Indonesia's urban population).

Surabaya, Bandung, Semarang, Medan, Palembang, Ujung Pandang, in order the next most economically and demographically important cities, are provincial capitals and range downward from about 1/2 to 1/8 the size of Jakarta. But they are economically inferior by much greater margins in terms of investment, port (except for exports) and manufacturing (except for food products and the like) functions. Only Surabaya at this time is growing significantly faster than the national population growth rate (at 4.4 per cent annually 1961-1971), with Medan and Ujung Pandang also somewhat higher (2.9 per cent and 3.7 per cent respectively).

Central government planned development project investments were highest in Jakarta among all provinces and cities in both 1971/2 and 1972/3 (by a factor of 2 and 2.5 respectively over West Java, the second most important province. East and Central Java followed at 31 per cent and 25 per cent of Jakarta's allotment in those years respectively.) The pattern in the 1969/70 to 1971/2 period of development budget expenditures by provincial governments themselves shows a similar ascendance of Jakarta over the rest of Java and Indonesia; although West Java's annual average development expenditure in the period was only about 60 per cent of that of both Central and East Java. The significant difference with the provincial, as opposed to the central measure of regional development policy activity, though its magnitude has not been great, lies with the exporting Outer Island provinces. South Sumatra, North Sumatra, Riau, West Kalimantan, and Lampung had provincial government development expenditures greater than Central Java's, with East Kalimantan and North Sulawesi only slightly less. These figures reflect the returns to provinces of special funds proportional to their foreign exchange earnings as a matter of central government policy, and mean these provinces

will probably become relatively developed in terms of certain infrastructure and modern productive capacities rather quickly in the next decade.

In the Repelita I, except for Jakarta, cities were not explicitly considered as systems to be developed. They were only singled out as transshipment points on the matter of which some were very significant, even in relation to Jakarta. (Medan's value of exports exceeded that of Jakarta in 1972 by 9 per cent. Surabaya's was about 1/3 of Jakarta's.) Nevertheless, cities of course received substantial development expenditures from the central government. In the fiscal year 1971/72 for example the order of importance in policy (project) activity among significant Middle Cities (see Indonesia Map) was : Yogyakarta (which as an urban/rural province in the South-Center of Java of special status like Jakarta is anomalous), Surabaya, Palembang, Semarang, Bandung, Solo and Ujung Pandang. Medan ranked 18th. Virtually all such expenditures were for public services projects (especially utilities, transportation, education and health) or industrial development, the latter in most cases taking less than 6 per cent.

Kotamadya, or municipal governments (there are 64 out of a total of 70 port-hinterland centers in Indonesia), with Kabupatens, or districts (218 covering the rest of the national land area) are the next governmental level below (within) the 26 provinces. But their ability to generate revenue for development has been minimal, for legal and administrative reasons, primarily the non-assignment to them of significant tax revenues.

The Repelita II (draft Chapter 20) gives significantly more rhetorical attention to regional and urban development. The planners seek "to intensify the degree of interdependence among regions", while "laying down a policy and directions on urban development in Indonesia based on the framework of growth centers on the basis of regionalization, in order to allow urban areas to take an active and functional role in the process of national and regional development." The planners remark that in cities are concentrated "government officials from all levels, capital, expertise, marketing facilities, trade, transporta-

tion, industries and other activities which are necessarily required to support rural activities." Policy for urban development stresses these goals : (1) improved balance between cities and their service areas according to hierarchical arrangements between the Middle City and lower order settlements, (2) the growth center strategy in which certain Middle Cities such as Ujung Pandang, Medan, Surabaya, and Padang are expected to receive enhanced development policy attention which will result in regional (provincial) economic growth; and (3) "*improving the quality and quantity of city services facilitates as well as administrative and managerial capacity....*"¹⁾ The plan specifies drinking water, garbage and sewerage, electricity, public transport and social facilities as particularly important. Moreover, there is the specific urban policy goal of "*redirecting gradually the flow of migrants away from Jakarta Raya and the spreading of employment opportunities to other cities*".²⁾ Three specific policy acts will be : (1) the evolution of an urban land development policy supported by enhanced master planning that will rationalize urban physical development patterns and suppress land speculation; (2) the development of industrial estates, in addition to Jakarta's, in Surabaya, Medan, Ujung Pandang, and Cilacap; and (3) an increase in the total Kotamadya and Kabupaten budgets by almost seven times during the five year period, presumably through grants and loans from the central and/or/ via the provincial governments. This should enable the municipal governments to better attend to their immediate and complex development problems such as employment and housing.

C. The Case Cities

Where do Surabaya, Medan, Ujung Pandang, Semarang and Padang fit into past and future development patterns? As examples of Middle Cities they were chosen to yield an interesting mix of important

1) & 2) *Authors' emphasis.*

similarities and dissimilarities in unit and regional center functions. They are similar in being provincial capitals, significant ports, regional circulation centers, the objects of relatively active city and provincial government planning attention and of past central government infra-structure project action and possibly future "growth center" policy. For example, in the Repelita II sectoral chapters, all are singled out for airport, seaport, telecommunications, and electricity development.

These five cities, while performing similar regional center functions, though of varying magnitude according to the demographic and economic properties of their provinces (see Chapter III), are quite dissimilar in importance in the national demographic, economic and development policy patterns. The order in which they are treated in this study is that of their descending combined importance on such parameters. Padang is small and off by itself in an unimportant Outer Island province which nevertheless has succeeded in developing a vigorous government and attracting considerable central government development policy attention to the province.

The other four cities are interestingly competitive in one, at present, generally unquantifiable but important respect. They compete with Jakarta and among themselves to an extent as manufacturing and services centers of larger regions than those bounded by their provinces. Java being small and now possessing a reasonably functional intra-island transport system (roads, rail, air, with numerous competitive private carriers in the first and last) can now be viewed as a whole potential market by Jakarta, Semarang and Surabaya. If the past market hinterlands of these cities tended to correspond more exactly to the respective boundaries of their provinces (Bandung being a complicating factor in West Java, and Yogyakarta/Solo in Central Java), present trends and theories seem to suggest the following : (1) a possible Jakarta/Surabaya hinterland boundary in Central Java dividing the island in two with respect to the marketing of certain important heavy and modern consumer products; (2) an increasing dominance of the whole island and indeed Indonesia by Jakarta in products having the highest technolo-

gical content; and (3) Semarang's market area contracting generally from the west, southwest and east, perhaps holding its own or expanding southeastward.

Medan is regarded as the macro-regional center of the north, but faces increasing pressure from Jakarta-originated trade. So too do Padang and Ujung Pandang which, however, have in modern times already been more dependent on Jakarta and, respectively, on Medan and Palembang, and Surabaya for a wide range of imports and modern services.

Most interesting, perhaps, is the question of Surabaya versus Ujung Pandang as the entrepôt, communications and manufacturing center of the eastern islands. There is explicit concern on the parts of both municipal governments about their separate roles in the expanding economy of the East. Much will depend on the communications policy of the central government, which is as yet not finalized. While neither city to date seems to have been playing the role of Jakarta and Medan as a port of entry of modernizing forces (as in commercial practices) and products (such as electronics), both are equipped to supply many basic manufactures and trading services. On the evidence, Surabaya would seem to have the greater likelihood of domination in the eastern Indonesian economy in the long run, considering the nature of modern communications and business practices, and if only because of its evidently greater commercial vigor and mass.

Finally, specific functional differences among the five Middle Cities may be noted. In the manufacturing sector, Surabaya, Ujung Pandang, and Padang similarly have a proportion of industrial employees of about 30 per cent in food processing; while Semarang has 51 per cent, and Medan 18 per cent. Medan has half again the proportion of employees in the machine manufacturing industry of both Surabaya and Ujung Pandang; while that in Semarang is half Surabaya's; and Padang's is negligible. These and other breakdowns seem to support the large regional trading roles suggested above. So too does the pattern of foreign investment from 1967 to 1972. Surabaya received more than four times the volumes of both Ujung Pandang and Semarang, with a greater concentration in light as opposed to basic industry. Medan had

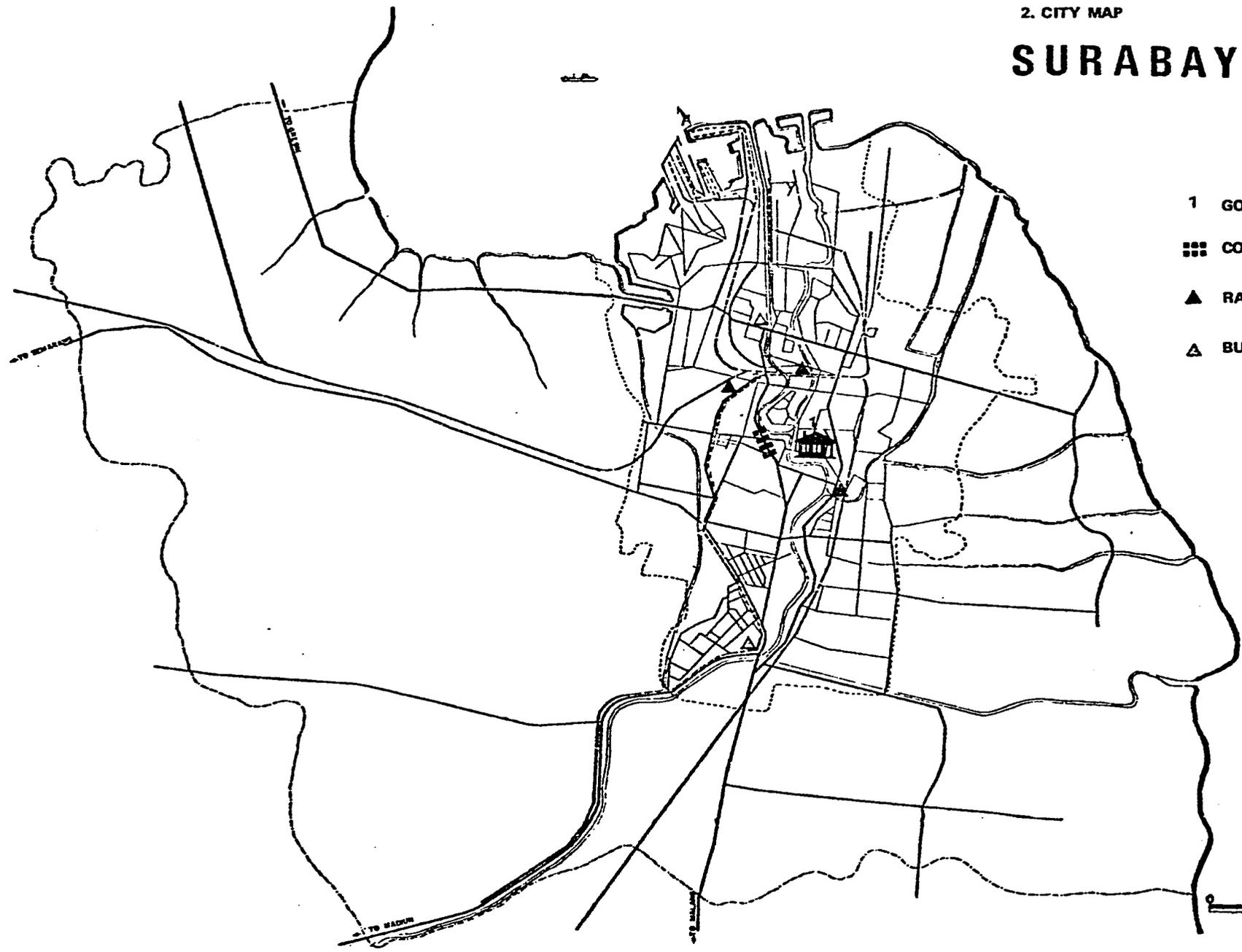
a balance of modern small machines and traditional light and food industrial investment at a level totalling 58 per cent of Surabaya's.

In the central government development project distribution among the five cities during Pelita I, Medan received relatively more investment for drinking water, Surabaya and Ujung Pandang more for health and vocational education, and Padang less than the others for electricity, Semarang less than the others for its airport. In the Repelita II, Surabaya receives relatively more policy attention in the field of tourism development and Semarang more for drinking water. For 1971/2 total central government planned development project expenditure in the cities as a percentage of central government planned development expenditures in their provinces, Semarang, Surabaya, and Padang clustered with ranks of 11th, 13th, and 14th among the Middle Cities. Medan ranked 22nd and Ujung Pandang 7th. In planned BAPPENAS (National Planning Board) approved development projects for the first year of the Pelita II (1974/75), Surabaya, Medan and Ujung Pandang were similar in receiving 10 per cent, 18 per cent, and 17 per cent, respectively of location-specific expenditures in their provinces. Urban and urbanizing expenditures in their provinces as a proportion of total expenditures were 24, 28, and 23 per cent respectively. Semarang received two per cent and Padang seven per cent of location-specific planned expenditures of their provincial totals, which totals had 14 per cent and 16 per cent, respectively, in urban and urbanizing expenditure allocations.

These figures reflect the basic differences among the cities with respect to their provincial hinterlands : Medan's is most significant for export agriculture, and Ujung Pandang's for rice export within Indonesia. Surabaya, Semarang and Padang are similarly surrounded primarily by subsistence agriculture and with widely dispersed small-scale manufacturing, and have relatively less significance, with settlements generally, in their provinces. The five cities thus have required quite different patterns and magnitudes of central government development expenditures and proportions of expenditures devoted to their provinces as wholes, as related to their basic regional center functions and the nature of their provincial economies.

2. CITY MAP

SURABAYA



- 1 GOVERNMENT CENTER
- COMMERCIAL CENTER
- ▲ RAILWAY STATION
- △ BUS TERMINAL

Chapter III

SERVICES IN THE DEVELOPMENT OF FIVE CITIES

The five Middle Cities are treated in turn in this chapter, beginning for each with a description of its unit and center functions, accompanied by standardised tables of demographic, economic and governmental budget data. The services system of each is briefly discussed with reference to the Master Services Tables in Appendix A, and then conclusions drawn on the city's natures and problems. There is little textual recapitulation of the quantitative information contained in the tables. Emphasis is on the addition of information unsuitable to tabular display but relevant to an understanding of the city or service, and on certain questions of quality, change, and efficiency in the services systems and their administration. Surabaya is treated first because of its greatest importance among the cities. Details of its administration of services and urban characteristics that are common to all cities are not generally repeated in subsequent city discussions.

A. Surabaya

1. The City as a Unit and Center

Form - Surabaya is a large port city oriented to road and rail accesses between the port on the north and the hinterland of East Java to the south and west. It has a compact center of commercial, government and residential land use, the last ranging from the highest to lowest classes, and is bisected by a river system. The old city boundaries contained this center and the harbour area in 6,700 ha. New city boundaries have been expanded to include 29,178 ha, a considerable amount of which is cultivated in padi and market gardening. The city is flat and subject to floods, with drainage, especially of sanitary wastes, a continuing problems. The city has been growing mainly southward. Traffic and slum conditions in the vicinity of the center and congestion on the arteries out of the city at peak periods are obvious physical problems as well.

Population. - Surabaya's 1.63 million permanent residents registered in 1972 make Surabaya closer to one-third than one-half of the size of the primate Jakarta. But that figure does not account for much of the transitory or migratory population that nevertheless is significant in the labor force, especially in low-level services. These seasonal and diurnal migrants are said by the Municipal Government to amount to as many as 700,000, raising Surabaya's functional population during the non-harvest season to around 2.3 million or just half of Jakarta's permanent population. Surabaya thus contains from nine to six per cent of East Java's population depending on the time of year and is the center of an immediate city-region of about 3.5 million, including Sidoarjo and Bangkalan. It was growing at about 4.4 per cent annually from 1961 to 1971 in permanent population which, as contrasted to East Java's growth rate of 1.7 per cent for the same period, suggests that considerable in-migration has been taking place and is probably quickening. Yet the age structure of the city is quite similar to that of the Province as a whole, indicating that permanent migration is not of the single-man-seeking-work sort found in some Asian cities. The labor force breakdown of city versus Province, however, naturally reflects the city's economic center function in the region, especially in commerce, construction and industry. And the distribution of higher educational facilities, energy consumption, and heavier industrial employment present a clear specialization by Surabaya's population that in turn serves the province's modern economy and society.

Manufacturing - Sixty-six per cent of East Java's labor force is in agriculture. What is not produced for local subsistence moves primarily to Surabaya for processing or, in the case of rice, is exported mostly overland elsewhere in Java. Surabaya has a predominance of light industries, with those in food and beverages, chemicals and textiles processing employing a little less than two-thirds of the industrial workers in large and medium sized enterprises in 1970. Although East Java's heavier industries are concentrated in Surabaya (78 per cent and 85 per cent of East Javanese employees of large enterprises in metals and machines cum assembly respectively employed in the city),

this sector is seen to be only in its infancy. A recent survey notes that though Surabaya is no longer the metal processing center of Indonesia, but that indeed the city is well suited with respect to population, location and infra-structure, at least potentially, for all industrial production sectors, especially considering potential markets in East and Central Java and the Eastern Islands. ¹⁾ A foundry plant is being set up to serve as a model for high-quality steel and iron casting production; and an industrial estate is in the works. The Gresik Cement plant near Surabaya is Indonesia's major source of cement. It was completed in 1958 and expanded beginning in 1969 with a USAID loan to an annual capacity of 500,000 metric tons. Approved domestic and foreign investment in Surabaya has been growing since 1967, largely in the lighter processing industries but with significant volumes in metals and chemicals, in all of which Surabaya has taken large proportions of East Java's totals (70 per cent of new investments in foods, 65 per cent of textiles, 97 per cent of paper, 56 per cent of chemicals, 80 per cent of metals, 100 per cent of machines).

Trade - Surabaya is the commercial and professional center of East Java. But its trade center function is most clearly manifested in port activities, which in both international and inter-insular trade expanded more than fifty per cent in imports and close to 100 per cent in exports from 1968 to 1971. General cargo traffic is predicted to double again from 1972 to 1977 (to 5.2 million tons annually) and to triple that by 1990. ²⁾ Local authorities estimate that 90 per cent of East Java's primary goods exports pass through Surabaya, including valuable and increasing quantities of coffee, rubber and tobacco. The largest volumes of inter-island trade imports to Surabaya come from from Ujung Pandang and Palembang, with largest export volumes also

¹⁾ See FGU-Kronberg, *Feasibility Report : Industrial Estate Surabaya* (Surabaya: November, 1972), pp. 2-10-2-26.

²⁾ See Asian Development Bank, *Ports Study in Indonesia*, (Manila : November, 1973), pp. 13-15.

3. TABLE: SURABAYA BASIC DATA

I T E M S	E A S T J A V A		S U R A B A Y A			
	No.		No.		% of East Java	
A R E A (km2)	47,922.48		291.78 ¹⁾		0.61	
POPULATION [1971]	25,526,714		1,567,176		6.13	
[1972]	25,833,826		1,632,721		6.32	
ANNUAL POPULATION GROWTH [1961-1971]	1.7 %		4.4 %			
DENSITY/km2 [1971]	533		5,371			
AGE STRUCTURE [1971]	No.	%	No.	%		
0 - 4 years	3,702,102	14.5	221,395	14.1		
5 - 14 years	6,845,540	26.82	370,970	23.7		
15 - 24 years	4,035,489	15.81	293,970	18.8		
25 +	14,583,131	42.87	680,841	43.4		
EDUCATION FACILITIES [1971]	units	pupils	units	pupils	units	pupils
kindergarten	2,296		345	16,614	15.03	
elementary school	9,996	2,406,338	554	91,175	5.54	7.83
elementary school for mentally retarded	8		4	197	50.00	
junior high : general	843	245,496	102	29,165	12.10	14.40
school :vocational	287		29	6,176	10.10	
senior high : general	164	91,326	45	16,119	27.44	29.90
school :vocational	280		36	11,183	12.86	
O R P H A N A G E [1971]	units	capacity	units	capacity	units	capcty.
	55	3375	9	735	16.36	21.78
ELECTRICITY [1970] ²⁾						
contracted kVA	134,600		73,300		54.46	
residential	74,300		40,830		54.95	
industrial	47,900		26,000		54.28	
commercial	12,400		6,500		52.42	
energy sold (mil.kWh)	295.8		151.5		51.22	
residential	236.5		119.4		50.49	
industrial	40.7		21.2		52.09	
commercial	18.5		10.8		58.38	
E X P O R T	through all four harbours in East Java		through Tanjung Perak		%	
volume (kg) 1968	473,133,651		371,946,000		78.61	
1970	799,557,797		714,449,720		89.25	
1971	935,104,112		864,314,417		92.40	
value (US \$) 1968	27,395,413.15		-		-	
1970	40,098,721.48		33,796,736.84		85	
1971	56,702,533.04		45,697,505.96		80	

1) Before 1966 it was 67.2 km2

2) This "Surabaya" area includes also district of Surabaya (Gresik) and district of Sidoarjo. Source: O.T.C.A., *Study of Long range Electric Power Development Program in East Java, Japan, 1972.*

Approved Domestic and Foreign Investment
1967 - 1st half of 1972 (Million Rupiahs)

	East Java		Surabaya		% Surabaya East Java	
	No.	Investment	No.	Investment	No	Investment
1. Food, Beverage, Tobacco	45	15,044	26	10,548	59.78	70.11
2. Textiles	18	10,856	8	7,065	44.44	65.08
3. Leather products	1	422	1	422	100	100
4. Wood processing	-	-	-	-	-	-
5. Paper and printing	6	1,513	5	1,470	83.33	97.16
6. Chemicals & Pharmaceuticals	24	8,889	20	4,981	83.33	56.04
7. Electrical Products	3	712	3	712	100	100
8. Ceramics, Glass, Building materials	7	1,417	6	979	85.71	69.09
9. Metals	22	6,281	17	5,042	77.27	80.27
10. Machines & Assembly	5	767	5	767	100	100
11. Miscellaneous	3	159	1	104	33.33	65.41
T o t a l	134	46,060	92	32,090	68.66	803.16

Flow of Goods (M.ton) in Tanjung Perak Harbour

	Overseas International		Interinsular	
	out	in	out	in
1967	381,018	346,154	298,849	210,510
1968	371,946	419,829	335,840	210,708
1969	486,787	562,325	424,325	254,261
1970	668,210	604,448	556,672	244,285
1971	848,707	689,309	605,637	346,794

Number of Industrial Enterprises & Workers in East Java & Surabaya.

	Number of Industrial Enterprise 1971						Number of Workers 1970					
	East Java		Surabaya		% Surabaya East Java		East Java		Surabaya		% Surabaya East Java	
	L	M	L	M	L	M	L	M	L	M	L	M
1. Food, Beverages, Tobacco	344	2180	20	201	5.81	9.22	140,100	40,800	6,280	3,470	4.48	8.50
2. Textiles	63	485	17	60	26.98	12.37	15,280	9,260	3,600	940	33.56	10.15
3. Leather products	5	38	3	12	60	31.57	610	580	390	150	63.93	25.86
4. Wool processing	10	250	3	34	30	13.6	1,130	3,820	210	420	18.58	10.99
5. Paper & printing	20	165	4	70	20	42.42	2,890	2,110	270	520	9.34	24.64
6. Chemicals & pharma- ceuticals	17	191	12	62	17.59	32.46	7,000	2,710	3,590	1,200	0.51	44.28
7. R u b b e r	39	72	5	50	12.82	69.44	20,420	1,770	680	1,060	3.33	59.89
8. Ceramics, glass, building materials	20	150	15	28	75	18.67	2,650	2,330	2,120	660	0.03	28.33
9. M e t a l s	14	128	11	54	78.57	42.19	2,550	1,630	2,000	830	78.43	50.92
10. Machines & assembly	13	131	10	48	76.92	36.64	2,940	1,910	2,490	690	84.69	36.13
11. Miscellaneous	9	69	-	13	9	18.84	1,430	1,640	-	190	..	11.59
Total	562	3888	100	632	17.80	16.26	197,000	68,560	21,630	10,130	10.98	14.78
Total Large & Medium Enterprises	4,450		732		16.45		265,560		31,760		11.96	

Note :

- Surabaya = Municipality Surabaya.
- L = large enterprises
- M = medium - " -
- But surrounding the Municipality of Surabaya — i.e. in district of Surabaya and district + municipality of Sidoarjo — there are also many industrial enterprises, so that for Surabaya's economic area (city region) there are 29.17 % of the industrial enterprises in East Java of 19.63 % of the number of workers.
- Source : FGU - Kronberg, *Feasibility Report, Industrial Estate Surabaya*, (Surabaya : November, 1972).

	Labor Force	
	East Java, 1971	Surabaya, 1970
Agriculture	66 %	-
Commerce	10.2	20 %
Transportation and Services	11.46	18
Construction	1.38	19
Industry	5.38	15
Other (including white collar)	3.56	23
Unemployed or seeking work	0.65	5

going to these cities, in the reverse order. East Javanese rice distributed through the official Logistic Bureau system goes 31 per cent to Jakarta, 17 per cent to North Sumatra and 6.5 per cent to West Sumatra, the latter two flows presumably go through the port of Surabaya.

Government - Three levels of government make and implement development policy, particularly expend development budget resources in the form of projects, in Surabaya: Central government ministries and companies, the Province of East Java, and the Municipality of Surabaya. (See Appendix B.) Final accounts of the Pelita I years' project expenditures are not yet available, but indications from yearly planned project activity suggest that Surabaya received between 7.5 and 10 per cent of location-specific project expenditures in East Java from 1972 through 1974, with the total planned project expenditures doubling in that interval. There was a consistent division of these with about half the identifiable total devoted to Surabaya's port and shipping and about one-third to higher education. These figures do not include Inpres and village development expenditures, which across the country are roughly proportional to population. Provincial budgeted development expenditures in the years 1971/2, 1972/3, and the first quarter of 1973/4 show a steep rise and an estimated increase almost three-fold in three years. There is no way at hand of estimating the proportion of provincial development expenditures devoted to Surabaya but we would hazard the guess that it is small but increasing, as the government itself, which is located in Surabaya, is growing and infrastructural support of the modern productive and trade facilities of Surabaya is becoming increasingly important in overall provincial development.

The Surabaya Municipality is of the Tingkat II level, the echelon below the Province which includes other Municipalities (kotamadyas) and where there are no Municipalities, Districts (Kabupatens). For the years 1969/70 to 1972/73 we see an interesting change in the proportion of expenditures the Municipality of Surabaya has made out of the totals of Provincial plus all Tingkat II governments in East

Java, and in Surabaya's expenditures as a proportion of total East Java Tingkat II expenditures. The trend is clearly for Surabaya to be spending increasing proportions of the Province's local governments' resources. Surabaya's government must be more effective in generating revenues. And the proportion of *development* expenditures rises to 28.7 per cent of total provincial plus Tingkat II development expenditures in 1972/73 and to a striking 41.1 per cent of all Tingkat II development expenditures in the same year. This is to be compared to Surabaya's mere six per cent (permanent population) of provincial population.

The income of the Surabaya Municipality, like its expenditures is divided into routine and development categories, with the addition of extraordinary revenues and the revenues from Municipal Corporations which in most years contributed a considerable amount of earnings to the city government over the expenditures they required for maintenance and expansion.¹⁾ Routine income in 1973/74 was estimated to consist 45 per cent of funds from higher governments, but that for the development budget only 35 percent was received from higher governments. This reflects the greater assistance necessary for raising salaries of local officials as well as the greater self-reliance expected of Municipalities in the matter of certain (local responsibility) capital investments.

Expenditures for development in the years 1971 through 1973/74 declined from 74 per cent of routine expenditures to 45 per cent, presumably reflecting an increasing salaries burden and the problems of generating funds locally for development investments. This trend might be taken to portend a declining role of city government in development project activity *vis à vis* both its routine management role and the programs of higher levels of government which however, may have a more tenuous connection to local planning and perhaps needs. Surabaya

1) *The division of income into routine and development categories is not necessarily followed consistently by other cities or even provincial governments. This complicates comparative research.*

4. GOVERNMENT FINANCES
Surabaya : Realization.

	1971 / 1972	1972 / 1973	1973 / 1974
I N C O M E			
- R O U T I N E	1,120,640,960.29	1,411,011,600.34	1,895,519,941.18
from higher government	290,175,000.00	402,576,500.00	852,686,098.12
self-generated	760,465,960.29	958,435,100.34	1,042,833,843.06
t a x e s	489,444,313.38	569,953,547.36	746,046,094.04
others	271,021,556.91	388,481,552.98	296,787,749.02
carry-over	70,000,000.00	50,000,000.00	--
- D E V E L O P M E N T	739,923,145.33	988,667,513.17	901,639,411.44
from higher government	1,623,947.43	?	314,359,173.12
self-generated	730,309,197.90	?	587,280,238.32
carry-over	--	?	--
- S A L D O of previous year		36,171,338.24	--
- M U N I C I P A L C O R P O R A T I O N S	611,277,410.47	648,534,433.05	218,900,041.68
- O T H E R S (dinas luar biasa)	922,737,208.36	2,147,189,360.46	3,389,479,807.34
E X P E N D I T U R E			
- R O U T I N E	998,643,351.49	1,368,178,061.49	1,751,383,335.17
- D E V E L O P M E N T	742,786,432.56	833,220,584.07	779,562,808.76
economic	576,079,072.52	452,164,962.97	620,211,027.96
<i>infrastructure</i>	571,579,072.52	443,757,792.97	617,123,577.96
<i>road and bridge</i>	478,273,532.26	338,484,822.01	?
<i>sewerage & road illumination</i>	93,305,540.26	105,272,870.96	?
social	67,814,461.95	61,424,255.20	93,071,015.56
government (umum)	98,892,898.09	319,631,365.90	60,280,765.24
- S A L D O (Savings or Deficit)	119,144,321.57	234,451,806.19	--
- M U N I C I P A L C O R P O R A T I O N S	611,277,410.47	951,241,743.90	68,661,195.43
- O T H E R S (dinas luar biasa)	1,372,118,338.14	1,812,400,890.19	3,355,100,699.75

East Java : Realization

B u d g e t	1971 / 1972	1972 / 1973	1 st quarter 1973 / 1974
R o u t i n e	9,250,717,290.17	12,746,431,322.82	8,385,263.12
Development	884,151,314.51	1,541,065,405.27	571,652,540.60

Performance expenditures as %-ages.

	1969/70	1970/71	1971/72	1972/73
Surabaya a as % of/Province & East Java Local (tingkat II)				
T O T A L	8.3 %	8.5 %	9.3 %	11.2 %
DEVELOPMENT	12.0 %	12.3 %	24.5 %	28.7 %
Surabaya a as % of/East Java Local Government (tingkat II)				
T O T A L	19.5 %	24.5 %	20.4 %	23.0 %
DEVELOPMENT	22.7 %	28.7 %	34.6 %	41.1 %

Municipality's development expenditures, except in the fiscal year 1972/73, averaged 78 per cent devoted to "economic" goals, almost entirely infra-structure. Development expenditures for "umum" (government) declined absolutely as government facilities were finally upgraded.

Extraordinary resources and expenditures took on an increasing importance over the years. Those called "Luar Biasa" (beyond the ordinary) were practically double the magnitude of the ordinary ones discussed above, and may have eased the above mentioned problem of declining development expenditures. "Luar Biasa" money basically consists in Surabaya of a revolving fund from which money is advanced to contractors and companies doing work for the city. This side-steps the long process of project review (see Appendix B) so that work can proceed, often involving the purchase or rental of expensive equipment. The money returns to the fund as time goes on out of the profits of the borrowers derived from the final project payments. Another extraordinary revenue of the Municipality which, however, is accounted in tax revenues comes from taxation on games of chance. These were said to have contributed 25 per cent of the entire Municipal revenue in 1970/71. By now these are being reduced in importance by increases elsewhere in the budget and by a slackening of desire to be dependent on such sources on the part of the government.

2. The Services System

a. *Power* - Electricity is provided in Indonesian cities mainly by the Perusahaan Listrik Negara (PLN), the national electric company which is owned by the central government and divided up into Exploitation Regions, of which the one including Surabaya is No. IX. Private and public factories, hotels and other large institutions often have their own supporting electricity generation facilities to be used in emergencies. The PLN both produces and distributes electric power. It finances its own capital improvements, frequently with foreign assistance for equipment acquisition and demand studies. All cities are becoming increasingly dependent on electric power delivered without interruption to homes, factories, and public facilities such as street lighting

and places of entertainment. The degree to which a particular system may be behind demand is generally determined by the priorities of the local PLN Exploitation Region organization and of PLN nationally, and the timing of new generating and distributing installations. Because the electricity is purchased according to set rates the financing of new facilities is relatively easy, yet for an individual city development may depend as much on PLN's overall national electricity development policy as on needs perceived locally.

In Surabaya the amount of electricity contracted to be available to consumers (kVA) increased steadily from 1970 through 1972, with the amount available *per capita* increasing by 23 per cent, and so may be said to be catching up on needs. On the other hand the unfulfilled demand waiting list of large industrial subscribers increased from 105,000 kVA in 1970/71 to 182,700 kVA at the end of 1972. In that period household usage held steady or actually declined; while industrial and commercial usage both increased considerably (44 per cent and 31 per cent respectively).

The electricity supply question in Surabaya is complicated by the fact that supply comes in part from outside the city itself, and the grid covering the city goes beyond its boundaries. The figures in 17 Table a (Appendix A) must unavoidably be for this service region which, however, is almost entirely Surabaya and the rest Surabaya-related economically. At the end of 1973 a new gas turbine was to have come on line (yielding 25 MW), as was the first electricity generated from the massive Karangates hydro facility in East Java to be delivered in Surabaya (2x35 MW). This accounts for the enormous jump in expenditures *per capita* in 1973 and should alleviate the demand problem from heavy industry. A third Karangates generator is to come on line after 1974 adding another 35 MW, with yet a third steam power unit in Surabaya planned to begin construction in 1976 (50 MW).

In the first half of 1972 there were 56 reported days of power interruptions in Surabaya, blamed on maintenance problems. That should not be a problem during the later 1970's. And the industrial estate of the Municipality plans to guarantee sufficient electricity to the

industries it attracts. Seemingly the needs for electricity of industries and terminals will be sufficiently met after 1976 into the 1980's. It is problematical whether or not domestic availability of electricity service will and similarly.

The data and research problems associated with analyzing electricity development are alleviated by the excellent studies on demand done in conjunction with the industrial estate development and by PLN's efficient record keeping. However the nature of electric grid systems makes consideration of a city as an areal unit in this regard very difficult and so the comparison of electricity services to some others.

A National Gas Company (Perusahaan Gas Negara), belonging to the Department of Public Works and Electric power sells gas fuel manufactured in Surabaya to 4,000 customers and needs more customers.

b. *Water* - Drinking water in Surabaya is provided by the Municipal Waterworks Company (Perusahaan Air Minum) which also provides this basic necessity beyond the boundaries of Surabaya, but mainly to urban users. It is interesting that almost all time-series indicators from 1967 to 1973 show significant increases: amount delivered growing by 30 per cent, development expenditures by 581 per cent (uncorrected for inflation), and development expenditures per capita by 30 times, with the most interesting indicator, expenditures per existing amount available per capita, going up 33 times; yet on the basis of the, admittedly questionable, population estimates of those non-census years, the amount available per capita actually declined since 1967 and held its own from 1969. In 1971 the purification plant was producing 1,450 liters/second which field researchers reported could be increased by 1,000 l/sec. No figures were available on wastage in the system.

For *sewerage*, Surabaya has only one river/canal system, reserved for drainage of street and rain water, but constantly used for dumping of wastes and in need of dredging. It seems to municipal consultants that it would be prohibitively expensive to install a hoisting sanitary sewerage system owing to the lack of incline in the city

area.¹⁾ Nor has the city organized a night-soil collection service. Each industrial establishment is urged to purify its sewerage itself; and septic tanks are the answer the city government provides in its planning.

The water problem of Surabaya falls squarely on the shoulders of the municipal government. Even though users pay regulated rates for water neither the amounts provided *per capita* (ignoring industrial usage for a moment) nor the expansion of the system in line with population increase, and particularly the demands of seasonal inhabitants who are not counted on the population rolls, has been adequate : the service is falling behind. The reasons for this, in contrast to the case of electric power, must be that while expensive capital investments are required, the greatest demand in Surabaya is for water as a social service rather than a productive one, i.e. industry is not so large a user at present that its needs can spur development; the municipal water company cannot draw upon national resources for development with the ease of the PLN; and significantly more development resources thus far have had to be devoted to rehabilitation of old facilities, leaving relatively less for expansion. Meanwhile, at least, public information campaigns which impress on the population the need to boil water are reported to have had wide acceptance. The danger to health from sewerage movement slowly through open passages is bad however, as in most Indonesian cities.

c. *Roads and Bridges* - Roads and bridges within the Municipality of Surabaya are the responsibility for upkeep of the Municipality. Capital investment in roads designated as national and provincial is made by those governments through the local branch of the vertical agency, the Directorate General of Highways (Bina Marga) of the Department of Public Works and Electric Power.

The municipality also receives Inpres funds on a *per capita* and village basis from the central government, many of which are devoted

¹⁾ *FGU-Kronberg, op. cit., pp. 261-2.*

to roads especially upgrading neighborhood ones. Inspection in Surabaya suggests that the condition of most main roads and even local ones is sufficient for the types of traffic. The *density* of traffic is the main problem, especially on arteries moving out of the city, and giving access to the port. The connection of the port to its hinterland, of course, is extremely important; so the Municipal Master Planning Team plans a series of ring roads connecting the new industrial estate to terminals and the terminals to the provincial and inter-provincial highways. The notable decline in municipal expenditures for roads from 1971/72 through 1973/74 can be expected to reverse itself once the Master Plan has been approved.

d. *Education* - The education service available in Surabaya is made complex by two factors: there are both private and public schools, the former having various degrees of autonomy of standards and state subsidies (some receiving no state support); and while primary schools are financed and operated by the provincial government, under Department of Education guidance, higher schools and universities are directly administered by the central government. In addition, at the junior and senior high school levels there are both general and vocational schools. The major problem with the development of public education in Surabaya, and this applies even more to private institutions, is the severe lack of facilities, especially buildings. One gains the impression that this is a worse problem than the lack of teachers, which in turn suggests the opportunity for efficient capital investment in primary and secondary education in Surabaya — a field which otherwise might have been supposed to offer a quite limited opportunity for rapid expansion because of the length of time it takes to train the necessary teachers. The lack of facilities results in the fact that only 34 per cent of Surabaya youth between the ages of 5 and 14 years attended elementary or junior high school in 1971, a large proportion of them undoubtedly in the elementary levels.

Public education in Indonesia has a high priority in development policy, with investment in it distributed largely according to central

government dictates. Thus the deficit in Surabaya can be expected to be corrected in time. At least, if the percentage of school age children out of the population were supposed to have remained constant from 1966 to 1973, we would conclude that the proportion of elementary school children enrolled in schools just about kept pace with population growth (a 25 per cent increase in enrollment per 1,000 population) and therefore demand at the current level. And in junior high schools from 1968 to 1973 the proportion of students enrolled *per capita* increased by 40 per cent, while the population could only have increased by about 29 per cent. However in general senior high schools the proportion of enrollment *per capita* actually declined from 1968 to 1973, as did vocational school enrollment. Vocational enrollment increased, meanwhile, from 37.6 per cent to 47 per cent of senior high school enrollment. This follows the dictates of central educational policy, whereby it has been realized that a growing demand for technical skills and a more stagnant one for generally educated youth required a re-direction of training.

The demand for places in the insufficient public school system of Surabaya has been made less severe by the increasing elementary and senior high school enrollments of private schools (which grew from 1968 to 1971 by 54 per cent and 62 per cent respectively). The proportion of students in private schools at these two levels increased markedly (elementary from 31 per cent in 1968 to 38 per cent in 1971; and general senior high school from 54 per cent in 1968 to 63 per cent in 1971); while junior high school enrollment in private schools stabilized at an enormous 66 per cent of a stable general school enrollment. In 1971 there were 25 universities in Surabaya with a total enrollment of 12,756 students. The pre-eminent one was Airlangga, which is supported by the central government and has the full range of high quality professional schools. There is no apparent shortage of university graduates except in technical and advanced professional fields.

e. *Terminals* - The port of Surabaya is managed by a Port Authority which is independent of the municipal government and regulated

as well as funded by the Directorate General of Sea Communications of the Department of Communications. We have already noted the plans to expand its ability to handle cargo. There is at present a reported under-utilization of certain land facilities (especially open area) of as much as 60 per cent, owed to the unmet need to dredge the channel to permit larger ships to unload cargo (currently only ships of less than 25,000 tons loaded can gain access.) An alternative to the rehabilitation and modernization program already planned would be relocation of certain international receiving and export facilities at a point with natural access for larger ships (to 50,000 tons). Another rehabilitation need is increased pavement of cargo handling areas, and lighting for night work. The current building area of 279,378 m² should also be increased; and eventually the Port Authority in cooperation with the Municipality may see the wisdom of creating a free trade industrial zone adjacent to the port.

The civil *airport* of Surabaya, Djuanda, is owned and operated by the Navy, with separate terminal facilities for civilian passenger and cargo traffic. These facilities seem adequate at present for the traffic, with reasonably efficient movement of domestic aircraft to and through Surabaya. The runway can accommodate planes up to the DC-8 in size. Although it seems desirable to the municipal government planners that the airport join Jakarta, Medan, and Den Pasar as an international port of entry, this conflicts with the current Communications Department's policy of keeping Jakarta as the main door to Indonesia. Surabaya is not even the jumping off place for the Eastern Islands that it once was, as Den Pasar originates flights of private companies eastward and there are now non-stop flights by Garuda, the major state airline, between Jakarta and Ujung Pandang and Jakarta and Den Pasar. On the other hand the traffic between Jakarta and Surabaya has increased rapidly in the last few years, with approximately one Garuda flight each way an hour daily during the day with near full occupancy.

The *railway* facilities of Surabaya, as elsewhere, are under the complete control of the National Railway Company (Perusahaan Jawatan Kereta Api), whose budget for Surabaya is not available locally.

Passenger traffic has been slowly declining due to inter-city bus and air service improvement, while cargo tonnage has increased by 13.5 per cent from 1968 to 1970. Service is by 30 freight trains and 14 express and 36 passenger trains per day. Both kinds of traffic grew slower than Surabaya's population in the period.

Intra- and inter-city *bus terminals* are provided in Surabaya by the Public Transport and Terminals Company of the Municipality. These terminals also provide space for "bemos", or smaller, sometimes three-wheeled local conveyances. There has been no public bus service since the late 1950's. But these terminals serving the numerous private services have been upgraded considerably in the last years, as reflected by the fact that such expenditures in 1971/72 were almost double those of 1970/71; while income from the terminals increased 2.75 times, yielding a nice profit to the Municipality.

f. *Health* - The provision of health services in Surabaya, that is treatment and prevention, dispensary and family planning assistance, is as complicated as was education. Hospitals are maintained by the Province, the Military, the Municipality, the State Railways (maternity), the Port Authority, and by private organizations. The development financing of none of these could be ascertained with enough accuracy to warrant comment, with capacity figures available only for 1972. The total number of hospital beds per 1,000 population in that year was 2.235, of which 1.926 were in public general hospitals, and of that 0.837 were provided by the Province of East Java, 0.591 were private, and 0.465 were military. Subtracting the number of beds available only to members of special organizations with welfare responsibilities for their employees, the number of beds per 1,000 of the public is reduced to about 1.4, a grossly inadequate amount especially considering that 0.591/1,000 are in private institutions only some of which provide services at low cost. General public health centers, sub-centers, and the smaller poly-clinics are more numerous and better spread throughout the area of Surabaya, totalling 115 (including 61 non-city health agency poly-clinics), with an additional 74 post-natal clinics (45

non-city health agency), 67 family planning clinics (43 non-city health agency). The subject of health care is not one that has received much attention in Surabaya (as compared to industrial development, for example), which is one reason detailed statistics are unavailable. Future priorities would seem to lie in expanding the poly-clinic system in the poorer areas, including instruction in sanitation and family planning, and in up-grading the large hospitals' capacities for quickly treating major disorders. There is, of course, a doctor shortage in Surabaya, but informal observations suggest that the city is in fact better served than most smaller cities, at least as to variety of specialists available but probably also *per capita*. Certainly it is better served than rural settlements, and attracts other East Javanese seeking special or more reliable treatment, including natal.

g. *Communications* - The post office, telephone, telex, telegraph, (public) radio and television services available in Surabaya are all owned and operated by vertical agencies of the central government, the first by Kantor Pos & Giro, headquartered in Bandung, telecommunications by Perusahaan Umum Telekomunikasi under the Department of Communications in Jakarta, and (public) radio and television by Radio Republik Indonesia (RRI) under the Department of Information in Jakarta. The number of telephone connections in Surabaya (15,352) did not change from 1971 to 1973; although the number of customers grew from 8.7 per 1,000 population to 8.81. There is a large unquantifiable demand for new telephone connections which is practically limited to businesses and the wealthy, however, by the prohibitive installation costs. There are seven government (5 RRI) radio stations operating on Surabaya's air and 26 private (commercial) ones. There is one RRI television broadcasting station that relays programs from Jakarta with clear reception throughout the Surabaya city-region and beyond.

h. *Markets* - There is a municipal enterprise for the management of Markets (Perusahaan Pasar Kotamadya Surabaya) which both builds and

operates markets that are well distributed throughout the city, mainly offering space for vendors of food and other necessities, and which attempts to control, plan and provide security for markets generally. In 1968 there were, in addition, an estimated 76 illegal markets occupying an area about 30 per cent the size of the city markets. Expenditures on markets by the city company have been increasing steadily absolutely (by more than five times from 1968/69 to 1972/73 in Rupiah unadjusted for inflation), and *per capita* (by more than four times in the same period). The market company also makes profits for the city (Rp35.4 million in 1972/73); although these have had a tendency to decline in the 1970's owing to increased capital development expenditures. This is a good case of a municipal corporation providing a service that pays for itself and can be expanded to fill need with little difficulty and fine neighborhood ecological results.

i. *Public Safety* - Responsibility for public safety is shared between the Municipality, which provides policemen, traffic policemen and fire fighting, and organizes the civil defence force (Hansip, a local volunteer civil defense organization providing neighborhood security), and the security forces of the various military bodies under the control of the central government. The courts are organized and financed by the central government's Department of Justice. Crime, with urbanization, would seem to be increasing in Surabaya, but its effects on the population at large are mitigated by the Hansip force of which there were 16.47 members per 1,000 population in 1970. That is a case, at the neighborhood level, of a kind of local cooperation and mutual support that in other sectors of the Surabaya society may be declining.

k. *Amusement* - East Java-wide organizations for sports (KONI, privately financed) and general park/picnic recreation (BAPPARDA, provincial government financed) operate in Surabaya side by side with numerous types and sites for amusement that the private sector provides at profit. But Surabaya Municipality also has an impressive tradition of providing special and very popular amusement areas. The two most

important are the famous zoo, which had 82,645 visitors in 1971, and the city amusement park (Taman Hiburan Rakyat) which is owned and operated by a municipal corporation. This contains childrens rides, theatres, restaurants, shops, and open space, and was visited by 2,374,619 people in 1971, generally in the evening. Moreover it makes a profit for the city, which has allowed continuing improvements, with the expenditures on it almost doubling from 1969 to 1971 and revenues more than tripling (net profit 1971 = Rp. 13,671,755). The Municipality also maintains five public performance buildings, and the Municipality parks department of Municipal Public Works) maintains parks, fields and "green lanes" with an additional income from the Department of Mental and Spiritual Affairs that came to Rp 42.4 million in 1971, representing an increase of 338 per cent over 1969, and was intended mainly for community sports.

1. *Other* - Two additional services provided by the Municipality of Surabaya may be mentioned : settlement and industrial estate development. Public housing and kampong improvement are concerns of the city government to which only limited attention has been given thus far. Certain Inpres funds, as mentioned, are devoted to up-grading the physical/environmental quality of the poorest slums near the city center. This up-grading is expected to increase . Housing is not something that the city government has devoted itself to for obvious reasons of inadequate finance. There is no public bank or other financing organization that provides credits for low income housing, nor are there any resettlement projects. The Jajasan Kas Pembangunan, of which the Mayor is the Chairman is semi-governmental and has the mandate to promote savings for housing, to assist organizations to build housing, and to build housing (mostly middle class) for sale and rent. By 1971 it had reportedly built 1,593 houses, hardly denting the demand for better housing created by rising incomes of the upper classes who nevertheless are frustrated by the absence of suitable financing institutions and spiralling costs (only 48 per cent of householders own their own homes). It has not attacked the low-income housing problem at all. We should add that over the years companies and government bureaux in

Indonesia have developed the tradition and capacity, from necessity, for taking care of some important capital intensive needs at least of their higher level employees. This applies to housing and also to transportation to work of staff of the more prosperous governmental units, the utilities, airlines, and military. Private companies follow suit. And these extra-governmental services have a great importance at present.

As a matter of central government policy Surabaya is to have an industrial estate. The municipal government's Master Plan team has planned this, for an agricultural site in south Surabaya, and has acquired the land. By 1981 150 industrial enterprises are expected to be accommodated, employing 30,000 - 50,000 workers who will settle nearby.

2. City Conclusions.

The various levels of government, and the public and semi-private agencies and companies providing services in Surabaya have not been observed to be greatly at odds with one another. They hardly compete, and their general implicit notions of Surabaya's needs seem to be complementary if not identical. On the other hand opportunities for more concerted cooperation, as between the port, the municipal and provincial roads departments, and the Municipality's industrial estate planners, for example, have not been fully grasped. Smoother dynamic cooperation will be in the offing when (soon) the Master Plan Team of the Municipality is converted into the Surabaya Development Board as the implementing agency of the Plan. Also the establishment of the Surabaya Industrial Estate Corporation will place under one roof large responsibility for providing a variety of inputs for industrial development that should result both in attracting many manufacturing ventures that before now have had practically nowhere to go but the Jakarta region, and in rapid development of currently deficient expertise at the municipal level in managing complex modern urban development. Such new skill can be expected to be applied beyond the one industrial estate to other ventures which in the long run may succeed in alleviating the probable

enormous unemployment problem of the coming decades.

Comprehensive conceptualization of Surabaya's development problems, thus, will not be so great a problem as that of persuading each service administration with a larger compass of responsibility (like the national electricity, education, health, and telecommunications bodies) to provide what the city thinks it needs — in competition with all the other localities in Indonesia. We see that electricity, port, higher education, and public safety functions of Surabaya are well served relative to present need of the city as a unit and a regional and macro-regional center. Indeed with the port and electricity investments now planned, these and the higher education services can be said to be imminently leading actual demand, which is healthy if Surabaya is to remove itself from Jakarta's modern economic shadow and grasp Eastern Indonesia as its own dependent hinterland in future Indonesian development. On the other hand, telephone and health services development is falling behind need; both are controlled by the central government, although telephone service at least is supposed to pay for itself and so be easily expandable.

For the city services that the Municipality of Surabaya itself provides largely on its own, the record is mixed. Local roads, entertainment, and markets are close to meeting need, if not leading it. But kampong improvement, simpler health services, and water, especially sewerage removal are falling behind, with obvious and potentially deadly consequences for the future. This raises the issue of municipal finances and the role, especially of Municipal corporations and extraordinary revenues. The latter might be increased and directed to these services sectors in greater amounts. It is difficult not to admire the municipal corporations for their successes in building and expanding facilities with business acumen. Perhaps they represent a device that could be applied to slum improvement and basic health care. Such public corporations have the advantage of credit-worthiness and complete control by the municipal government and its planners. The latter is especially important as delicate social systems would here be the object of development policy.

The "services identity" of Surabaya at the time of writing, hence, is one of vigor in industrial support functions and service to

the region in transshipment of export produce. The importance of city-regional development interdependence is well understood and its importance given high priority.

Services improvements at the same time have tended to by-pass vast sub-areas of the city many of which are the most decrepit and house the least advantaged people. The development of the ring road system should have a beneficial effect on many such localities at least by providing better access to the modern areas of the city and hence job opportunities.

The municipal government will soon have to seriously consider the needs of job-seekers by the provision of employment and training services, and ones whose aim is to simply provide low-level service work which at least will feed more of the labor force. A particular issue in this regard are the becaks (bicycle-powered rickshaws widely used since the early 1940's by the urban population for intra-city journeys to work and errands). Following the example of central Jakarta policy these are intended to be forbidden from main thoroughfares in the coming years because they clog traffic. There is no doubt that modern transportation through Surabaya requires an absence of becaks from main arteries. But with imaginative transportation network design these conveyances, which are otherwise pleasing to everyone, might be allowed to prosper, if in reduced numbers. They constitute an important first employment opportunity for migrants to the city and serve to initiate them into the modern ways of the metropolis. They employ large numbers. Moreover their proper preservation and use could be a pilot example of municipal management of a local low-level service providing a quantity of employment to the kinds of urban residents of the future Surabaya who will be an increasing welfare burden. Other kinds of similar services which the Municipality might organize to employ numbers of uneducated young citizens while they are adapting and perhaps simultaneously being trained for industrial employment by the city government might be in parking attending, washing, city cleaning and waste removal, and industrial and commercial security.

Collection and interpretation of data on Surabaya's development and its services system were greatly facilitated by the existence, pro-

ductivity, and cooperation of the Team Master Plan, which all were made possible by the municipal government's commitment to the task of comprehensive policy planning and operation for Surabaya. The problems of obtaining data on services provided by agencies of higher levels of governments can be expected to recede as the Municipality's planning competence and vigor increase in the coming years. At present the greatest gaps are in knowledge of the intra-city patterns of services distribution, and of the amounts and kinds of investment in specific capital projects from higher levels of government.

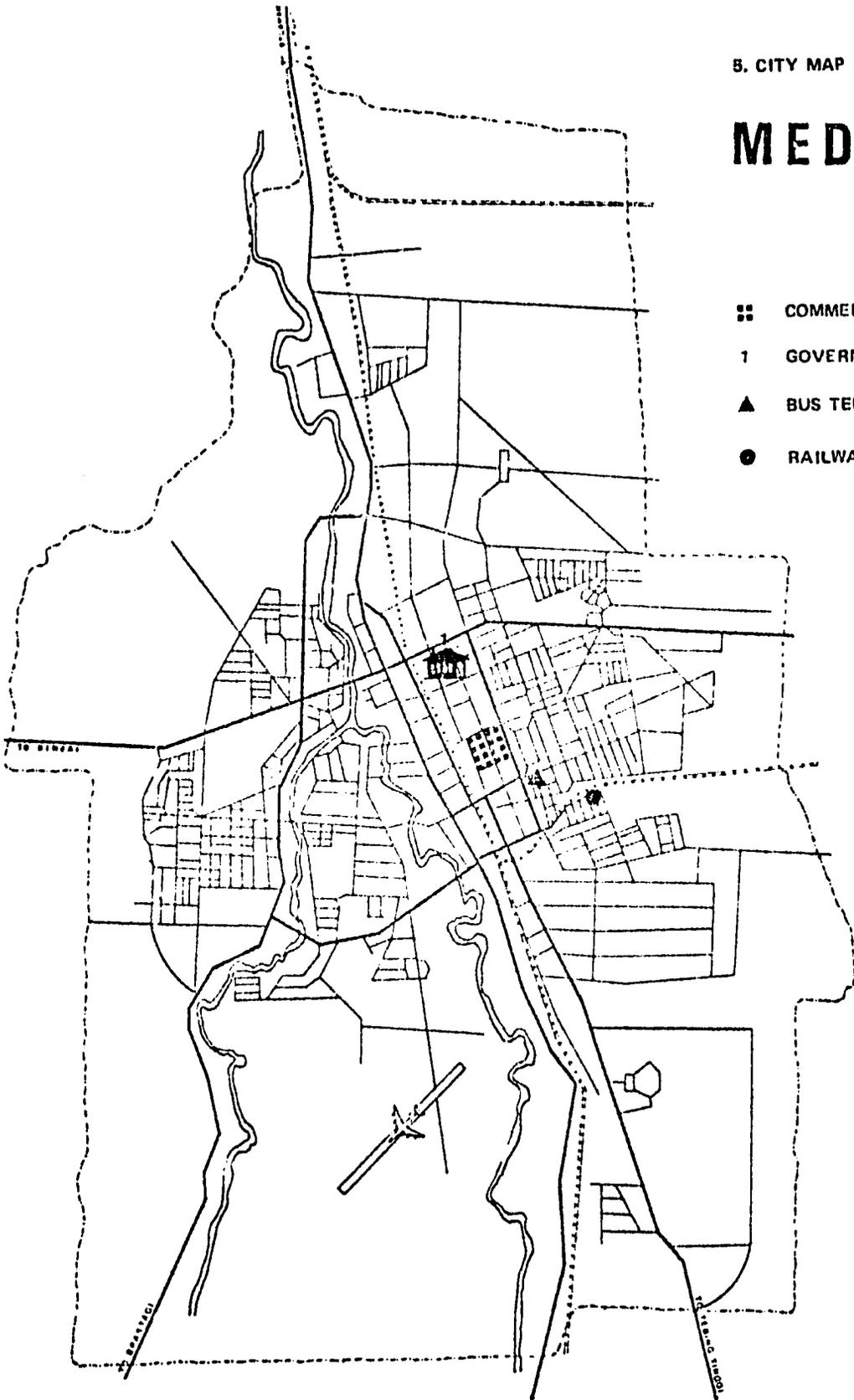
Surabaya shares with all cities an inadequacy of deep research on social and economic systems. If priorities for social science research were to be set they might stress the problems mentioned above, and particularly those of the community support systems within the city that could contribute best to equipping young residents for employment, as well as the far larger issue of Surabaya's absorptive capacity, given physical and fiscal constraints, for supporting a probable far larger population by 1990. A specific case for study and perhaps emulation in other fields is the private schools system. On the regional and macro-regional level, research should be devoted to actual and potential economic and social complementarity between Surabaya and its hinterland at different scales.

At the same time, continuous monitoring of change and the impact on that of specific government actions is something that is not sufficiently developed in Surabaya. (see Appendix B, Part Two,) This more probably is the function of the municipal government itself. It cannot be done without expert help, a large quantity of which should be available from within the staffs and students of local and national universities.

B. CITY MAP

MEDAN

- COMMERCIAL CENTER
- 1 GOVERNMENT CENTER
- ▲ BUS TERMINAL
- RAILWAY STATION



B. Medan

1. The City as a Unit and Center

Form - Medan is a large trading and manufacturing city with a north-south rail and road axis (the former causing congestion throughout the city by level crossings) connecting the traditional commercial, government, and entertainment center with the interior of northern Sumatra and its port of Belawan. The direction of growth of the city is northward toward the port. The city government recognized this by extending the boundaries in 1955 to include 5,130 Ha (from 1,583) and in 1973 extending them again to take in Belawan in a city area of 26,510 Ha. Medan is the trade center for North Sumatra and for export products also of Aceh. The rail network extends into the rubber, palm oil, and tobacco growing areas of North Sumatra and to Aceh, and there are reasonably good provincial and inter-provincial highways. Land use in Medan reflects its functions but interpretation is complicated by the recent expansion of city boundaries; housing takes 25 per cent and commercial, industrial and government establishments occupy about 2 per cent of the city, with the rest in agriculture or vacant. Two rivers flow through Medan causing flooding problems. The airport is within the 1955 city boundaries and considered by some to be too close to the city center.

That center has a core of government buildings, banks, the railway station and a large section of shop-houses in traditional commercial and small industrial uses, with some functional specialization by neighborhoods within the center. What was called "the most beautiful market place in Indonesia", the central market in the core, burned down in September 1971, a major cause of the complete destruction being both traffic congestion in the area and the existence of illegal structures on what would have been the ways of access for the fire fighting equipment. Thus Medan suffers clogging in the center similar to or worse than Surabaya's.

Population - Medan's permanent population of 664,955 in 1972 makes it about one-seventh the size of Jakarta and slightly more than

6. TABLE : MEDAN BASIC DATA

	NORTH SUMATRA		M E D A N		
	No.		No.		% of North Sumatra
AREA (km2)	70,787		old 51.30		0.07 %
			new 265.1 (1973)		0.38
POPULATION					
1961	4,984,200		471,098		9.45
1971	6,609,795		634,192		9.59
1972	6,928,989		664,955		9.60
annual increase(1961-71) (1961-71)	3.19 %		3.46 %		
density/km ² 1961	70.4		9,183.2		
1971	93.4		12,362.4		
AGE STRUCTURE	population	%	population	%	Population
(1971) 0 - 4	1,210,461	18.29	100,357	15.82	8.29
5 - 14	1,992,489	30.1	176,466	27.83	8.86
15 - 24	1,110,157	16.78	137,832	21.73	12.42
25+	2,303,311	34.81	219,437	34.60	9.53
total	6,616,418	100	634,192	100	9.59
EDUCATION (1972)	units	pupils	units	pupils	pupils
university/academy	30	16.074	24	14,044	87.37

6. TABLE : MEDAN BASIC DATA (cont.)

H E A L T H (1971)	units	capacity	units	capacity	units	capacity
Public Hospital	63	9.637	11	1,860	17.46	19.30
Sub Public Hospital	30	1,101	-	-	-	-
Specialized Hospital	13	2,090	4	491	30.77	23.49
Maternity Clinics	48	566	28	372	58.33	65.72
EXPORT			via Belawan Port			
volume (kg) 1971	622,910,517		609,796,107		98.88	
1972	707,216,428		685,875,984		97.98	
Value (US \$) 1971	152,425,335		148,672,065		98.53	
1972	153,885,567		152,956,509		99.39	

51

EXPORTS via BELAWAN

	Rubber	Palm Oil	Tobacco
volume (kg) 1971	226,652,132	52,911,500	2,237,191
1972	246,301,341	50,857,253	1,316,258
value(US\$) 1971	64,430,963	5,395,427	8,036,487
1972	68,991,361	3,676,163	10,173,840

I N D U S T R Y 1972 / 1973

	North Sumatra	M e d a n	Deli Serdang	% Medan of North Sumatra	% Medan + Deli Serdang of North Sumatra
<i>1. Food & Service Industries (Kerajinan)</i>					
Investment (Rp)	8,802	1,457	1,690	17	36
Investment (Rp) 1972/1973	3,426,732,009	335,612,511	883,556,425	10	27
Manpower	10,455	4,336	4,471	42	84
<i>2. Light Industry</i>					
Number	1,817	557	231	31	40
Investment (Rp) 1972/1973	42,094,501,799	10,355,538,000	15,598,737,800	25	62
Manpower	20,505	4,939	6,534	24	56
<i>3. Textiles</i>					
Number	140	33	23	24	40
Investment (Rp) 1972/1973	42,510,012,000	1,333,969,000	1,043,650,000	3	5
Manpower	5,364	1,220	1,644	23	53

I N D U S T R Y 1 9 7 2 / 1 9 7 3

(cont.)

4. <i>Chemicals & Maritime</i>					
Number	192	96	36	50	69
Investment (Rp) 1972/1973	5,196,858,244	1,222,245,131	2,727,071,804	24	76
Manpower	4,478	1,012	1,223	23	50
5. <i>Basic</i>					
Number	86	65	21	76	100
Investment (Rp) 1972/1973	5,860,499,000	1,978,890,000	3,811,609,000	34	100
Manpower	2,511	1,470	1,041	59	100
6. <i>T o t a l</i>					
Number	11,037	2,197	2,001	20	38
Investment (Rp) 1972/1973	59,082,594,052	15,026,551,642	24,134,625,029	25	66
Manpower	40,412	12,543	10,248	31	56

Source : Dinas Planologi, *Penyusunan Tahap Pertama Masterplan Kotamadya Medan*, (1971),
tables III.A.14.2 - 14.5.

a third the size of Surabaya; but the city's economic functions in the national economy make it considerably more important than the population figures might indicate. Medan's population has been a steady 9.5 to 9.7 per cent of North Sumatra's since 1961. The age structure of its population and its population growth have not differed significantly from those of North Sumatra. But Medan in 1971 had five per cent more youth in the 15-24 year old category, and a yearly growth rate 0.19 per cent faster than North Sumatra's remarkable 3.19 per cent per year since 1961. Thus we might conclude that migration to North Sumatra does not direct itself to Medan out of proportion to Medan's size in the provincial total, and migration to Medan from within the provincial population is not particularly great, but having some emphasis on young job-seekers.

The labor force of Medan in 1971 found 64 per cent in trade, 15 per cent in services, transport and communications, 12 per cent in agricultural production (prior to expansion of the city's boundaries), and four per cent each in utilities and construction. The modernity that this labor force represents is reflected in Medan's dominance of the region in advanced education and health care facilities. Public hospital capacity available in Medan, for example, is 19 per cent of the provincial total; Medan has 66 per cent of the maternity clinics, and 87 per cent of the university/academy students. These figures are to be related to Medan's about 10 per cent of the population and to the fact that, as with Surabaya, its provincial hinterland contains several important larger towns and a set of modern tourism facilities.

Manufacturing - Medan is a light and basic industry center whose food processing and services industries have 42 per cent of North Sumatra's employment but only 10 per cent of the investment. Consideration of Medan's industrial role in North Sumatra is complicated by the fact that the figures available (for 1972/73) were derived from surveys taken before Medan expanded. Therefore it is necessary really to consider Medan in combination with Deli Serdang, the Kabupaten that surrounds it and which contained at that time Belawan and the industrial corridor between it and Medan's center. For this city-

region we see that in all industrial categories and types of industrial indicators (employees, investment and numbers of firms) it has more than a quarter of the Province's activity (with the exception of investment in textiles at 5 per cent). One hundred per cent of basic industry is in the Medan area and 76 per cent of the investment in chemical and maritime industries. Medan is least important to the Province in food and service industries and in textiles production. In totals, Medan and Deli Serdang had 66 per cent of industrial investment in 1972/73 and 56 per cent of the employees. The Medan city area, as a part of its whole city-region is most predominant in basic and chemical industries.

Within Medan, food and services industries are broadly distributed by type; light industries are largest in palm oil processing, cigarettes manufacture, and publishing; and of basic industries, construction materials takes 30 per cent of investment, employing 17 per cent, automobile assembly has 25 per cent and 5 per cent, respectively, motor scooter assembly 17 per cent and 5 per cent, radio and airconditioner assembly 12 per cent and 16 per cent, and dry batteries 5 per cent and 27 per cent. Thus Medan fills its role as an entry and processing location for more modern, capital intensive small manufacturing parallel to its and its city-regions's function as a processor of export agricultural products.

Trade - In 1971 and 1972 Belawan harbour of Medan exported from 97 to 99 per cent of the volume and value of exports from North Sumatra. These were rubber (about 36 per cent of volume), palm oil and tobacco in that order by volume, and rubber, tobacco and palm oil in order of value. Processing for none of these must necessarily be done in Medan, whose manufacturing and import role is in machines and food commodities. Imports to North Sumatra, which similarly have practically no alternative but to come from overseas via Medan, were 31 per cent by volume in building materials in 1971, 19 per cent in food, and 18 per cent each in chemicals and machines and machine parts.

Government - The same mix of governmental units operating and carrying out development policy as in Surabaya are important in Medan. In addition, the All-Sumatra Defence Command headquarters is located

7. MEDAN GOVERNMENT FINANCES
MEDAN : REALIZATION

	1969/1970	1970/1971	1971/1972	1972/1973	1973/1 st quarter 1974
Salaries	111,779,834.40	73,286,012.83	165,686,860.40	110,231,158.34	92,883,900.37
Expenditure for goods	163,599,080.73	257,183,440.49	334,908,905.63	434,040,167.81	304,969,881.57
Development expenditure	156,865,857.52	365,675,517.88	420,350,051.29	593,909,554.10	262,515,177.39
T O T A L	432,244,772.65	696,144,971.20	920,945,817.32	1,138,180,880.25	160,368,959.33

56

NORTH SUMATRA BUDGET
BILLION RUPIAHS

	1969/70	%	1970/71	%	1971/72	%
1. S a l a r i e s	2,7	39	2,9	33	3,5	32
2. Expenditure for goods	1,0	14	1,1	13	1,4	13
3. Development expenditures	3,3	47	4,7	54	6,1	55
TOTAL	7,0		8,7		11.0	

MEDAN 1973 / 1974 BUDGET ESTIMATES

	R e g u l a r	%	Luar Biasa (extraordinary)
REVENUES			
TOTAL	1,997,929,295		82,025,083
from Higher Government	294,292,066	15	
T a x e s	725,600,000	36	
Sales of Services	572,505,830	29	
Other	405,531,399	20	
EXPENDITURES			
TOTAL	1,997,929,295		82,025,083
Routine	822,085,433	41	
Development	1,175,843,862	59	
Umum (government)	175,068,000	9 (15) ^{*)}	
Public Works	443,542,279	22 (38)	
roads and bridges	333,947,279	17 (28)	
drainage	63,400,000	3 (5)	
cleanings & parts	24,080,000	1 (2)	
Education	63,700,000	3 (5)	
H e a l t h	24,795,000	1 (2)	

^{*)} % of development expenditures.

there. Central government Pelita project expenditure plans, however, give up to three times the prominence to Medan within its province than Surabaya receives for location-specific projects (33 per cent in 1971/72 and 28 per cent planned for 1974/75; 1972/73 planned expenditures were anomalous for dropping Medan to about 12 per cent, very large expenditures for the Asahan hydro-electric facility perhaps being the reason that year). Communications (including airport), higher education, and then industrial development (rehabilitation particularly, especially in 1971/72) were most important in Pelita I expenditures. They together accounted for 85 per cent, 75 per cent, and 68 per cent of the total planned expenditures of the central government in the years 1971/72, 1972/73 and 1974/75. ¹⁾

As the budget of the Province of North Sumatra increased from 1969/70 to 1971/72 by 57 per cent, the proportion of development expenditures rose from 47 to 55 per cent and those for salaries correspondingly declined. Because 38 per cent of Indonesia's plantation export trade comes from North Sumatra, with ample opportunities for expansion, concern in provincial development policy has been given first to access roads and second to other infra-structure, especially harbor and irrigation. This will have had a great effect on Medan's prosperity but not on the more social-welfare oriented services structure.

The Municipality of Medan expresses its development priorities as being educational facilities construction, kampong improvement, health and commercial facilities upgrading, in that order. Revenues in 1970/71 came 31 per cent from taxes, 16 per cent from higher governments, and 10 per cent from unconventional sources (presumably additional taxes on gambling). While expenditures for salaries remained fairly constant from 1969/70 to 1972/73, those for purchases of goods

¹⁾ *Figures for 1973/74, even for these planned expenditures have not come available because of the need for adjustments due to inflation, according to the Department of Finance.*

and especially those for development (capital investment) increased markedly (by 2.7 and 3.8 times respectively). In that period the proportion of development in total expenditures increased from 36 to 52 per cent. By the time of the 1973/74 budget estimates of the Municipality, total expenditures over those of 1969/70 had increased 4.6 times and the percentage of development expenditures in these to 59 per cent, with a 27 per cent increase in the proportion of development expenditures devoted to public works (roads and drainage, back to the 1969/70 percentage of about 38 per cent).

We see that Medan is to a fair degree left on its own for development beyond that of assisting North Sumatra's export economy to expand. After the Asahan hydro plant comes into operation the second stage will provide needed electricity to Medan. Meanwhile, the city government has been able to greatly increase development expenditures and to channel these in larger amounts to basic city infra-structure. Problems of drainage, traffic congestion (especially caused by the railroad) and wretched living conditions in certain poor kampong areas, however, remain unsolved.

2. The Service System

a. *Power* - Electric power in Medan, provided by the PLN Exploitation Region I organization, is regarded as inadequate, with only about one-third of the homes receiving service in 1972. Data are extremely scarce but indicate a slight excess of expenditure over revenue in 1970. Household usage in 1971 was 134 per cent that of industry. The same problem of analysis found in Surabaya obtains here: the system's service beyond the Municipal boundaries. To assist in bringing the Medan system up to a level that would support continued industrial expansion and broader distribution to homes, the USAID provided a loan in 1970 of \$13.8 million to finance the foreign exchange costs of the first stage of a long-range electricity development plan for North Sumatra which will begin with rehabilitation of the electric power system of Medan. Construction should begin in 1974, with the project scheduled to be completed by 1977.

Gas is produced by the National Gas Company in Medan and was sold to 1,650 consumers in 1970 in a volume of 1.74 million m³. The Gas Company seems to make a considerable profit from this despite the fact that up to 25 per cent of its production is lost.

b. *Water* - The Province of North Sumatra, unlike East Java, is responsible for providing drinking water to some of the major towns of its region, including, here, Medan. In 1971 the liters per second capacity was 550, or 0.9 per thousand population. The official Indonesian urban standard is 1 liter/sec/1,000 population. There were no figures available on loss in this old system. The number of households receiving water service (less than 50 per cent, perhaps as low as 20 per cent - figures are unclear) has remained fairly constant from 1968 through 1971 (increasing by only eight per cent, taking what statistics there are), while the households receiving water per capita has of course slightly declined. One cannot escape the supposition that if drinking water were provided by a municipal corporation the service would be improving faster; whereas it is now falling behind public demand and even in the proportion of households served. The city does at least maintain 804,966 meters of sewerage canals (18,822 closed) and budgeted Rp.63.4 million for this service in 1973/74. The danger to health from unsanitary wastes would seem to be less in Medan than Surabaya by a long way; although there also is no city garbage collection.

c. *Roads and Bridges* - The Medan Municipal Public Works Department builds and maintains roads and bridges within the city, with the exception of provincial and national roads whose construction, (only) is financed by these higher governments. What was said of adequacy of roads in Surabaya applies in Medan. Annual development expenditures by the Municipality for roads and bridges have increased almost three times between 1970 and 1973; while central government inputs (Inpress) have more than tripled, and provincial government expenditures fluctuated, ending in 1973 at about the same low level of 1970. From 1971 to 1973 the length of modern roads and bridges only increased by one per

cent (to 406 km). Observations suggest that far more road development will be needed if future development of Medan is to keep pace with the demands of national and provincial development policy and the city's own needs. A by-pass or ring road around the city to the harbor will be essential.

d. *Education* - Elementary education in Medan showed a decline in enrollment of seven per cent from 1970 to 1972, with public school students remaining at a constant number and the reduction accounted for by a fall in the proportion of all elementary pupils in private schools (from 43 to 38 per cent). In that period development expenditures on elementary education fluctuated wildly, but as we see, with no apparent impact on service availability. General junior high schools had a private attendance in 1972 of 53 per cent of the total (as compared to Surabaya's 66 per cent). In 1973 the general junior high school attendance had grown by 22 per cent, and vocational junior high school attendance was 56 per cent of total enrollment at that level (as compared to Surabaya's 47 per cent). Enrollment in elementary and junior high schools in 1972 (which appears to not include vocational schools) was 56 per cent of the children in the five to 14 year age group, which contrasts significantly with the parallel Surabaya figure of only 38 per cent. Medan appears to be ahead of Surabaya in education of the population and in the vocational field, yet inadequate to obvious demand.

There were 13 institutions of higher learning registered in Medan in 1970 with a total enrollment in the eight major ones of 10,633, rising to 14,049 in 1975. In 1970, 7,931 of these students were in universities, of which the preeminent one is the University of North Sumatra, supported by the central government. No data were available on Nomensen, the Methodist university, or the Universitas Darma Agung, the other major and private institution. Like Surabaya, Medan does not seem to be wanting in generally educated university graduates, but is short of those graduating in the higher professions and technical fields.

e. *Terminals* - The port of Medan is key to the continued development of Medan and indeed all of northern Sumatra. It is administered by the Port Authority of Belawan, under the direction of the Department of Communications. The Asian Development Bank (ADB) provides the facts that it serves an area containing 8.5 million people and is connected with the deep water of the Straits of Malacca by a dredged channel about 12 km long leading from the Island of Belawan. A new harbor was completed in 1966 for ocean-going vessels, but it is now (1973) limited to the use of inter-insular vessels owing to the silting up of the harbor basin caused by embankment failures. The present handling capacity is estimated to be 1.3 million tons of general cargo per year. The ADB concludes: "The condition of facilities in the main port area is reasonable except that some rehabilitation is still required in transit sheds, open pavement, and water and electricity supply systems ... (*but*) the port facilities are inadequate even for the present traffic, and severe congestion could result in the near future unless early modernization work and development of additional facilities is undertaken."¹⁾ This is not to say that operations do not go reasonably smoothly at present, considering that the annual number of ships calling since 1968 has only increased by less than four per cent and cargo tonnage by 22 per cent. Income of the Port Authority increased from Rp.167 million in 1970 to Rp.244 million in 1972, which suggests that locally generated in addition to central government funds should be available in increasing amounts from now on.

Rail and Air services in and out of Medan show opposite trends: rail cargo and passengers are declining (the former to less than a third, in 1971, of the 1970 traffic), although this could be reversed by rail development policy if prices can be brought below those of land transportation of goods; while air traffic continues to rise steadily. The rail system of North Sumatra is under the direction of the central railways administration and managed locally as the North Sumatra Exploitation System, coordinated by the provincial government. Tonnage moved in the system declined from 920,276 tons in 1966 to 589,453 tons in 1971, ton kilometers from 104.7 million to 92.1 million,

and passenger kilometers from 134.7 million to 89.4 million. Air service did not see a significant rise in air cargo traffic from 1967 to 1971 and is not in real competition with the harbor cargo. Passenger and baggage traffic, on the other hand, just about tripled in both categories during the period (to 123,717 passengers and 1,664,380 kg of baggage in 1971; while passenger traffic in the harbor only increased by 20 per cent in that time to 64,389). The airport, Polonia, is under the mutual management of the Indonesian Air Force and the Department of Communications. International flights arrive and depart for Malaysia and Singapore, operated by Garuda, Merpati, and (in 1972) Malaysia - Singapore Airlines. The airport, as noted, is situated quite close to the center of the city and therefore is very convenient, although bothersome to the residents of its neighborhood.

There is no municipal bus service in Medan. The Municipality provides and maintains three inter-city and 2 intra-city bus terminals for the use of private companies.

f. *Health* - As in Surabaya, health facilities are provided by the Province, Municipality and private agencies, but not, evidently by the military. There were in 1970 11 general hospitals with 1,860 beds, of which six and 432 respectively were private. An additional four (non-maternity) specialized hospitals provided 491 beds, of which one hospital and 13 beds, were private. According to the statistics made available to field researchers the number of general hospital beds declined to 1,664 in 1972, and the beds in (non-maternity) specialized hospitals to 92, provincial ones of the former to 338. Even allowing for discrepancies in definition and reporting practices we conclude that either the authorities don't know what they are facing or general advanced health care in Medan is in big trouble. The city health agency provided in 1972 three poly-clinics (in competition with 24 private ones), a dental clinic, 22 post-natal clinics, and 11

¹⁾ *Ports Study in Indonesia, op. cit., pp. 13-18.*

public health centers, which, except in the case of public health centers, compares very unfavorably to Surabaya's service.

g. *Communications* - The number of telephones per 1,000 population in Medan in 1971 was 22.7, or 2.3 times greater than Surabaya's. In 1971 there was one RRI radio station and in 1973 also one TVRI television channel, a part of whose policy is reported to be to turn viewers away from Malaysian competition, in addition to education and public awareness promotion. In 1971 there were an amazing 80 private radio stations operating on Medan's air: private stations were allowed in Indonesia beginning in 1967.

h. *Markets* - The Municipality operates a Market Corporation which has increased the floor area of its 24 markets by 166 per cent from 1971 to 1973. Like that of Surabaya it is a profit-making organization, with the earnings exceeding expenditures by 159 per cent in 1971 and 219 per cent in 1973. The market service seems to be adequate.

3. City Conclusions

While the pattern of services administration in Medan is practically the same as that in Surabaya, the emphases are different, with resulting differences in services benefits accruing to Medan residents and commercial and industrial operators. The city government has not reached the point of comprehensive master planning as integrated into city management of development that can enable it to cope with certain obvious problems. A Master Plan is being prepared by the planning department of the Municipality, but in itself will not help without the greater connection to policy-making activities and broader scope (to industrial estate planning, for example) that Surabaya's Team has gained.

There is a basic dichotomy in Medan's services situation between services which serve North Sumatra's export agricultural development, which generally are well supported and adequate to the needs of that for the time being, and those which are supposed to serve the unitary

development of the Medan city-region. The fact that Medan is quite advanced in importing and even assembly of modern industrial products and is way ahead of Surabaya in this respect, is to be attributed to the proximity of the relatively highly developed Malay peninsula (including Singapore) and the specific equipment needs of northern Sumatran estate agriculture.

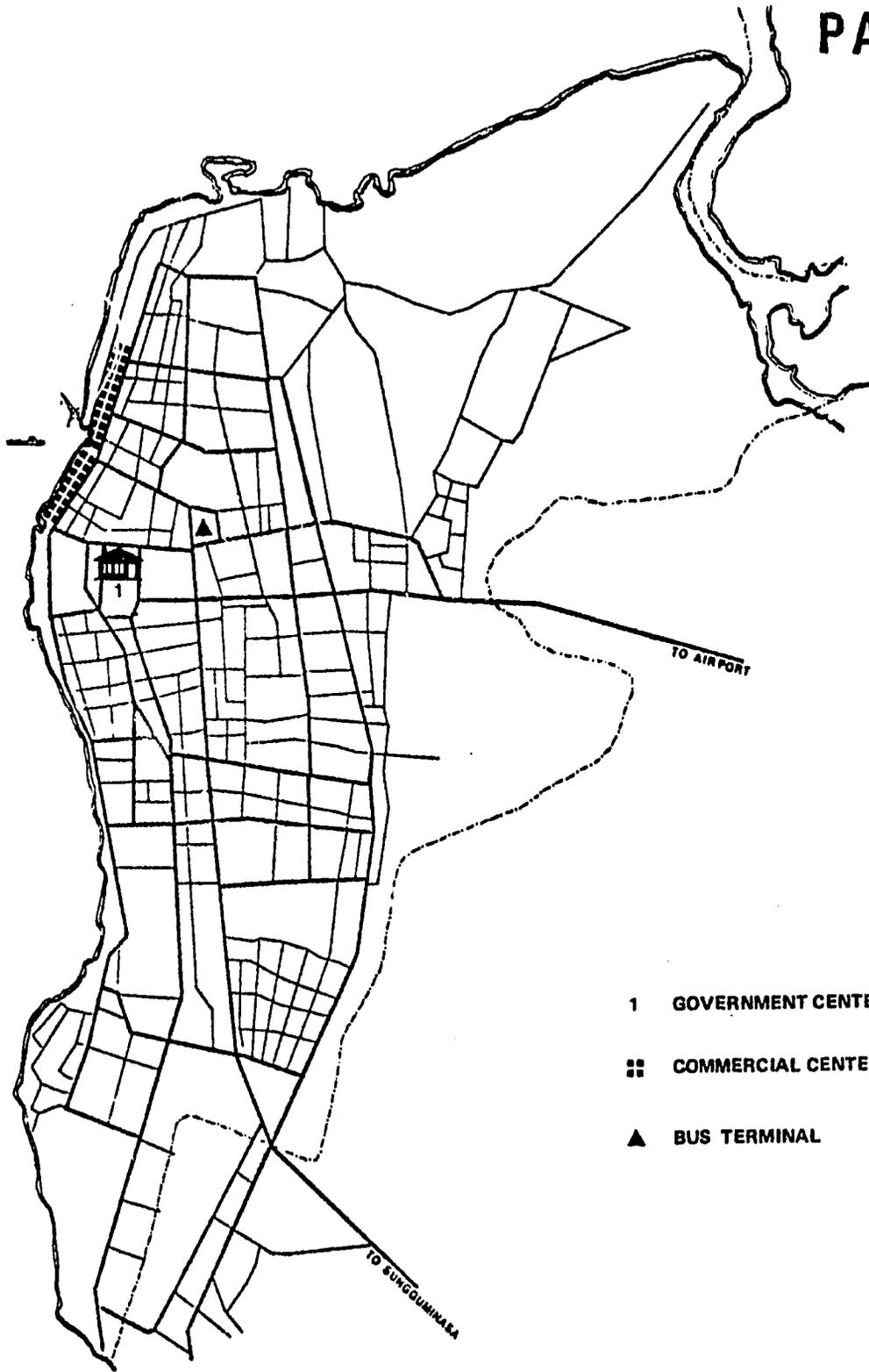
Thus the services identity of Medan is determined by growing attention to the harbor and the road system serving the city-region and beyond, as well as the airport, telephone system (as compared to Surabaya's) and, increasingly, the major university. At the same time, the Municipality cannot keep up with drainage, kampong deterioration and road traffic problems. The National Electricity Company should catch up with Medan's needs, but not for quite a while. The health service situation appears to be worsening and is beneath need considerably with the city government unable to make up for the lack of required provincial and central government development support. The water service could not be worse if the Municipality managed it itself, and quite possibly would be much better. Hence the municipal government appears to be caught between national and provincial institutions and priorities, on the one hand, and the needs of its own area on the other. It has not developed the financial or planning capacity, as yet, to bring order out of this and increased attention to crucial problems.

Fortunately, the city does not face the imminent migration and employment problems that Javanese cities will have to cope with, nor their already great density and deterioration problems. North Sumatra is not self-sufficient in food, but the port and land transportation facilities of Medan readily move foodstuffs to and through the city which the Province can readily afford to buy out of export earnings. If Medan is to grow as the trade center of the north of Indonesia, however, certain services, such as electricity, water, and high class medical care will have to be improved. These are not essential to the agricultural export economy of the province, but, by contrast, are central to further diversification of Medan's industry and its succes-

ful competition with Jakarta as a major modern center in the national economy.

Doing research on Medan must begin with reorganization of the confusing general and detailed official data. Those for provincial agricultural and export functions, of course, are excellent. What seems to be required is a strong municipal planning organization with development responsibilities beyond the drawing of maps to make the rest of the necessary information fall into useful place; hopefully this will come to Medan soon. In addition to the kinds of basic research recommended for the Surabaya city-region, special attention in Medan should be devoted by scholars and planners soon, *inter alia*, to three subjects : (1) the opportunities and requirements of industrial diversification, with emphasis on further concentration on modern equipment and capital intensive production, including in agricultural products processing, (2) the nature of Medan's physical expansion toward Belawan and what that will mean for efficiency of industrial development in conjunction with improved movement of goods to and from the city's hinterland and Belawan (perhaps an industrial estate will be in order in the next decade); and (3) the reorganization or expansion of the municipal government such that it can better take responsibility for urban development, and particularly provide the social services (perhaps through more dynamic municipal corporations) whose inadequacy is now so obvious. This is made more attractive as a research and action initiative by the Medan Municipality's demonstrable ability in recent years to vastly increase development expenditures.

UJUNG PANDANG



- 1 GOVERNMENT CENTER
- ▨ COMMERCIAL CENTER
- ▲ BUS TERMINAL



C. Ujung Pandang

1. The City as a Unit and Center

Form - Ujung Pandang, formerly named Makassar, is a medium-sized port city and trading center. It is flat with an elevation of zero to 2 meters above sea level, and has a long waterfront between two rivers. Roads from the interior of South Sulawesi enter from the east and northeast bringing produce to the city center and the port northwest of it. The center contains government buildings and parks and lies between an older and a newer commercial area, the latter closer and more oriented to the port, having shophouses and city-provided markets. Land use of the old city (2,100 Ha) was 37.5 per cent built up (30 per cent slums), 14 per cent in agriculture, 10 per cent in roads and sewerage channels, and 9 per cent swampy. The new city expansion (to 11,587 Ha.) takes in mostly agricultural land into which westward is to expand housing and industrial development along the road to the airport. This is designed to reduce the heavy density in slums, especially around Hasanudin University just west of the city center. A researcher has reported that the Municipality and Province own a large proportion of the land in the city, especially in the old city (up to 75 per cent of areas he sampled), and that markets and elementary schools are usually within reach of residents' domiciles, although there are longer journeys to work (especially to the port). The overall housing standard of the old town center is quite high and there are adequate facilities and space in the commercial areas. ¹⁾

Population - The population of Ujung Pandang increased from 8.5 to 10.6 per cent of South Sulawesi's from 1961 to 1972 with the city growing at an annual rate of about 2.5 per cent from 1961 to 1971 (and overall to 1972 by 4.2 per cent yearly including the population

¹⁾ W.D. McTaggart, "Ujung Pandang Survey, 1973 - Field Report," (Department of Geography, Arizona State University: 1973, pp. 3-20.

9. Table: Ujung Pandang Basic Data

	South Sulawesi	UJUNG PANDANG	
	No.	No.	% of South Sulawesi
AREA (km2)	77,636.83	21.00 (old) 115.87 ('71/'72)	
POPULATION 1961	4,516,544	384,159	8.51
1971	5,186,445	424,809	
1972	5,294,293	561,238	10.6
annual increase (61-72)	1.56 %	4.2 % (2.5% 1961-72)	(U.P.increased in size in 1971/72)
density/km2 1961	581.75	16,006.63	
1971	668.04	18,117.04	
EDUCATION FACILITIES (1972)	units pupils	units pupils	units pupils
kindergartens	227 8,975	64 3,143	28.19 35.02
elementary schools	3,330 559,534	219 68,733	6.58 12.28
junior high schools:			
general	173 43,024	35 10,329	20.23 24.01
vocational		13 3,000	
senior high schools:			
general	58 12,027	23 5,858	39.66 48.71
vocational	59	14 2,638	
universities/academies	50 16,647	43 16,122	86 96.56
HEALTH (1972)			
General Hospitals(no)	35	9	25.71
Health Centers	108	45	41.67
Clinics	765	95	12.42
EXPORT		via Makasar Port	
volume (tons) 1970	89,396	80,926	90.53
1971	44,936	41,940	93.33
value (US \$) 1970	14,153,353	13,154,000	92.94
1971	19,814,234	8,344,000	42.11
HARBOR (1972)		via Makasar Port	
goods movements (kg)	856,795,297	768,932,028	89.75
passengers	98,586	79,141	80.28

Export Realization of South Sulawesi 1972

Commodities	US \$ value	%
Agricultural Products	2,923,238.13	27.51
Forestry Products	4,420,864.47	41.60
Livestock	600,153.34	5.65
Sea Products	1,888,493.55	17.76
Handicraft Products	13,210.21	0.12
Others	782,181.51	7.36
T o t a l	10,627,186.21	100.

Imports via Ujung Pandang 1972

Commodities	US \$ value
Consumption goods	1,197,924.93
Raw Materials	4,992,997.99
Capital goods	4,179,203.67
T o t a l	10,370,126.59

Inter-insular flow of foods Sulawesi Selatan 1971-72

Commodities	units	Volume	
		1971	1972
Agricultural Products	ton	79,030.538	63,158.322
	tbg(?)	389	529
	liter	200	-
Forestry Products	M3	-	794,714
Sea Products	Ton	448.657	227.904
Livestock	No.	9,585	10,176
Industrial Products	Ton	1,621.609	1,792.372
	Sheet	61,965	206,135

South Sulawesi Industrial Labor Force

	1969		1970		1972	
	No.	%	No.	%	No.	%
Small, light and Food Industries	10,669	24	12,941	33	15,208	54.1
Peasant Industries	4,834	11	9,214	24	6,792	24.1
Basic Industries	-	-	118	0.3	174	0.6
Textile Industries	27,927	63	15,438	39	4,288	15.3
Chemical Industries	1,063	2	1,425	3.7	1,471	5.2
Maritime Industries	-	-	-	-	201	0.7
T o t a l	44,493	100	39,136	100	28,134	100

Employment Ujung Pandang 1969

Nature of employment	Total	%-age
1. Trade	19.304	4,26
2. Clerical	10.181 ¹⁾	2,24
3. Manual laborer	4.837	1,07
4. Fishing	2.000	0,44
5. Becak driver	27.896	6,64
6. Driver	7.917	1,74
7. Soldier	2.410 ²⁾	3,57
8. Student*	71.660	15,75
9. Other	126.870	17,88

Note: 1) Labor force
2) residing outside the barracks

Source: DLLAJ.

added in the city expansion). Provincial population has not grown significantly through inter-provincial migration; so Ujung Pandang has been attracting migrants from within South Sulawesi which add to its population by at least 0.7 per cent annually. The active labor force is reported to consist of 35 per cent of the population (of a potential 67.5 per cent), with a large proportion of students (16 per cent) and a relatively low one in trade (four per cent).

Ujung Pandang had a far higher proportion of provincial social and economic activity than its numbers might suggest. It employed 18.3 per cent of the industrial labor and contained in its city-region almost all of the basic and heavier industry of South Sulawesi. Twenty-four per cent of the provincial junior high school, 49 per cent of the senior high school and 97 per cent of the university/academy students went to school in Ujung Pandang in 1972. And the city provided 26 per cent of provincial general hospitals and 42 per cent of health centers. There is no place to go easily from South, Southeast and much of Central Sulawesi but Ujung Pandang for modern opportunities. Land transportation facilities being relatively underdeveloped, and the employment opportunities in Ujung Pandang being fairly stagnant at this time, have meant that migration so far has been nothing compared to its ultimate potential.

Manufacturing - Figures on urban economic activity in South Sulawesi, like those for trade and government activity, are less well organized and available than for the more dynamic cities of Surabaya and Medan. The 1970 Industrial Survey indicates that 32 per cent of industrial employment in Ujung Pandang was in food processing, 17 per cent in machine fabricating and repair, 15 per cent in printing and paper industries, and 10 per cent in ceramics and non-metal processing industries. Large-scale industrial investment aimed at serving the Eastern Indonesian region has had four major undertakings: a flour mill privately invested in adjacent to the port began operations in 1972 to employ, when in full operation, about 800 workers with 70 per cent of its production to be exported from the province; a galvanized iron factory is in operation on the road to the Ujung Pandang

airport; a paper mill 16 Km South of Ujung Pandang was built in 1962-65 with Japanese war reparations, and the Tonasa Cement factory 50 km north of the city was completed in 1968 with Czech assistance. In 1969 the last operated at only 50 per cent of capacity because of the limited market at the time. (South Sulawesi can absorb only 30 per cent of its production; 50 per cent or more went to Java).

Trade - The port of Ujung Pandang handles about 78 per cent of the international exports of South Sulawesi and in 1970, 91 per cent and in 1971, 93 per cent of the volume of all provincial exports. The value of provincial exports moving through Ujung Pandang dropped from 93 per cent to 42 per cent between those years, seemingly owed to competition from Pare-Pare, Palopo and Malili, to some extent in international exports. Provincial products that move through Ujung Pandang are mainly unprocessed agricultural ones, in addition to cement, paper and flour, with the 1968 value of rice exports at Rp. 311 million, and coconut oil Rp. 114 million. Livestock is also exported, and the main agriculturally derived imports are sugar (1968 = Rp. 526 million) and textiles (Rp. 451 million). There of course are large imports of building materials and machinery as well for which the Province is dependent on the other islands of Indonesia, mainly Java.

Government - Central and provincial government development policy devoted to South Sulawesi has had, over the years, two components : raising food production for export to the rest of Indonesia, and development of Ujung Pandang as a macro-regional manufacturing, processing and trading center. In 1964 a crash program to spur rice production was begun and resulted by the late 1960's in a yearly surplus of more than 50,000 tons of rice. Ujung Pandang has an agricultural research station branch of the Bogor Agricultural Institute. And in recent years increasing attention in central government development expenditures has been given to improving rural infra - structure, especially service roads and irrigation works. Since 1968, additionally, exploration for and the beginning of extraction of commercial nickel for international export has begun in northeastern South Sulawesi (Luwu), which will also be the target of a transmigration

10. TABLE : Ujung Pandang : Government Finance.

UJUNG PANDANG : REALIZATION

	1970/1971 (tentative)	1971/1972	1972/1973
I. DINAS BIASA (ROUTINE)			
<i>INCOME</i>	489,530,174	625,675,743.09	764,005,456.76
1. Positive Saldo (Saving)	-	-	34,613.90
2. From Higher Gov't	195,229,604	215,029,000.	314,537,535.83
3. Taxes & Retribution	175,906,043	205,647,630.93	270,422,964.32
4. R e n t s	337,549	1,759,294.80	1,831,389.17
5. From Owned Enter- prices	101,202,693	103,556,409.05	142,371,997.22
6. Others	16,854,285	98,783,408.41	34,806,956.32
<i>EXPENDITURE</i>	389,808,481	625,641,129.29	763,975,874.27
II. DINAS LUAR BIASA (DEVELOPMENT)			
<i>INCOME</i>	809,285,375	879,885,929.61	830,665,319.70
<i>EXPENDITURE</i>	982,242,348	879,885,929.61	830,665,319.70
1. Investment	144,188,436	322,500,436.76	192,128,876.36
a. Health	14,411,361	4,608,025.51	12,077,641.05
b. Education	65,253,258	101,383,412.60	48,961,131.15
c. Public Safety	22,060,868	102,477,857.87	34,528,594.97
d. Social-economic	16,649,435	114,031,140.78	96,561,509.19
e. Other	25,814,000	-	-
2. Capital formation	-	-	1,333,853.50
3. Others	838,053,912	557,385,492.85	637,202,589.84

SOUTH SULAWESI : REALIZATION - 1971/1972.

R O U T I N E		D E V E L O P M E N T	
<i>I N C O M E</i>	2,691,052,784.13	<i>I N C O M E</i>	477,801,331.40
- From Higher Gov't	2,194,933,778.56	<i>EXPENDITURE</i>	449,288,628.37
- Taxes & Retri- bution	174,052,064.28	- dinas biasa	90,280,084.65
- Other	322,006,941.29	- economic	
		-infra structure	56,194,917.48
		-production	44,607,000.
<i>EXPENDITURE</i>	2,691,052,784.13	- Social	104,835,718.68
		- Umum (gov't)	153,370,907.56

sum surplus agricultural development scheme under the Repelita II.

Central government development project expenditures planned for Ujung Pandang have consistently been from 17 to 18 per cent of totals devoted to South Sulawesi in the years 1971/72, 1972/73 and 1974/75, with urban and urbanizing expenditures around a quarter of provincial distributions. The airport, communications, and higher education have taken a third to a half of these, with very little central government money spent on drinking water, health and roads. In 1973 a loan agreement was signed between PLN and the ADB to cover foreign exchange costs of \$5.3 million for the Ujung Pandang Power Project (diesel). Gas and RRI projects are also planned.

The development priorities of the Municipality of Ujung Pandang are for the development of an industrial area on the eastern edge of the city, to improve and develop new residential areas, especially in association with the industrial area development, and to provide better services to these areas, especially roads, along with a ring road in the north of the city better connecting the port with its interland and the airport. The city also plans to construct added government buildings, markets, an amusement park and to approve further tourist hotel development especially along the sea.

Municipal financial record keeping is confusing and not presented in a form quite comparable to that of Surabaya and Medan. We see that various kinds of capital manipulation have provided income that was slightly greater than that derived from taxes and the like in 1972/73 and twice that of 1970/71. Two-thirds of city revenue of the latter type in 1971/72 came from taxation on games of chance. Such gains were abolished by 1974; yet the city still managed to raise its overall income by 38 per cent, reportedly through intensification of tax collection. From 1970/71 to 1972/73 the Municipality raised its development investments by 33 per cent (but the total declined by a third from the 1971/72 level, inexplicably). Education expenditures declined in 1972/73 to 25 per cent of the total from a high of 45 per cent in 1970/71; while expenditures in the social/economic category (as for certain roads, sewerage and kampong services) increased from

12 per cent to 50 per cent of total development expenditures, presumably with Inpres funding. Ujung Pandang is a city that is left very much to its own devices except for improved inter-island connections, and faces problems of increasing migration and a generally undynamic economy. Better welfare especially housing and higher level industrial employment are expected to result from the attraction of further industrial investment oriented to export from South Sulawesi and located conveniently.

2. The Services System

a. *Power* - The PLN Exploitation Region VI concentrated 90 per cent of its load in Ujung Pandang and environs in 1971, in which the use was 62 per cent by commerce, 27 per cent by residences, and 11 per cent by industry. Electricity supply for current city needs became sufficient when in 1971 a 25 MW steam generator associated with a 30 KV transmission system was commissioned with assistance by the Yugoslav government, and power sold in 1972 was reportedly more than ten times the amount of the previous year despite the accidental destruction of one generating unit. Customers for electric power increased only 12 per cent from 1966 to 1971 but after 1972 presumably have more opportunity to acquire electric services; although the large users taking up the increase are apparently industrial. Gas is provided in Ujung Pandang by a Municipality-owned enterprise, but as elsewhere is not particularly popular as a fuel. The amount of cubic meters sold remained constant from 1971 to 1974, with a slight increase in customers.

b. *Water* - Water is sold by a municipal enterprise, but there is a shortage due to equipment needs. The cubic meters available did not increase from 1969 to 1973 while those available monthly per 1,000 population declined by 20 per cent and the expenditure per capita increased by less than a third. Water service is subject to interruptions. It is planned to increase flow in the system to 500 liters/second from the present 200 l/sec. Major improvement will await de-

velopment of the industrial area with attendant housing. Sewerage service is provided by a division of the Municipality's Public Works Department, and danger to health from open sewers is concentrated in the slums. Only 10 per cent of city residents use a refuse collection service.

c. *Roads and Bridges* - The roads of Ujung Pandang are adequate to the type and quantity of main traffic use but retain a high priority in municipal development policy, especially the construction, as mentioned, of a ring road. Thus from 1971 to 1972 expenditures actually saw a decline, with the Municipality, the major agency responsible, having planned the ring road but detailed engineering and financing plans not yet completed:

d. *Education* - The elementary school system of Ujung Pandang has a well distributed set of schools which increased in number by 37 per cent from 1970 to 1972. There were 68,733 elementary school pupils in 1972, or approximately one per household. The junior high school and senior high school system, by contrast, is regarded as quite inadequate, as well as over-concentrated around the center of the city. The actual numbers of junior and senior high schools seem to have declined from 1970 to 1972 from 49 to 48 and 42 to 31 respectively. There were more university/academy students in Ujung Pandang in 1972 even than junior high school students, if the 1972 figures are to be taken seriously. Educational data on Ujung Pandang, similar to those on health services in Medan, seem perhaps to be faulty at the source. University students numbered 16,122 in 1972, rising from 12,850 in 1970, with about two-thirds of the students in the 20 universities and academies (36 listed in 1972) registered at Hasanudin, which receives central government support and has several professional schools. Officials complain of a general shortage of university graduates in Ujung Pandang, made worse by the hitherto almost complete absence of vocational training. It may be noted that Ujung Pandang's elementary and senior high school enrollments per capita are still higher than those in Medan and Surabaya by 50 per cent or more.

e. *Terminals* - The port of Ujung Pandang is under the direction of the central government's Department of Communications. Both its passenger and cargo traffic have been steadily but slowly rising. But in 1972 the port was reported to be as much as one-third underutilized, which suggests potential for city development in the future along with perhaps a past over-expectation of the real port function potential of Ujung Pandang. Income exceeds expenditures. Because Ujung Pandang is only accessible to inter-island visitors conveniently by air, the airport has seen a steady increase in usage since 1968 (almost tripling from 1968 to 1972 in both passengers and cargo). It is under the administration of the Air Communications Administrator of the air communications territory covering Sulawesi and Maluku. Services to Java and Bali are constantly improving, with the airport's runway now capable of receiving a DC-9. As in the first two cities, the municipal government manages a bus terminal, but in this case not as a municipal corporation. Incomes have been increasing; while in the absence of an urban public bus service, private companies operate efficient and extensive services, particularly to the outskirts of the city-region.

f. *Health* - Health services in Ujung Pandang are regarded locally as inadequate; although the numbers of hospital beds and of clinics *per capita* are almost double those of Surabaya and Medan. Public hospitals increased in number from 1969 to 1972 from eight to ten. A Municipal Health Department (whose budget almost quadrupled from 1969 to 1971) coordinates health services to a degree, but all the major installations are under the management of the Department of Health. And private facilities seem to be of minor importance, as they do not appear in the records.

g. *Communications* - The range of services, including television, available in Surabaya and Medan is available in Ujung Pandang. Even more amazing there are 95 private radio stations registered to operate through Ujung Pandang's air.

h. *Markets* - Similar to the earlier cities, the Municipality of Ujung Pandang owns and operates markets through a municipal enterprise.

The number of neighborhood markets increased from 10 to 32 in the years 1970 - 1972, including a new fish market on the seaside and a cold storage facility that is currently not used by the fish industry. Unlike the other cities's market enterprises, the one here just met development expenditures with revenues in 1972.

i. *Public Safety* - The Municipality of Ujung Pandang maintains the police, traffic police, fire fighting facilities, and the courts, in cooperation with national bodies. Crime does not seem to be a significant problem in the city, which may be accounted for in part by the fact that Ujung Pandang has eleven times the police per capita of Surabaya (1.46 per thousand population), an absolute advantage of almost 3.5 to one. Yet Ujung Pandang does not have as highly developed a *Kan-sip* as Surabaya, nor the large numbers of military police connected to military establishments.

1. *Other* - Like the other cities, Ujung Pandang is served by a variety of regulatory agencies, which generally have very limited budgets but definite responsibilities for the welfare of the community, and which may be listed together. They are relatively less significant in the services systems of Surabaya and Medan and less highly developed than in Semarang and Padang. There are : a Municipal Fish Auction Section providing service to fishermen; a Municipal Cattle and Livestock Agency which promotes the industry generally and works on epidemic prevention; a Municipal Market Bank Corporation which provides short-term credit to traders; a Municipal Housing Agency which evolved into the Village Reorganization Board and seeks to get housing built; an employment service of the Labor Department under the coordination of the Mayor; municipal traffic regulation; a Tourism Board, under the Governor of the Province; a Municipal Park and Cemetery Section; a Municipal Cleanliness and Beauty Section; a Municipal Library; religious agencies under the department of Religion; an Inspectorate of Immigration under its central ministry; a Municipal Agrarian Office which manages rural land reform; a Municipal Land Office; a Municipal Social Affairs Office, which gives some assistance to the needy; and meteorological

services provided by the central government.

3. City Conclusions

Ujung Pandang was ranked in this study ahead of Semarang, though it is smaller and serves a far less populous hinterland, because of its potential role of great importance in the development of Eastern Indonesia and because its distance from Jakarta and the surplus food production of its province could make it the object of special attention. We see that these three factors in a perception of Ujung Pandang by local and higher governments have resulted in an extraordinary services pattern. At the same time, the center function of Ujung Pandang in South Sulawesi and beyond raises certain problems for future development, mainly : (1) the absorption of rural-urban migrants who while not driven off the land as many may be in Java, may still not care to participate in new land development and will be attracted by the relative big-city character of Ujung Pandang; and (2) the fact that the larger (macro-regional) hinterland supposedly naturally belonging to the city and its port and factories may divert trade increasingly to Java, despite investment by the governments in and near Ujung Pandang.

The services identity of Ujung Pandang thus finds all social services and most productive services relatively better developed than those in Surabaya and Medan on a *per capita* basis. Even the water shortage is in the process of being corrected. The central government has been most concerned, over the years, with port, airport, and higher education development, the first two of which make the leading demand. Ujung Pandang's shortage of skilled workers and university graduates will be eased by the creation of vocational education centers in the coming years. But the basic problem of attracting highly qualified migrants will remain difficult at least so long as Ujung Pandang's commerce is so slow.

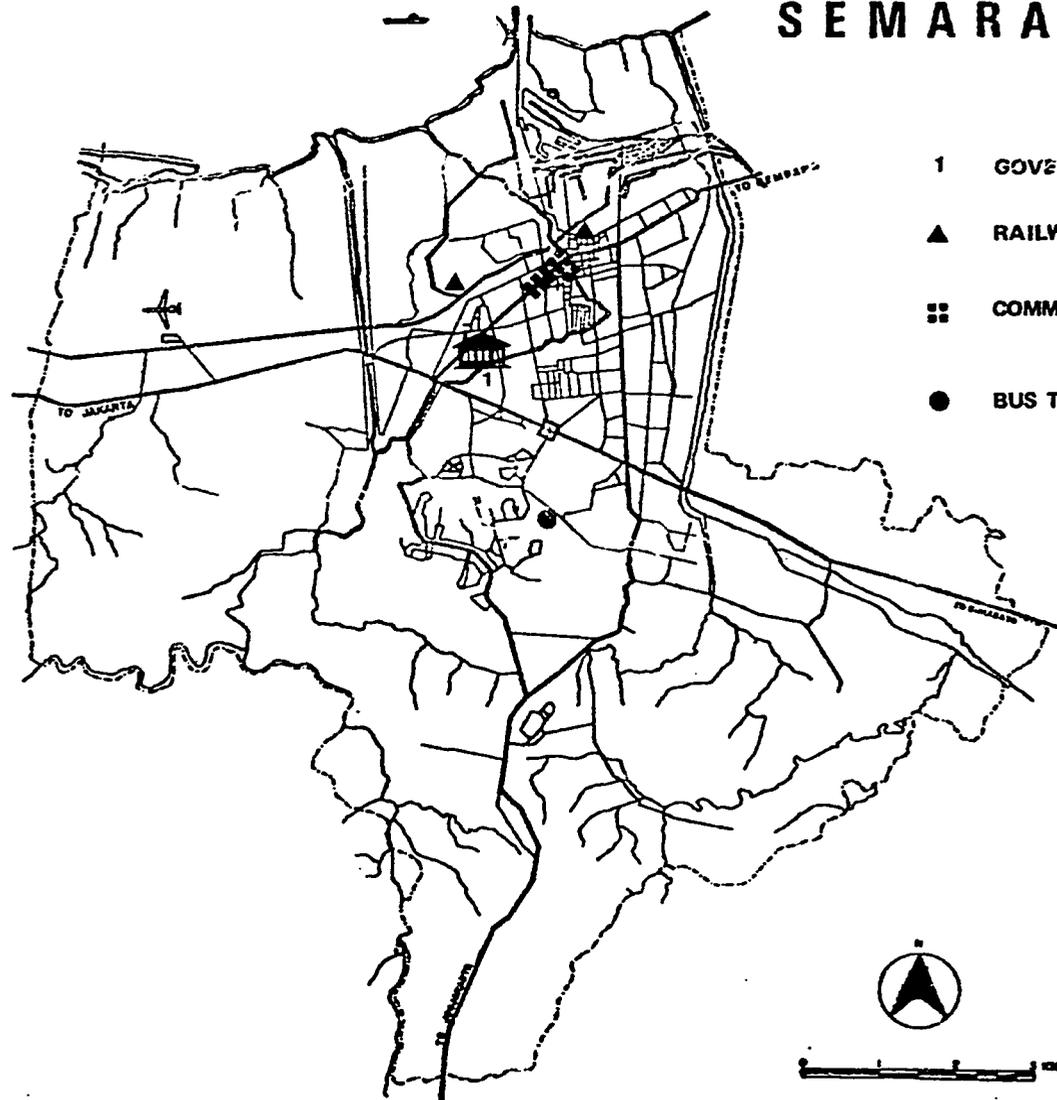
The municipal government has a relatively more free hand in the provision and management of many social services, not including health, but suffers from an extreme shortage of revenues; while judging from

the current level of provincial development expenditures in the city, that government is either unwilling or unable to provide significant support — perhaps believing from observation that facilities in Ujung Pandang are not so bad. But that does not get to the problem of attracting industry which will both provide employment and better serve the export economy of the Province that will grow to even greater importance to the national economy in coming years. The plan for industrial *cum* housing development seems wise. The city government, however, is handicapped by the absence of vigorous professional planning staff in the confidence of the Mayor.

Data, as is clear from the above and the Master Tables in Appendix A, are not adequately available on Ujung Pandang for deep or continuing analysis of its problems. The provincial statistical service is oriented to agricultural development. A bright spot is the economic research done by the Faculty of Economics of Hasanudin University, but this appears to be unsystematic as to subjects and little used by the authorities. Specific research endeavors that would seem to be especially important to long-range development of the city would be in the fields of inter-island trade flow potentials centering on Ujung Pandang, and the social and economic organization of kampong improvement. Speculative attention should also be given to the requirements that the city might better serve the future modern agricultural and minerals exploitation development of southern Sulawesi : it will not necessarily be automatic that Ujung Pandang will benefit from this as an entrepot and producer of useful products.

11. CITY MAP

SEMARANG



- 1 GOVERNMENT CENTER
- ▲ RAILWAY STATION
- ⊠ COMMERCIAL CENTER
- BUS TERMINAL

D. S e m a r a n g

1. The City as a Unit and Center.

Form - Semarang is a medium-sized commercial, small manufacturing and port city on the north coast of Central Java. Inland it has a hilly area, mainly residential. The flat plain northward to the sea-shore contains the city center which has the usual railway station, government buildings and commercial area, but is not quite so concentrated as in Ujung Pandang. There is a cross shaped set of axes — east-west in the case of the rail line and some main highways, and north-south in city development and joining the port to the south and south-east hinterland. Trade is in the center and north, industry in the east, center and north sections (port-oriented manufacturing includes rice milling and a spring mill) of the city, with housing, some padi farming and open land surrounding these. Physical problems include flooding caused by the silting up of canals and the two rivers, traffic congestion downtown, and the draft limitations of the harbor (limiting ships to 700 tons). City boundaries have not expanded since 1906.

Population - Semarang is growing half again as fast as Central Java (at 2.8 per cent per annum, 1961-71 with about half of that migratory) and has had a slight increase in its proportion of provincial population to 2.96 per cent. The 1972 population of 668,643 is conservatively projected by officials to exceed one million by 1990. It is problematical what the impact of in-migration will be from the poor agricultural hinterland of Central Java in that period, but this could raise the final population considerably over that, especially if modern governmental and industrial activities grow rapidly as is likely. About 31 percent of the labor force in Semarang is employed in government already. Statistics on all socio-economic aspects of Semarang and Central Java are less highly developed and cogently presented than those for East Java or North Sumatra. Elementary school enrollment in Semarang we know, however exceeds Semarang's percentage of provincial population by 1.4 times.

Manufacturing - The 1970 Survey of Manufacturing Industries

12. SEMARANG : BASIC DATA.

	Central Java		Semarang			
	No		No.	% of central Java		
A R E A (km ²)	34,206		99.4	2.91		
POPULATION (1971)	21,877,081		646,504	2.96		
annual increase(1961-71)	1.9 %		2.8%			
EDUCATION (1972)	units	pupils	units	pupils	units	pupils
kindergartens	4,927		251	11,370	5.09	
elementary schools	12,597	2,116,833	347	88,490	2.75	4.18
ELECTRICITY (1972)						
Power available (kVA)	40,000		14,000		35	
TRANSPORTATION (1971)						
Length of roads (km)	9,524,125		251,274		2.64	
E X P O R T						
1965 (tons)	121,200		69,400		57.3	
1968 tons			170,204			
1969 tons			161,083			
1970 tons			119,422.467			
1971 tons(\$ mil)	160,534,371(25.9)		139,595.616(21.3)		87 (82)	
1972 tons(\$ mil)	173,137.495(30.4)		113,927.027(24.6)		65.8(81)	
1973 (1st Quarter) tons			13,010.563			

IMPORT through Semarang Port (tons)

Year	Goods	Fuels	Total
1968	196,702	155,498	352,200
1969	227,661	179,749	407,410
1970	43,074	207,560	250,634
1971	44,650	331,112	375,762

Sources : Central Java Census and Statistic Office and Bagian Statistik, Port of Semarang.

indicates that Semarang's 14,158 industrial employees are predominantly in light industries and repairs (4,217 in clove cigarette production, 1,306 in knitting mills, 1,037 in cotton production, for example). Manufacturing in general has been slow to recover from the physical and economic deterioration of the early and middle 1960's : in 1970 only 1,128 (or 19 per cent) of the 5,859 firms formerly registered were operating (43 per cent of them home industries).

Trade - The port of Semarang exports rubber and teak-timber overseas and wood, cattle fodder (47 percent of exports in 1971), rice and other natural products domestically. It is the major port of Central Java and the only significant one on its north coast, with the proportion of provincial exports increasing to 87 per cent by volume and 82 per cent by value in 1971. Imports passing through Semarang's port are construction materials, fertilizer and food, mainly, with copra coming domestically as well, and fuels taking an increasing proportion (to 88 per cent in tonnage in 1971). This suggests that road and even rail delivery of products from overseas and from the industries of Jakarta is supplanting Semarang's entrepot function.

Government - Central government development policy has not given a place of relative importance to Semarang, as a part of the national city system or as a center in Central Java. The 1971/72, 1972/73 and 1974/75 fiscal years' planned project expenditure pattern shows Semarang receiving four, ten, and three per cent of location-specific expenditures out of provincial totals. The far higher percentage for 1972/73 is attributable to electricity and roads development (55 per cent) increases above the ordinary. In the other years the proportions were around 20 per cent for education (mainly higher), about the same for communications, except that an additional 13 per cent of planned expenditures in Semarang were devoted to the airport for 1974/75. Health expenditures remained very low absolutely and proportionally (seven to 14 per cent in the three years, with an upward trend).

While the central and provincial governments have been preoccupied with agricultural, rural industrial and infrastructural development in the Province that did not touch Semarang appreciably,

13. Semarang : Government Finance
Kotamadya Semarang : Realization

	1968	1969/70	1970/71	1971/72
I N C O M E				
<i>R O U T I N E</i>	152,459,553.23	215,972,817.75	272,884,589.78	311,500,833.85
1. From Higher Gov't	69,941,986.52	101,177,120	104,309,052	122,165,000
2. Taxes & Levy	24,819,238.81	44,222,232.31	58,474,351.41	65,240,030.46
3. Retribution	22,390,311.19	44,836,607.05	44,935,627.20	64,402,257.65
4. Others	1,342,038.11	6,510,879.19	48,497,949.82	59,693,545.74
5. I P E D A	33,965,978.60	19,225,979.20	16,667,609.35	
<i>D E V E L O P M E N T</i>	25,485,060.20	42,161,686.64	131,706,208.41	134,947,621.52
1. From Higher Gov't	2,500,000	-	-	-
2. Taxes	2,403,988.42	18,297,966.33	11,977,842.64	9,000,091.39
3. I P E D A	11,647,844.52	5,883,152.64	9,375,530.25	27,174,415.07
4. Others	8,933,227.26	17,980,566.67	110,352,835.52	98,773,115.96
E X P E N D I T U R E				
<i>R O U T I N E</i>				329,630,119.53
<i>D E V E L O P M E N T</i>				137,891,755.65
Agriculture and Irrigation				2,220,000
Transportation and Tourism				103,415,796.28
Religion				32,579.06
Education and Employment				4,438,667.55
Health and Family Planning				11,778,780
Information and Press				500,000
Public Safety and Civil Defence				964,311.76
City Cleansing and Beauty				4,419,979
City Development				3,443,010
Investment				1,000,000
Others				5,678,632

Central Java : Realization

	1969/70	1970/71	1971/72	1972/73
I N C O M E				
R O U T I N E	5,849,455,968.94	6,229,587,765.54	7,813,018,469.61	1,109,051,775.51
1. Positive Saldo	760,664,808.64	141,632,772.96	375,755,338.60	177,718,657.49
2. From Higher Gov't	4,640,588,874.13	5,532,312,135.28	6,632,254,605.34	10,385,824,973.11
3. Self-generated	448,222,286.17	555,639,857.30	805,008,525.07	1,109,051,775.51
a. Taxes & Levy	347,375,784.35	482,577,189.61	598,949,902.90	821,809,470.25
b. Retribution	74,632,450.83	66,918,988.83	194,833,328.86	259,330,678.57
c. Others	26,214,045.99	6,143,678.86	11,225,293.91	27,911,626.69
Saving to Dev't-Budget	387,500,000	-	70,800,000.	202,270,000.
DEVELOPMENT	887,130,270.66			
E X P E N D I T U R E				
R O U T I N E				10,219,376,813.06
DEVELOPMENT	861,788,094.05	683,534,728.50	1,340,319,272.02	1,794,224,061.76
Production and Communications				544,723,910.78
Education				167,270,933.64
Public Health				112,773,431.50
Governmental				120,146,111.23
Subsidies to Backward Areas				18,895,851.02
Special Projects				694,793,885.79
Reboisition/Cess				354,554.60
Others				135,265,383.20
Carry-over				1,776,026,829.96

the city government (which only became a Municipality in the Republic of Indonesia governmental system in 1965) gradually raised the proportion of its development income and expenditures of the total. But by 1971/72 these were only 30 per cent (14 per cent in 1968) out of a total of city revenues and expenditures that had increased 2.6 times in the period (uncorrected for inflation). In 1971/72 the city's development budget assigned 75 per cent of expenditures to transportation and tourism, and only about nine per cent to health, the next highest expenditure. Figures are not available for time-series analysis, but the conclusion is inescapable that Semarang is very poorly served in terms of capital investment for development by all levels of government. The Municipality's development budget total for 1971/72, for example, was only 17 per cent of both Ujung Pandang and Surabaya's, both of which cities also received far higher percentages of central and provincial government development expenditures in their provinces. The Municipality of Semarang has a professional city planning staff which is working on a Master Plan.

2. The Services System

a. *Power* - The Exploitation Region " Organization of PLN serves Semarang and Central Java, with Semarang having the heaviest concentration of usage (38 per cent in 1971). As elsewhere, figures are only available for the urban area which extends beyond the Municipal boundaries. There the amount of power produced tripled from 1966 to 1971, with almost an equal amount of power coming into the city-region from other Region X generation. Consumption increased fastest by commercial users, who purchased 14 per cent of power used in 1971, as contrasted to 55 per cent consumed by households and 31 per cent by industry. The USAID is extending assistance for increasing thermal power generation at Semarang, with \$68.4 million in loans, plus West German credits, to cover the foreign exchange costs of that and construction and expansion of the transmissions systems emanating from Semarang. Initial new capacity will be 2x50 MW, planned to be in operation by 1975 with additional expansion intended. Electric power service thus can be said to be imminently ahead of need and demand in the Semarang

area.

Gas is sold by a Municipality-owned enterprise, has had a consistent excess of production over consumption, both of which have been declining absolutely and *per capita*. Gas is not a popular fuel, owed reportedly to its relative expensiveness, and is not pushed because of the low profit margins.

b. *Water*- Water is sold by a municipal enterprise. The amount produced did not increase appreciably from 1966 to 1971, the usage by households just about keeping up with population increase, although about three times that of Ujung Pandang. Usage is stressed here because there is a reported 50 per cent loss in the system due to worn-out installations dating from 1911-1932. While water production and consumption have grown slowly, the water company's profits have increased more than ten-fold from 1966 to 1971, or in more real terms, by 1.6 times from 1970 to 1971. This suggests the opportunity to significantly expand service, at least in the stand-pipe system that already serves some of the slum areas.

c. *Roads and Bridges* - The Municipality maintains these, with investment for higher level ones coming from the provincial and central governments. The amount of paved roads, which on main arteries seem to be in reasonably good condition, did not increase significantly in relation to population from 1968 to 1972. However the unpaved road length, mainly in kampongs, grew by 800 per cent between 1970 and 1972 (unless a new record keeping procedure was introduced). The Municipality spent Rp. 87,309,541 or 26 per cent of its routine expenditures in 1971 on roads and bridges, mainly for administration and routine maintenance, indicating a particular concern for these. Hence Semarang had 35 per cent more paved road mileage *per capita* in 1971 than Surabaya, over twice that of Ujung Pandang and eight times that of Medan.

d. *Education* - Educational services are also as good or better *per capita* in Semarang as those in the elementary, and secondary levels in the other three cities. Growth of enrollment has been

especially high at the junior high school level, growing by 54 per cent between 1968 and 1972. University/academy enrollment is 11,048 and more than twice Surabaya's level *per capita*. There are secondary technical schools in engineering, social and womens skills fields, but insufficient data on them for analysis.

e. Terminals - The port of Semarang is only just about at the cargo movement level of Ujung Pandang, remarkable considering the huge hinterland it might serve (four times the population of South Sulawesi). One problem, as we have seen, is the extreme limitation on ship size that can be accommodated at the docks. Cargo nevertheless has been steadily increasing over the years, more than doubling between 1968 and 1972. Handling facilities and storage area are somewhat overburdened and very small compared to Tanjung Perak in Surabaya, but similar in size to those in use in Medan and only slightly inferior to Ujung Pandang's.

With ground improvements, the airport doubled its passengers just between 1970 and 1971, and more than doubled the number of aircraft landing (to 1,264). It is under the management of the Air Force. Railway passengers have been declining, though still exceeded air passengers by 23 times in 1971; while a 20 per cent increase in cargo traveling by rail out of Semarang was registered between 1971 and 1972. The Municipality of Semarang not only operates three bus terminals but also an urban bus service in competition with private operators, both administrations in the form of municipal enterprises. Figures on profitability were not available.

f. Health - Hospitals in Semarang are operated privately or by the Department of Health, mainly, with one provincial special hospital and two police department maternity hospitals. Clinics are operated either privately or by the Municipality but are not equally distributed through the city area. In 1972 there were four private versus two public general hospitals with 1,398 and 1,250 beds respectively. The beds available *per capita* in Semarang were about the same as Surabaya's, less than Medan's and less than half Ujung Pandang's. But clinics *per capita* were higher than those of the

other cities, suggesting that the Municipality in Semarang is capable of better serving its population in this respect as compared to the other cities, but the Department of Health operating there is not, with the situation only saved by the high significance of private hospitals.

g. *Communications* - The telephone service in Semarang has been extremely underdeveloped, having only 3,596 subscribers in 1972 (an increase of 20 per cent over the year before) and even as compared to Surabaya. There is a modernization plan to complete automation and increase connections to 8,000 in the near future. The estimated future demand in this decade is at least 22,500. In 1972 there was one RRI radio station and one RRI television station, with 28 private radio stations also operating.

h. *Markets* - A municipal department, not a corporation, owns and operates markets in Semarang. The floor space per capita is only inferior to Ujung Pandang's in cities treated thus far. But development expenditures, while exceeding income, have not been significant in recent years.

i. *Public Safety* - The Municipality provides the fire-fighting service in Semarang, and the military forces provide support for the police and the civil defence force.

k. *Recreation* - The Municipality operates one amusement park (with zoo, night club, etc.) of 100,000 m², which was visited by 849,398 visitors in 1971. As in many other cities, prostitution is controlled through registration by the police in Semarang, for health by the health department. And, here, like Surabaya (which provides the land) the Municipality of Semarang provides some localized accommodations (for 564 in 117 rooms). For Semarang, uniquely in this study, such statistics are available (from the police) and show the interesting trends of increasing numbers of prostitutes in Semarang since the mid-1960's through 1971 with declining ages and lengths of residence. They come mainly from small towns and villages in Central Java.

l. *Other* - The Municipality of Semarang, in conjunction

with the Bank of Indonesia operates a market bank, which provides credit in small amounts to vendors in the markets. There is no apparent movement toward the creation of a city industrial estate.

3. City Conclusions

Semarang is an old and traditionally important city of Java with a certain potential for industrial development and accommodation of increasing migrants in manufacturing and service jobs. The City is nevertheless relatively ignored in central and provincial development policy activity and has too poor a municipal government to make much impact on its rehabilitation and development problems. In economic development terms it faces stiff competition in trade and manufacturing from both Jakarta and Bandung (especially in textiles), not least because land transport in Java has reached a level such that the port function of Semarang has declined in importance. The port would take on renewed importance as a dynamic factor in Semarang's development if it were developed to accommodate larger ships and if industrial production for export and/or large food imports to Central Java were to become important.

The services identity of Semarang follows from its traditional center functions and the more modern neglect of the city in regional development policy. Roads, education, and health facilities are good relative to other cities and in the case of the first two may almost meet immediate demand. Electricity production will become more than adequate, because Semarang is the generation center of the region, which it also is significantly, though relatively less so, in higher education and higher health care. On the other hand airport, port, rail and industrial development have come slowly to Semarang. Port and industrial estate development have perhaps come even slower to Semarang because of higher level fears of their potential competition with the development and use of facilities at Cilacap on the south coast Central Java. And it is these developments which would spur development of employment and indirectly contribute to an enlarged municipal budget which could then be devoted to the social welfare needs of the probable large in-

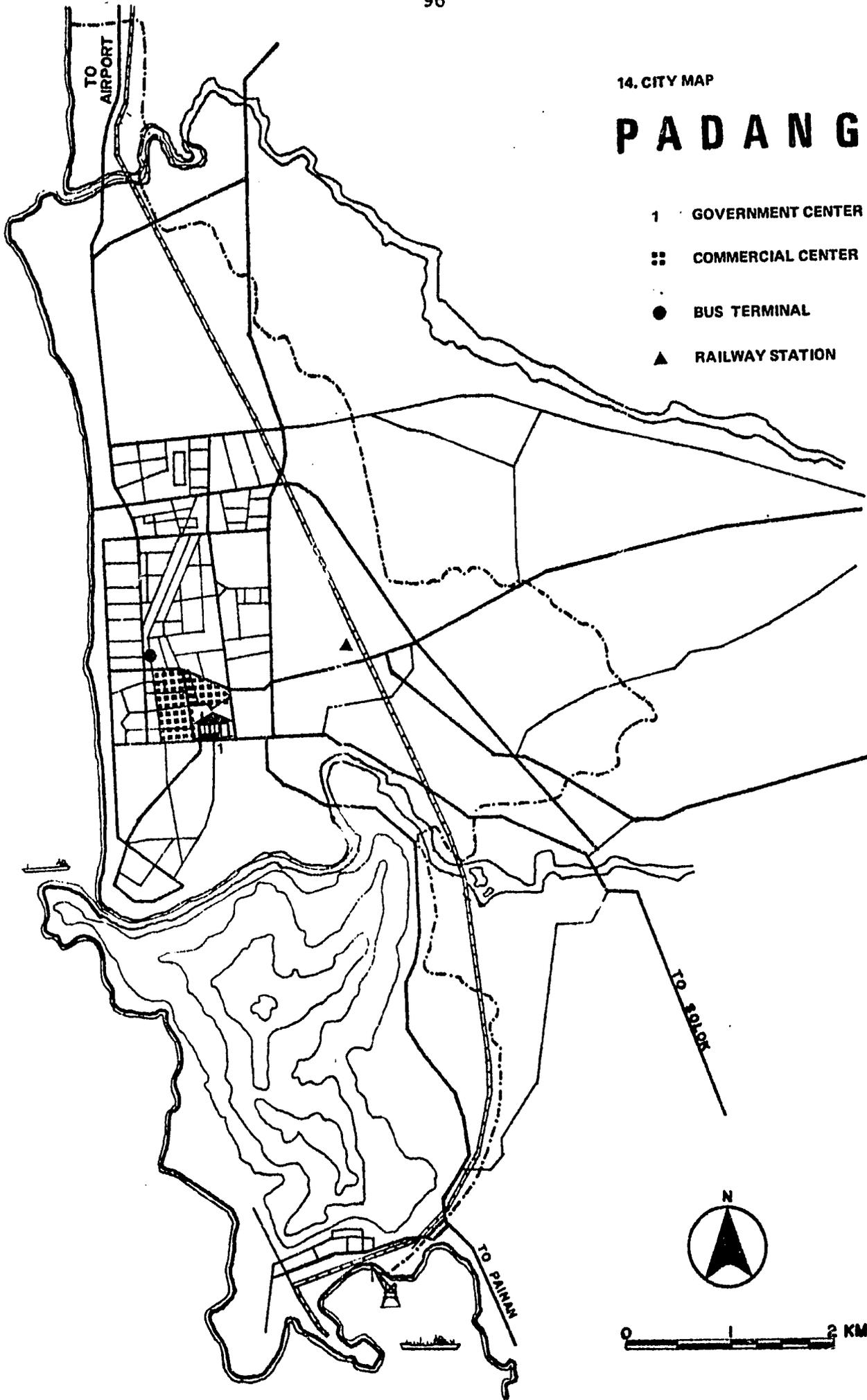
migration in the coming decades. The municipal government has thus far been unable to adequately raise development expenditures. Nor has it been able to initiate dynamic policy directed at development of industrial areas and coordinated infra-structure to serve new investment.

Data on Semarang's development, services, and role in the provincial and national economy are particularly deficient, despite the location of the Provincial government in the city. Some excellent social science research is done by local universities, notably the Universitas/IKIP Kristen Satya Wacana. But this does not sufficiently attack some of the major problems. Further research that would be particularly rewarding would be in the fields of city/provincial economic relations, the social integration of Central Java migrants into the modern city economy and social life, and port competition within Indonesia.

14. CITY MAP

PADANG

- 1 · GOVERNMENT CENTER
- COMMERCIAL CENTER
- BUS TERMINAL
- ▲ RAILWAY STATION



E. P a d a n g

1. The City as a Unit and Center.

Form - Padang is a small city, port and trading center in an unpopulous Outer Island Province. It averages two meters above sea level, with a large hill between the town center and the port, which is the only harbor of note on the west coast of Sumatra. It has a simple areal structure, with road access to the hinterland leading out north- and south-eastward. Commercial and government structures are grouped in a center.

Population - Padang has been gaining an increasing proportion of provincial population (increasing to 7 per cent in 1971), with an annual growth rate of 3.65 per cent (versus West Sumatra's 2.04 per cent) indicating a sizeable in-migration from within the Province. It dominates the region in modern facilities and industrial activity, with 41 per cent of the general senior high school students, 97 per cent of industrial consumption of electricity and 94 per cent of the university/academy students. Students, in fact take an even larger proportion of city employment than in Ujung Pandang, at 27 per cent, with civil servants and merchants each at 16 per cent and laborers at 13 per cent. The city even has 19 per cent of the roads of the province (in contrast to its .08 per cent of the land area), indicating how backward and inaccessible much of its regional hinterland is.

Manufacturing - Padang has 30.5 per cent of all industrial establishments in West Sumatra, employing 26 per cent of the industrial labor. In the city these are distributed 28 per cent in food processing, 22 per cent in fiber and leather products production, but 31 per cent in natural products processing, another indication of the region's non-importance as a food exporter, export products exporter, or indigeneous population supporter. Interestingly, the Governor announced in May, 1974 that the central government had designated the province as one of the country's "food barns". He did not say how important a one, relatively, it is to

15. PADANG BASIC DATA

I T E M S	WEST SUMATRA		P A D A N G		% WEST SUMATRA	
	NO.		NO.			
- AREA (Km2)	42,297.30		33		.08 %	
- POPULATION (1971)	2,792,221		196,191		7.03	
density/Km2 (1971)	66.02		5,958.18		-	
Annual Pop. Increase('61-'71)	2.04 %		3.65 %			
- POPULATION (1961)	2,319,100		143,699		6.20	
density/km2 (1961)	54,823		4,354.51			
EDUCATION (1972)	units	pupils	units	pupils	units	pupils
Kindergartens	205	9,127	32		15.61	
Elementary Schools	2,038	370,681	124		6.08	
Junior High Schools :						
general	128	30,050	18	6235	14.06	20.75
vocational	70	11,023	8	3270	11.43	29.67
Senior High Schools :						
general	25	8,198	9	3326	36	40.57
vocational	47	13,071	25	5527	53.19	42.28
University	11	7,926	9	7,483	81.82	94.41
HEALTH (1971)						
Hospitals	12		1		8.33	
Clinics	475		58		12.21	
Para-medics	166		141		84.94	
ELECTRICITY (1972)						
Power Installed (KVA)	10,612		5,130		48.34	
Energy Produced (KWH)	2,053,437		960,800		46.79	
Usage: Residence & Office	13,763,711		10,958,946		79.62	
Industries	1,216,723		1,183,641		97.28	
Road-Illumination	659,631		521,505		79.06	
Others	125,186		121,516		97.07	
INDUSTRY (1972)						
Amount (all kind of industries)	462		141		30.52	
Labor	8,440		2,199		30.52	
TRANSPORTATION (1972)						
Length of roads (km)	621		116,183		18.71	
Terminals	13		3.		23.08	
TELECOMMUNICATION (Phones)						
- Offices	19		3		15.79	
- Consumer	5,002		3,177		63.51	
Radio sets	96,039		28,471		29.65	

become, but noted that the 1974/75 development budget of the central government allocates Rp. 408.3 million for development of irrigation. ¹⁾

Trade - Exports of the province are almost entirely of unprocessed and semi-processed natural products, including those from the coconut plantations along the coast, rubber tapping by small holders in the hills, and coal and small amounts of other minerals like zinc, iron and lead extraction, all by traditional methods. Mineral exploration continues, and the coal production facilities are heard from time to time to be in the process of rehabilitation. Forty per cent of the province's agricultural products exports go to Pekanbaru, presumably mainly overland, and 20 per cent to North Sumatra. The province is thus a sub-center sending subsistence commodities to the more highly populated and advanced products exporting provinces of Sumatra, and not through Padang.

Government - Padang received a percentage of central government location-specific development project planned expenditures just about exactly equivalent to its percentage of provincial population in the fiscal years 1971/72, 1972/72 and 1974/75. These went mainly for communications (the airport receiving 54 and 65 per cent of totals, for example, in the second two periods), and higher education. A larger than usual (for these five cities) proportion was devoted to health (28 and 19 per cent of city totals respectively in 1971/72 and 1972/73).

The central government has not only provided most of the development project funds it controls to development outside of Padang, but has also been a larger direct supporter of provincial government development financing than in many provinces. (See Appendix C.) In the first two years of Pelita I (1969-1971) the central government supplied 75 per cent of West Sumatra's revenues.

¹⁾ See *Indonesian Times*, 22 May, 1974, p.1.

16. PADANG : REALIZATION

	1968	1969/70	1970/71	1971/72	1972/73
I N C O M E					
<i>ROUTINE</i>	<i>83,010,273</i>	<i>119,029,613</i>	<i>127,541,210</i>	<i>166,409,740</i>	<i>271,022,928</i>
1. From Higher Gov't	45,866,824	63,621,413	65,475,180	71,915,360	77,777,320
2. Taxes	17,682,595	16,323,137	31,034,618	32,833,780	67,217,371
3. Retribution	16,174,629	32,819,356	30,531,287	46,570,393	100,466,042
4. Others	3,286,225	6,265,707	500,125	15,090,207	25,562,195
<i>DEVELOPMENT</i>	<i>28,984,733</i>	<i>53,427,303</i>	<i>55,201,457</i>	<i>86,969,256</i>	<i>57,318,136</i>
1. From Higher Gov't	-	-	-	-	15,000
2. I P E D A	-	3,139,604	4,825,521	9,305,555	10,111,640
3. Retribution	6,032,950	49,987,699	26,694,223	18,040,975	6,952,648
4. Others	-	-	-	4,195,568	5,903,088
E X P E N D I T U R E					
<i>ROUTINE</i>	<i>69,361,604</i>	<i>106,650,779</i>	<i>103,249,140</i>	<i>146,728,545</i>	<i>213,627,453</i>
1. Wages & Salaries	42,507,624	65,889,833	68,807,946	94,633,816	97,683,849
2. Procurement	26,853,980	40,760,946	34,441,194	72,144,739	115,943,605
<i>DEVELOPMENT</i>	<i>17,583,182</i>	<i>82,166,800</i>	<i>73,303,818</i>	<i>118,586,860</i>	<i>138,729,951</i>
1. Economic Sector*)	17,583,182	82,166,800	71,261,685	87,844,506	97,231,981
2. Social	-	-	1,045,033	13,982,108	27,147,781
3. U m u m	-	-	1,001,090	16,760,246	14,350,189

*) Before 1969/70, was included
in Capital Expenditure.

WEST SUMATRA : BUDGET (in thousands)

INCOME : DEVELOPMENT	1972/73	1973/74
1. ADO subsidy	498,000	470,000
2. I P E D A	12,000	15,000
3. Gov. Enterprises	4,100	13,000
4. S W I U	-	
5. Dev't Taxes	17,500	20,000
6. Royalties/License Fees	35,000	65,000
7. Postal Saldo		7,000
T o t a l	566,600	590,000

EXPENDITURE : DEVELOPMENT
(in Rps, Budget) !

I. <i>Economic Sector</i>	214,922,000	223,041,000
1. Agriculture & Irrigation	96,208,000	115,285,000
2. Industry	5,850,000	4,200,000
3. Transportation & Tourism	59,464,000	29,056,000
4. Village sectors	23,400,000	24,500,000
5. Capital investment	30,000,000	-
II. <i>Social Sector</i>	143,387,000	213,658,000
III. <i>General Exp.</i>	108,736,000	153,301,000
Total	467,025,000	590,000,000

In 1973/74 the percentage was 82 per cent. In the first two Pelita I years, 80 per cent of provincial development expenditures went for improvement of communications in the Province, especially rural roads. This is an indication of the importance West Sumatra and potentially Padang has to central planners despite the area's comparative insignificance in the national economy. By 1973/74, 20 per cent of all development expenditures in the provincial budget, and more than half of those for economic (as opposed to social and governmental) development were targeted directly to agriculture.

Development expenditures of the Municipality of Padang have been increasing rapidly since 1968, with a yearly growth from 1970/71 to 1972/73 of 13 per cent. But the proportion of development in all Municipality expenditures in those years declined from 42 to 38 per cent. The development priorities of Padang's lie in upgrading basic and intermediate education, and the city's roads, and in promoting cleanliness. Thus "social" expenditures rose from insignificance to 21 per cent in the municipal development budget in the years 1970/71 to 1972/73. Padang emerges as a quiet town which awaits great development in its hinterland promoted by higher governments. Meanwhile it tries within its small but growing budget to bring basic social facilities up to a level that is satisfying to its traditionally foot-loose population who migrate so often to larger cities in Indonesia.

2. The Services System

a. *Power* - Padang differs from the other four cities in having an exceptionally high proportion of the electricity used by industry generated privately (98 per cent in 1972 if the official figures are to be believed). The PLN Exploitation Region XIV, having taken over from the Municipality in 1971, seemed to move out of the industrial electricity business to concentrate on commercial, household and governmental usage, which nevertheless declined slightly from 1969 to 1972. There does not seem to be a present electricity problem if the low level of use and the industrial self-sufficiency are accepted. Development of the city's economy in line with the desired future im-

importance of the region, however, will require some moderate to heavy investment in generating capacity.

b. *Water* - Water supply responsibility was also transferred, from the Municipal Water Company, in 1971, and went to the Sanitation Directorate of the Department of Public Works, a vertical agency, with cooperation and monitoring still by the Municipality. Water production, customers, expenditures and amount available *per capita* all rose between 1972 and 1973, the expenditures almost doubling. Padang has far more water available *per capita* than Ujung Pandang and Semarang (20 and seven times more, respectively) but only 40 per cent of Surabaya's flow *per capita*. Of course Padang does not have Surabaya's industrial and military usage. On the other hand, loss in the Padang system is about 30 per cent. Padang has 10 km out of 75.5 km of sewerage canals covered, and relatively little hazard to health from waste disposal, being not densely populated.

c. *Education* - Padang has the highest ratio of attendance to population in all levels of public education (except vocational) of all five cities. The numbers are steadily though gradually increasing. Elementary and senior high school enrollment increased each by about 20 per cent from 1969 to 1972; while junior high school enrollment, which surprisingly was only 80 per cent of senior high school enrollment, increased only 14 per cent. There is no apparent educational deficiency in Padang even at the university level, given present demand.

d. *Terminals* - The port of Padang is managed by a Port Authority under the direction of the Department of Communications. Facilities did not grow from 1967 to 1972, but cargo traffic increased by 147 per cent in that period. The airport, Tabing, is under the management of an airport authority, and has seen a fairly rapid increase in passenger traffic from 1968 to 1972 (167 per cent) though not in cargo. The central government *Railway Company* operates rail service between Padang and the iron mining area of the interior which saw increasing freight traffic but declining number of passengers from 1968 to 1970. The municipal government of Padang operates three *bus terminals* for the use of private intra- and inter-city bus companies. Development

expenditures for these have increased irregularly, more than doubling income in 1971. In none of the terminals services does there seem to be demand greatly in excess of facilities.

e. *Health* - The central government maintains one and the military the other general hospital in Padang. The central government provides three public health centers, and 25 clinics, the military 4 clinics, with two private. The Municipality provides a health service with preventive and educational responsibilities. Neither the hospital beds nor clinics in Padang *per capita* are as numerous as those in Medan and Ujung Pandang, but seem adequate to demand.

f. *Communications* - Padang has the highest number of *telephone subscribers per capita* of any of the five cities. It had one RRI radio station and no television, with 17 private radio stations in operation in 1971.

g. *Markets* - A municipal enterprise operates five markets in Padang at great profit, with area *per capita* of the magnitude of Surabaya's, but 30 per cent of Ujung Pandang's. There are three municipal slaughter houses.

h. *Public Safety* - Police services (120 regular policemen) are provided in Padang by the armed forces of the central government, in addition to 210 civil defence forces (Hansip) organized by the Municipality. The number of policemen *per capita* in Padang is less than half that of Ujung Pandang and Semarang but more than four times Surabaya's ratio.

i. *Other* - There is a municipal enterprise for Land and Community Development which supplies land for housing and has built and rents a small amount of housing. This enterprise yielded a revenue in 1969/70 of Rp. 311,620.

3. City Conclusions

Padang is a Middle City awaiting destiny. It has the center functions expected of an Outer Island provincial capital, including significant growth through rural-urban migration. (Bukit Tinggi, the traditional capital of the region, up in the hills, grows only slightly faster than the provincial population growth average.) Padang is the place for modernization and service to modern needs of the population, including processing of commodities for export elsewhere in Indonesia. But there has been very little for Padang, as an urban entity, to grasp to spur dynamic development. It and the Province are quite dependent on the central government for the ideas and inputs needed to develop the regional economy. Despite comparatively great attention to the region, including a request by the National Planning Board that it be included in this present study, and an exhaustive regional economic survey provided by West German foreign aid, it is difficult to see West Sumatra, and thus Padang, rising to prominence in the national economy or even reaching what some economists would call a growth "take-off" stage. The distinctive Minangkabau culture and pleasant physical attributes of the Province and city are features with which the local authorities may be well satisfied. The matter of imparting economic dynamism will be centered on heavy investments for export agriculture. If successful at a sufficient scale this would greatly raise local incomes and the opportunities for Padang's modern development. In the absence of that, the area and city will remain quiet, pleasant and stagnant.

The services indentity of Padang reflects a medium to high level sufficiency by current Indonesian urban standards in almost all categories. Services investments cannot lead development in the absence of higher level policy action, as mentioned above. So services development is just about keeping pace with current population growth. And the population that remains in Padang seems content.

As a result of the strong interest of local governments, especially the provincial, the data available on West Sumatra and Padang are better than the scale of activity there would have us presuppose. Research of more immediate value to urban development policy in Padang might concentrate on the impact of out-migration on local dynamism, the potential for the development of urban processing industries devoted to increasing volumes of natural products brought out of the interior, and the needs and potential for tourism development in the region.

Chapter IV
CONCLUSIONS

The first and main task in studying the role of the city in economic growth is to make surveys of city institutions and the social and occupational composition of different urban centers in less developed countries.

Bert Hoselitz ¹⁾

This study has been aimed to collect available information on urban services and their institutions in five cities, to present this in an orderly and useful format, and to use it to draw conclusions on local problems, the roles of the cities in Indonesian economic development, and in the development of their regions, while, on the basis of comparisons among them, to present conclusions and recommendations on development and development policy of the various levels of government with respect to the class of urban areas defined here as Middle Cities. Hoselitz also remarked (*Ibid.*) that few studies of this kind, in 1960, existed and "many of these are not adequate." Inadequacy in the present study is great. It is due far less to lack of resources, energy or time expended on the project than to an inability to acquire complete data in the case cities and the central government despite two or more visits by survey teams in the more than two years duration of the project. This has led to lacunae in the presentation and, so, in the individual city conclusions, and to incompleteness in the city comparisons. Policy recommendations below are to be taken in the light of these unavoidable omissions. And further data collection and research recommendations stress the opportunities for gaining a better understanding of urban phenomena as related to the

¹⁾ *In Sociological Aspects of Economic Growth, (Bombay: Vakils, Feffer and Simons, Current Thought Series, 1960), p. 79.*

Indonesian development process through improved data organization and their use at all levels of government and scholarship.

A. City Comparisons and Local Development Policy Conclusions

The five Middle Cities demonstrated a common breadth of services provision to their populations and industries, and a near complete standardization of the administrative devices and division of powers applied to their services systems. They all offer opportunities to their own and higher governments for further development investments that would serve both welfare needs and the economic roles they play, which are preeminent in their regions, and in the case of three, extend beyond their provincial boundaries.

Common deficiencies in services are low levels of welfare services as related to population, though water, electricity, roads, education and health facilities are generally higher in these Middle Cities *per capita* than elsewhere in their provinces. Increasing revenues of local agencies providing such services have resulted in improved services, with some exceptions. Where services are the responsibility of higher governments or central corporations, such as electricity, telephones, and port facilities, growth of service has been linked to national development goals and the implicit areal strategy of central planners. We have seen that there has been considerable variation in the amounts of central government development project expenditures allocated among the five cities and, as a proportion of those devoted to their provinces, according, roughly, to the cities' national importance. While there is a natural conflict, especially in the case of less important cities such as Semarang and Padang, between locally and centrally perceived development needs of the local areas, we have observed very little *administrative* conflict among the various services agencies operating within the cities. Rather, the problems for all concerned seem to be those of lack of joint planning and complementariness of development activities. The poor revenue situation of many service organizations, especially ones operated by the municipal governments but not as profit-making

corporations is also a difficulty. If true decentralization of development policy responsibility and control of investments is to occur in Indonesia it must be, for Middle Cities, linked to two administrative improvements: (1) increased taxing power or guaranteed transfers from higher governments so that the city governments can plan and implement long-term development projects, and (2) more operative, decisive and powerful comprehensive urban policy planning, which goes far beyond mere physical design and zoning planning in institutions at the center of municipal political and administrative power. The example of Surabaya's progress with the latter might be studied by the administrators of the other Middle Cities in Indonesia. We have noted the successes of certain municipal enterprises in increasing provision of services, like markets, at considerable profit.

Comparison of the levels, growth, and the few administrative peculiarities of services provision in the five case studies provides some interesting observations with policy implications. There is a basic division of services between those serving production and trade activities of the cities, particularly port and electricity distribution functions, and those which support and are to nurture the urban populations mainly. The first category is far more related to, even determined by, the character of the region which a city serves than the latter. Great waves of rural-migration or migration from smaller towns in the regions have not hit these cities yet; although in the cases of the Javanese ones there are signs for the future which suggest the impending need for much greater investments, (*inter alia,*) in water supply, sewerage and kampong improvement.

The great harbors among the five are those of Surabaya and Medan, with cargo traffic of the others from a third to a fourth of theirs. Neither has the scale, traffic or problems of Tanjung Priok in Jakarta and both are the objects of significant development policy that flows efficiently from the Department of Communications to their Port Authorities. Such policy has resulted, too, in over-capacity at Ujung Pandang which indicates that more than adequate port facilities are not enough *per se* to attract industrial investment or to spur

internal agricultural development for export. Semarang's port, by contrast, would be central to revitalization of the city's modern economy and service function in Central Java, yet, partly for physical reasons, is much neglected. Airports in all these provincial capitals seem to have been improved sufficiently such that airlines can expand services in response to demand. Ujung Pandang's plays a macro-regional role in Eastern Indonesian communications that has raised traffic almost to the level of that of the more dynamic and internationally-oriented Medan.

Interestingly, the cities with least significant regional center functions (because of competition in the case of Semarang, and regional emptiness in the case of Padang) have the largest quantity of roads *per capita*, even exceeding Surabaya's where a large part of the goods moving through the city comes by road. Roads thus must be classed more as social services than regional-economic ones. That contrasts somewhat with electricity service. While consumption in Surabaya is almost two and a half times that of Medan it is slightly less *per capita*, and both *per capita* figures are almost half again as great as those in Ujung Pandang and Semarang. (Padang's electricity supply situation is too strange for comparative comment). Surabaya and Medan benefit from large external attention to electricity, as Semarang is beginning to. The attractive quality of electricity supply for industrial development is recognized by the PLN which as a central enterprise has the double features, in distributing development project activity among cities, of a national strategy and an eventual recovery of investments through rates. That strategy, as compared to the harbor development pattern in Indonesia, has ignored Ujung Pandang to the present, giving Semarang a distinct advantage as a locus for future light, even, heavy industrial development.

Water service bridges the gap, to a degree, between productive and social services in that there can be considerable industrial demand. Thus Surabaya's Municipal Water Company provides an order of magnitude or two of water volume *per capita* more than the other cities;

yet, with figures for Medan unavailable, it seems that supply otherwise follows the general ability of cities to provide social services, as correlated with population size, though not the magnitude of municipal budgets. Significantly while the Padang water supply organization spent more *per capita* for water development in 1972/73 than Surabaya, the expenditure per existing unit consumed *per capita* was less than a third of Surabaya's. Hence Surabaya might seem to be pulling away. And this would support the thesis documented for Malaysia in other studies ¹⁾ that larger and more dynamic Middle Cities improve faster than smaller less dynamic ones regardless of population and decrepidation problems and pressures.

Education service may also be said to serve the modern economy of a city and hence its center function. But with a certain level of literacy (perhaps already attained in these cities) demand from the modern sector seems to be mainly for technically trained young people, which is a sector of education that is only lately being addressed diligently in Indonesia policy. The cities with least regional importance and therefore perhaps a greater tradition of devoting resources and energy to local social needs have the highest enrollments *per capita* in all levels, from Padang downward to Surabaya. This is despite central governmental control of educational development above the primary level, with private education not a disturbing element in this pattern. The situation is similar for health services, particularly hospital beds available *per capita*; although the margins of difference are much smaller, and private services are much more significant in the comparisons among cities. There is no correlation of market area *per capita* among the cities with city size, function or magnitude of municipal budgets. The role of the municipal corporation must be emphasized here as determining the degree of service based

1) See James Osborn, *Area, Development Policy and the Middle City in Malaysia*, (Chicago: University of Chicago, Department of Geography Research Series, 1974).

on managerial ability and the desire of a city to realize profits from the activity.

Municipal corporations' earnings and expenditures are reflected in municipal budgets. But the crucial ingredient in city revenues is ordinary tax collection ability (now that gambling and certain entertainment tax revenues are becoming a thing of the past). And the telling issue in the distribution of revenues to development versus routine expenditures is the bureaucratic efficiency of the city government, particularly numbers of employees and buildings to be maintained. Medan had higher and Ujung Pandang equivalent development expenditures as compared to Surabaya's in 1972/73, apparently attributable as much to better taxing ability as to lower relative routine expenditures (59 per cent and 52 per cent respectively of total budgets devoted to development as compared to Surabaya's 38 per cent). The poorer cities of Semarang and Padang similarly devoted a lower proportion of outlays to development (29 per cent by Semarang in 1971/72 and 38 per cent by Padang in 1972/73).

Local development policy in the cities studied and probably even more so in smaller and less important cities and towns remains very much a responsibility of city government. Cities in Indonesia, as in Malaysia, are mostly left to their own devices by higher governments except in matters of service facilities provision for regional exports and intra-national traffic. Even public educational and health facilities development, which is centrally controlled, may be affected, it seems by local government pressures for improvements. And certainly privately provided services in these fields are open to the active encouragement or discouragement, even support, as in land provision, by city governments. Conclusions on policy thus return to the operations of municipal governments. On this matter there are three basic conclusions :

1. City governments must raise their revenues and the proportion within those devoted to capital investment projects and information gathering and processing. This means fighting for increased tax-

ing power, improving tax collection (as Ujung Pandang has been able to do, for example), keeping the size of the bureaucracy down, and creating new revenue-earning ventures. As central government funding is decentralized in the future, through the provincial governments, the cities must gain increasing proportions of this if future needs are to be met in time. That will require particularly thoughtful project planning and relating that in policy documents to provincial and national needs.

2. Improved city policy planning and development monitoring will be required to fulfill the need above and to channel development project activity, from whatever source, to the most beneficial targets. The ability to do integrated and comprehensive planning requires well trained staffs, and constant and extensive data services. Thus an enhanced training program is required for municipal officials and greater investment in the collection and processing of important information is crucial. The latter would be particularly useful if it included project monitoring that extended from the matters of financial to physical and higher goal fulfillment over the course of a project's construction and afterward.

If industrial estate planning and development is an example of better and more comprehensive project activity undertaken by a municipality, the principle behind it -- of attacking several problems at once with the use of a variety of resources, including the city's ability to acquire land -- would apply more broadly to kampong improvement and certain kinds of commercial cum housing and health services development. When central or provincial government development activities in a city are large, as for communications services, these could more easily be combined with city-generated schemes to serve the welfare needs of its population. This requires a constant touch be kept on growing development needs in the city and the development priorities and plans of the higher level governments and their vertical agencies. Expertise in management of development in a dynamic situation, which situation, which situation, in the Javanese cities at least, threatens to become over-burdening to the urban systems, is of

the essence. It requires information, training, and *concepts*. The concept of the city-region as a complex and delicate system, for the welfare of which the municipal government has responsibility and can gain increasing resources and management competence, is the central one.

3. Administrative innovations and a casting of the net wider in the community for development assistance and dynamism are also desirable. Municipal corporations in some of the five cities studied have demonstrated an ability to provide in expensive and growing services while returning profits to the municipalities. Such devices might be extended into other fields where services are bought but the provision of them requires an initial capital investment beyond private operators. Likewise the obvious value of private institutions in the provision of health and educational services in some of these cities suggests that, as resources will continue to be scarce (not least because they come from the central government), cooperation of municipal authorities with private institutions with development capital to expend might be expanded -- into joint ventures and at least into greater coordination of activities to avoid duplication and to extend services to deprived segments of the community.

B. National Development Policy Recommendations

Middle Cities have acquired a certain amount of attention in Pelita II planning documents emanating from the central government. They can be expected to receive increased attention in the regional planning office of the National Planning Board. This comes from a recognition of their importance to the economy, especially as regional economic and modernization centers, and from a concern that expansion of Jakarta's modern development, with attendant immigration at the present rate will be ultimately very unbalancing to national growth and the popular distribution of benefits from overall national development.

However, the key ingredient of a policy that will make the most of Middle City potentials in national development is an overall *areal*

strategy of national development, which currently is absent. Cities, as we have seen and is well known, are not isolated areal units. Nor does development in them based on local perceptions of needs necessarily optimally assist national or regional development. It will be necessary for the central planners, hitherto mainly macro-economists, to see and plan for manipulation of networks of areal associations. The Middle Cities are only at one scale of organization of activity. However in many respects and regions, as we have also seen, they do appear to be crucial both as centers of modern activity and sources of management and supply to their hinterlands and as units which can take care of large numbers of people in gradually more remunerative occupations, given the right incentives and support.

A national areal development strategy will be important at the regional and rural mass scales also. Regional studies and the provision of vast sums to regional governments to dispense for development are less useful in the absence of a more comprehensive view of national areal patterns of growth, potential, dynamism, and the inter-relations of units of organization of different sizes. Again the matter of competition among regions for national development policy attention must be seen from the center as natural but to be filtered through a screen of national-scale areal analysis. In Malaysia two phenomena have been observed (Osborn, *Ibid.*) : a tendency for richer areas, including States (equivalent to Indonesia's Provinces and some of them past their growth peak) to continue to receive increasing central government development expenditures while others languish, not entirely for lack of potential; and a tendency for some areas — Bornean States and certain municipalities specifically — to have developed extraordinary revenue generation powers on their own which benefit their citizens enormously. A national areal development strategy for Indonesia would seek to counter the first possible trend and to foster the latter, while redistributing raw materials export earnings as justly and efficiently as possible.

A special development goal in Indonesia, particularly in Java, is

that of rural industrial development to raise incomes, serve agricultural production and discourage urbanward migration. The local governments of rural areas can be expected to be even less adept at development planning and pleading at higher levels of government than those of cities. They require special training and project development assistance (as still do most cities for that matter), which in turn should inform both the central planners on the nature of rural area development and the Indonesian rural area officials on central government priorities, modes of operation, and national development perceptions and conceptions.

In line with this, the central government must further standardize the reporting procedures of local governments, including provinces. This study has been handicapped by arcane budget reporting systems in some cities and the resultant impossibility of detailed comparisons of the activities of governments below the national level. Also, national government-generated surveys of economic, demographic, social, and government activities are central to the development and refining of national areal development strategies, but are currently insufficient in number, coverage, and especially in comparability of units and years. The National Planning Board might be encouraged to take over even more responsibility for the central collection of statistics related to development planning. As the development policy of Indonesia matures in line with national development and the increasing availability of development expenditure resources, the complexity and coverage of data required for planning will increase enormously, and especially in the realm of finer areal scale information collected by standardized units over a time series. The present type and form of information at the scale of the municipality and the district (kabupaten) will be decreasingly sufficient, deficient though it now is, for both rural industrial development planning and planning for the provision of increasing welfare benefits in settlements. Income, employment, flows, areal growth and industrial production surveys are needed which will permit automatic inter-city comparisons.

C. Further Research Recommendations

Some specific research topics important to the five Middle Cities of this study have been listed in Chapter III. The problems of doing urban research are mainly in the acquisition of official data : social science sample surveying is relatively easy to do in Indonesia, there being a large number of willing university students to assist, and general cooperation of the authorities and populace. And this subject, too, has already been treated above. The object in this last section is to think in larger terms of Indonesia's social science research needs as related to development policy and specifically urbanization, and the institutional arrangements that might better serve these.

In the dynamic society of modern Indonesia, research in the social sciences would be most usefully concentrated in three subjects : *flows, values, and responses to development initiatives*. Production is subsumed in the last two and resources and resource potentials are relatively well understood. In the economy and social life of Indonesia material and knowledge flows are the most direct objects of policy action and the most important elements of growth. Flows among areas, strata of society, bureaucracies, economic sectors and between Indonesia and the rest of the world are dynamic and so more easily changeable. But the nature of movement — diffusion of innovation, for example, even rural-urban trade — is not quantified or analyzed sufficiently in totals or at a fine enough scale.

Values of individuals and corporate entities and their perceptions of their physical, economic, and bureaucratic environments are easily generalized but until now not well enough understood in Indonesia to enable the authorities and the private sector to make fair judgements about the need and efficacy of particular actions. Likewise the acted-upon are not in a position to obtain and understand analyses of national and regional development goals, though action stemming from which may affect their well-being tremendously. They therefore cannot bring to bear on the actions of remote or higher instrumentali-

ties the personal and local governmental freedom of choice and balancing of power that they are entitled to.

In the course of vast development policy activity throughout Indonesia during the Pelitas, impacts on local systems and their relations with change in higher order systems can be highly significant. Yet research is scarce on the results of development project implementation. Data are often uneven just on the physical change brought by particular expenditures. Deeper analysis of development project impacts and operation is much needed.

Research activity can be discussed in terms of the level of government or areal scale involved. It is not within the province of this study to judge the central government research establishment. It seems natural to propose, however, that central research institutions concentrate on areal data analysis at the national scale, and on the food production, employment, and foreign trade aspects of national development. The first must be the responsibility of the center; for only information covering the whole nation will serve fine national development policy planning purposes. Food, employment and foreign trade issues affect the whole nation crucially, though the problems associated with them may be somewhat localized at a given time.

This leaves to the regional level and below the responsibilities for research on issues within the compass of their governmental responsibilities and at a scale they should be best equipped to handle. Provincial governments and institutions might be encouraged to undertake research, perhaps as part of their expanded (decentralized) national development policy role, on the subjects of : natural resources exploitation potentials, urbanization processes, including changes in the settlements system down to the lowest level and changes in attitudes of their inhabitants, and the relative competitive position in the present and future of the province *vis à vis* other provinces.

Municipalities and Kabupaten, especially the former, have the direct responsibility, as noted, for directing local ecological and even industrial change, and may have increasing resources to do so. City governments must be encouraged to develop policy planning insti-

tutions which monitor change and sponsor depth analysis of particular problems. This would not only include continuing research on the local impacts of development projects and private investments on the areal, social and other systems of the city, but also the monitoring of change in local income and employment patterns and the attitudes of the citizenry toward change, and the overall evolution of the physical pattern of the city-region. Specific studies related to services should concentrate on the relationship of cost to use, the advantages of particular forms of ownership and management of service agencies, and the interrelations of changes in the level of services provision among different types of services, especially as between productive versus more purely social services.

There are three types of research institutions and research products that may be employed by the various governments : the universities and more pure research institutions doing scholarly work; the consulting firms, including foreign ones (which bring with them additional technical assistance financing) who address large development issues such as regional or industrial development in broader plans; and the consulting firms and government agencies who do project feasibility and cost/benefit analyses at a small but intensive scale. All seem to be amply developed in or imported into Indonesia. But all need a kind of direction in problem identification and data organization that is frequently beyond them but which in any case must be the responsibility of the governments. Thus the governments at all levels require better equipped and more highly motivated initiators of research who will also be better able to make use of research products in policy planning and implementation. Interchange of education, thus, is required, between the scholars and officials ; and both need better training.

Appendix A
MASTER TABLES

Notes on Tables and Their Interpretation

For each of the five Middle Cities tables are presented below for each of the services types listed in Chapter One, ordered according to the apparent importance of the service category in development and its administrative complexity. They are placed here in a standardized form to facilitate inter-service and inter-city comparisons. Where data for different years for the same kind of service were available these are presented in vertical array. Horizontally, the data columns move from the name of the administering body to quantities supplied and breakdowns of users. Financial information is disaggregated where possible into types of receipts and expenditures of the administering agencies and amounts of development expenditures applied from local and higher administrative levels. Finally ratios of service per capita and expenditures *per capita* and per existing unit *per capita* are computed and explanatory notes provided where appropriate.

While the absence of certain categories of information usually means that the administering agencies in the cities were unable to provide such data to the field researchers or the nature of the records prevented comprehension, the cases of education and health services must be explained. There the largest investments and general management are controlled from the appropriate Departments in Jakarta. Only brief searches being possible in the scope of this city-oriented research, details for the five cities were often unavailable.

A problem of interpretation of the financial data arises from the varying degree of detail available for breaking down the agencies' budgets into routine and development budgets and in sorting out revenues generated from sales of services from those acquired from various levels of government. Thus the tabular columns for finance vary considerably in the categorization of financial information and therefore in the meaning of the ratios of expenditures to population.

With these tables as a baseline, it is hoped that future research will bring the evolution of an on-going monitoring of services development in Middle Cities and a perfection of the format of presentation that will be more useful in comparative studies of this type.

17 Table a : SURABAYA : Power

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT Contracted (kVA)	U S A G E								EXPND (Rp)	IN-COME (Rp)	AMT /1,000 POP (kVA) (1)	Expo'd /1,000 (1972) (Rp) (2)	EXPND/ (1)
				HOUSEHOLD		INDUSTRIAL		COMMERCIAL		PUBLIC SERVICE						
				AMT 10 ⁶ kWh	Average price Rp/kWh	AMT 10 ⁶ kWh	Average price Rp/kWh	AMT 10 ⁶ kWh	Average price Rp/kWh	AMT. 10 ⁶ kWh	Average price Rp/kWh					
ELECTRICITY	1969	Government Electricity Exploitation IX	?	119.4		21.2		10.8		x		?	?	?	?	?
	1970	"	73,300	125.1		24.2		11.5		x		?	?	48.28	?	?
	1971	"	80,008	?		29,426		?		x		81,950,740	563,405,602	51.05	50,184	1,6mil
	1972	"	96,592	85,819	4.71	37,891	9.29	15,679	18.15	46,510	7.13	?	1,440,589,092	59.16	?	?
	1973	"	?	?	?	?	?	?	?	?	?	368,564,000	2,057,794,000	?	225,836	?

A-2

17 TABLE b : S U R A B A Y A : WATER

SERVICE TYPE	Y E A R	MANAGEMENT	Amount per year (M3)	Price per unit			EXPENDITURE Routine
				Household	Commer-cial	others	
WATER SUPPLY	1967/1968	Municipal Waterworks Co.	36,566,190				
	1968/1969	"	38,080,219				
	1969/1970	"	40,201,246				210,648,068
	1970/1971	"	44,171,941				317,001,292
	1971/1972	"	45,773,740				476,391,321
	1972/1973	"	46,418,530	13.43	51.36	51.40	523,537,489

17 TABLE b SURABAYA : WATER (cont.)

Y E A R	EXPENDITURES Development	I N C O M E		Amount /1000 pop (m3) (1)	Dev't / Exp/1000 pop (Rp)	Dev't Expn'd/ (1)
		INPRES	Others			
1967/1968	7,448,500			30,020	6,116.79	248
1968/1969	1,796,300			29,079	1,371.74	62
1969/1970	51,137,200		414,006,731	28,274	35,965.71	1,809
1970/1971	90,629,900	1,250,000	652,995,635	29,092	59,689.65	3,115
1971/1972	118,906,700		874,847,672	29,208	75,873.23	4,071
1972/1973	311,798,600		1353,190,449	28,430	190,968.70	10,967

17 TABLE c SURABAYA : Roads and Bridges

SERVICE	YEAR	MANAGEMENT	AMOUNT (km)	EXPENDI- TURES	INCOME		AMOUNT/ 1000 popu- lation ... (1)	EXPN'D/ 1000 popula- tion (2)
					INPRES	OTHERS		
R O A D S	1971/72	Municipality Surabaya	568.628	?	95,702,813	748,978,543	362.84m	?
	1972/73	"	?	?	?	548,007,018	?	?
	1973/74	"	?	126,016,431	?	325,446,851	?	76,900

17 TABLE d
S U R A B A Y A : E D U C A T I O N

TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E (pupils)	PUPILS per 1000 Population	Remarks
			units	classes			
<u>Kindergarten</u>	1970	Private	371	572	16,285	10.73	
	1971	"	345	568	16,614	10.60	
	1972	"	413	721	20,925	12.82	
	1973	"	452	712	22,655	13.83	
<u>Elementary Schools</u>	1965	Government	204	1,494	70,552	0.10	Gov't manage- ment includes Gov't subsidiz- ed privately managed schools. Private manage- ment includes gov't helped privately manag- ed schools. Source: Team Master Plan Kodya Surabaya.
		Private	132	950	36,794	0.04	
		Total	336	2,444	107,346	0.12	
	1966	Government	204	1,515	68,254	60.14	
		Private	339	1,039	36,527	32.19	
		Total	543	2,554	104,781	92.33	
	1967	Government	212	1,603	76,603	62.91	
		Private	148	1,104	39,792	32.68	
		Total	360	2,707	116,395	95.58	
	1968	Government	283	2,183	100,663	76.87	
		Private	184	1,277	45,843	35.008	
		Total	467	3,460	146,506	111.88	
1969	Government	314	3,435	109,146	76.76		
	Private	209	1,471	52,985	37.27		
	Total	523	4,906	162,131	114.03		

17 TABLE d (cont.)

TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E (pupils)	PUPILS per 1000 Population	Remarks		
			units	classes					
<u>Junior High School</u>	1970	Government	309	2,466	109,736	72.27			
		Private	227	1,475	52,529	34.60			
		Total	536	3,941	162,265	106.87			
	1971	Government	324	2,497	113,166	72.21			
		Private	264	1,871	70,539	45.01			
		Total	588	4,368	183,705	117.22			
	1972	Total	593	4,406	181,625	111.24			
	1973	Total	620	4,582	200,599	122.41			
	- General	1968	Government	15	190	9,180		7.01	Gov't management includes Gov't subsidized privately managed schools.
			Private	64	393	17,596		13.44	
			Total	79	583	26,776		20.45	
	- General	1969	Government	15	203	9,205		6.47	Private Management includes Gov't helped privately managed schools.
Private			85	423	17,771	12.50			
Total			100	626	26,976	18.97			
- Vocational		Total	?	?	4,590	3.22			
- General	1970	Government	15	194	9,141	6.02	Source for general school : Team Master Plan Kodya Surabaya		
		Private	78	420	17,556	11.56			
		Total	93	614	26,697	17.58			
- Vocational		Total	26	180	5,033	3.31			

17 TABLE d (cont.)

TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E (pupils)	PUPILS/ 1000 Population	REMARKS
			units	classes			
- General	1971	Government	15	190	9,358	5.97	
		Private	70	412	17,867	11.40	
		Total	85	602	27,225	17.37	
- Vocational		Total	29	267	6,176	3.94	
- General	1972	Total	113	733	32,207	19.72	
- Vocational		Total	37	264	7,460	4.57	
- General	1973	Total	120	819	36,072	22.01	
- Vocational		Total	33	260	9,026	5.51	
<u>Senior High School</u>							
- General	1968	Government	13	170	6,162	4.706	
		Private	46	195	7,227	5.52	
		Total	59	365	13,389	10.22	
- General	1969	Government	12	191	8,286	5.83	
		Private	30	290	19,945	14.03	
		Total	42	481	28,231	19.86	
- General	1970	Government	12	168	5,364	3.53	
- General		Private	33	214	7,836	5.16	
		Total	45	382	13,200	8.69	
- Vocational		Total	34	260	8,232	5.42	

17 TABLE d (cont.)

TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G - E (pupils)	Pupils/ 1000 pop	REMARKS
			Units	Classes			
- General	1971	Government	12	164	6,784	4.33	
		Private	33	187	11,739	7.49	
		Total	45	451	18,523	11.82	
- Vocational		Total	35	285	11,183	7.14	
- General	1972	Total	45	374	13,817	8.46	
- Vocational		Total	42	368	11,645	7.13	
- General	1973	Total	43	388	14,474	8.83	
- Vocational		Total	43	349	12,779	7.80	

17 TABLE e.
S U R A B A Y A : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	EXPENDITURES	INCOME	Amount/pop (m2) (1)	Expenditures/1000 pop. (Rp) (2)	(2) (1)
BUS: Intercity & Urban transportation	1970/ 71	Public transport & Terminals. Co	15,474.5	12,505,636	16,243,377	10.19	8,236.32	808.27
	1971/ 72	"	?	10,139,928	29,654,011	?	6,470.19	?
	1972/ 73	"	?	24,421,718	44,716,479	?	14,957.68	?

17 TABLE e (cont.)
S U R A B A Y A : T E R M I N A L S.

T Y P E	YEAR	MANAGEMENT	AMOUNT	U S A G E passangers	cargo(tons)	pax/1000 pop.	Cargo(tons)/ 1000 pop.
Rail Road Terminals	1968	Rail Road Company	16 terminals	4,873,939	665,527	3,721.98	508.23
	1969	"	16 "	4,100,099	709,433	2,883.67	498.96
	1970	"	16 "	4,398,378	744,092	2,896.81	490.07

17 TABLE e (cont.)
S U R A B A Y A : T E R M I N A L S

TYPE	YEAR	MANAGEMENT	A M O U N T					U S A G E		Cargo per 1000 pop. (tons)
			OPEN STORAGE (m3)	GO DOWNS (m3)	CARGO BERTH.		CRANES	CARGO (tons)	SHIPS (nos)	
					Length (m)	Drafft (m)				
Sea- Port	1967	Port-Autho- rity	-	-	-	-	-	1,236,531	-	1,015.45
	1968	"	-	-	-	-	-	1,338,323	4623	1,022.01
	1969	"	-	-	-	-	-	1,727,698	-	1,215.12
	1970	"	-	-	-	-	-	2,072,608	-	1,365.04
	1971	"	64,436	209,645	3,875	9-11,3	7	-	-	

TYPE	YEAR	MANAGEMENT	A M O U N T	
			Critical Aircraft	Runway length
Air port	1973	Navy	DC-8, B - 727	3000 m

17 TABLE f.
S U R A B A Y A : H E A L T H

T Y P E	YEAR	MANAGEMENT	No.s	AMOUNT capacity (beds)	beds/ 1000 pop	Remarks
Public Hospitals	1972	East Java Province	1	1367	0.837	pop. 1972 = 1,632,721
	"	Military	5	760	0.465	
	"	Port Health Center	1	52	0.032	
	"	Private	6	965	0,591	
	"	T o t a l	13	3144	1,926	
Specialized Hospitals	"	East Java Province	1	148	0,091	
	"	Private	1	115	0,070	
	"	T o t a l	2	263	0.161	
Maternity Hospitals	"	East Java Province	1	4	0.002	
	"	Municipality	4	27	0.017	
	"	Military	3	23	0.014	
	"	State-owned Railways	1	8	0.004	
	"	Private	13	179	0.109	
	"	T o t a l	22	241	0.148	

17 TABLE f. (cont.)

T Y P E	YEAR	MANAGEMENT	Amount No. s	No. /1000 population	Remarks
Public Health Centers	1972	City Health Agency	13	0.008	
Public Health Sub Centers	"	T o t a l	12	0.007	
	"	City Health Agency	11		
	"	Non City Health "	1		
Policlinics	"	T o t a l	90	0.055	
	"	City Health Agency	29		
	"	Non City Health "	61		
Dental clinics	"	T o t a l	14	0.009	
	"	City Health Agency	10		
	"	Non City Health "	4		
Post Natal Clinics	"	T o t a l	74	0.045	
	"	City Health Agency	29		
	"	Non City Health "	45		
Family Planning "	"	Total	67	0.041	
Clinics	"	City Health Agency	22		
	"	Non City Health "	43		
Dispensaries	"	Non City Health "	84	0.051	

17 TABLE g.
S U R A B A Y A : C O M M U N I C A T I O N S

T Y P E	Y E A R	M A N A G E M E N T	A M O U N T	A R E A	A m o u n t p e r 1000 p o p .	C u s t o m e r s / 1000 p o p u l a t i o n
Radio	1973	Radio Republik Indonesia	3 stations	regional		
			2 stations	local		
		Government	1 station	Government broad- casting		
			1 station	Agricultural In- formation Center Station		
Private	26 stations					
Television	1973	Televisi Republik Indo- sia	1 station	Relay Station		
Telephone		Telecommunication Pub- lic Co.				
	1971	"-, City Branches	15,352 connec- tions	13,627 customers	9.80	8.70
		"-, City Region Bran- ches	600 "	436 "	0.38	0.28
	1972	"-, City Branches	15,352 "	13,880 "	9.40	8.50
		"-, City Region Bran- ches	600 "	462 "	0.37	0.28
	1973	"-, City Branches	15,352 "	14,430 "	9.37	8.81
"-, City Region Branches		600 "	481 "	0.37	0.29	

17 TABLE h.
SURABAYA : MARKETS

T Y P E	YEAR	MANAGEMENT	A M O U N T		RECEIPTS (Rp)	EXPENDITURES (Rp)	PROFITS (Rp)
			places	size(m2)			
Markets	1966	Municipal Enter- prise for the mana- gement of Markets	56	156,491	1,679,440.35	1,795,115.59	115,671.24
	1967		56	156,491	12,836,885.97	8,207,802.66	4,629,083.71
	1968/69		58	156,491	40,850,264.28	18,036,046.53	22,814,217.75
	1969/70		58	156,491	61,865,754.13	24,870,031.21	36,995,722.92
	1970/71		58	156,491	94,762,243.79	40,457,685.70	54,304,558.09
	1971/72		57	176,589	104,862,520.61	76,993,107.18	27,869,413.18
	1972/73		57	176,589	128,565,943.15	93,209,430	35,356,513.15
Markets	1968	I l l e g a l	76	46,667			

Year	Size per 1000 population (1)	Receipts per 1000 population (2)	Expenditure per 1000 population (3)	Profits per 1000 population (4)	(3) / (A)	Expenditures (1)
1966	137.9 m2	1,479.83 rp.	1,581.76 rp.	101.82	11.47	13,816.
1967	128.51"	10,541.79 "	6,740.34 "	3,801.45	52.45	63,862.
1968/9	119,50"	31,195.24 "	13,773.19 "	17,422.04	115.26	150,928.
1969/70	110,06"	43,511.30 "	17,491.54 "	26,019.76	158.93	225,968.
1970/1	103.07"	62,411.25 "	26,645.77 "	35,765.46	258.52	392,529.
1971/2	112.68"	6,691.18 "	49,128.56 "	17,783.20	436.00	683,289.
1972/3	108.16"	7,874.34 "	57,088.40 "	21,654.96	527.81	861,770.
1968	35.64					

17 TABLE i.
SURABAYA : PUBLIC SAFETY

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	AMOUNT/ 1000 pop.
Fire Fighting	1973	Municipality	7 fire truck	-
Police	1970	"	200 policemen	0.13
Traffic Police	1970	"	71 Police-post	0.05
Civil Defence	1970	"	324 Policemen	.21
Courts	1970	Central Government Financed	25.000 persons 18 judges	16.47 0.13

17 TABLE k.
SURABAYA : R E C R E A T I O N

T Y P E	YEAR	MANAGEMENT	USAGE (visitors) per year.	EXPENDITURE (Rp)	REVENUE (Rp)	EXPN'D per 1000 pop. (1972) (Rp)	Revenue per 1000 pop. (1972) (Rp)
Taman Hiburan Rakyat (Amusement Park)	1968	Municipality of Surabaya	2,766,005	9,562,699.71	15,297,019.29	5,856	9,367
	1969	Company	2,527,872	17,274,278.18	34,139,593.76	10,578	20,906
	1970	"	2,824,261	23,071,962.55	51,224,739.73	14,129	31,369
	1971	"	2,374,619	32,698,886.23	46,362,640.77	20,024	28,391
Z O O	1971	Municipality	82,645				
5 Public Perfor- mance Buildings	1971	Municipality	32,500				

18 TABLE a . M E D A N : POWER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (kWh) Produced	U S A G E					ADMINISTRATION		EVALUATION		
				GOVT	HOUSEHOLD	INDUSTRIAL	TOTAL	CONSUMER	EXPENDITURE	INCOME (Rp)	AMOUNT/ 1000 Pop. (1)	EXPEND/ 1000 Pop (2)	(2) / (1)
				kWh	kWh	kWh	kWh	No.					
Electricity	1970	Govt. Electricity Exploitation I	74,953,520	691,445	-	-	74,262,075	28,000	227,000,000	215,500,000	128,969.59	390,591.4	0.30
	1972	"	-	-	1,031,400	768,600	-	-	-	-	-	-	-
	1973	"	-	-	-	-	-	-	-	-	-	-	-

18 TABLE a : M E D A N : POWER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M3) PRODUCED	U S A G E				EXPENDITURES (Rp)	INCOME (Rp)	AMOUNT/1000 pop (1)	EXPEND/1000 pop (2)	EXPENDITURES (1)
				HOUSE HOLD		INDUSTRIAL						
				Amount (M3)	Price/unit	Amount	Price/unit					
GAS	1970	National Gas Company	2,288,501	1,741,808 [Total sold Amount / years]				10,178,300	3-4 million Rp/ month	3,937.73	17,513.40	2,585
	1971		-				30,000,000	42,374,541		49,304.29		
	1973		1,500,000		Rp.20/m3	>10.000 m3	=Rp.16/m3	35,000,000				

18 TABLE b.

M E D A N : W A T E R

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (L/sec.)	U S A G E Household (No)	EXPENDITURES (Rp)	INCOME (Rp)	AMONT L/sec/ 1000 pop	House hold No. / 1000 pop	Expen- ditures /1000 pop.
Water supply	1968	Prov. Gov't	-	23,122	91,076,460. 32	91,637,045. 18		40,11	158,695.65
	1969	"	-	23,154	191,400,310. 28	192,555,088. 45		39,00	324,371,44
	1970	"	550	24,030	197,439,943. 90	198,804,574. 28	0,9	41,35	339,727,30
	1971	"	-	24,922	-	-		39,30	

SERVICES TYPE	YEAR	AMOUNT (M)	ROUTINE (Rp)	MUNICIPAL GOVT. (Rp)	AMOUNT/ 1000 pop (1)	EXPEND/ 1000 pop (2)	(2) / (1)
Sewerage Canals	1971/72	Closed 18,822 open 785,144	10,657,600		29,68 M 1,238.02		
	1973/74	Closed 18,822 open 785,144	-	63.400.000.- (budget)			

18 TABLE c.
M E D A N : ROADS and BRIDGES

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (Km)	EXPENDITURE (Municipal)		I N C O M E				AMOUNT/ 1000 pop	Dev't EXPND/ 1000 pop
				Routine (Rp)	Development (Rp)	Cent.Govt. Inpres (Rp)	Prov. Govt. (Rp)	Municipal Govt. (Rp)	S e l f		
Roads (Incl. Bridges)	1970	Municipal Public Works	?	?	34,267,385	27,574,000	6,693,385.90				58,962.55
	1971	" -	401.594	301,113,577	65,448,142	44,425,000	21,023,142.82	93,038,652		0.63	103,199.25
	1972	" -	?	?	25,674,230	8,778,000	16,896,228.82	833,413,977			38,610.48
	1973	" -	406	?	101,147,851	94,171,000	7,307,510.02	300,145,065	14,840,200 (Road Tax)		

18 TABLE d. M E D A N : EDUCATION

TYPE	YEAR	MANAGEMENT	AMOUNT		USAGE	Gov't EXPENDITURE			AMOUNT pupils/ 1000 pop. (1)	EXPENDITURE/POP 1000 (2)	REMARKS	
			Unit	Classes	Pupils/ Student)	Development (Rp)	Central Govt. (Rp)	Prov. Govt. (Rp)				
KINDER GARTEN	1973	PRIVATE	33	71	4,264						Gov't management includes Gov't subsidized privately managed schools Private management includes gov't helped privately managed schools.	
ELEMENTARY SCHOOL	1970	Government	135	616	56,312	68/69: 18,485,367.22	REPELITA	6,882,598('68)	96.89	32,068.87		
		Private	83	443	41,828				91.97			
		Total	218	1,059	98,140				69/70: 10,706,369.59			168.87
	1971	Government	146	747	56,848	70/71: 14,635,981.30	13,280,877('70)	1,800,000/year	89.64	25,183.56		
		Private	95	583	42,932				71/72: 981,145,415.			67.70
		Total	241	1,330	99,780				157.33			154,708.43
	1972	Government	136	643	56,997	72/73 4,482,014.	73/74: 11,341,088.49		85.72	6,740.33		
		Private	92	348	34,465				137.55			
		Total										
JUNIOR HIGH SCHOOL	1972	General	24	311	14,376				21.62			
		Private	31	155	7,634				11.48			
General Vocational	1973	Total	39	2,896	17,526				27.6			
		Total	21	65	22,457				35.4			
SENIOR HIGH SCHOOL	1971	Government	18	219	8,518				13.43			
		Government	18	219	8,501				12.78			
	General Vocational	1973	Private	16	78	2,059						
Total			43	289	11,137							
UNIVERSITIES and ACADEMIES	1970	Total	45	491	17,765							
			8	31 Faculty	10,635				18.30			
	1973		24		14,044							

18. TABLE e.
MEDAN : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	AMOUNT 1000 pop
B U S	1971	Municipality terminal enterprises		
- INTERCITY			3	0,005
- URBAN TRANSPORT			2	0,003

18 TABLE e.

MEDAN : TERMINALS

SERVICE TYPE	YEAR	MANAGEMENT	OPEN STORAGE (m2)	GO - DOWNS (m2)	OPEN-space (m2)	FIRE PROOF STORAGE (m2)	QUAY (m2)	QUAY length (m)	PASSENGER (persons)	CARGO (tons)	SHIPS (No ^s)
Harbour	1966	Port Authority of Belawan							53,573	1,176,383.218	1,817
	1967	"							43,860		2,098
	1968	"							56,836	1,517,271.619	2,511
	1969	"							52,109	1,560,810.501	2,519
	1970	"							55,380	1,478,103.206	2,673
	1971	"		2,300	67,928	20,831	136	2,653	2,678		
	1972	"									

	INCOME (Rp)	PASSENGER per 1000 pop	CARGO (TONS) per 1000 pop.	INCOME (Rp)/ 1000 pop.
1966		98.58	21,646.14	3.34
1967		78.36	-	3.75
1968		98.60	26,322.00	4.36
1969		87.78	26,292.87	4.24
1970	167,021,250.-	95.29	25,433.15	4.55
1971	44,825,200.-	101.5	29,235.40	4.11
1972	224,100,000.-			

18 TABLE e.
MEDAN : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	U S A G E		Passenger per 1000 pop. (1)	Cargo(tons) per 1000 pop (2)	(2) / (1)
				PASSENGER (No)	CARGO (ton)			
RAILWAY STATION	1970	Govt. Railways	2 station		344,636	-	-	
	1971	- " -	2 "	371,421	107,867	639.09	170.09	0.27

18 TABLE e.
MEDAN : T E R M I N A L S.

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E			per 100 population		
			Critical Aircraft	Runway Length (m)	Passenger (no.)	Bagage (kgs)	Cargo (kgs)	passenger (no.)	baggage (kgs)	cargo (kgs)
AIRPORT	1967	Joint management airforce & Civil aviation			43,594	668,122	881,258	77,89	1,193.73	1,574.54
	1968				67,483	1,048,512	741,188	117,07	1,766.94	1,285.83
	1969	"			90,306	1,417,337	800,092	152,12	2,387.59	1,347.80
	1970	"			119,973	1,796,692	862,933	206,43	3,091.50	1,484.82
	1971	"	DC9	2450	123,717	1,664,380	839,739	195,08	2,624.41	1,324.11

18 TABLE f. M E D A N : H E A L T H

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT		Development Expenditures	Amount per 1000 pop.	Expenditure per 1000 pop.
			Units	Capacity (beds)			
Central Public Hospital	1970	Provincial.	1	544	1,259,826,400.-	0,94 beds	21,677.34
Public Hospital		Gov't Agencies	4	884	(by the Municipality under the Management of City Health Agency.	1,52	
		Private	6	432		0,74	
Maternity Hospital		Provincial	?	?			
		City Health Agency	?	?			
		Gov't Agencies	?	?			
		Private	28	372			
Specialized Hospital		Provincial	2	338		0,58	
		Gov't Agencies	1	140		0,24	
		Private	1	13		0,02	
Total Hospital		T o t a l		2.723			
Policlinics		City Health Agency	?	?			
		Private	?	?			
Dental clinics		City Health Agency	?	?			
	Private	?	?				
Post Natal Clinics	City Health Agency	?	?				
Public Health Centers	City Health Agency	?	?				

18. TABLE f. (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT		Dev't Expendi- ture (Rp)	Amount per 1000 pop	Expend. per 1000 pop.
			Units	Capacity (beds)			
Central Public Hospital	1972	Provincial	1	544	5,484,986.47	0.82 beds	82,486.58
Public Hospital		Government Agencies	5	644	(by the Mmicipa- lity, under the management City Health Agency	0.97	
		Private	6	476		0.71	
Maternity Hosp.		Provincial	1	106		0.159	
		City Health Agency	1	18		0.03	
		Gov't Agencies	2	40		0.06	
		Private	33	397		0.60	
Specialized Hosp.		Provincial	1	92		0.14	
Total Hospital		T o t a l	50	2317			
Policlinics		City Health Agency	3			0.004units	
		Private	24			0.04	
Dental Clinics		City Health Agency	1			0.002	
		Private	1			0.002	
Post Natal Clinics		City Health Agency	22			0.03	
Public Health Centers	City Health Agency	11			0.02		

18 TABLE g.
MEDAN : COMMUNICATIONS

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T			
			EXCHANGE OFFICE (UNITS)	CONNECTIONS		
				PUBLIC LINES (No.s)	DIAL (Nos)	NON DIAL (Nos)
TELEPHONE	1971	Gov't enterprise (Monopoly)	17	5	6.444 14,377	7.917

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		ADMINISTRATION		Amount/ 1000 pop (1)	Expend/ 1000 pop (2)	(2) / (1)
			Exchange Office (Units)	Nos. of Handled EXCHANGES	Expenditures (Rp)	Income (Rp)			
TELEGRAPH	1971	Central Gov't	1	546,119	8,500,000.	35,000,000	861.10	13,402.88	1,556.48

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (Lines)
TELEX	1972	Central Gov't	60 channels

18 TABLE g. M E D A N : COMMUNICATION (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (Units)	ADMINISTRATION INCOME	Amount/ 1000 pop.
				(Rp)	
POST OFFICE	1971	Central Gov't	1 main office	25,000,000 (1973)	0.002
			5 branch office		0.008

SERVICE TYPE	YEAR	MANAGEMENT	A M C U N T		ADMINIS- TRATION	Amount/ 1000 pop (1)	Expend/ 1000 pop (2)	(2) / (1)	REMARKS
			Units	Power (kW)	Expn'd (Rp)				
GOV'T RADIO STATION	1971	Central Gov't	1	50	7,200,000	0.08 kw	11,353.03	1,419.13	
COMMERCIAL RADIO STATION	1971	Private	80			0.13			
TELEVISION RELAY STATION	1973	Central Gov't	1	10	-	-	-	-	
TELEVISION SETS	1971	Private-owners	2,834			4.47 (sets)			On a tv. set owner must pay tax 100 - 300 Rp/month depending on size and make (import or domestic).
	1972	" "	5,185			7.80			
		" "	6,325			?			

18 TABLE h.
M E D A N : M A R K E T S

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		EXPENDITURES (Rp)	INCOME (Rp)	AMOUNT/ pop (1)	EXPENDI- TURE / pop (2)	EXPENDI- TURE / (1)
			(m2)	No.					
MARKETS	1971	Municipality Market enter- prise	20,700	24	41,496,426	65,999,680	32.64	65,432	127,134
	1973	"	55,142 10,142 (vendors)		65,149,713	142,915,497	86.97	102,760	

18 TABLE i.
M E D A N : P U B L I C S A F E T Y

SERVICE TYPE	YEAR	AMOUNT	EXPENDITURE (Rp)	AMOUNT/1000 (1) pop	EXPENDITURE/1000 (2) pop	(2) / (1)
PUBLIC SAFETY Fire Fighting	1971	5 car units	12,660,578	0,008	19,963.32	2,495.42
	1972	5 car "	?	0,008	?	
	1973	10 car "	?	?	?	

18 TABLE j.

M E D A N : SOCIAL WELFARE

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	USAGE	EXPENDITURE		AMOUNT children/ 1000 pop (1)	EXPEND./ 1000 pop (2)
					ROUTINE (Rp)	MUNICIPAL GVT (Rp)		
SOCIAL WEL- FARE	1970	Social Affair Dept	6 orphanage houses	860 child- ren			1.48	
	1972/3		?	?	2,000,000	?	?	3,007.72
	1972/4		?	?	10,170,000	6,000,000	?	17,500.84

18. TABLE k. MEDAN : RECREATION

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T	U S A G E	E X P E N D I T U R E	
					ROUTINE	DEV'T PRO- JECT FINANCE
RECREATION						
Parks	1971	Municipal Gov't private	13 Public parks & sport field 29 ha 8 Ornamental parks 1,3 ha	INTERNATIONAL TOURIST		
Hotel	1964			1,080 persons		
	1965			975 "		
	1966			1,742 "		
	1967			2,083 "		
	1968			3,005 "		
	-					
	1970	8 Buildings	8 Buildings (338 rooms/764 beds)	11,197 "	NO BUDGET Allocated	No Allocation
	1971			6,008 "		

	YEAR	INCOME (Rp)	AMOUNT/1000 pop (1)	Tourist/1000 pop (2)
Parks	1971		0,036	
			0,002	
Hotel	1964			2,10
	1965			1,84
	1966			3,21
	1967			3,72
	1968			5,21
		275,000,000 (1973)		
	1970		1,31 beds	19,27
	1971			9,47

18 TABLE k. MEDAN : RECREATION (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T
CINEMAS	1973		30 buildings
Theatre	"		5 "
Meeting Hall	"		7 "
Night Club	"		7 "
Steambath	"		4 "
Tourist Objects (Park)	"		5 object/site (416 Lid)

19 TABLE a

UJUNG PANDANG : POWER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (contracted KVA)	U S A G E			ADMINISTRATION		AMOUNT/ 1000 pop (1)	USAGE/ 1000 pop (2)	(2)/ (1)
				No. of consumers	Power sold (kWh)	Own need (kWh)	Foreign aid (Rp)	Central Gov. aid + local income (Rp)			
ELECTRICITY	1966	Gov't Elect.Co	—	17,800	—	—	—	—	—	—	
	1967	Exploitation VI	—	18,000	—	—	—	—	—	—	
	1968	"	—	18,200	—	—	—	—	—	—	
	1969	"	—	18,300	—	—	1.453.000.000	3.440.943	—	—	
	1970	"	—	18,700	—	—	—	—	—	—	—
	1971	"	—	20,000	3,200,000	—	—	—	—	7,416.86	—
	1972	"	41,212,638	—	36,762,546	4,154,179	—	—	73,419.88	72,892.72	0.99

19 TABLE a.

UJUNG PANDANG : POWER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT m3/month	USAGE		EXPENDITURE		PER 1000 POP			
				Customer (no)	Sold power m3/month	Development	Routine Rp/month average	AMOUNT (1)	EXPEND. (2)	² / ₁	USAGE
G A S	1971	Mon. Gov't Owned Enterprise	65,975	386	55,247	43.000.000 Rp	1,200,000	151.965.	128,067.51	842.74	0.89
	1972	"	65,975	388	55,247	—	1,200,000	117.53.	25,653.45	218.27	0.69
	1973	"	65,975	399	55,247	—	1,200,000	—	—	—	—
	1974	"	65,975	404	—	—	—	—	—	—	—

19. TABLE b. U J U N G P A N D A N G : WATER

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T (m ³ /month)	USAGE HOUSE- HOLD (no. of custom- ers)	EXPENDITURE (Rp)		I N C O M E	
					Routine monthly	Municipality Dev't	Subsidy by central Gov (Rp/Month)	Income (Rp)
	1969	Owned	324,000	4,737	2,500,000	-	866,000	
	1970	Enterprise	324,000	4,700	2,500,000	-	909,000	
	1971		324,000	5,000	2,500,000	23,384,890	1,554,000	23,384,171
	1972		324,000	-	2,500,000	25,419,159	1,320,000	25,419,159
	1973		324,000		2,500,000			

YEAR	AMOUNT/ 1000 pop (1)	EXPEND/ 1000 pop (2)	Development Expenditure /(1) (Rp)
1968	-	-	-
1969	719.79	66,184.11	
1970	803.29	79,378.93	
1971	746.29	122,965.29	31,334
1972	577.20	98,728.65	40,039
1973	-	-	-

19. TABLE c : U J U N G P A N D A N G : R O A D S A N D B R I D G E S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (km)	EXPENDITURE		INCOME
				Routine (Rp)	Municipal Dev't	
Roads	1971	Municipal Gov't Public Works	101,483 (Total)	5,468,213.17	100,650,200.93	2,404,493
	1972	"	101,483	4,927,697.72	68,788,406.49	3,096,945

YEAR	AMOUNT/1000 pop (1)	EXPENDITURES/1000 pop (2)
1971	0.234	24,443.02
1972	0.181	131,324.47

19 TABLE b. UJUNG PANDANG : W A T E R (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	EXPENDITURES		Expn'd/ 1000 pop
			Routine	Development	
SEWERAGE	1971	Municipal	921,527.60	62,299,014	145,620.46
	1972	Government	1,677,883.16	33,508,290	62,683.80

19. TABLE d : U J U N G P A N D A N G : EDUCATION

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		USAGE No. of pupils	E X P E N D I T U R E	
			UNITS	CLASS		Routine	Municipal Gov't Development
EDUCATION							
Kindergartens	1970	Municipality	18		3,143		
	1971		-				
	1972		64				
Elementary School	1970	Municipality	160		68,733	88,220,170	65,253,285 (70)
	1971		-			105,068,658	82,094,263 (71)
	1972		219			174,690,572	37,548,444 (72)
Junior High school	1970	Department of Education	49		26,613		
	1971		-				
	1972		48		13,329		
Senior High School	1970	"	42		15,678		
	1971		-				
	1972		31		9,996		
University/ Academy	1970	"	20				
	1971		-				
	1972		36		16,122		11,412,687

19. TABLE d : U J U N G P A N D A N G :
EDUCATION (cont)

SERVICE TYPE	YEAR	Per 1000 Populations		
		Amount (1)	Usage (pupils)	Expenditures (2)
EDUCATION	1970	0.04		} 380,452.39 (1970) 431,135.99 (1971) 378,092.68 (1972)
Kindergarten	1971			
	1972	0.13	6.53	
Elementary School	1970	0.28		
	1971			
	1972	0.46	142.9	
Junior High School	1970		55.3	
	1971	0.10		
	1972		77.8	
Senior High School	1970	0.11	34.5	
	1971			
	1972	0.06	20.8	
University/ Academy	1970	0.05		
	1971			
	1972	0.08	33.5	

19 TABLE e : U J U N G P A N D A N G : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M2)	U S A G E		ADMINISTRATION	EXPENDITURE	
				Passengers	Cars	INCOME (Rp)	Routine (Rp)	Development
BUS TERMINAL	1969	Municipal Gov't	1,500	301,125				
	1971		1,500			43,389,473	3,281,331	226,347.44
	1972		1,500		173,324	53,566,699.70	2,770,547.25	-

YEAR	AMOUNT/1000 pop (1)	EXPENDITURE / 10 ³ pop (2)	(2) / (1)
1969			
1971	3.46	8,079.99	2,335.11
1972	2.67	4,935/70	1,848.57

REMARK : 1500 M2 Capacity for 20 Buses & 30 Bemos.

19 TABLE e : U J U N G P A N D A N G : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T				U S A G E		
			Sheds (M2)	Open Storage (M2)	Berth (M2)	Draft (M)	Passenger	Ships No.s	Cargo tons
SEA PORT	1969	Central	78,959	20.600	1,710		71,191	3,139	390,328
	1970	Gov't.	"	"	"		63,093	3,346	445,848
	1971	(Department of Comm.)					73,902	3,340	471,271

YEAR	EXPENDITURE (Rp)	I N C O M E (Rp)	AMOUNT/ 10 ³ pop (1)	Exp./ 10 ³ pop (2)	(2) / (1)	Pax/ 10 ³ pop
1969						157.06
1970	52,558,068	83,448,680	118.69	130,307.10	1,097.87	156.43
1971						170.22

YEAR	Cargo / 10 ³ pop	Ships/ 10 ³ pop
1969	6.93	861.12
1970	1,105.38	8.29
1971	7.69	1,085.51

19 TABLE e : U J U N G P A N D A N G : T E R M I N A L

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T			U S A G E			
			Area (M2)	Runway Length (M)	Apron (M2)	Passenger	Baggage (kg)	Cargo (kg)	No. of Flights
AIRPORT	1968	Central Gov't (Department of Communication)	17,500			45,705	514,585	406.491	
	1969		17,500			56,180	393,099	541,452	1,181
	1970		17,500	1,745	24,525	68,248	1,091,033	652,922	1,858
	1971		17,500	1,745	24,525	125,000	2,200,000	1,200,000	2,260
	1972 Jan-Oct		Capacity : D C - 9	17,500	1,745	34	124,301		833,273

YEAR	EXPENDITURES (Rp)	INCOME	PASSENGER / 10 ³ pop	CARGO / 10 ³ pop	BAG / 10 ³ pop
1968		--	-	-	
1969			121.94	1,194.52	1,194.51
1970	26,610,389		169.21	1,618.79	2,704.99
1971			287.92	2,764.04	5,067.41
1972 Jan-Oct					

19 TABLE f : U J U N G P A N D A N G : HEALTH

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		E X P E N D I T U R E		
			Units	Beds	Routine	Self Finance	Municipality Development
Public Hospital	1969	Department of Health	8	1,686	} 14,788,515.24		4,608,025
Maternity Hospital	"		15	410			
Clinic	"		95				
Public Hospital	1971	8	2,070				
Maternity Hospital	"	15	410				
Clinic	"	95					
Public Hospital	1972	Department of Health	10	?	} 19,362,629.45		4,567,907.
Maternity Hospital	"		?	?			
Clinic	"		?	?			
Office of The Municipality Health Service	1969	Department of Health				1,139,471.41	
	1970					3,600,000.00	
	1971					4,500,000.00	

A-41

19 TABLE f : U J U N G P A N D A N G : HEALTH
(cont)

SERVICE TYPE	YEAR	Per 1000 population		(2) / (1)
		Amount (1)	Expenditure (2)	
Public Hospital	1969	0.02		
Maternity Hospital	"	0.03		
Clinic	"	0.21		
Public Hospital	1971	4.77	34,063.59	7,141.21
Maternity Hospital	"	0.94	34,063.59	36,237.86
Clinic		0.20		
Public Hospital	1972	0.02	44,413.99	2,220,674,5

19 TABLE g : U J U N G P A N D A N G : COMMUNICATIONS

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E No. of Customers	I N C O M E (Rp)	A M O U N T / 10 ³ pop (1)	U S A G E / 10 ³ pop (2)	(2) / (1)
			Units	Connec- tions					
TELEPHONES	1971	Central Gov't Owned Enterprise	1 (exchange units)	6000	5200	4,448,180	13.82	11.97	0.87

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		U S A G E No. of Customers	I N C O M E Rp/month	A M O U N T / 10 ³ pop (1)	U S A G E / 10 ³ pop (2)	(2) / (1)
			Units	Channels					
TELEX	1971	Central Gov't Owned Enterprise	1 Office	60	20	5,586,310	0.13	0.04	0.31

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T			E X P E N D I T U R E (Rp)	A m o u n t / 10 ³ pop	E x p. / 10 ³ pop	(2) / (1)
			Units	Power	Size of Lot (m2)				
Centr. Gov't Radio Station	1970/71	Central Gov't	1	50 kW	36.718	4,560,000	0.002	10,503.37	5,251,685
Private Radio Station	1970/71	Private	95	-			0.103		

19 TABLE g : UJUNG PANDANG : COMMUNICATIONS (cont).

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T			INCOME (self - Rp)	EXPENDITURE
			Units	Power (kW)	Operation		
TELEVISION	1973	-	1	1.2	3 days/week	50,000 (commer- cial programs)	15,000,000

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		EXPENDITURE (Own Finance) (Rp)	Amount/ 10 ³ pop
			Units	P.O.Box		
POST OFFICE	1969	Centr.Gov't	1 cen- tral + 9 bran- dus	278	217,948,348	0.02
	1970	"	"	"	287,198,089	0.02
	1971	"	"	"	354,286,499	0.02

19 TABLE h : U J U N G P A N D A N G : M A R K E T S

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		Dev't Expn'd (Rp)	INCOME (Rp)	Amount /1000 pop (Rp)	Expn'd / 1000 pop (Rp)	Dev't Expn'd / (1)
			U n i t s	Total Area (m2)					
MARKETS	1970	Mun. Gov't Owned Enterprise	1 Central Market	97,960	-	-	242.25	-	-
			10 Neighbourhood Markets						
	1971	"	1 Central Market	156,716	56,102,682	88,126,945	360.97	129,225.58	155,422
			28 Neigh. Markets						
	1972	"	1 Central Market	-	112,203,323	112,203,323	-	199,889.04	-
			32 Neigh. Markets						

19 TABLE i : U J U N G P A N D A N G : P U B L I C S A F E T Y

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	EXPENDITURE		INCOME (Rp)	Expn'd / 1000 pop	Amount / 1000 pop
				Routine (Rp)	Development (Rp)			
FIRE FIGHTING	1970	Municipal Government		1,885,000			4,673.47	
	1971			5,932,024	5,454,485.66	570,500	26,227.37	
	1972			8,291,595.75	4,219,070	616,500	22,287.62	
POLICE FORCE	1973	POLICE FORCE	11 Police Stations 700 Police Officer (109 Traffic Police)					0.23
								1.46
								0.23
CIVIL DEFENCE	1971	Municipal Government		1,886,088.71			4,344.36	
	1972			1,436,449.63			2,559.06	

19 TABLE k : U J U N G P A N D A N G : SOCIAL WELFARE

SERVICE TYPE TYPE TYPE	YEAR	MANAGEMENT	A M O U N T		EXPENDITURE Routine(Rp)	AMOUNT/ 1000 pop (1)	EXPENDITURES/ 1000 pop (2)	(2) / (1)
			Units	Capacity				
ORPHANAGE HOUSE	1971	Municipal Gov't	18	574	3,718,070	0.04	8,564.10	214,102.5
	1972	"	18	-	18,384,529	0.03	32,751.84	1,091,728.00

19 TABLE 1 : U J U N G P A N D A N G : RECREATION

SERVICE TYPE	YEAR	MANAGEMENT	A m o u n t		EXPENDITURE		Self financed	Amount/ 10 ³ pop (1)	EXP/ 10 ³ pop (2)
			Unit	Bed	Routine	Dev'nt			
HOTEL	1971	Private	17	928				0.04	

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		EXPENDITURE		Self financed	Amount/ 10 ³ pop
			Unit	Seats	Routine	Dev'nt		
OPEN AIR CINEMA	1971	Private	7	} 544			558,703	0.03
INDOOR CINEMA		Private	7					

SERVICE TYPE	YEAR	A M O U N T Unit	EXPENDITURE Development	Amount/ 10 ³ pop (1)	EXP/ 10 ³ pop (2)	(2) / (1)
SPORT HALL SPORT FIELD	1971	1 32	} 19,289,148	0.07	44,430.09	4,443,009

19 TABLE 1. UJUNG PANDANG : RECREATION (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		E X P E N D I T U R E		AMOUNT/ 1000 pop (1)	EXPEND/ 1000 pop (2)	(2) / (1)
			Unit	Size	Routine	Development			
CITY PARK	1971	Mun. Gov't	4	21,683.50	6,365,599		0.03	14,662.34	488,744.66
NEIGHB. PARK	1971	"	11	33,791					
	1972	"	-	-	9,019,509.32	24,949,175.23	0.03	60,514.05	2,017,135.00

20. TABLE a : S E M A R A N G : POWER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (kWh) Produced by Thermo Power (a)	U S A G E (kWh)		
				Household (b)	Industrial (c)	Commercial and Others (d)
ELECTRICITY	1966	PLN	9,081,550	-	-	-
	1967	Exploitation X	8,833,300	23,610,933	15,179,370	4,771,556
	1968	"	5,505,550	24,595,880	15,008,981	5,612,815
	1969	"	20,702,700	29,951,415	15,001,252	6,964,288
	1970	"	29,085,350	31,286,479	15,775,167	7,557,713
	1971	"	27,906,000	31,474,673	17,282,844	8,072,761

YEAR	PER 10 ³ POPULATION		REMARKS
	Amount (kWh)	Usage (kWh)	
1966	-	-	Additional Production from Hydro Power (see difference (a)≠(b)+(c)+(d))
1967	-	-	
1968	8,712,19	71,554,20	
1969	32,323.17	81,058.05	
1970	47,349.532	88,917.65	
1971	43,164.199	87,748.71	

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M3)	USAGE (M3)	Amount/ 1000 pop	Usage/ 1000 pop
G A S	1966	Municipality	4,992,099	3,886,152	-	-
	1967	Owned Gas Co.	6,870,442	5,226,408	-	-
	1968	"	4,055,887	4,379,292	6,418.19	6,929.96
	1969	"	4,942,948	2,615,775	7,717.43	4,084.01
	1970	"	3,076,626	3,013,905	5,008.59	4,406.49
	1971	"	3,122,787	2,289,801	4,830.23	3,541.79

20 TABLE b : S E M A R A N G : WATER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M3)	U S A G E		INCOME (Rp)	PER 1000 POPULATION	
				HOUSHOLD (M3)	TARIFF (Rp/M3)		AMOUNT	USAGE
WATER SUPPLY	1966	Municipality	15,129,027	5,371,289	1.80	9,660,168	-	-
	1967	Waterworks Enterprise	15,544,977	5,549,918	5.63	31,228,347	-	-
	1968	"	14,281,743	5,651,802	11.16	63,090,450	22,599.98	8,943.63
	1969	"	14,727,407	4,991,621	11.85	59,126,915	22,993.93	7,793.42
	1970	"	14,982,621	5,799,294	12.00	69,598,817	24,390.97	9,440.96
	1971	"	17,606,145	5,934,348	18.80	111,576,395	27,232.67	9,172.09

SERVICE TYPE	YEAR	MANAGEMENT	EXPENDITURE		Expenditure/ 1000 population
			Routine (Rp)	Development (Rp)	
SEWERAGE	1971	Municipality	436,582	306,850	1,150

20 TABLE c : S E M A R A N G : ROADS and BRIDGES

SERVICE TYPE	YEAR	MANAGEMENT	Amount (m)			EXPENDITURE	
			Paved	Un Paved	Total	Routine (Rp)	Dev't (Rp)
ROADS	1868	Municipal / Government	310,156	13,015	323,171	87,309,541	457,025
	1969		311,066	13,015	324,081		
	1970	"	313,266	13,015	326,281		
	1971	"	319,156	117,056	436,292		
	1972	"	321,556	117,086	438,642		

YEAR	PER 1,000 POPULATION		DEVELOPMENT EXPENDITURE / (1)
	Amount (1)	Expenditure (2)	
1968	511.39	135,754.80	677.31
1969	505.98		
1970	531.16		
1971	674.76		
1972	656.01		

20 TABLE d . S E M A R A N G : EDUCATION

SERVICE TYPE	YEAR	Amount		Usage (pupil)	Per 1,000 Population	
		Unit	Class		Amount (units)	Usage
KINDER GARTEN	1966	193		10,396		
	1967	198		10,839		
	1968	223		11,344	0.35	17.95
	1969	225		11,423	0.35	17.83
	1970	267		12,377	0.43	20.14
	1971	277		11,682	0.42	18.06
	1972	257		11,370	0.38	
	1973					
ELEMEN-TARY SCHOOL	1966	259	979	77,035		
	1967	262	1004	78,259		
	1968	269	1049	73,931	0.42	116.99
	1969	310	1131	81,393	0.48	127.07
	1970	338	1262	86,422	0.55	140.72
	1971	352	1012	89,472	0.54	138.39
	1972	359	-	91,439	0.58	
	1973	360	-	93,034		
JUNIOR HIGH SCHOOL	1968			14,751		23.34
	1969			16,388		25.58
	1970			17,095		28.80
	1971			17,801		27.53
	1972			22,696		
SENIOR HIGH SCHOOL	1968			12,730		20.14
	1969			14,140		22.07
	1970			15,708		25.57
	1971			15,757		24.37
	1972			13,912		
UNIVER-SITY / ACADEMY	1971			11,048		17.08

20 TABLE e : S E M A R A N G : T E R M I N A L S

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	DEVELOPMENT EXPENDITURE (Rp)	Per 1000 population		Expenditure/ (1)
					Amount	Expenditure	
BUS	1971	Municipal Bus	3 terminals	84,000	2.24	129.92	37,500
	1972	Enterprise	1450M2 "		2.16		

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T				U S A G E	
			Berth Length (M)	Transit Shed (M2)	Warehouse (M2)	Open Storage (M2)	Cargo (Tons)	Ships
SEA PORT	1968	PORT AUTHORITY	4,546	31,496	55,828	6,182	261,486,621	1,504
	1969		4,546	"	"	"	278,414,668	1,384
	1970		"	"	"	"	466,005,515	1,763
	1971		"	"	"	"	208,392,857	1,932
	1972		"	"	"	"	584,166,714	3,678

YEAR	Per 1.000 Population Usage	
	Cargo	Ships
1968	413,786.55	2.37
1969	434,689.94	2.16
1970	758,634.26	2.87
1971	322,336.08	2.98
1972	873,657.48	5.50

A-SS

20 TABLE e. SEMARANG : TERMINALS (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT		U S A G E				PER 1000 POPULATION			
			Unit	Runway length (Ft)	Passenger	Baggage (kg)	Cargo (kg)	Air Craft	Amount	U s a g e		
										Pax	Bagg	Cargo
AIR PORT	1967	AIR FORCES	1	8,102	945	59,533	8,017	378	0.001	9.80	40.89	12.68
	1968	"		"	6,196	25,840	4,542	346	0.001	9.80	40.89	12.68
	1969	"		"	4,955	35,725	5,878	272	0.001	7.73	55.77	9.17
	1970	"		"	19,622	142,713	7,656	558	0.001	31.94	232.32	12.46
	1971	"		"	39,144	255,254	15,962	1,264	0.001	60.54	394.81	24.68

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	U S A G E			PER 1000 POPULATION			
				Passenger	Baggage (kg)	Cargo (kg)	Amount	u s a g e		
								Pax	Bagg	Cargo
RAILWAY	1971	Government Enterprise	5 stations	900,943	3,369,141	4,115,331	0.007	1,393.55	5,211.29	6,365.47
	1972	"	stations		2,528,415	5,270,301	0.007		3,781.40	7,882.06

20 TABLE f : S E M A R A N G : HEALTH

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		PER 1000 POPULATION	
			Units	Beds	Units	Beds
Public Hospital	1972	Dept. of Health	1	950	0.001	1.42
" "	"	Dept. of Health	1	300	0.001	0.45
" "	"	Military District DAM VII				
" "	"	Private	4	1398	0.005	2.09
Special "	1972	Dept. of Health	3	403	0.004	0.60
" "	"	Provincial Gov't Owned for Health Service	1	85	0.001	0.12
Maternity "	1972	Dept. of Health	1	36	0.001	0.05
" "	"	Police Department	2	17	0.002	0.02
" "	"	District IX				
" "	"	Private	11	378	0.016	0.56
Public Clinic	1973	Municipality	14		.02	
" "	1973	Private	122		.18	
Special Clinic	1973	Municipality	13		.02	
" "	1973	Private	7		.01	
Post Natal"	1973	Municipality	11		.02	
	1973	Private	31		.05	
Dispensaries	1973	Private	52		.08	

20 TABLE g : S E M A R A N G : COMMUNICATIONS

SERVICE TYPE	YEAR	MANAGEMENT	Amount (Connections)	PER 1000 POPULATION
				Amount
PHONES	1971	CENTRAL GOV'T ENTERPRISE	3,000	4.64
	1972	"	3,596	5.25

SERVICE TYPE	YEAR	MANAGEMENT	Amount Station	USAGE	PER 1000 POPULATION	
					Amount	Usage
TELEGRAPH	1971	CENTRAL GOV'T ENTERPRISE	4	60,682	0.006	93.86

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		Per 1000 Pop		Remarks
			Stations	Radio sets	Amount		
					Broadcast	Radio	
RADIO STATION	1971	CENTRAL GOV'T ENTERPRISE	1	46,450	0.02	71.84	Radio tax collected by & for municipality
		PRIVATE BROADCASTING	16				
	1972	CENTRAL GOV'T ENTERPRISE	1	58,454	0.04	87.42	
		PRIVATE BROADCASTING	27				

20 TABLE g : S E M A R A N G : COMMUNICATIONS (cont.)

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		Per 1000 pop Amount	Remarks
			Station	T.V. Sets Privately Owned		
TELE-VISION STATION	1971	CENTRAL GOV'T	1	4,702 sets	7.27	Tax on use of T.V. sets for the benefit of Central Gov't
	1972	"	1	6,646 sets	9.93	

SERVICE TYPE	YEAR	A M O U N T (units)	PER 1000 POPULATION Amount
POST	1971	1 Central P.O 14 sub P.O	0.02

20 TABLE h : S E M A R A N G : MARKETS

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT		EXPENDITURES		INCOME (Rp)	PER 1000 POPULATION		DEV'T EXPEN'D/ (1)
			Units	SIZE (M2)	ROUTINE (Rp)	DEVLOP'MT (Rp)		Amount (M2)	EXPEND (Rp) (2)	
MARKETS	1971	MUNICIPALITY	36	92,816	624,170	1,698,300	40,411,310	143.5	3,592.32	11,835
	1972	"	36	92,816	-	-	82,265,176	-	-	--
	1973	"	37	-	-	-	-	-	-	-

20 TABLE i : S E M A R A N G : PUBLIC SAFETY

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T	EXPENDITURE		PER 1000 POPULATION		
				Routine (Rp)	Dev't (Rp)	Amount (Rp)	Expenditures (Rp)	(2) / (1)
FIRE FIGHTING	1971	MUN. GOV'T	3 Fire Engineer	510,000	454,311	0.004	1,491.55	372,887.50
	1972					0.004		
POLICE	1971	ARMED FORCES	800 Officers 160 Traffic officers			1.48		
CIVIL DEFENCE	1971	OWN UNIT COORDINATED BY MILITARY COMMANDER LOCATED IN THE CITY						

A-60

20 TABLE k : S E M A R A N G : SOCIAL WELFARE

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	USAGE (Per-son)	PER 1000 POPULATION	
					AMOUNT	USAGE
ORPHANGE HOUSE	1971	Private Municipality Management	10 units	597	0.015	0.92

20 TABLE 1 : S E M A R A N G : RECREATION

SERVICE TYPE	YEAR	MANAGEMENT	Units	A M O U N T :			USAGE (Visit- ors)	Per 100 Population		
				Size(M2)	Rooms	Beds		Amount		Usage
								Units	Beds	
CINEMAS	1971	PRIVATE	12				656,227	0.018		1,015.03
PERFORMANCE BUILDINGS	1971	PRIVATE	3					0.004		
AMUSEMENT PARK (THR)	1971	MUN. GOV'T	2	100,000			849.398	0.003		1,313.82
PARKS	1971	..	10					0.015		
HOTELS	1971	PRIVATE	52		812	1550		0.08	2.39	
NIGHT CLUB AND STEAM-BATHS	1971	PRIVATE	9					0.013		
SPORTS Stadium	1971		1							
Sport Hall			10					0.064		
Sport Field			31							

21 TABLE a : P A D A N G : ELECTRICITY

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT Contracte ed kvA	U S A G E (kWh)			Dev't Expenditure	PER 1000 POP.	
				Industrial	Others	Total		AMOUNT	USAGE
ELECTRICITY	1969	PLN EXP. XIV	13,008	1,140,000	12,729,000	13,869,000	86,093,193	70.63	75,308
	1970	"	13,777	1,240,000	13,444,000	14,684,000		72.53	77,298
	1971	"	12,818	888,000	12,545,000	13,433,000		65.33	68,469
	1972	"	11,258	700,000	11,949,000	12,649,000		55.11	61,924
	1969	NON GOV'T		14,400					
	1970	"		19,250					
	1971	"		25,670					
	1972	"		33,000					

21 TABLE b : P A D A N G : WATER

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M3)	WASTE (M3)	USAGE (No. Customer)		
					HOUSE- HOLD	INDUSTRIAL	OTHERS
WATER SUPPLY	1972	Public Works	2,317,753	30 %	2.199	85	241
	1973	Dept. with Municipality	2,459,118	30 %	3.425	110	251

YEAR	a d m i n i s t r a t i o n		Per 1000 Population		Expn'd/ (1) (Rp)
	Expend (Rp)	Income (Rp)	Amount (1)	Expend(2)	
1972	23,853,765.60	32,748,215.50	11,361	116,776.81	2,866
1973	46,646,028.	46,641,153.95	11,710	222,123.94	

21 TABLE b. P A D A N G : WATER (Cont.)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (M)
SEWERAGE	1972	Municipality	
OPEN CANALS	1973	"	65,153
CLOSED "	1973	"	10,375
INDUSTRIAL	1973	"	3,675

21 TABLE c : P A D A N G : ROADS AND BRIDGES

SERVICE TYPE	YEAR	AMOUNT Paved(KM)	INCOME (Rp)	DEVELOPMENT EXPENDITURE (Rp)	PER 1000 POPULATION		
					Amount (1)	Expend. (2)	Dev' EXP/ (1)
ROADS	1967		6,752,140				
	1968		10,203,175				
	1969						
	1970						
	1971			104,280			
	1972	89,273	7,782,082	17,695,467	437	86,628.67	40,494.3
	1973	89,273		19,233,469	406		47,374

21 TABLE d : P A D A N G : EDUCATION

SERVICE TYPE	YEAR	A M O U N T		USAGE	PER 1000 POPULATION		
		UNIT	CLASS		AMOUNT (1)	EXPEND	USAGE
KINDER GARTEN	1969	31	2,194	3,258,700	0.17	16,611.52	11.91
	1970	32	2,182		0.03		68.19
	1971	33	2,174		0.168		11.08
	1972	35	2,596		0.17		12.71
ELEMEN- TARY SCHOOL	1969	general	98	27,639	0.53	155.84	150.08
		special- ized	11	1,061	0.06		5.76
Total		109	28,700	0.59	196.17		
general	1970	124	30,099	3.87			
special- ized	1970	14	1,213				
Total	1970	138	31,312				
general	1971	120	30,543	0.61	161.58	155.69	
special- ized		14	1,316	0.07		6.70	
Total		134	31,859	0.68		162.40	
general	1972	123	31,618	0.60		154.79	
special- ized		15	1,388	0.07	6.79		
Total		138	33,006	0.68			

21 TABLE d : P A D A N G : EDUCATION
(cont)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT UNIT	USAGE	PER 1000 POPULATION	
					AMOUNT	USAGE
JUNIOR H.SCH.						
general	1969	GOV'T	18	5,735	0.10	31.14
vocational		"	9	2,999	0.05	16.28
specialized		Religions institute	1		0.005	
Total			28	8,734	0.15	47.43
general	1970	GOV'T	17	5,818	0.06	342.24
vocational		"	9	3,299	0.53	194.06
specialized		Religions institute	1		0.06	
Total			27	9,117	1.59	536.29
general	1971	GOV'T	18	5,938	0.09	30.26
vocational		"	9	3,356	0.04	17.10
specialized		Religions institute	1	14	0.005	0.07
Total			28	9,309	0.142	47.45
general	1972	GOV'T	18	6,348	0.09	31.08
vocational		"	9	3,552	0.04	17.39
specialized		Religions institute	2	63	0.010	0.31
Total			29	9,963	0.14	48.77

20 TABLE d. P A D A N G : EDUCATION (Cont.)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT UNIT	USAGE	PER 1000 POPULATION	
					AMOUNT	USAGE
SENIOR HIGH SCHOOL						
general	1969	GOV'T	9	2,923	0.05	15.87
vocational		"	16	4,503	0.09	24.45
		Private	11	2,852	0.06	15.49
Total			36	10,278	0.20	55.81
general	1970	GOV'T	10	3,286	0.59	193.29
vocational		"	17	5,474	0.06	28.82
		Private	11	2,893	0.06	15.23
Total			33	11,653	0.17	61.34
general	1971	GOV'T	9	3,489	0.04	17.78
vocational		"	18	6,052	0.09	30.85
		Private	12	3,116	0.06	15.88
Total			39	12,657	0.19	64.52
general	1972	GOV'T	9	3,370	0.04	16.50
vocational		"	20	6,061	0.010	29.67
		Private	12	3,046	0.06	14.91
Total			41	12,477	0.20	61.08

20 TABLE d : P A D A N G : EDUCATION (cont)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT UNIT	U S A G E STUDENT	PER 1000 POPULATION	
					AMOUNT	USAGE
UNIVERSITY						
technical Sc.	1969	GOV'T	7	2,348	0.04	12.75
social Sc.		"	8	3,784	0.04	20.55
others		Private	4	638	0.05	3.46
Total			19	6,770		
technical Sc.	1970	GOV'T	7	2,469	0.04	12.100
social Sc.		"	8	3,633	0.04	19.12
others		Private	4	784	0.02	4.13
Total			19	6,886	0.10	36.25
technical Sc.	1971	GOV'T	7	2,537	0.04	12.93
social Sc.		"	11	4,043	0.06	20.61
others		Private	4	748	0.02	3.81
Total			22	7,328	0.11	37.35
technical Sc.	1972	GOV'T	7	2,517	0.03	12.32
social Sc.		"	11	4,158	0.05	20.36
others		Private	4	901	0.02	4.41
Total			22	7,576	0.11	37.09

21 TABLE e. P A D A N G : TERMINALS

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (UNITS) TOTAL	EXPENDITURES DEVELOPMENT (Rp)	INCOME (Rp)	PER 1000 POPULATION	
						AMOUNT (1)	EXPENDS (Rp) (2)
BUS TERMINAL	1970	MUNICIPAL	3	8,343,800		0.02	43,922.82
	1971	GOV'T	3	12,454,027	5,349,575	0.01	63,485.56
	1972		3	5,850,000		0.01	28,638.84
				3	21,087,000		0.01

21 TABLE e : P A D A N G : TERMINALS

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T					U S A G E		
			UNITS	BERTH LENGTH (M)	WARE HOUSE (M2)	ENTRE - PORT (M2)	TRANSIT SHED (M2)	OPEN STORAGE (M2)	PASSE - NGERS	CARGO (tons)
SEA PORT	1967	PORT AUTHORITY	2	469	3,785	1,074.5	6,823	7,478.4	59,322	233,152
	1969		2	469	3,785	1,074.5	6,823	7,478.4	78,544	366,932
	1972	"	2	469					66,205	574,455

YEAR	PER 1000 POPULATION		
	AMOUNT	U S A G E	
		PASSENGERS	C A R G O
1967	0.01	342.73	1,347.01
1969	0.01	426.49	1,992.42
1972	0.009	324.11	2,812.26

21 TABLE e : P A D A N G : TERMINALS (cont)

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT UNIT	U S A G E		PER 1000 POPULATION		
				PASSENGER Nos	CARGO Tons	AMOUNT	U S A G E	
							P A X	CARGO
RAILWAY STATION	1968	Central Gov't Railway	1	497,651	16,811	0.05	2,787.33	94.15
	1969			222,479	18,164	0.05	1,208.04	98.63
	1970			190,916	25,024	0.05	1,005.00	131.73

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	U S A G E			PER 1000 POPULATION		
				Passe- ngers	Cargo (Kgs)	Flights friquen- cy	Amount	U S A G E	
								Passe- nger	Cargo
AIRPORT	1968	TABING AIRPORT AUTHORITY	1	16,945	1,058	604	0,005	94.90	5.92
	1969	"	1	28,792	1,078.5	994	0.005	156.34	58.56
	1970	"	1	54,108	1,124.1	2,091	0.005	284.83	59.17
	1971	"	1	43,457	997.2	2,301	0.005	221.52	5.083
	1972	"	1	45,325	1,121.8	2,154	0.004	221.89	5.49

21 TABLE f : P A D A N G : HEALTH

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T			EXPENDI- TURES (Rp)	PER 1000 POPULATION A M O U N T		
			UNIT	FLOOR SPACE (M2)	BEDS		UNITS	FLOOR SPACE	BEDS
PUBLIC HOSPITAL	1971	Central Gov't	1	17,500	430		0.01	124.89	2.44
		Military	1	5,000	50				
PUBLIC HEALTH CENTRES		Central Gov't	3	2,000	34		0.015	10.19	0.17
PUBLIC CLINICS		Province Gov't	9	7,000	104		0.11	35.68	0.53
		Private	12						
		Military	2						
MATERNITY CLINICS		Gov't	16				0.18		
		Private	18						
		Military	2						
DISPENSARIES		Private	20	4,500			0.10	22.93	
MUNICIPALITY OFFICE SERVICE FOR HEALTH		Municipality	1			3,113,386.65			

21 TABLE g : P A D A N G : COMMUNICATIONS

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT (Lines)	U S A G E (Pulses)	PER 10 ³ POPULATION AMOUNT
TELEPHONE	1971	Central Gov't	3,021	5,690.600 (local calls)	15.39
	1972	Enterprise	3,251		
	1973	"			

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T		PER 1000 POPULATION	
			U N I T S	RADIO SETS	A M O U N T	
					UNITS	RADIO SETS
RADIO	1971	Central Government	1 station	41,000	0.09	209.00
			4 transmitters 11.100 kW			
		PRIVATE	17 stations			

SERVICE TYPE	YEAR	MANAGEMENT	A M O U N T	U S A G E		PER 10 ³ POPULATION	
				Custo- mers	Pulses Occupied	Amount	U S A G E Customers
POST	1971	Government Postal Enterprise	1 central P.O 13 general P.O			0.07	
TELEGRAPH	1969	Telecommunications Corporation	20	9	73,399	0.11	0.05
	1970		20	9	112,822	0.11	0.05
	1971		20	9	123,451	0.10	0.04
	1972		20	10	116,312	0.10	0.05

21 TABLE h : P A D A N G : MARKETS

SERVICE TYPE	YEAR	MANAGEMENT	NUM- BER	AMOUNT (M2)	EXPENDI- TURES (Rp)	I N C O M E (Rp)	PER 1000 POPULATION		EXPENDI- TURES / (1)
							AMOUNT (1)	EXPENDS (2)	
MARKETS	1967	Municipality Gov't Enterprises				19,175,453			
	1968	"				50,470,974			
	1969	"			88,075,231	78,742,125		478,243.47	
	1970	"				72,242,541			
	1971	"	5	22,227	15,042,500	110,216,781	113.30	76,680.54	132,767
	1972	"	5	22,356	14,862,240	153,708,899	109.44	72,758.53	135,803
	1973	"				252,075,000			

21 TABLE i : P A D A N G : PUBLIC SAFETY

SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT	EXPENDITURES (Rp)	I N C O M E (Rp)	PER 10 ³ POPULATION		EXPENDITURE / (1)
						AMOUNT (1)	EXPN'D (2)	
POLICE	1971	Armed Forces	120 Officers			0.61		
			40 Traffic Officers			0.20		
FIRE FIGHTING	1967	Municipal Government			417,098			
	1968				155,697			
	1970				9,142,802			
	1971				8.960,000			
		"	1 Fire Station		2,411,763	0.005	45,674.43	1,792,000
		"	1 Fire Engine					
CIVIL DEFENCE	1971	Municipality	210			1.07		

21 TABLE k : P A D A N G : SOCIAL WELFARE

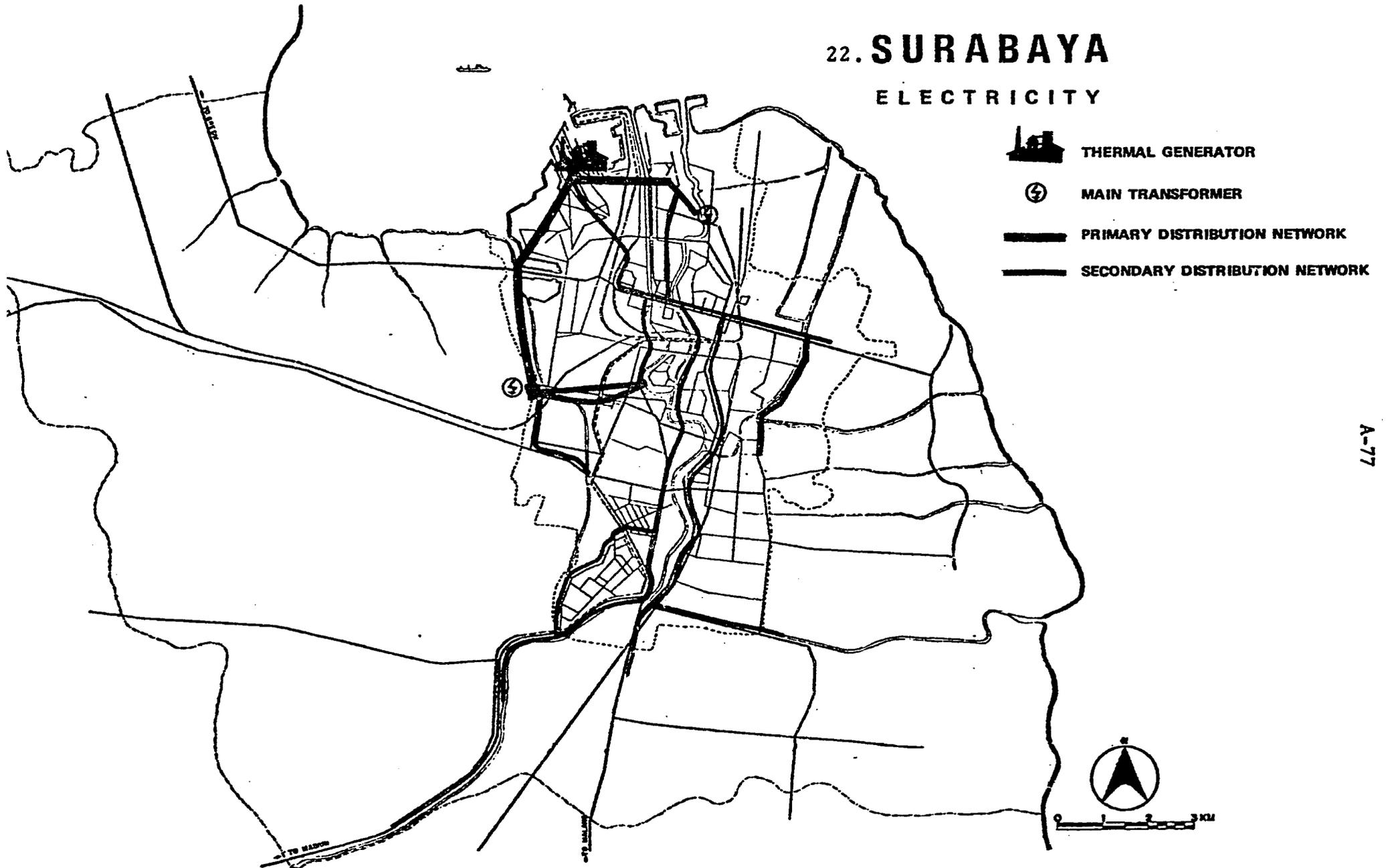
SERVICE TYPE	YEAR	MANAGEMENT	AMOUNT UNIT	PER 1000 POP AMOUNT
ORPHANAGE HOUSE	1972	PRIVATE	2	0.009

21 TABLE 1 : P A D A N G : RECREATION

SERVICE TYPE	YEAR	MANAGEMENT	Units	SIZE (M2)	BEDS.	EXPENDITURES (Rp)	PER 1.000 Population				
							A M O U N T			EXPENDITURES (Rp)	EXPENDITURES/(1)
							Units (1)	Beds	Size (M2)		
HOTEL	1971	Commercial	17		687		0.08	550			
	1973		26								
CINEMA	1971	Commercial	5				0.02				
MEETING HOUSE	1971	Municipality	4				0.02				
PARKS	1971	Municipality	4	24,776		442,176.74	0.002		126.29	2,253.80	14,739,200
SPORT FIELDS	1971	Municipality	3	20,750			0.01		105.77		
NIGHT -- CLUBS	1971	Commercial	1				0.005				

22. SURABAYA

ELECTRICITY

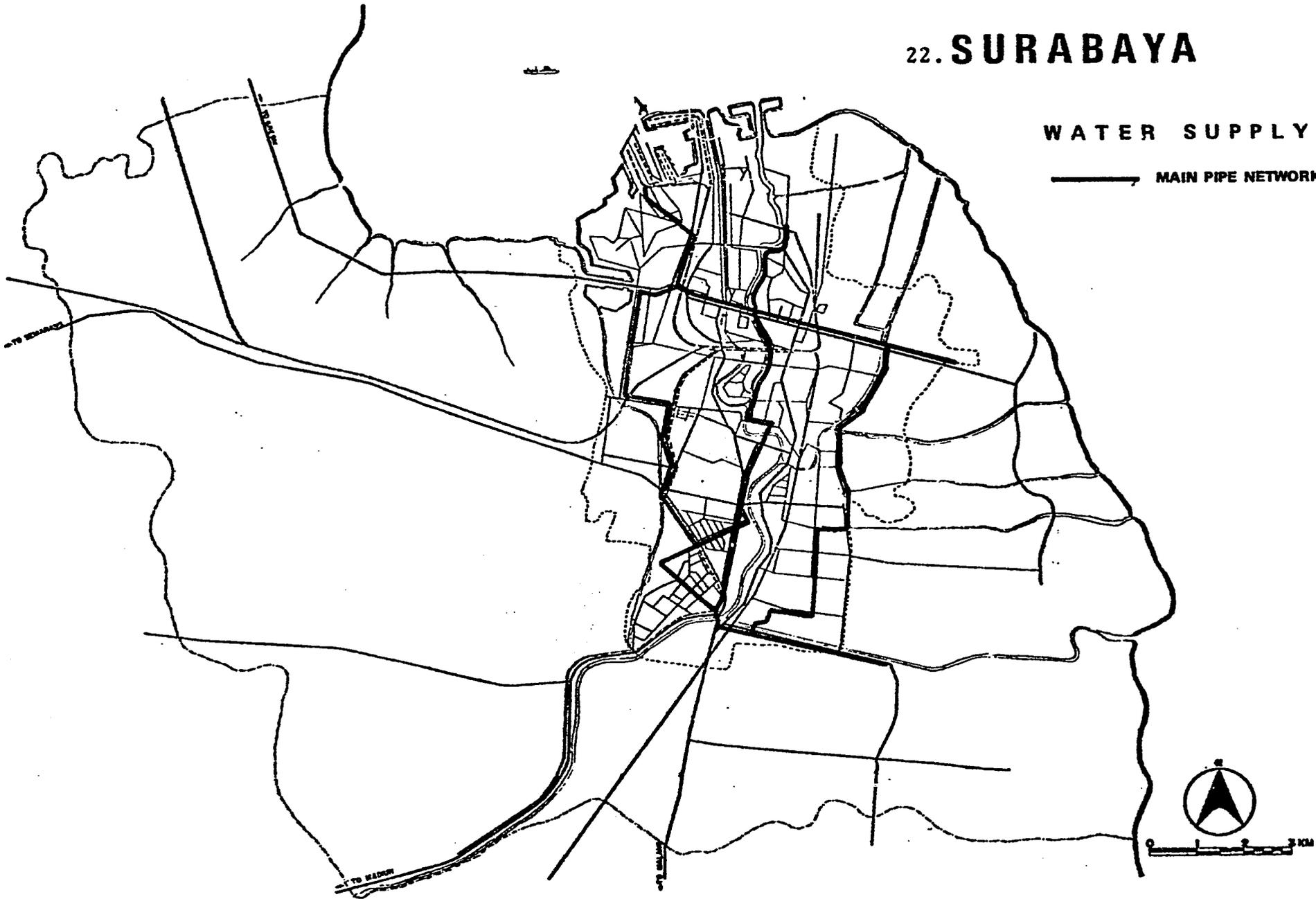


A-77

22. SURABAYA

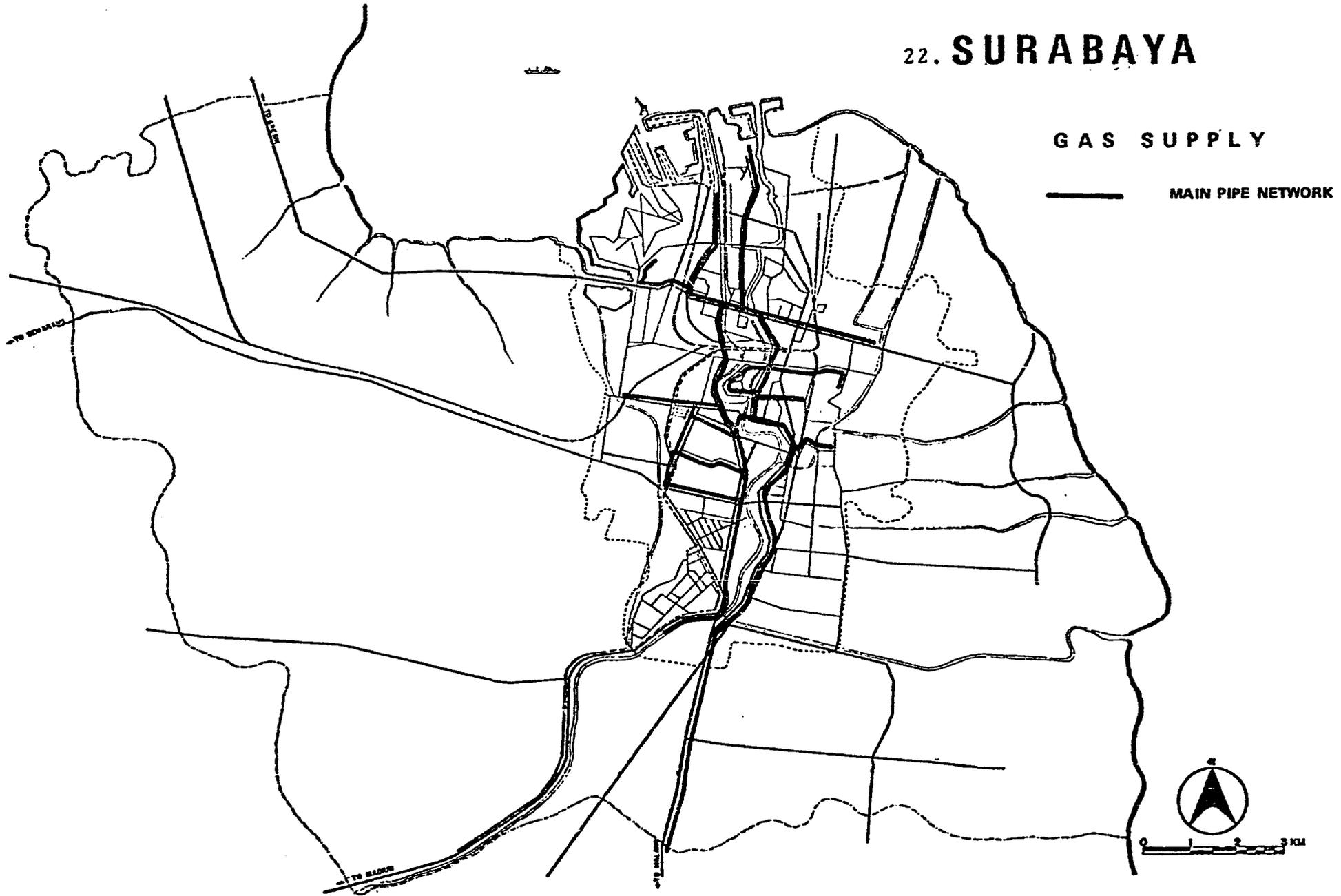
WATER SUPPLY

— MAIN PIPE NETWORK



A-78

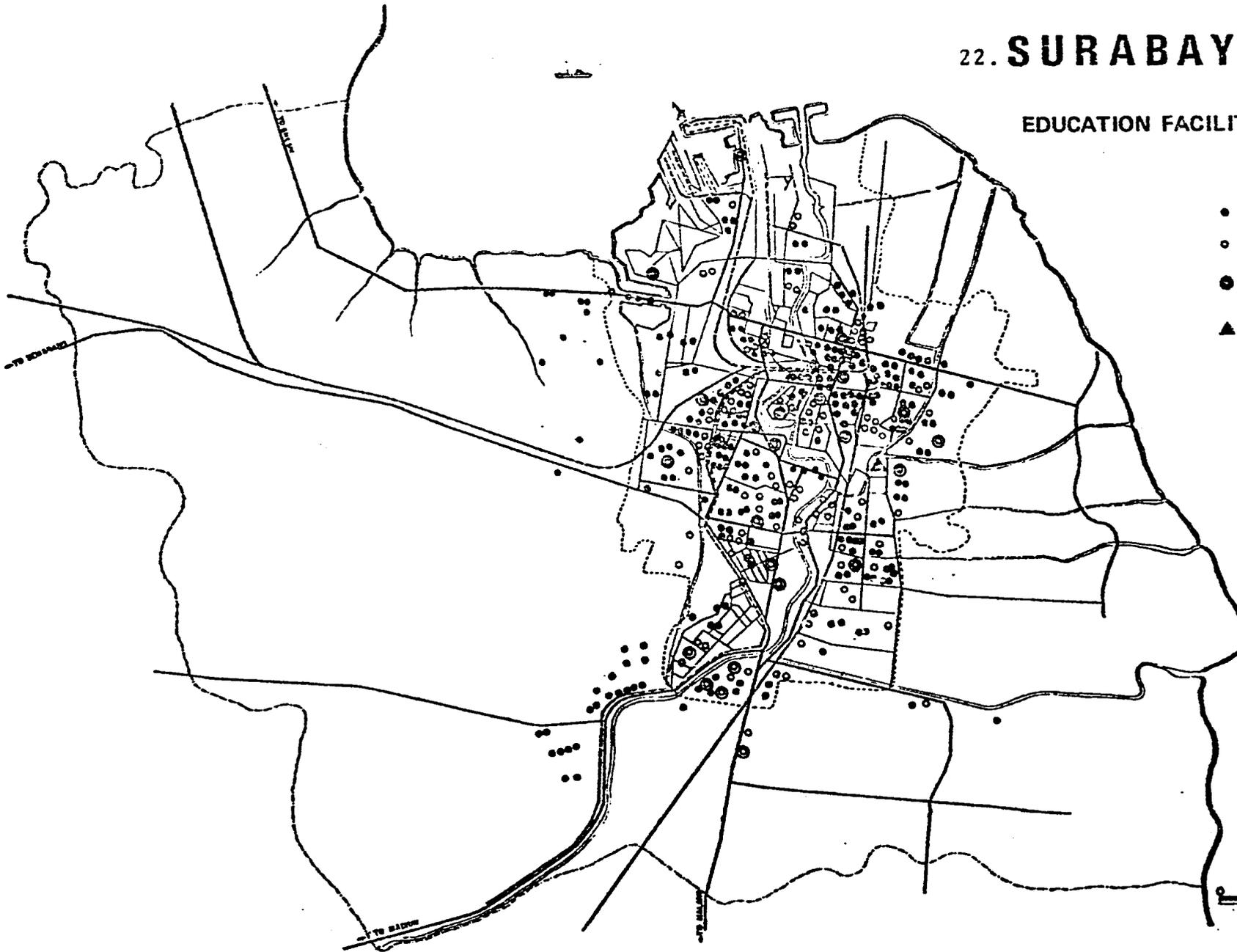
22. SURABAYA



22. SURABAYA

EDUCATION FACILITIES

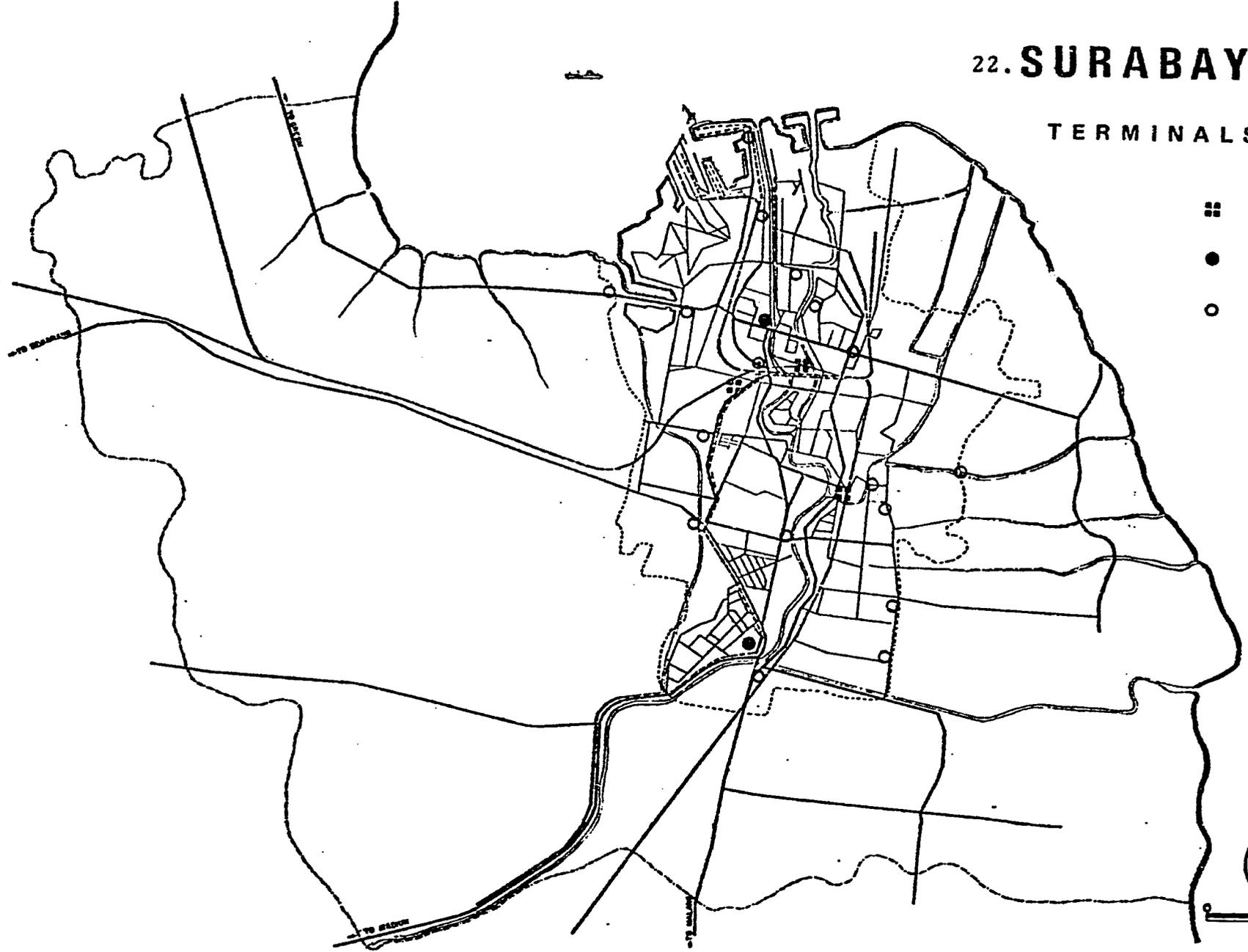
- ELEMENTARY SCHOOL
- JUNIOR HIGH SCHOOL
- SENIOR HIGH SCHOOL
- ▲ UNIVERSITY / INSTITUTE



22. SURABAYA

TERMINALS

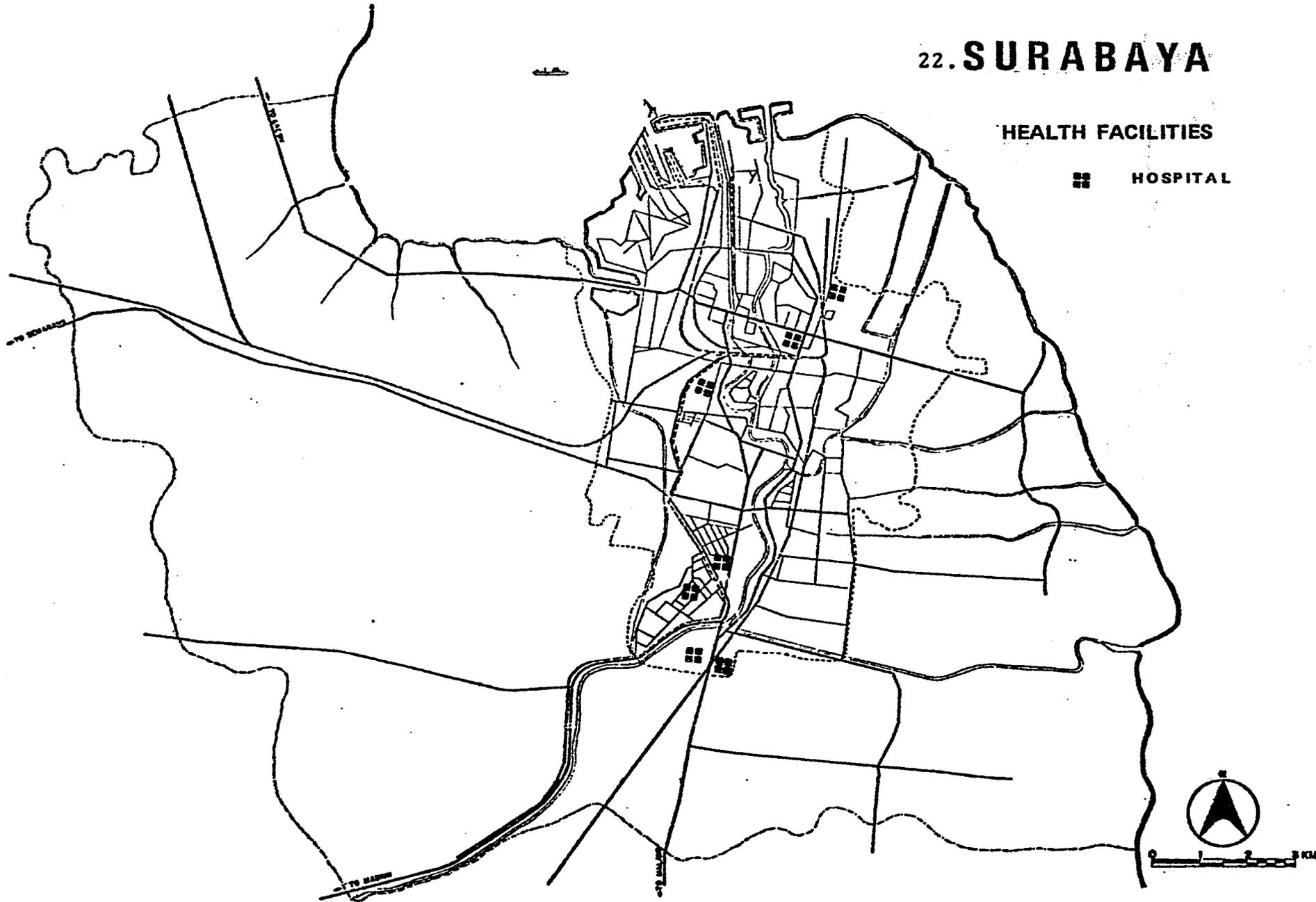
- RAILWAY STATION
- BUS TERMINAL
- BEMO TERMINAL



22. SURABAYA

HEALTH FACILITIES

■ HOSPITAL

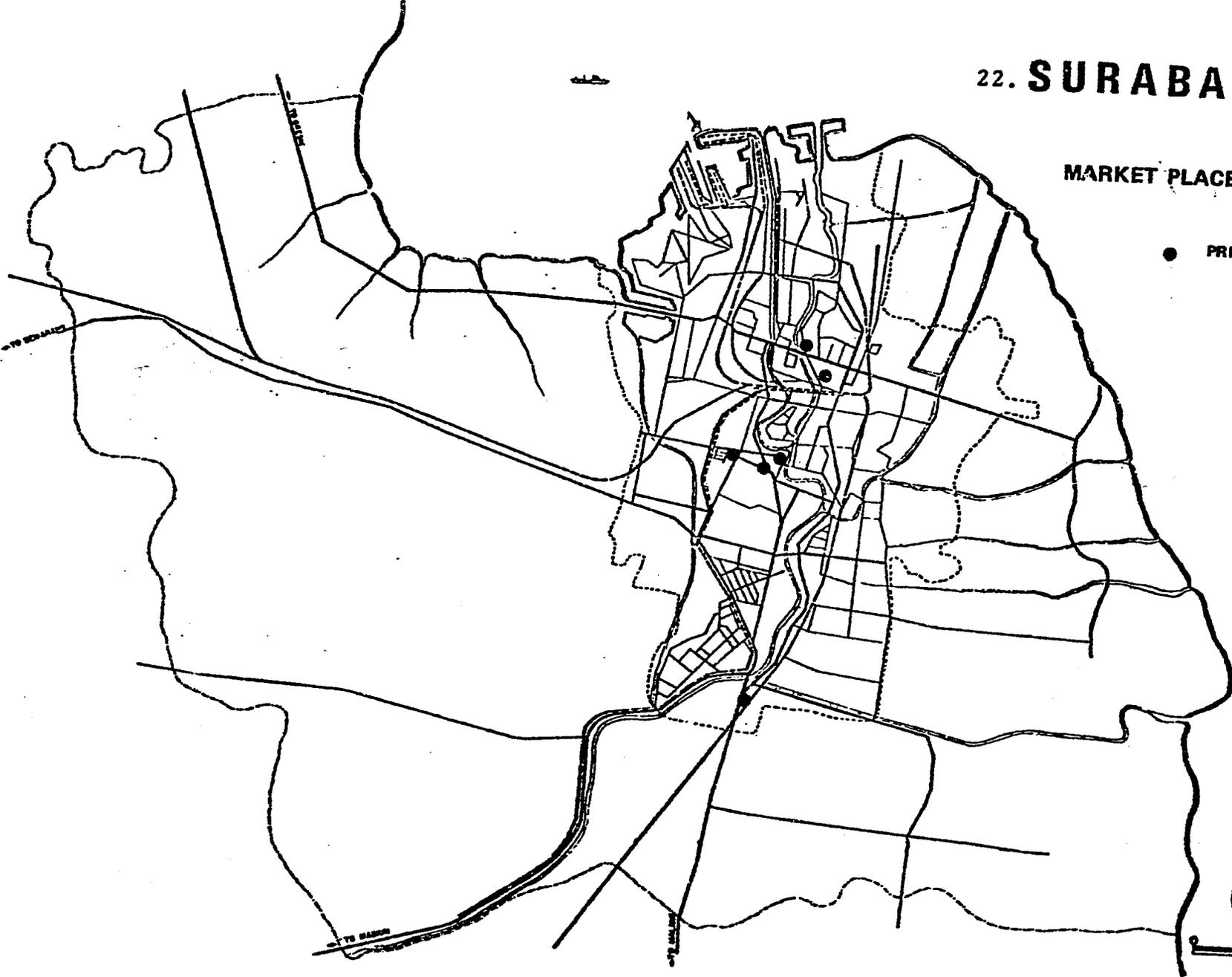


13-A
A-82

22. SURABAYA

MARKET PLACES

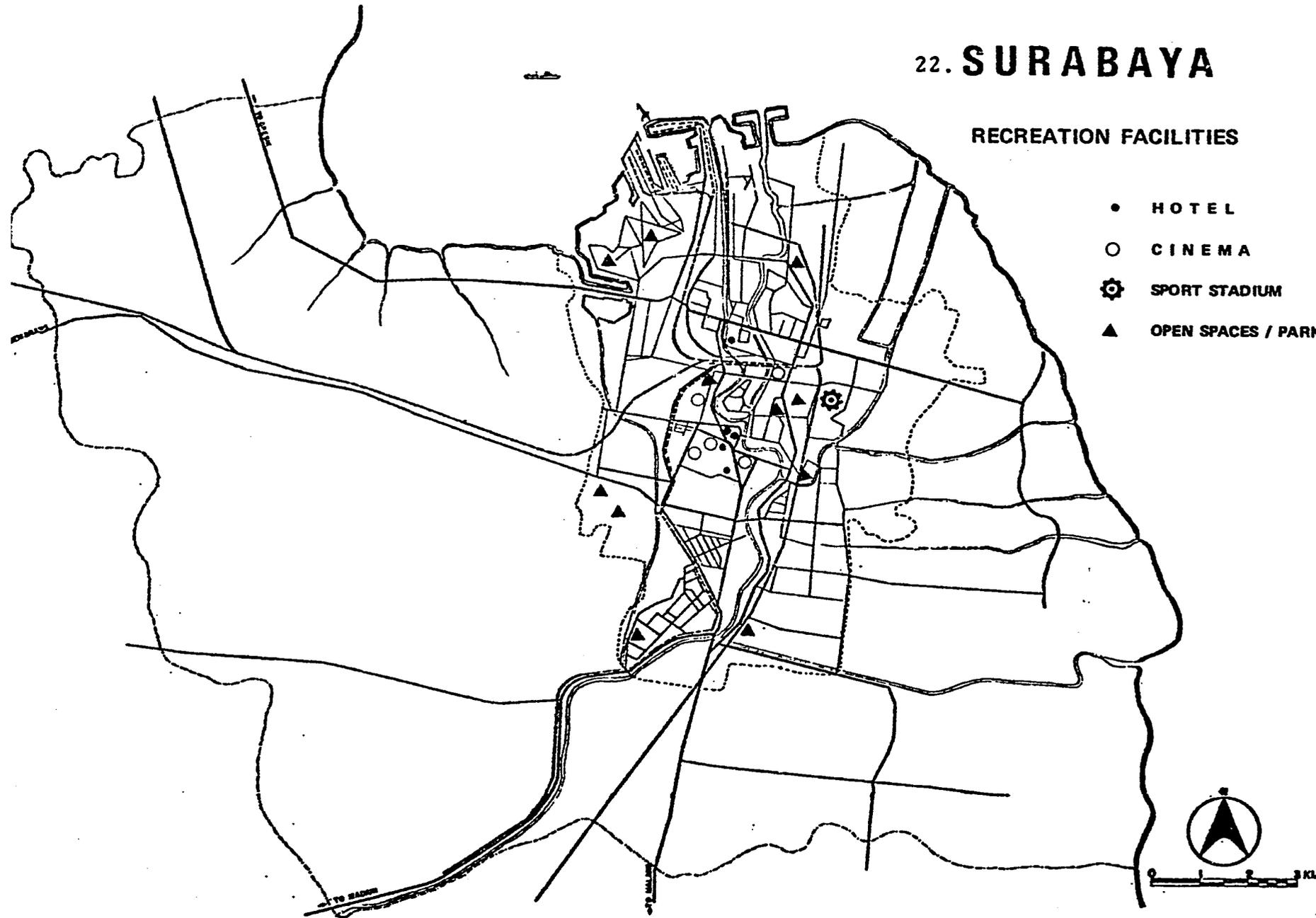
● PRIMARY MARKET



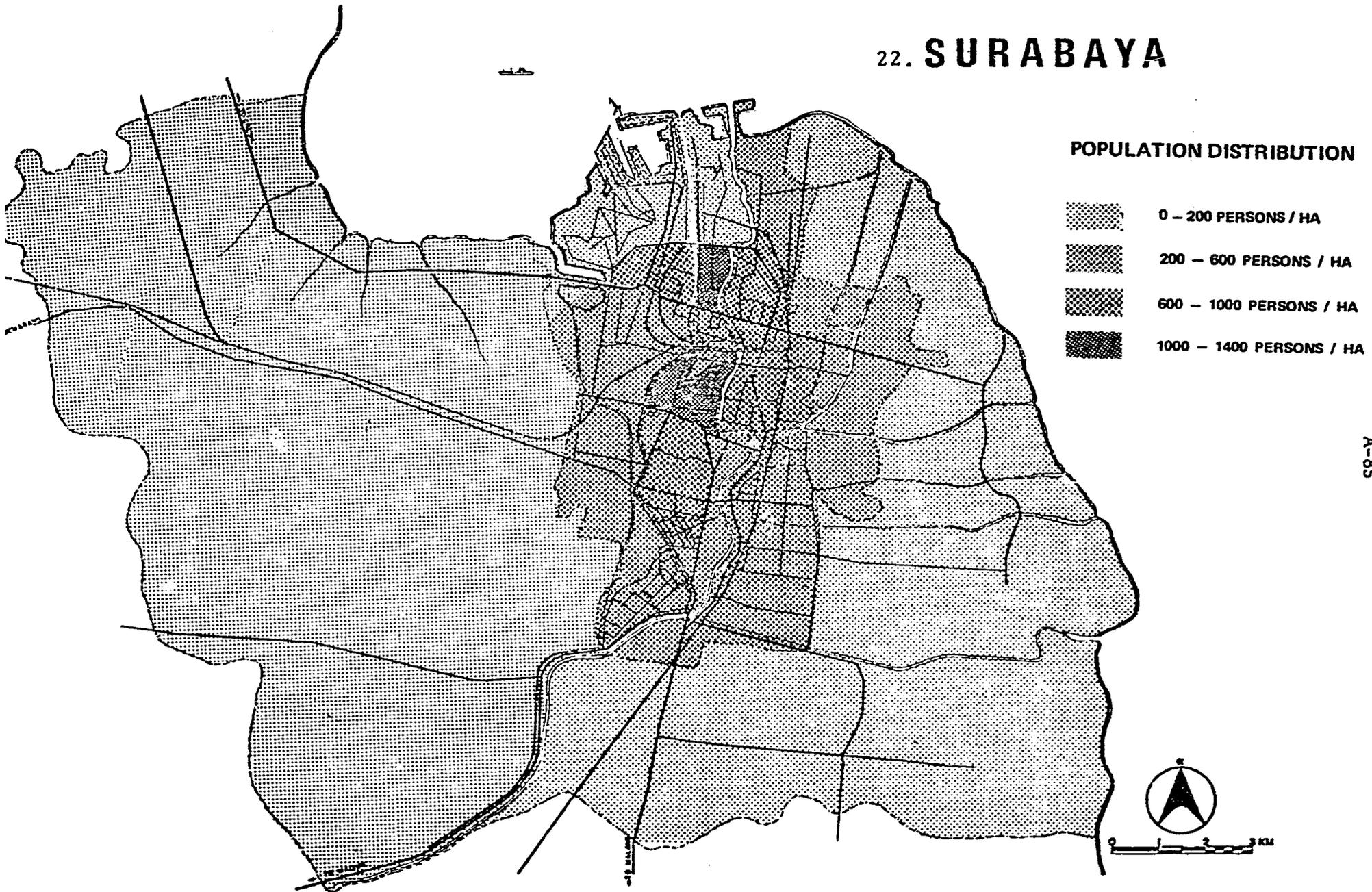
22. SURABAYA

RECREATION FACILITIES

- HOTEL
- CINEMA
- ⊗ SPORT STADIUM
- ▲ OPEN SPACES / PARKS



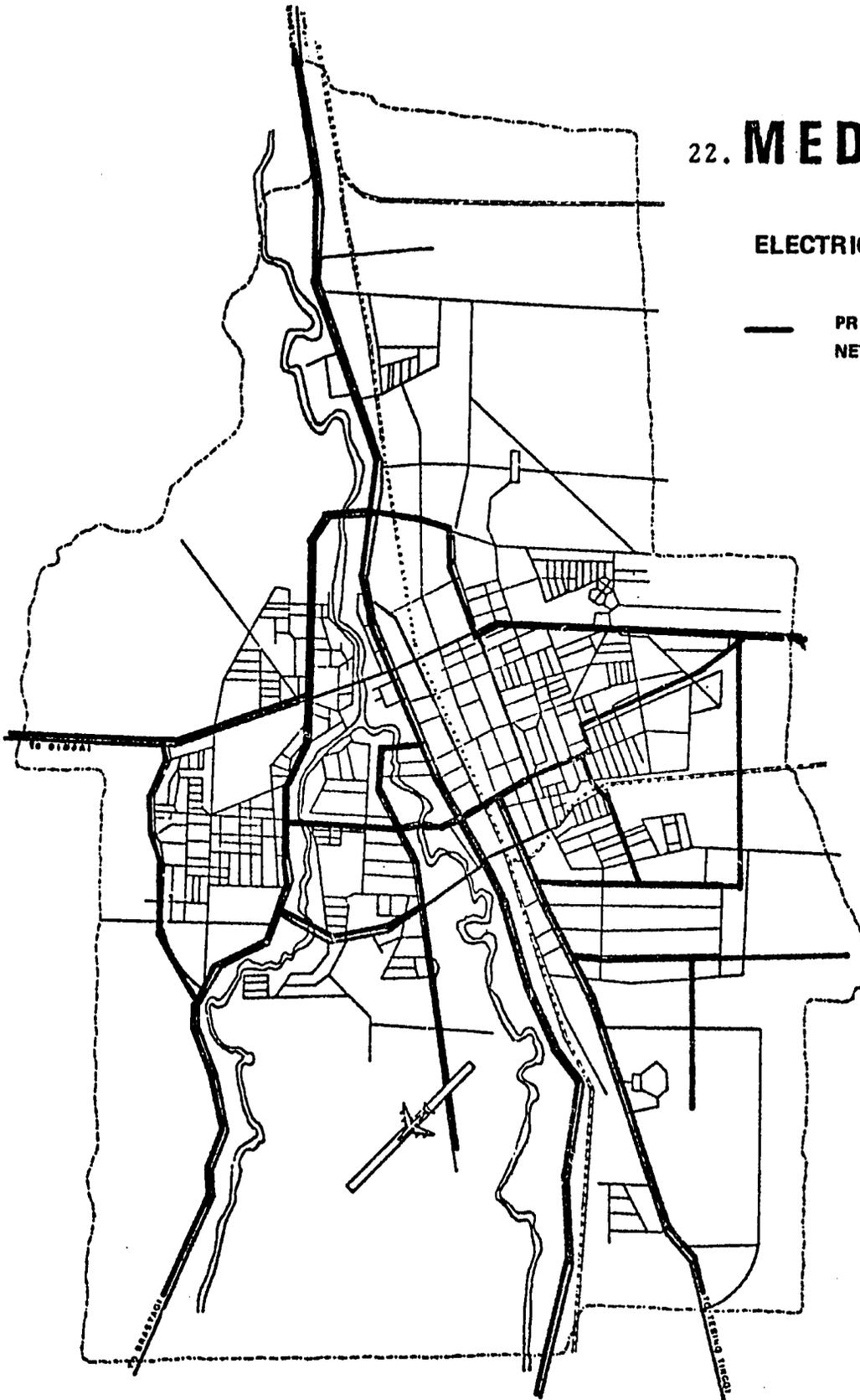
22. SURABAYA



22. MEDAN

ELECTRICITY

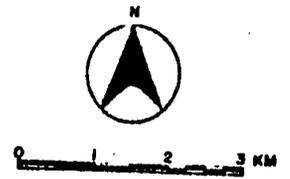
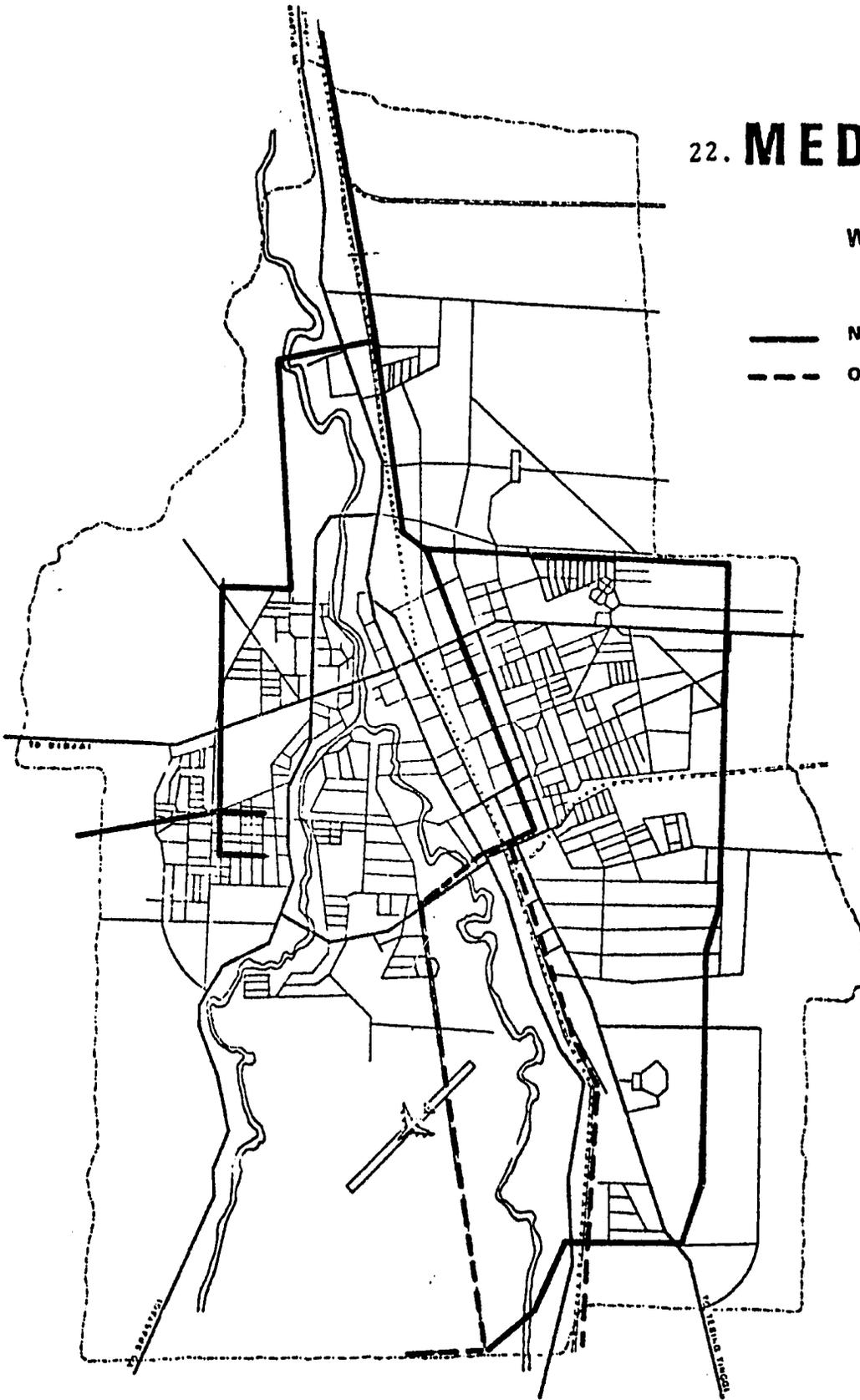
— PRIMARY DISTRIBUTION NETWORK



22. MEDAN

WATER SUPPLY

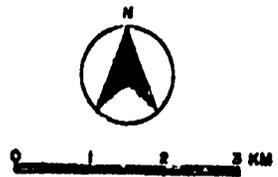
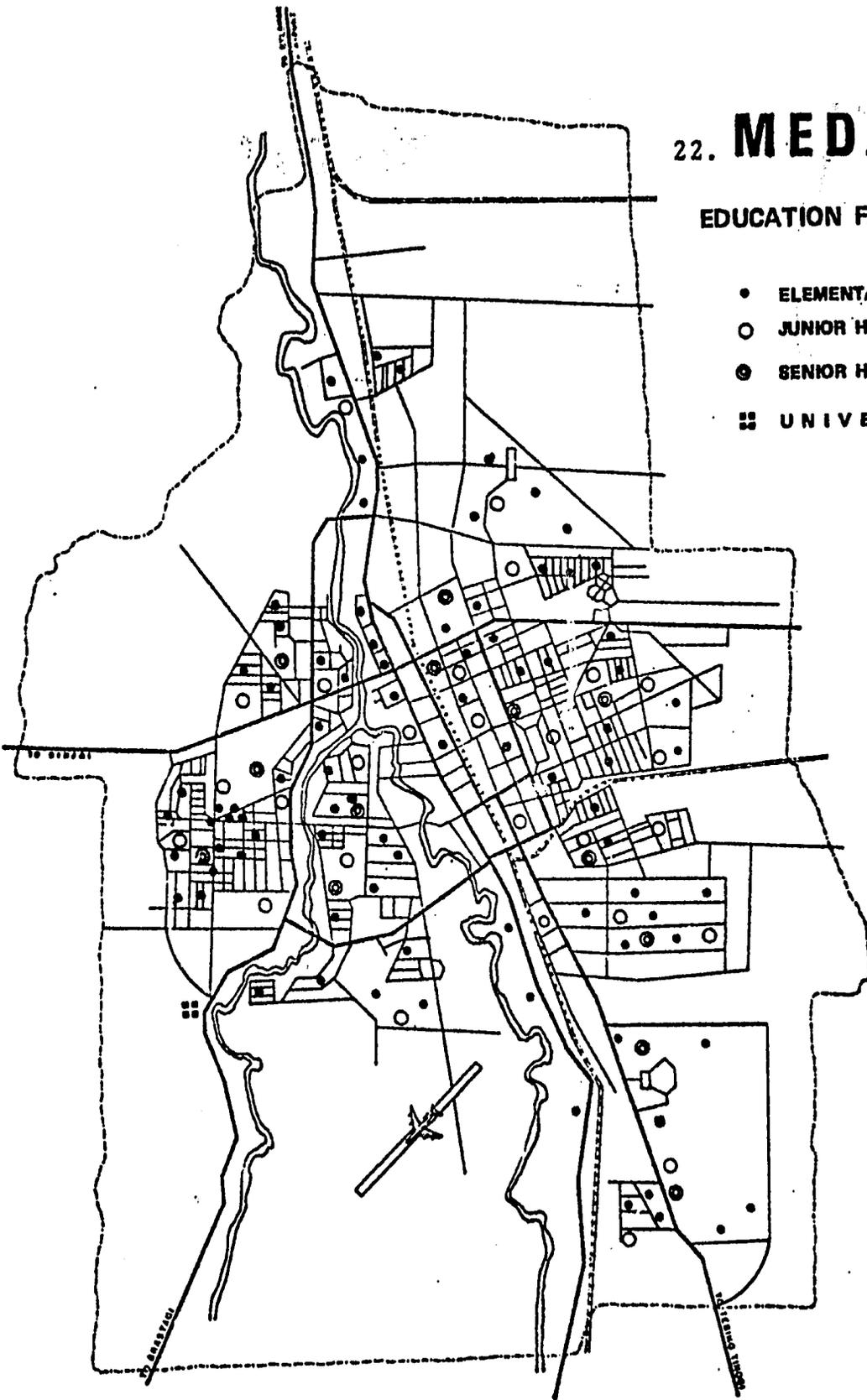
- NEW PIPE NETWORK
- - - OLD PIPE NETWORK



22. MEDAN

EDUCATION FACILITIES

- ELEMENTARY SCHOOL
- JUNIOR HIGH SCHOOL
- ⊙ SENIOR HIGH SCHOOL
- ⊞ UNIVERSITY

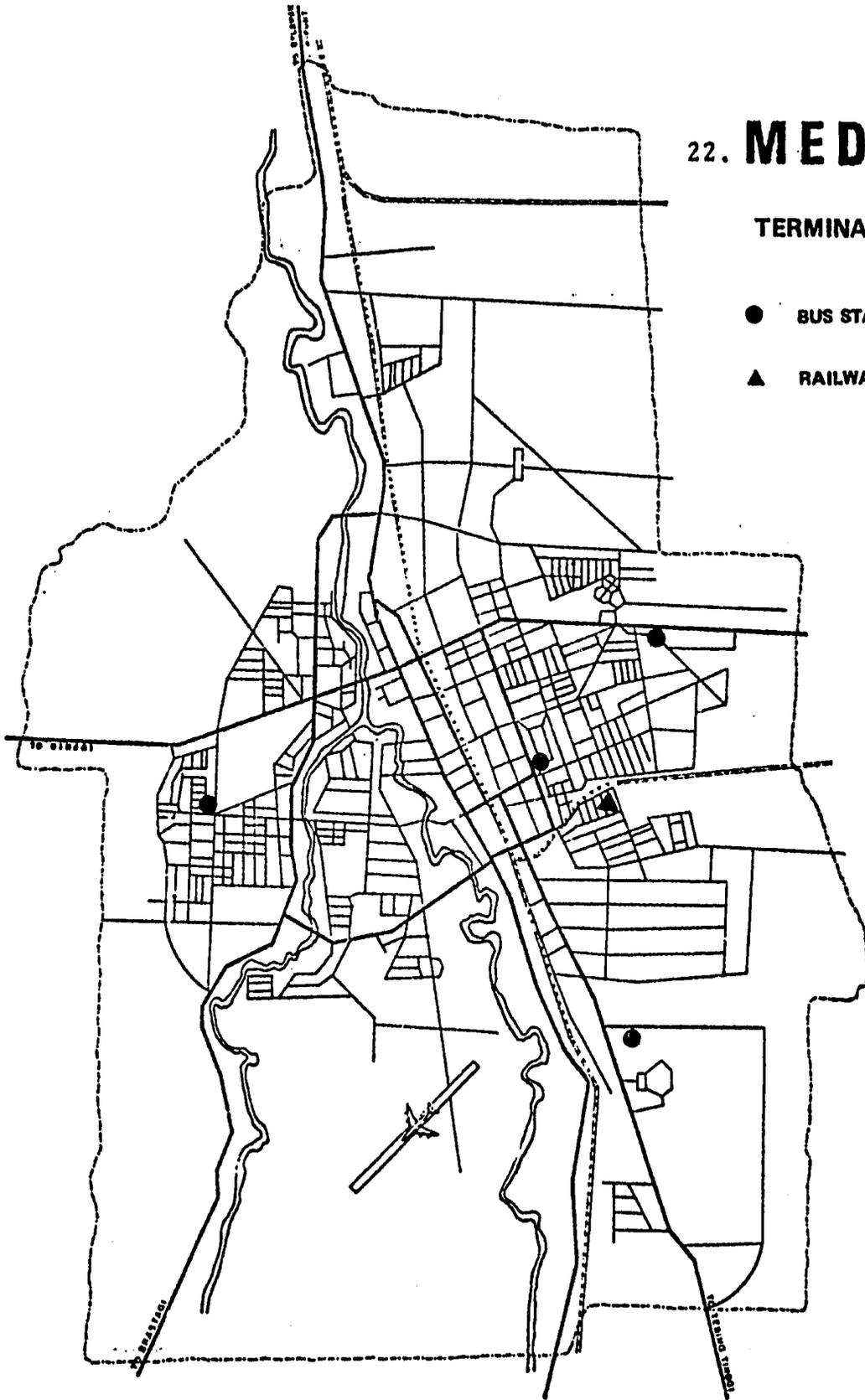


22. MEDAN

TERMINALS

● BUS STATION

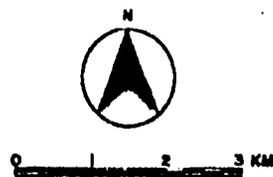
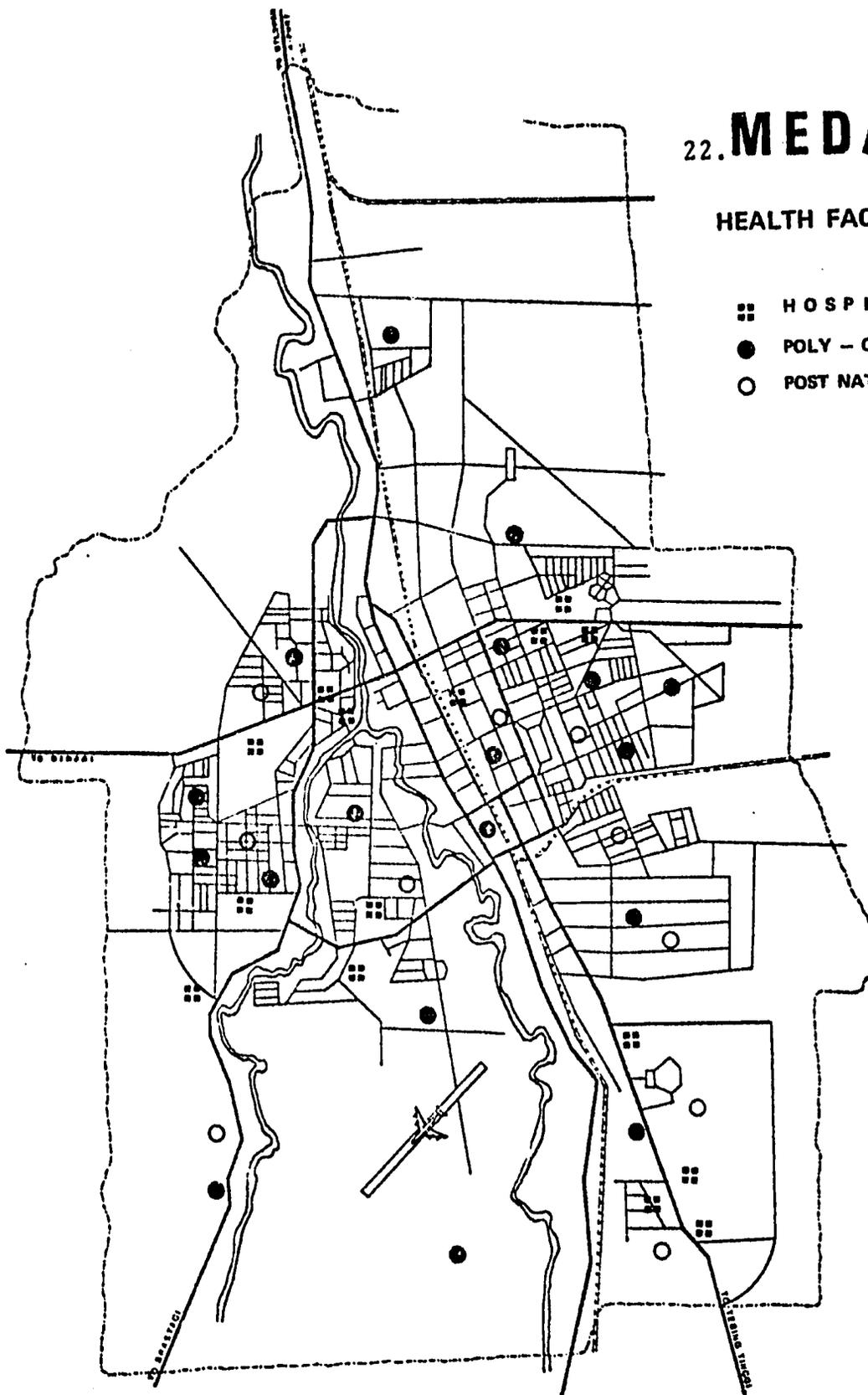
▲ RAILWAY STATION



22. MEDAN

HEALTH FACILITIES

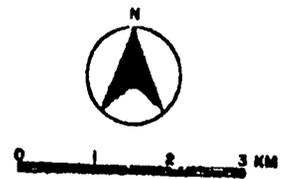
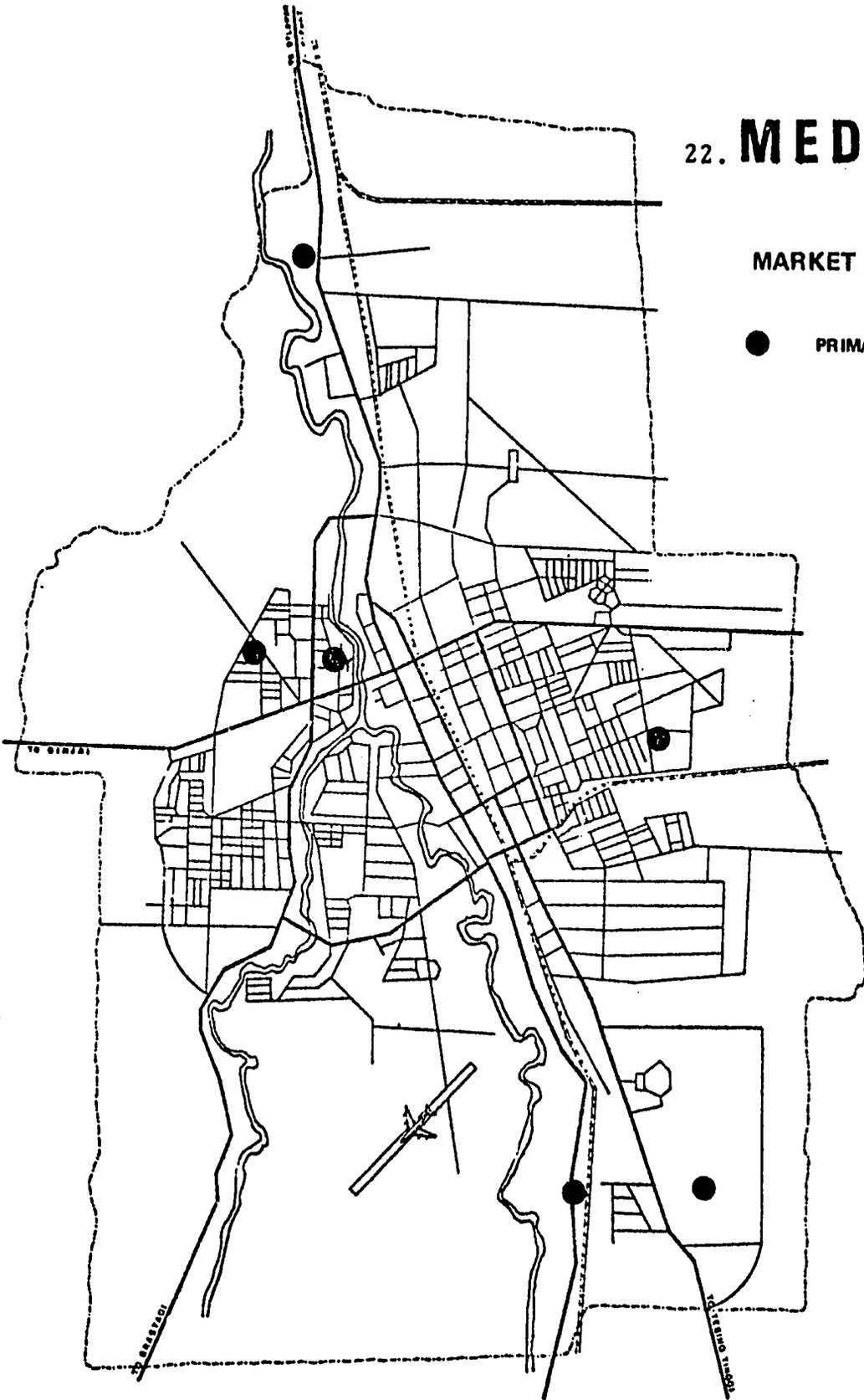
- HOSPITAL
- POLY - CLINICS
- POST NATAL CLINICS (B.K.I.A.)



22. MEDAN

MARKET PLACES

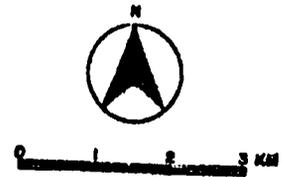
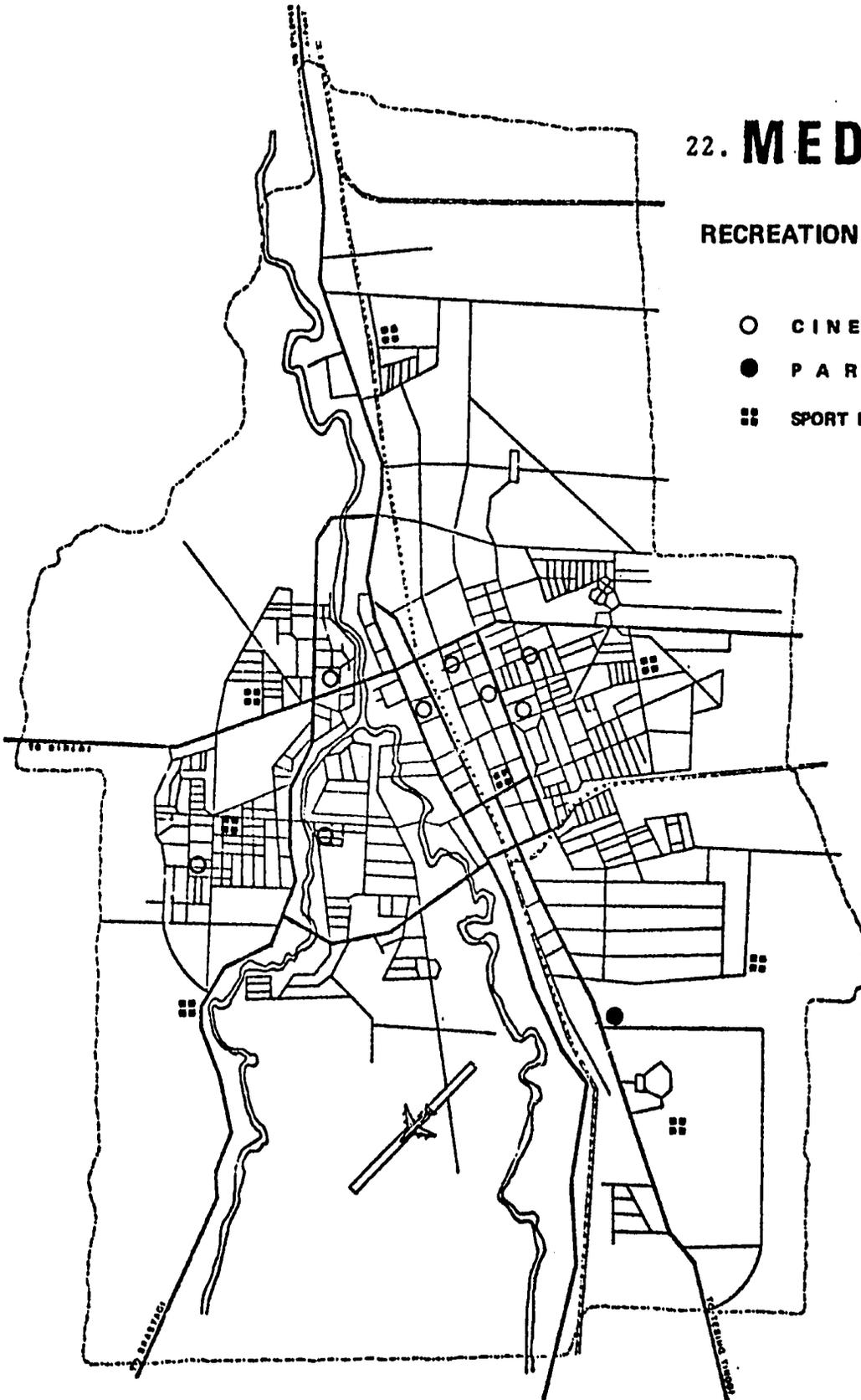
● PRIMARY MARKET



22. MEDAN

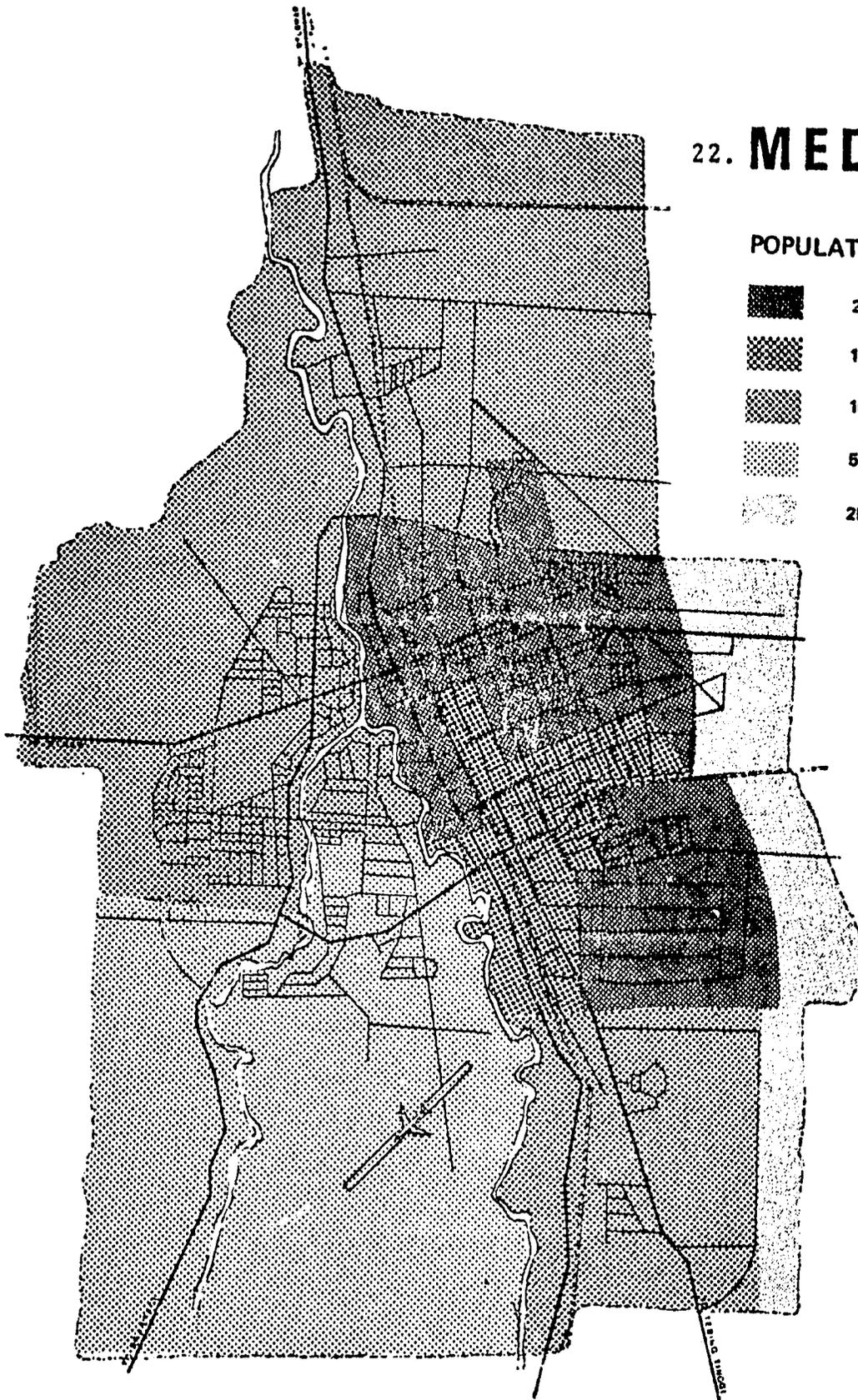
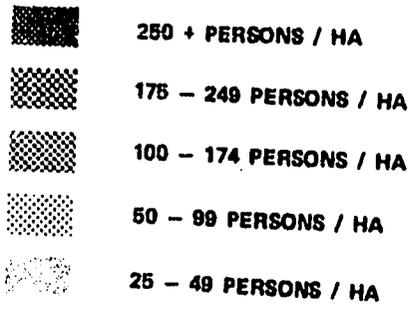
RECREATION FACILITIES

- CINEMA
- PARKS
- SPORT FIELD

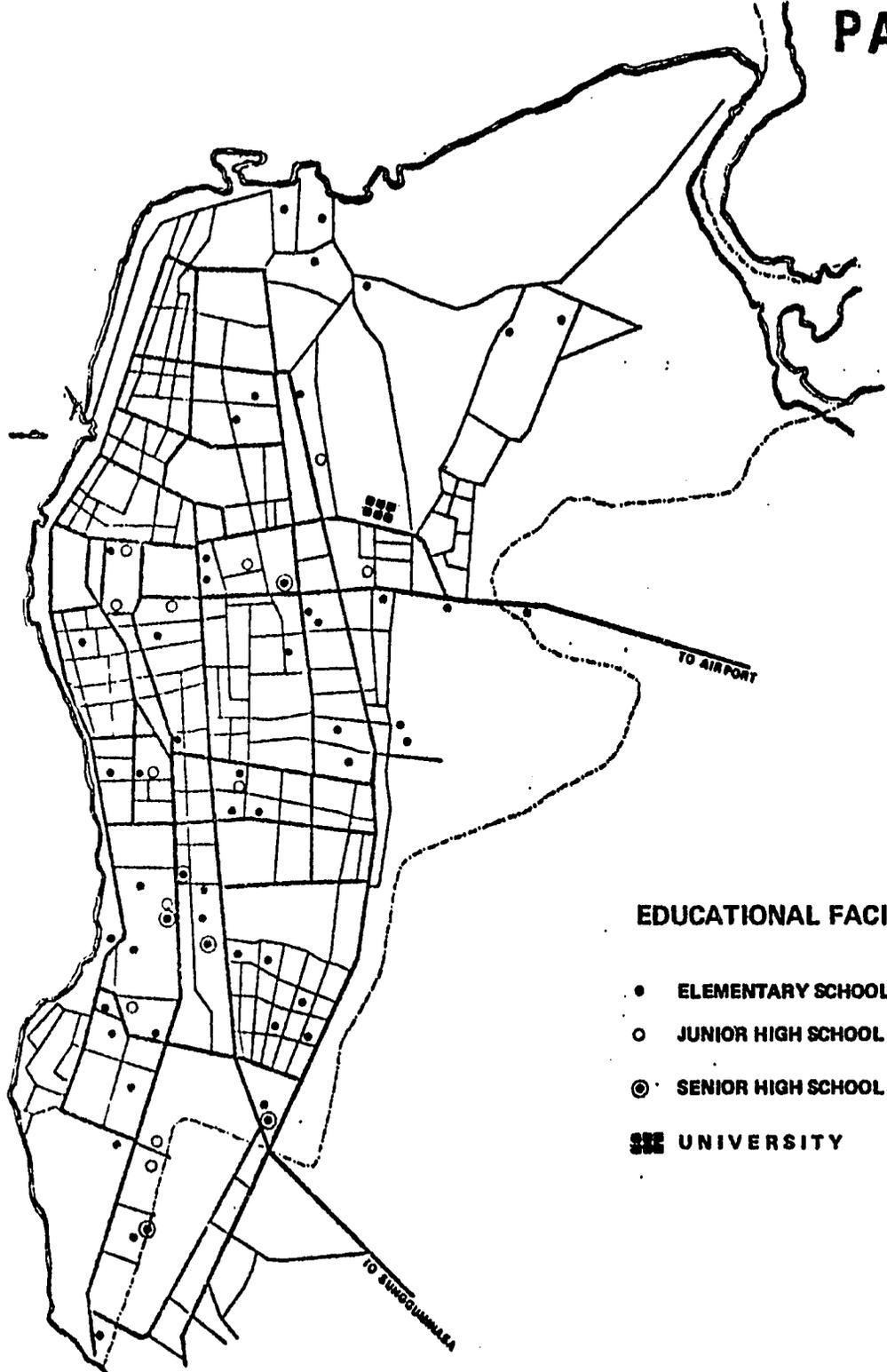


22. MEDAN

POPULATION DISTRIBUTION

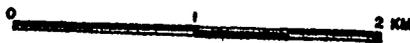


22. UJUNG PANDANG

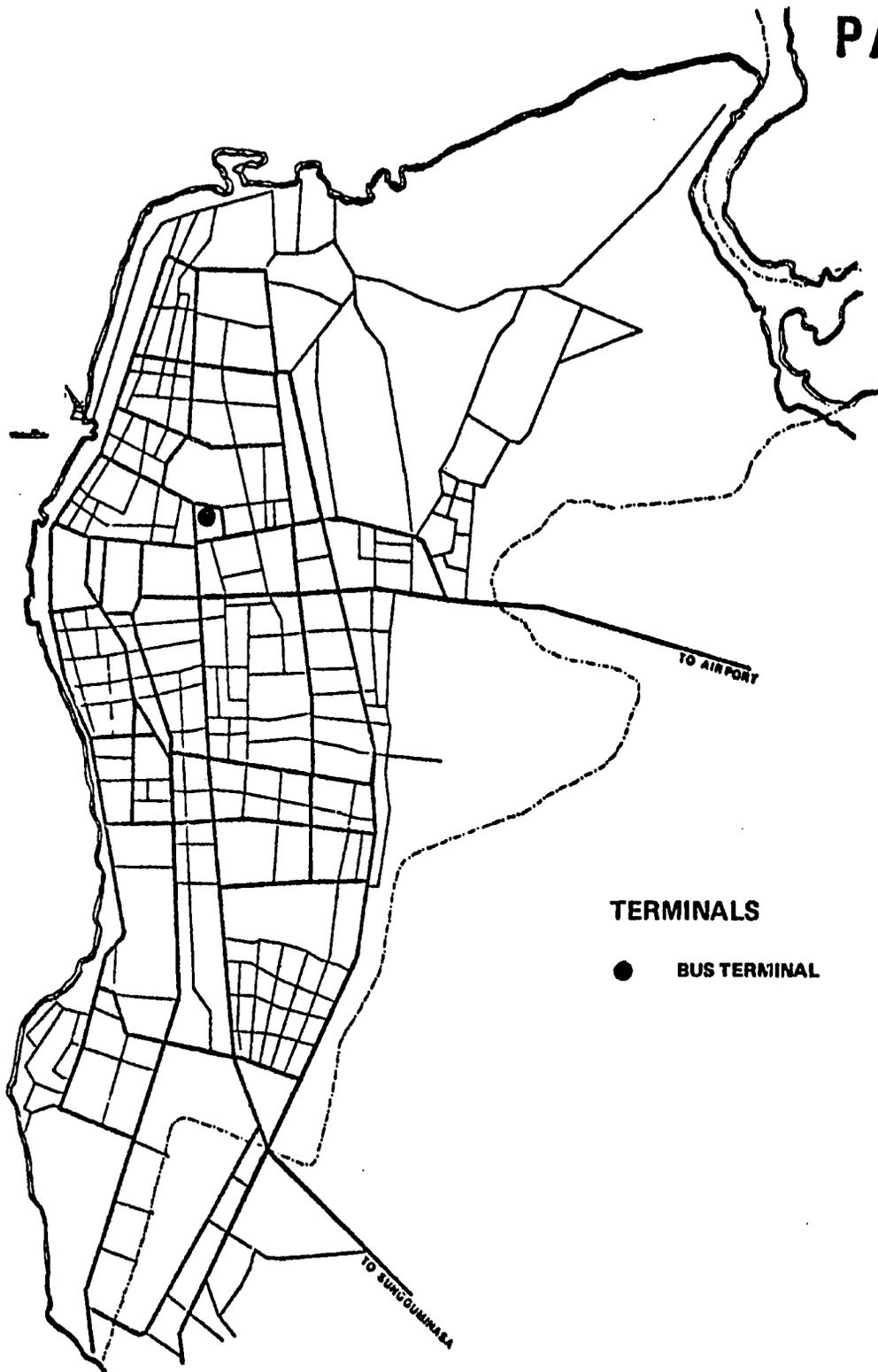


EDUCATIONAL FACILITIES

- ELEMENTARY SCHOOL
- JUNIOR HIGH SCHOOL
- ⊙ SENIOR HIGH SCHOOL
- UNIVERSITY



22. UJUNG PANDANG

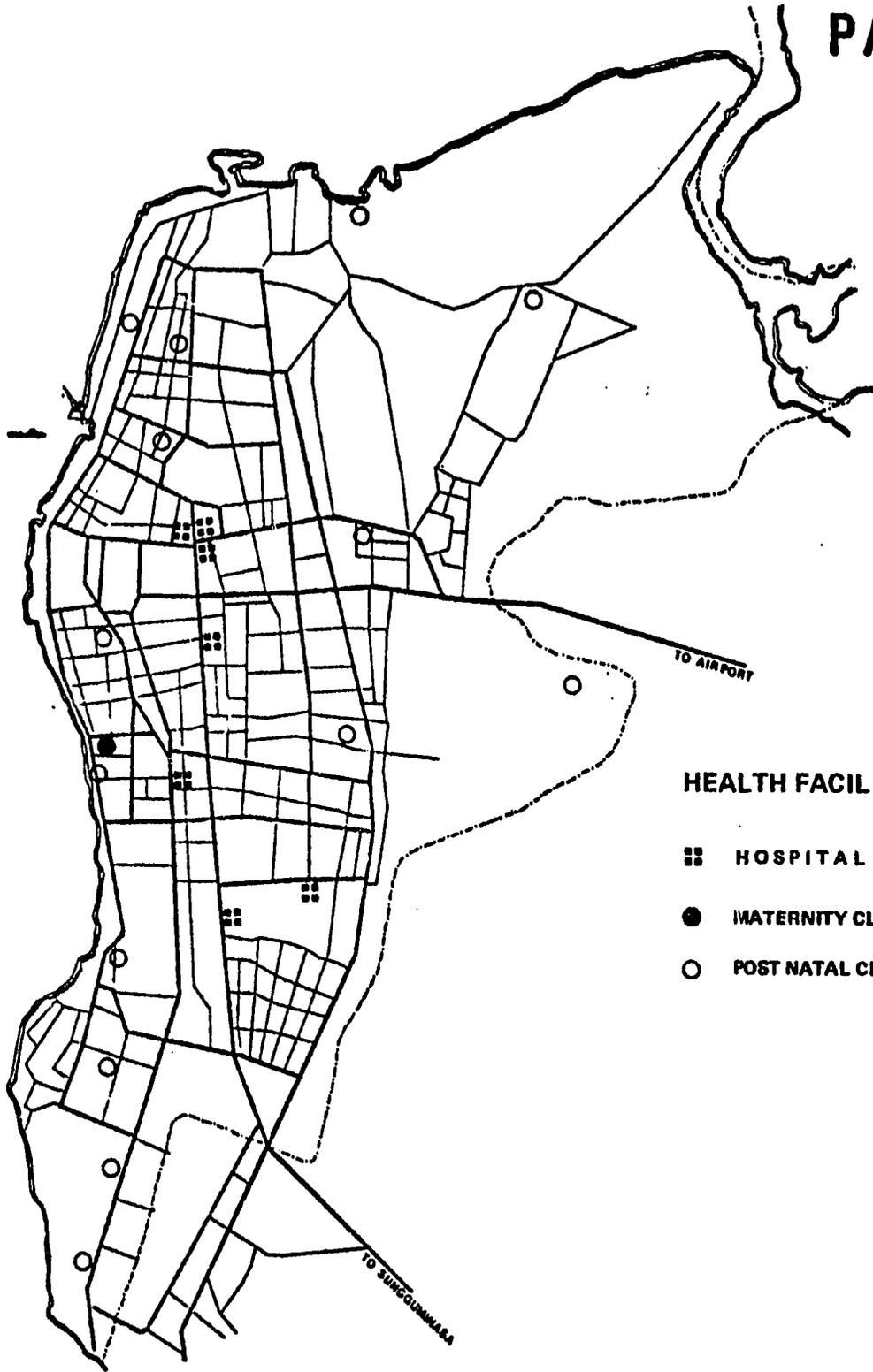


TERMINALS

● BUS TERMINAL



22. UJUNG PANDANG

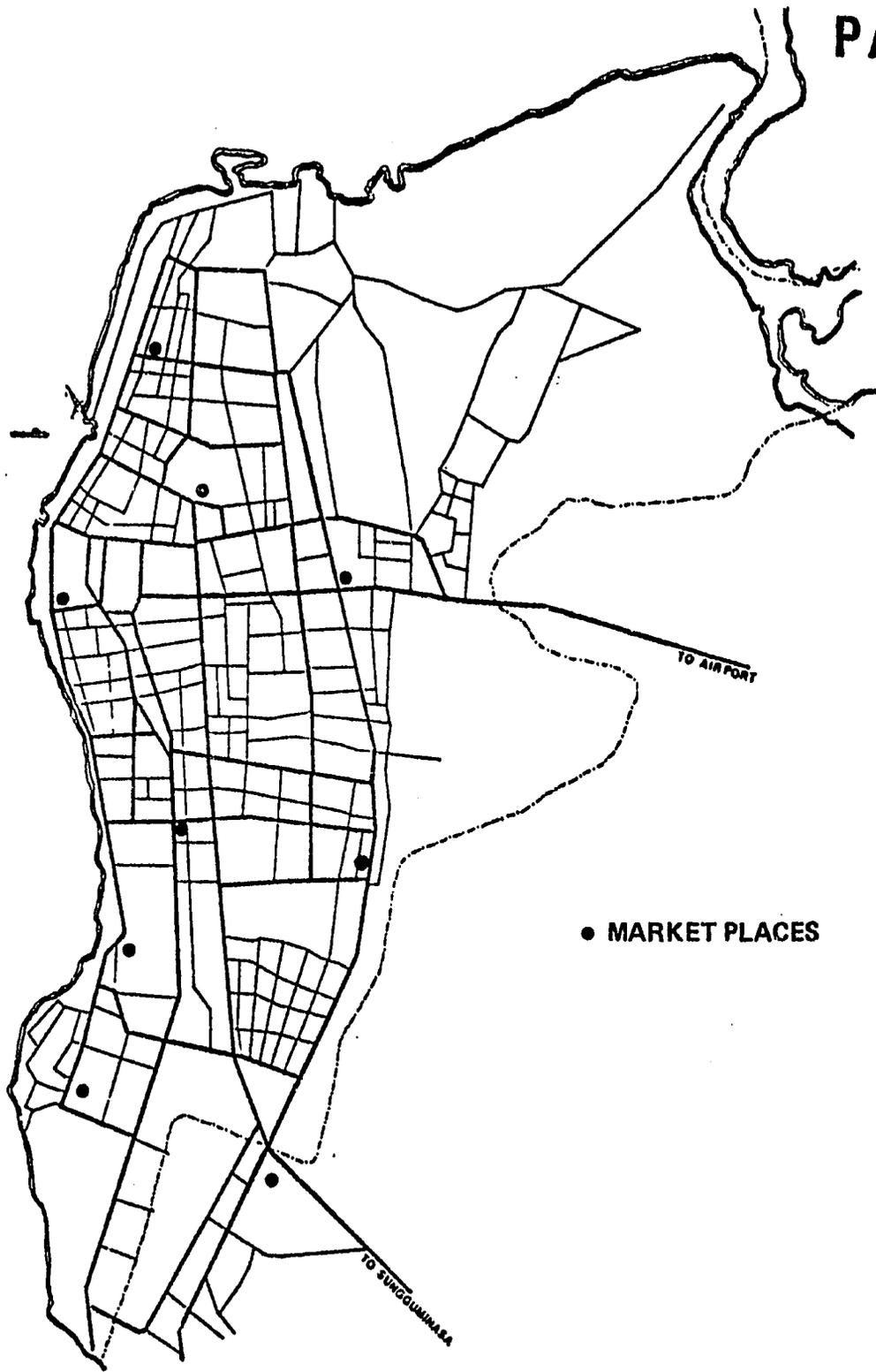


HEALTH FACILITIES

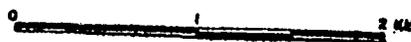
- ■ HOSPITAL
- MATERNITY CLINIC
- POST NATAL CLINIC (B.K.I.A.)



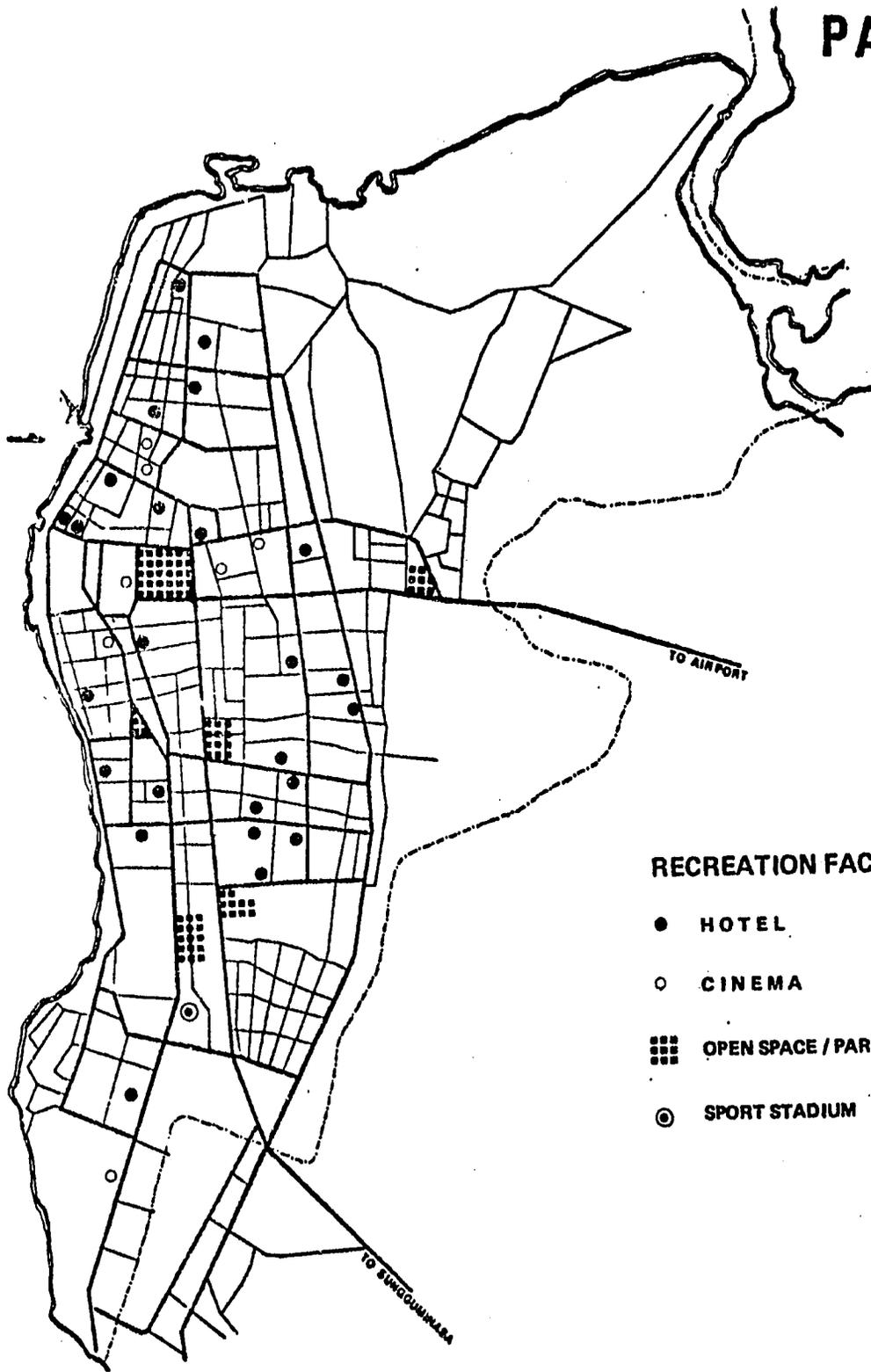
22. UJUNG PANDANG



● MARKET PLACES

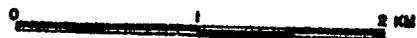


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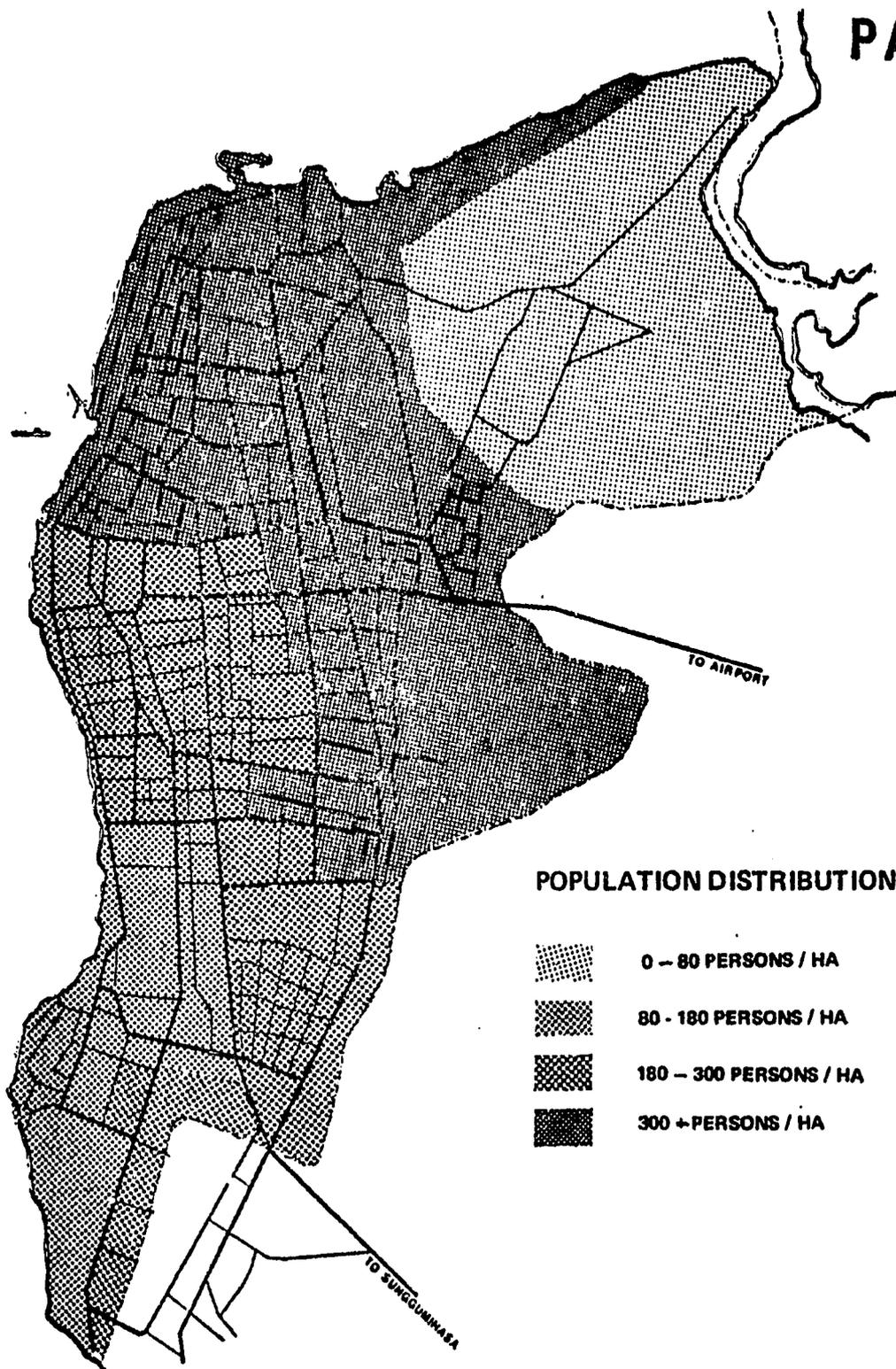


RECREATION FACILITIES

- HOTEL
- CINEMA
- OPEN SPACE / PARK
- ⊙ SPORT STADIUM

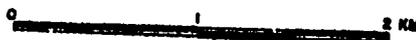


22. UJUNG PANDANG



POPULATION DISTRIBUTION

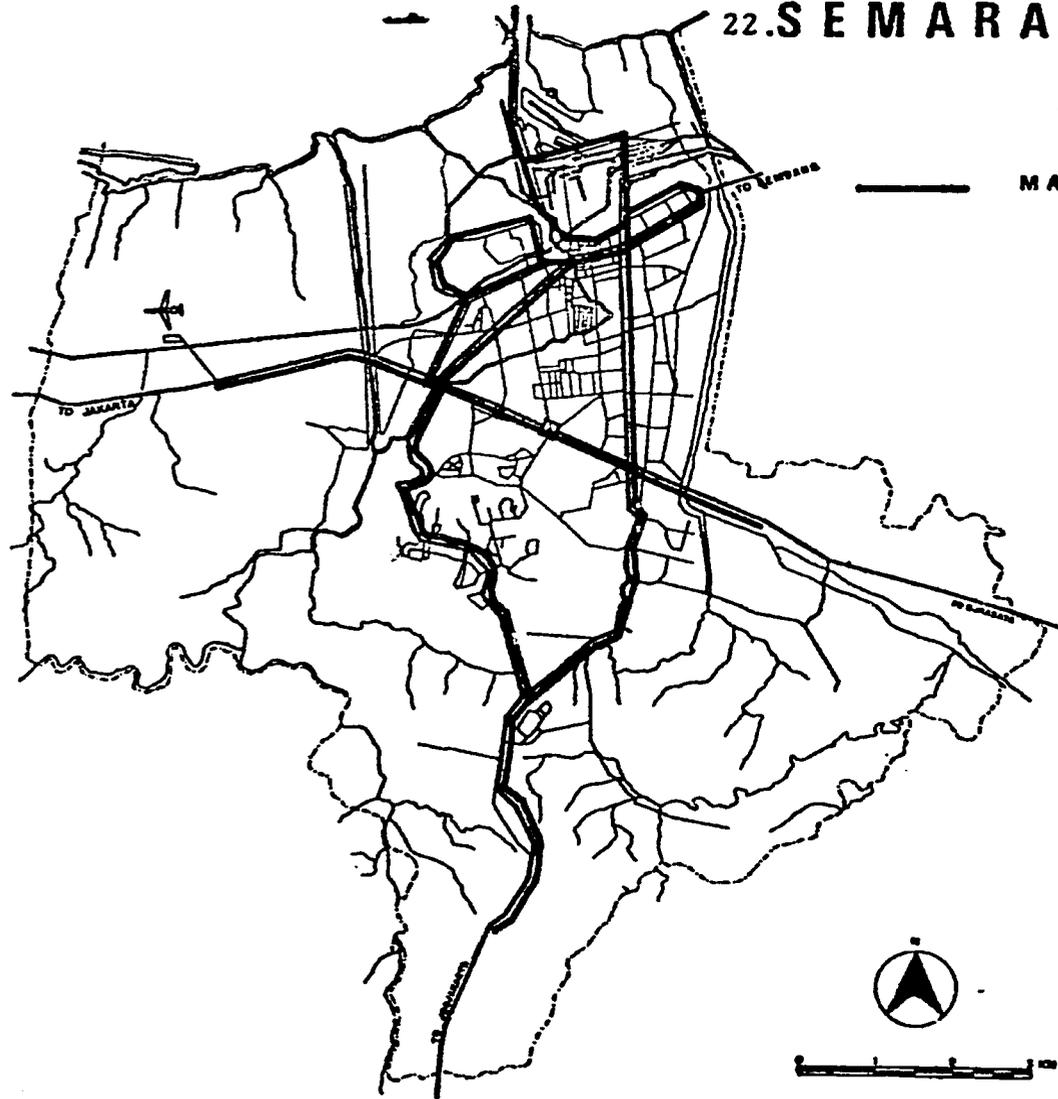
-  0 - 80 PERSONS / HA
-  80 - 180 PERSONS / HA
-  180 - 300 PERSONS / HA
-  300 + PERSONS / HA



22. SEMARANG

WATER SUPPLY

— MAIN PIPE NETWORK

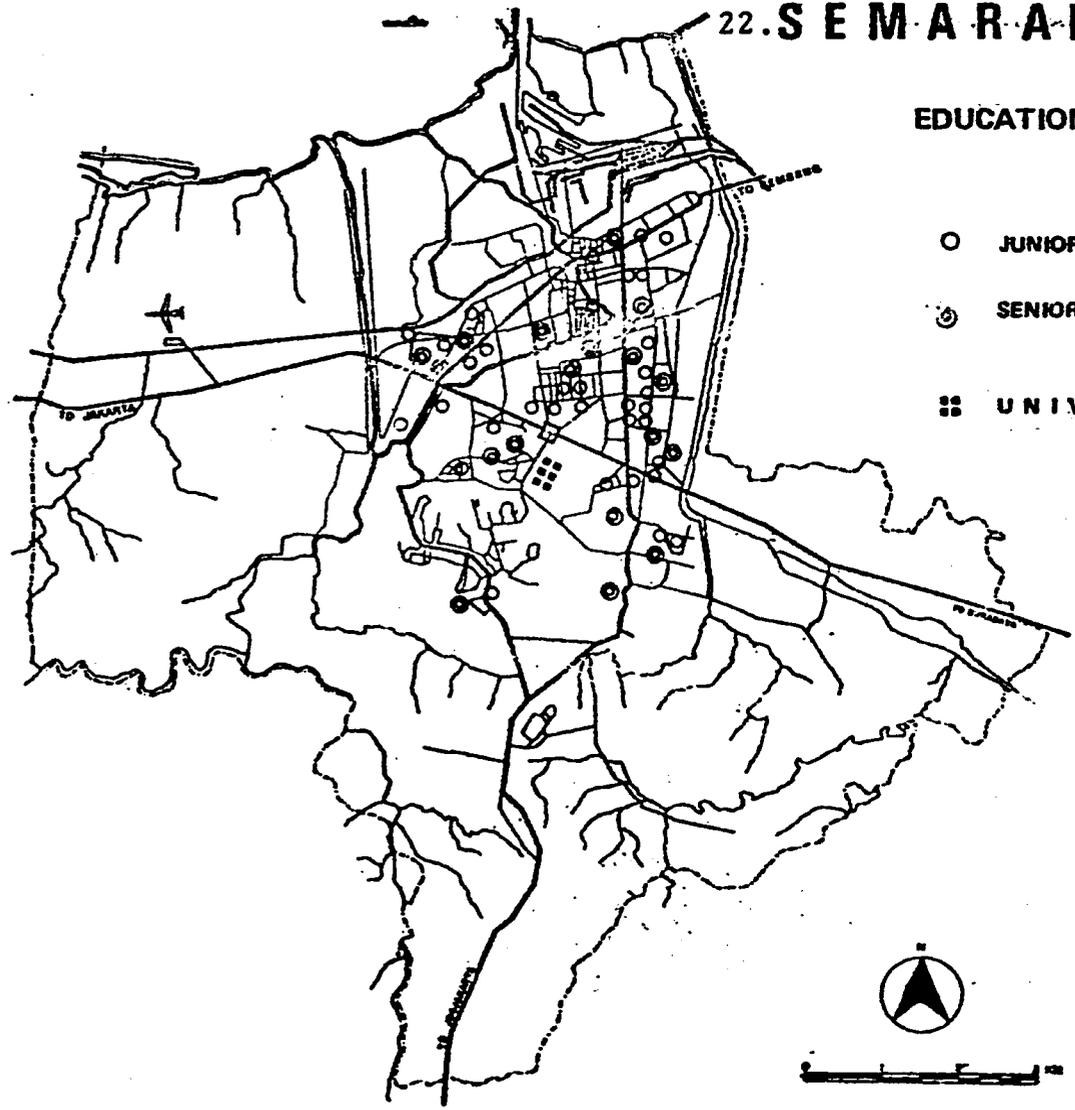


A-100

22. SEMARANG

EDUCATION FACILITIES

- JUNIOR HIGH SCHOOL
- ⊙ SENIOR HIGH SCHOOL
- ⊞ UNIVERSITY



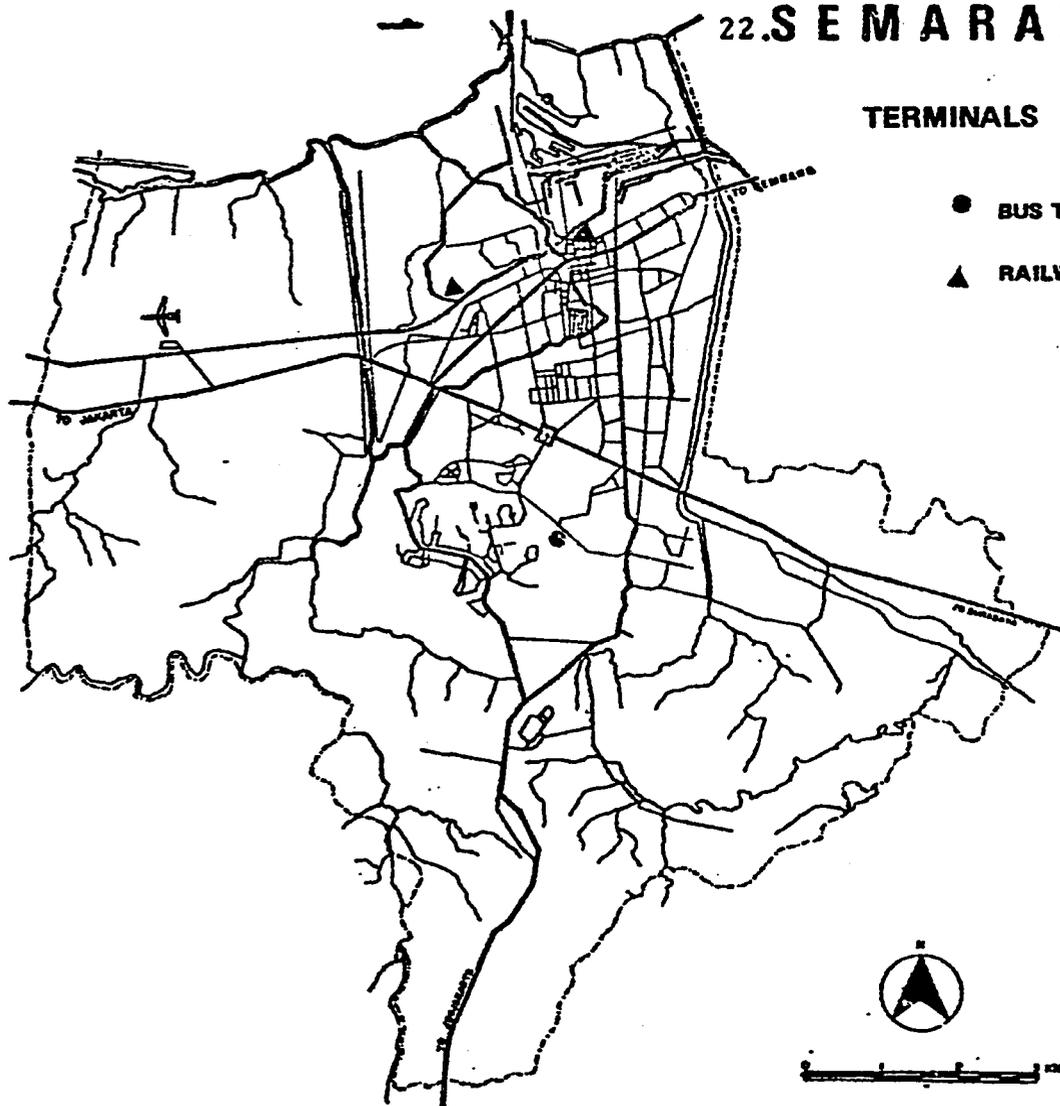
A-101

22. SEMARANG

TERMINALS

● BUS TERMINAL

▲ RAILWAY STATION

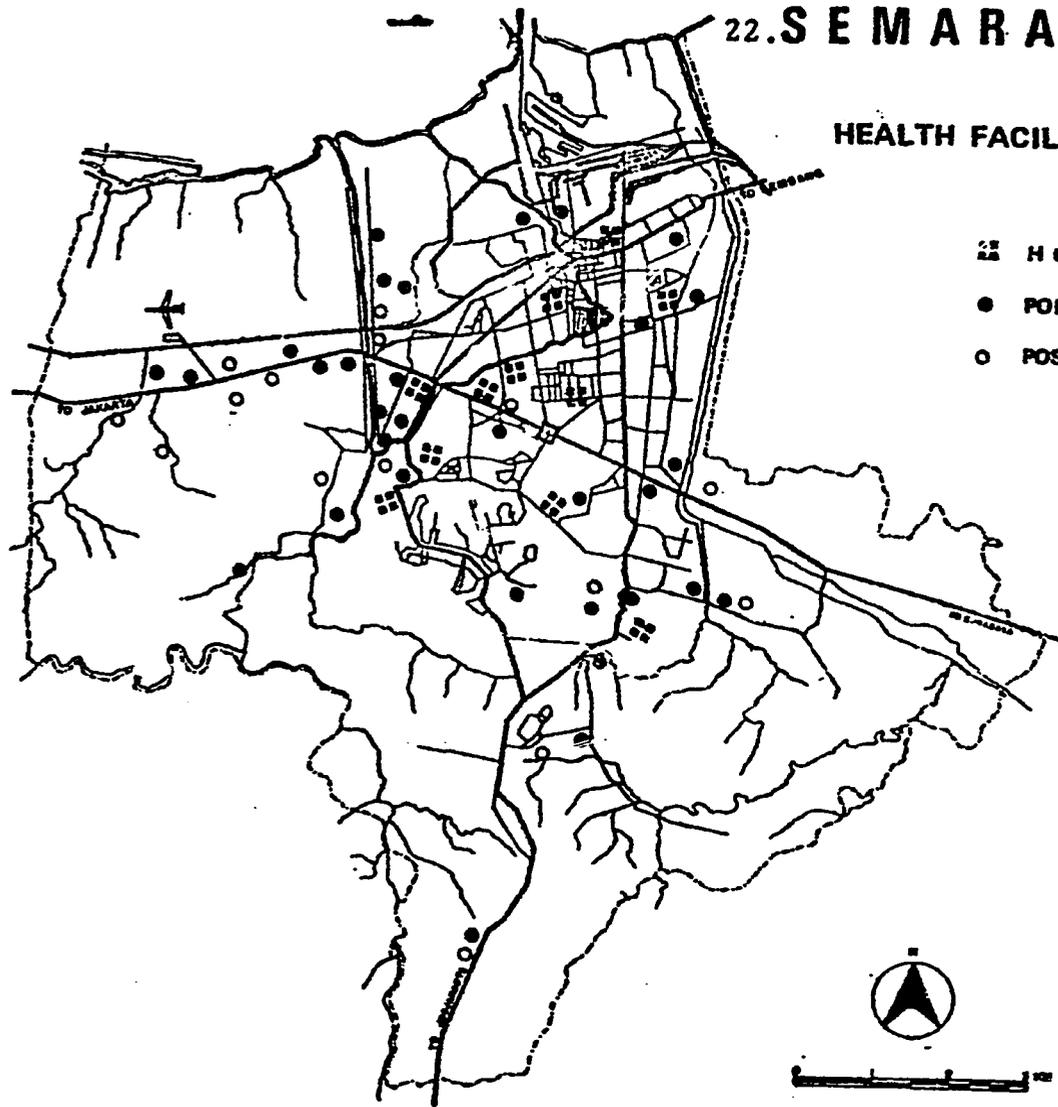


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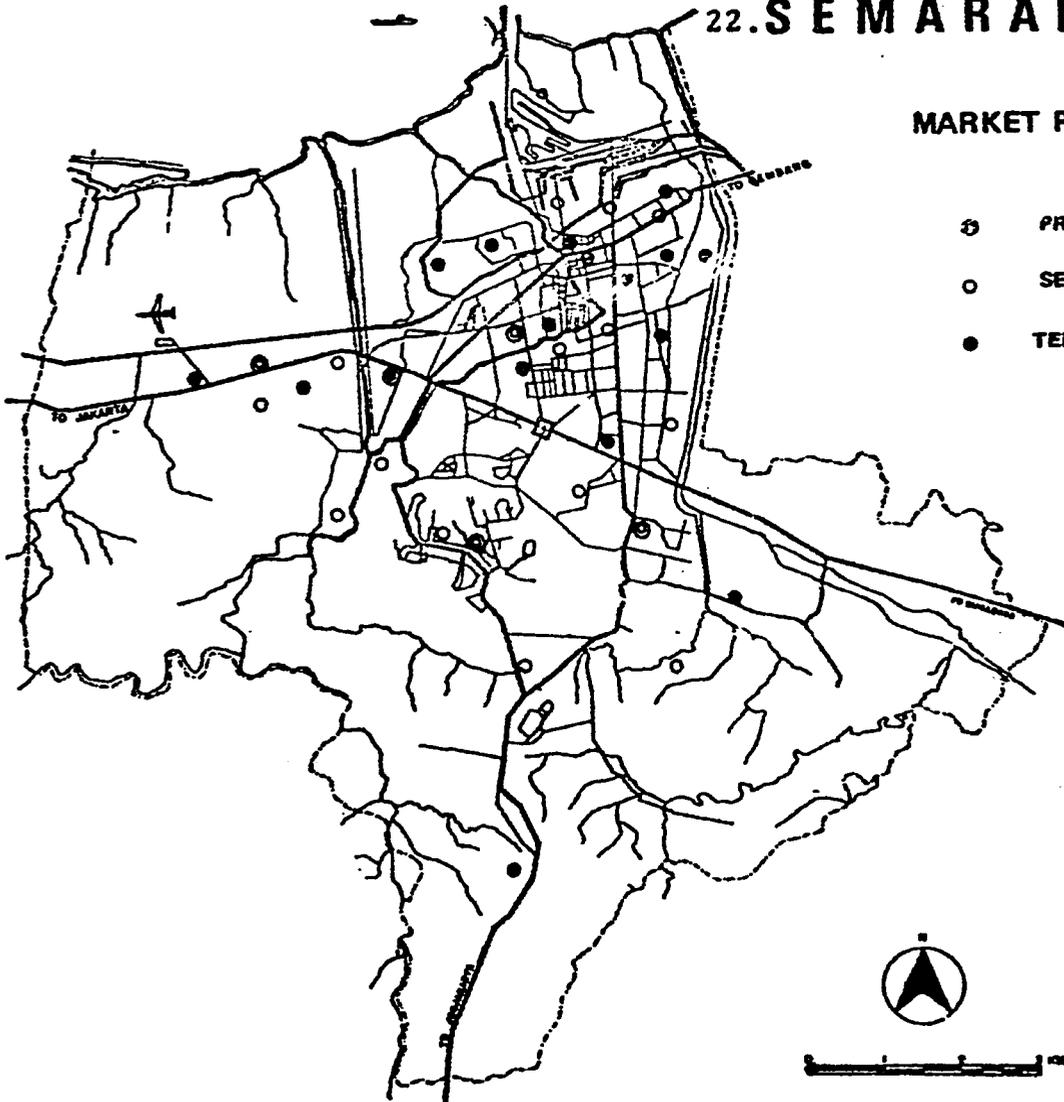
22. SEMARANG

HEALTH FACILITIES

- ☒ HOSPITAL
- POLY - CLINICS
- POST NATAL CLINIC (B.K.L.A.)



22. SEMARANG

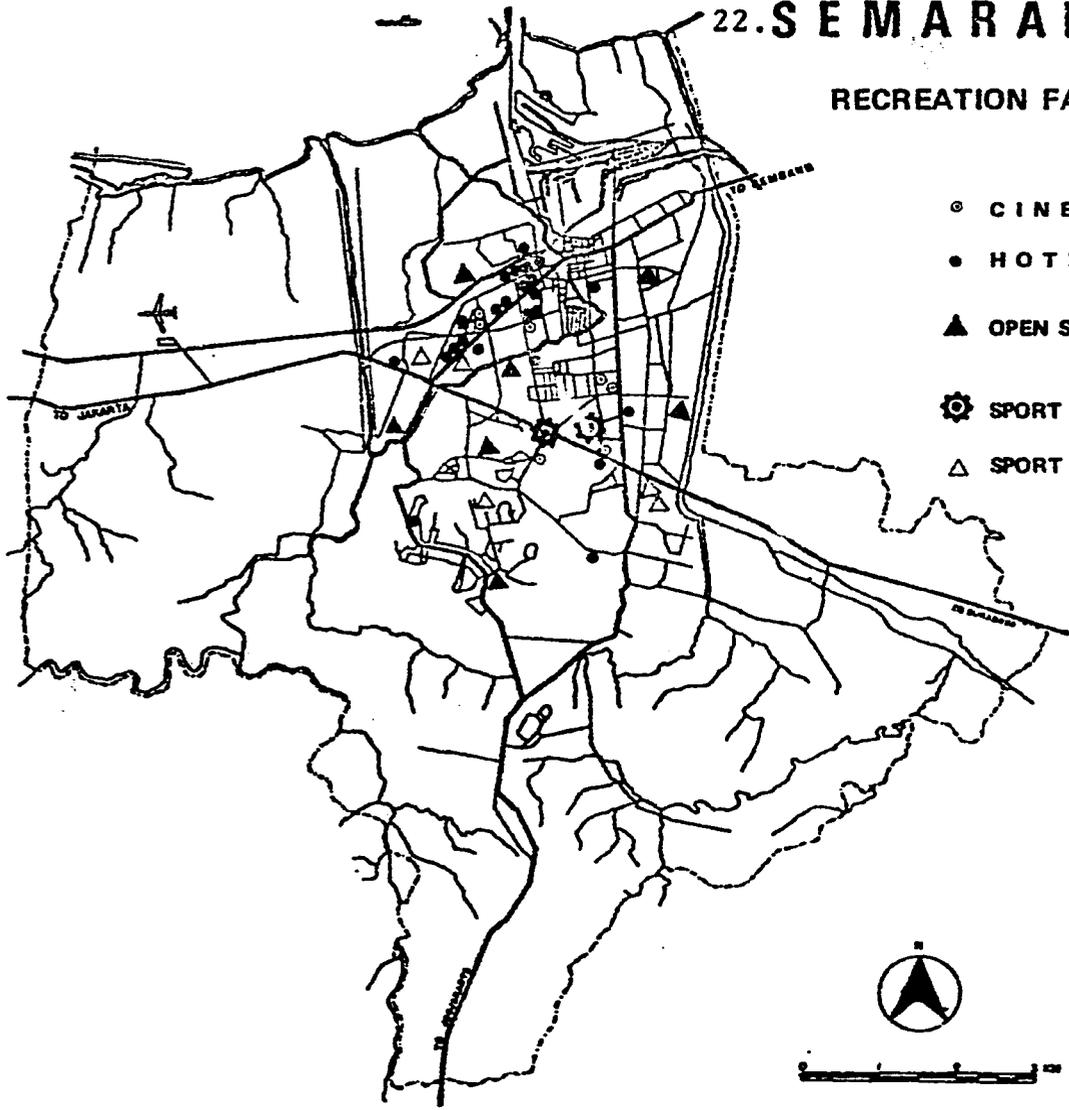


MARKET PLACES

- ⊙ PRIMARY MARKET
- SECONDARY MARKET
- TERTIARY MARKET

22. SEMARANG

RECREATION FACILITIES

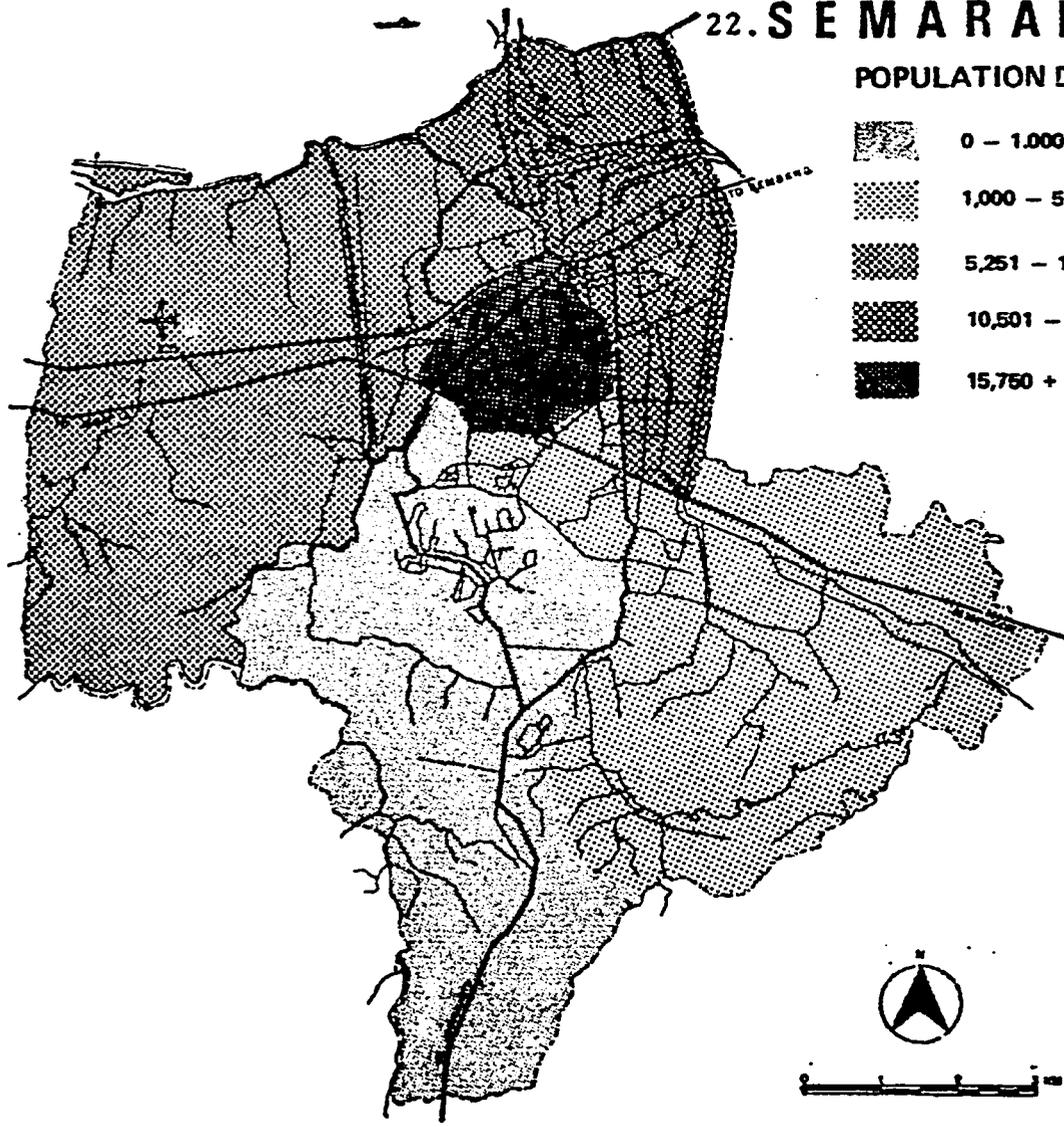


- ◉ CINEMA
- HOTEL
- ▲ OPEN SPACES & PARKS
- ⚙ SPORT STADIUM
- △ SPORT FIELD

22. SEMARANG

POPULATION DISTRIBUTION

-  0 - 1,000 PERSONS / HA
-  1,000 - 5,250 PERSONS / HA
-  5,251 - 10,500 PERSONS / HA
-  10,501 - 15,750 PERSONS / HA
-  15,750 + PERSONS / HA

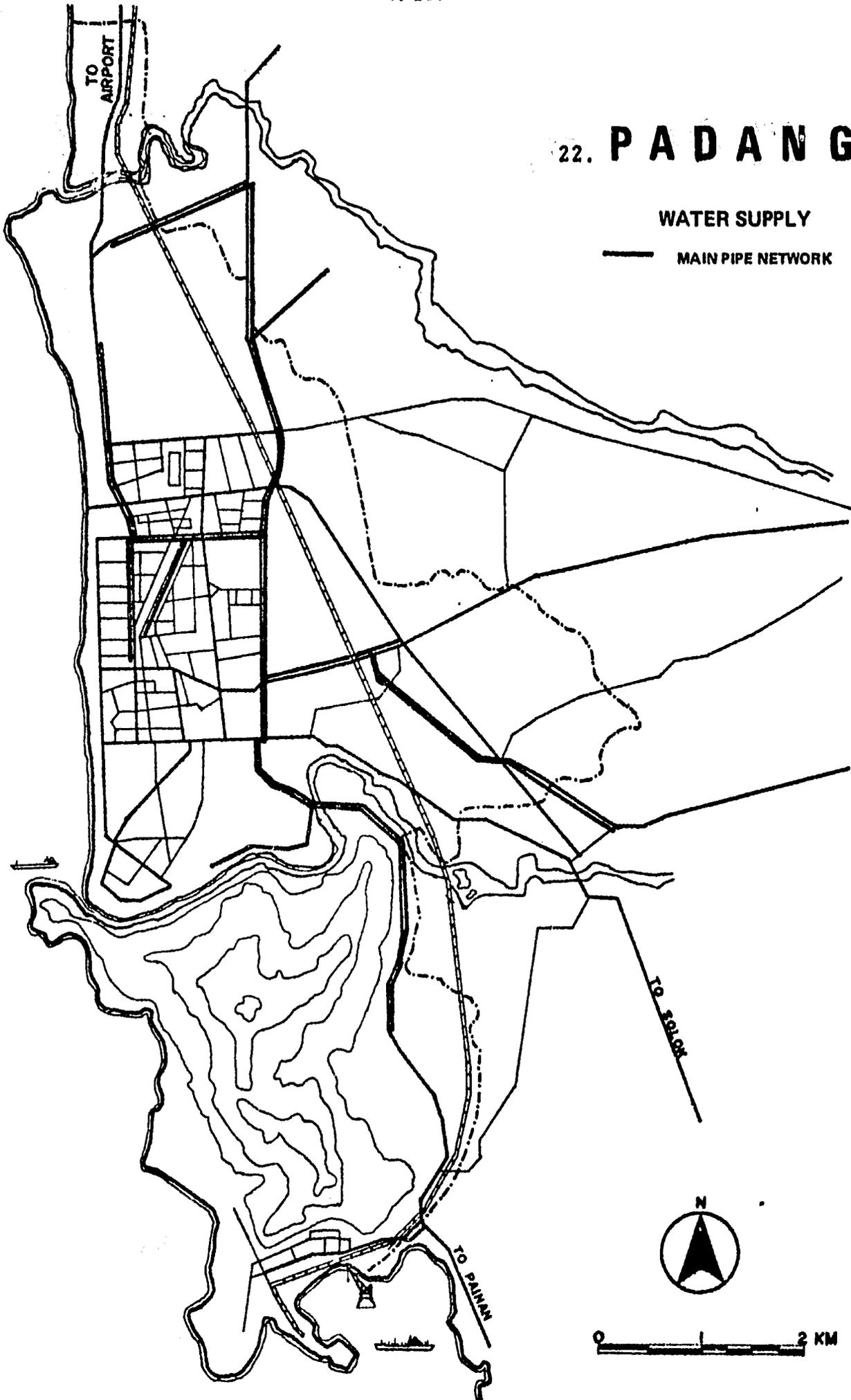


A-107

22. PADANG

WATER SUPPLY

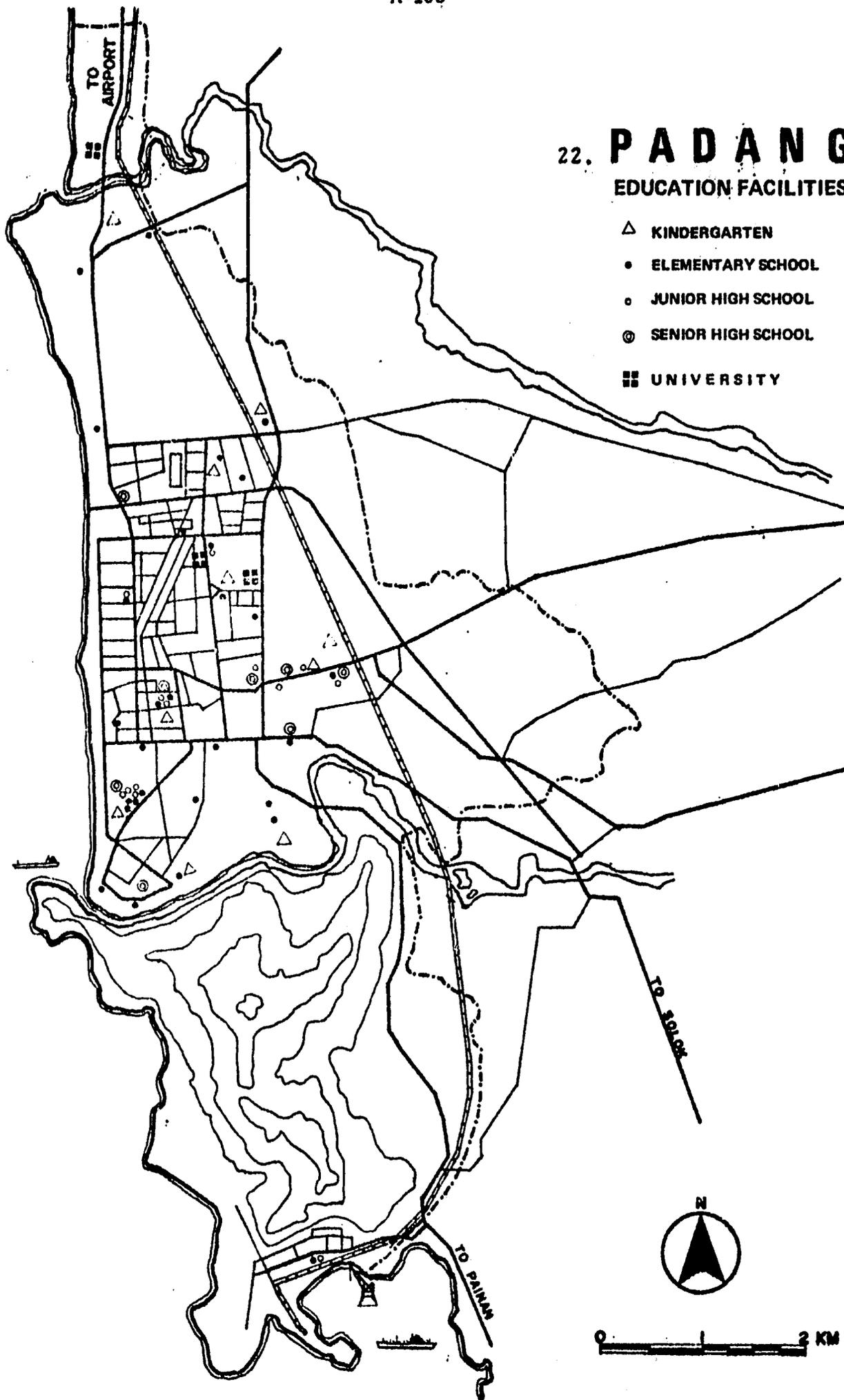
— MAIN PIPE NETWORK



22. PADANG

EDUCATION FACILITIES

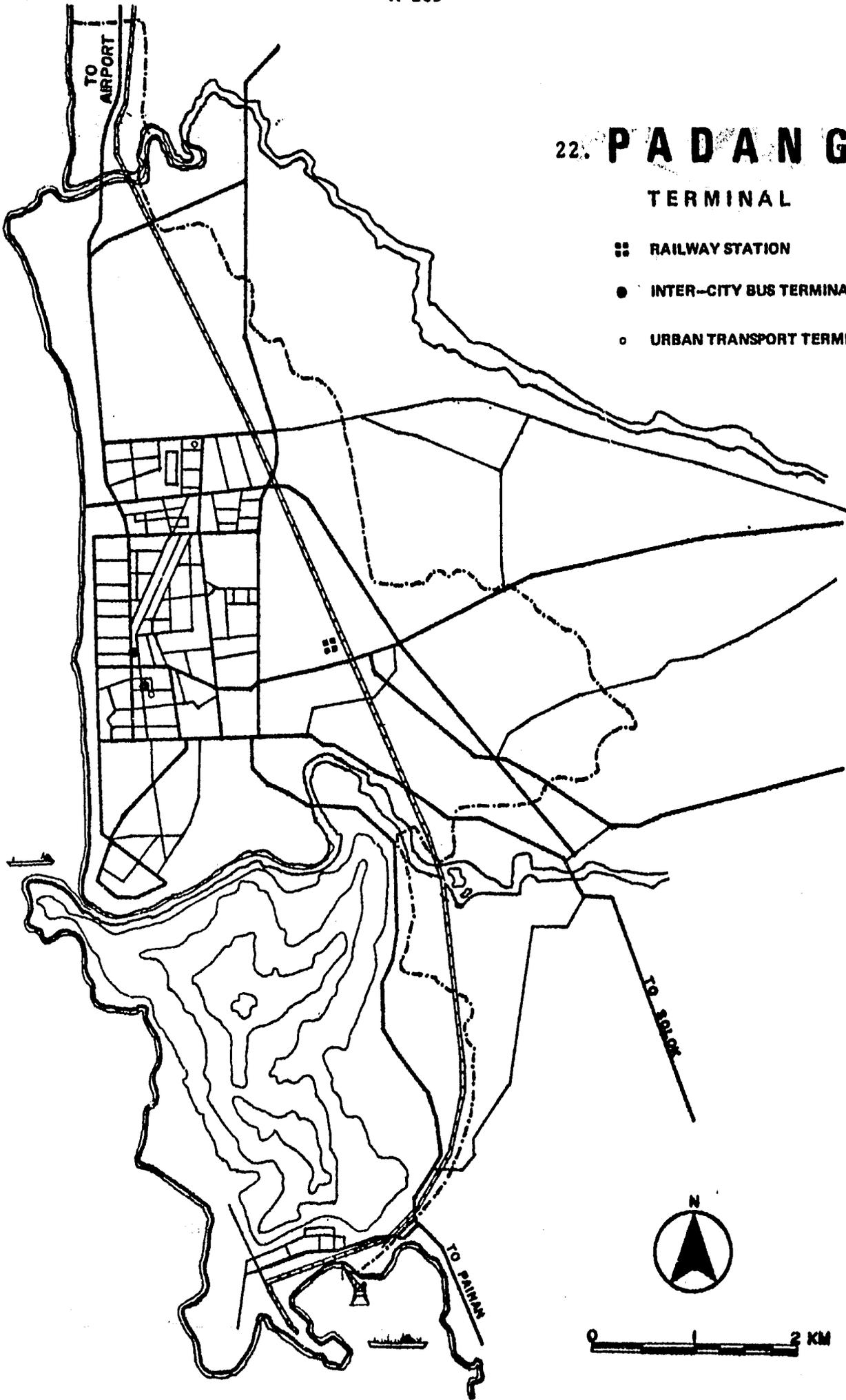
- △ KINDERGARTEN
- ELEMENTARY SCHOOL
- JUNIOR HIGH SCHOOL
- ⊙ SENIOR HIGH SCHOOL
- UNIVERSITY



22. PADANG

TERMINAL

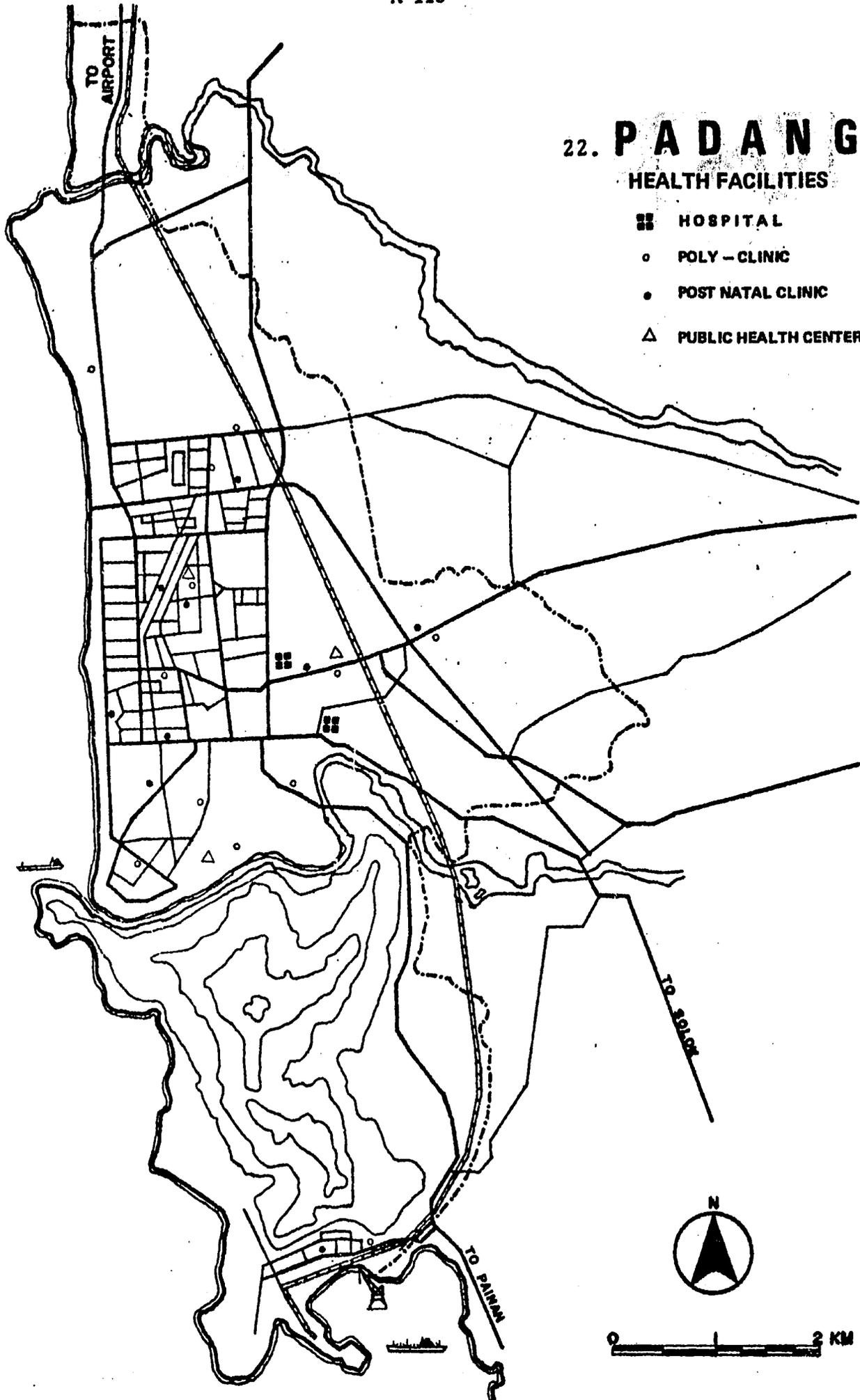
- ⊞ RAILWAY STATION
- INTER-CITY BUS TERMINAL
- URBAN TRANSPORT TERMINAL



22. PADANG

HEALTH FACILITIES

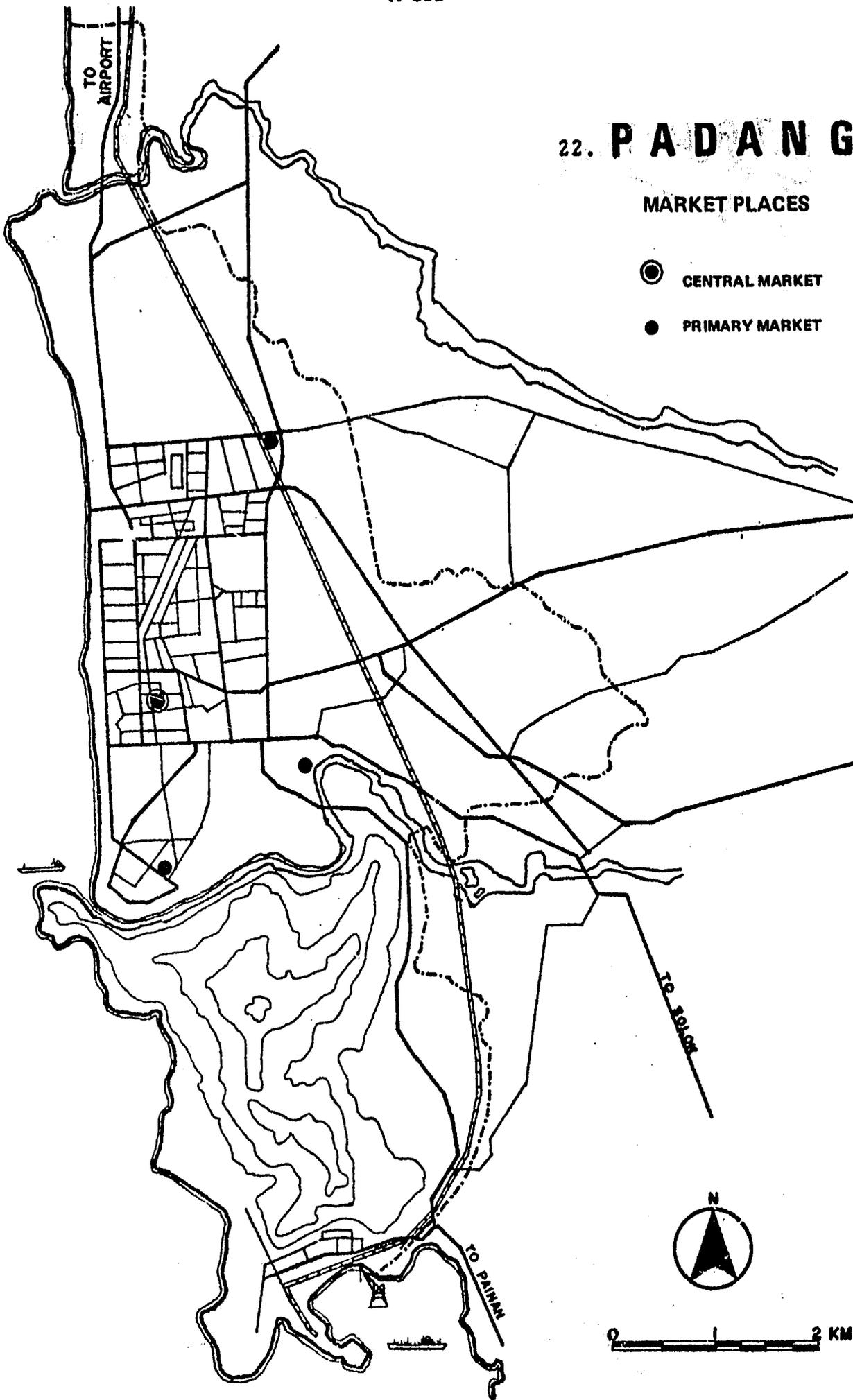
- ▣ HOSPITAL
- POLY-CLINIC
- POST NATAL CLINIC
- △ PUBLIC HEALTH CENTER



22. PADANG

MARKET PLACES

- CENTRAL MARKET
- PRIMARY MARKET

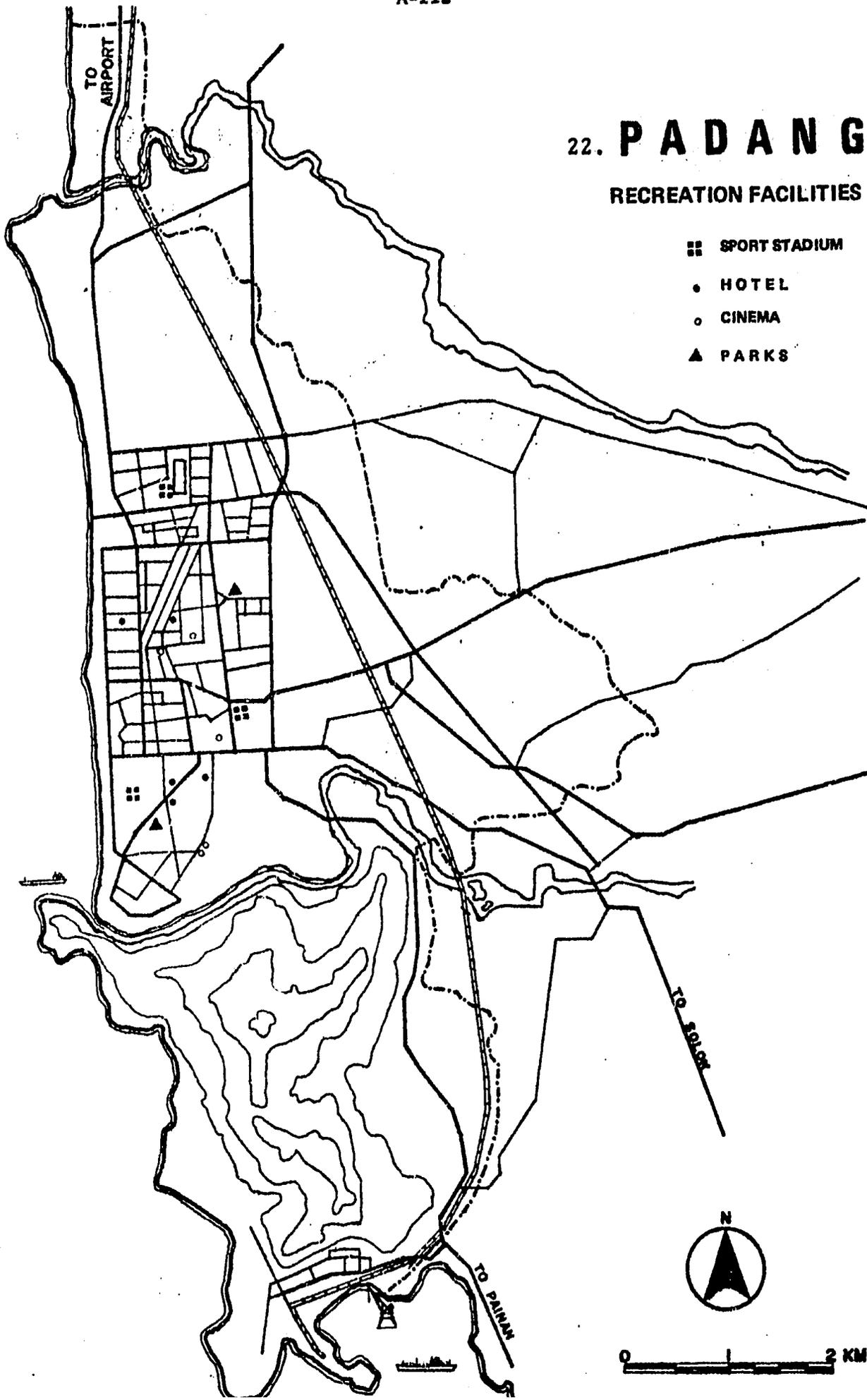


A-112

22. PADANG

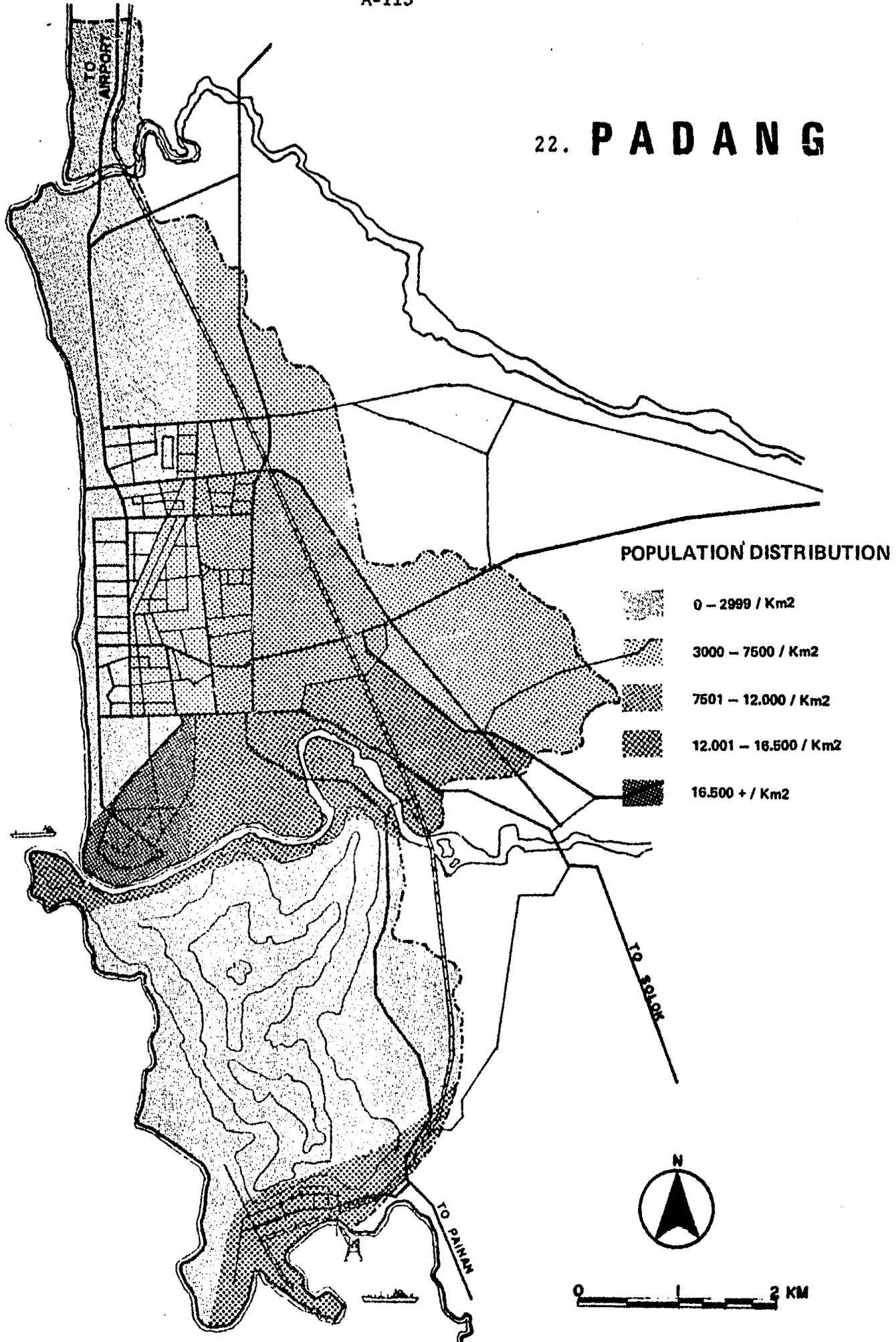
RECREATION FACILITIES

- SPORT STADIUM
- HOTEL
- CINEMA
- ▲ PARKS



A-113

22. PADANG



APPENDIX B

Part One

CENTRAL GOVERNMENT STRUCTURE CA. 1971

I. Common Aims of Departments

A. INTRODUCTION

The President is the Chief of State in the Unitary State of Indonesia. He is assisted by Ministers, as the highest authorities of Departments. The Central Government's main functions are divided among 18 Departments.

The Development Cabinet (Kabinet Pembangunan) consists of:

1. Department of Internal Affairs,
2. Department of Foreign Affairs,
3. Department of Defence/Security,
4. Department of Justice,
5. Department of Information,
6. Department of Treasury,
7. Department of Commerce,
8. Department of Agriculture & Forestry,
9. Department of Industry,
10. Department of Mining & Quarrying,
11. Department of Public Works & Electric Power,
12. Department of Communications,
13. Department of Education & Culture,
14. Department of Health,
15. Department of Mental & Spiritual Affairs,
16. Department of Labor,
17. Department of Social Affairs,
18. Department of Transmigration & Cooperation.

There are basically two types of Departments:

1. Integrated type: when executive units form a single integrated whole, e.g. the Treasury, Education & Culture and Labor Departments.
2. Holding Company type: when executive units are weakly integrated, e.g. the Communications and Public Works & Electric Power Departments.

B. LEGAL BASE

Legal base used for the present system of state administration, are:

1. *Ideal base*: Panca Sila,
2. *Constitutional base*: Undang-Undang Dasar '45,
3. *Real base*: Ketetapan M.P.R.S. (Decree of the Temporary Council of Peoples Representatives) No. XLI/MPRS/1968,
4. *Structural bases*:
 - a. Circulatory Letter of the First Minister No.1/MP/RI/1959, dated August 26, '59,
 - b. Decree of the Presidium Cabinet No. 75/V/Kep/11/1966,
 - c. President Decree No.171 year 1967,
 - d. President Decree No.183 year 1968,
 - e. President Decree No. 184 year 1968,
 - f. President Instruction No. 19 year 1968,
 - g. President Decree No. 25 year 1969,
 - h. President Decree No. 39 year 1969.
5. *Operational bases*: Five Year Development Plans.

C. ORGANIZATIONAL STRUCTURE

The pattern of organizational structure of the Departments, oriented toward line and staff, is as follows:

1. *Minister*: The Head/Chief of a Department and the assistant and advisor of the President for his Department.
2. *Secretary General*: The Secretary/Assistant of the Minister, responsible for administrative and technical matters in the operation of the Department. The Secretariate General is accordingly divided into units of Personnel Matters, Treasury, Material, Administration, Planning, Organization & Method and other units deemed necessary by each individual Department.
3. *Director General*: The Head/Executor of a Directorate, a part of the Department.
4. *Inspector General*: The Assistant of the Minister for internal surveillance of the Department.

Departments may have agencies/offices in the Provinces for the execution of their provincial duties. Departments may also have other org organs/boards/bodies as the executive units for the Department's special functions/tasks. These organs may be directly responsible to the Minister or Director General.

D. PROVINCIAL REPRESENTATIVE

Every Department but the National Planning Board has provincial representatives for the execution of their functional services. These may be classified into three forms:

1. **Bureaux:** for Provinces of strong autonomy, in which case bureaux are operationally responsible to the Province and technically to the Department.
2. **Agencies:** for Provinces of weak autonomy, in which case agencies are directly coordinated by the Department. The work relations are directed by President Instruction no. 48/1967.
3. **Corporations:** in the form of Agency Corporation, General Corporation or Company, have three possible functions:
 - a. merely public services,
 - b. public utilities and a state revenue source,
 - c. seeking profit as a state revenue source.

E. COORDINATION

Under the Repelita (Five Years Development Plan) implementation through inter-departmental coordination is done by control of development operations in sector forms, according to President Decree No. 18 year 1969 and No. 36 year 1970.

A surrender of a part of central government affairs or services given by Departments to a provincial government is regulated in Government Regulations. Government Regulations regulate the tasks, functions, forms and organizations of provincial agencies, relations and cooperations between the central and provincial governments and between Provinces and Districts, big cities and small cities, personnel division and treasury division. The central-provincial work relations in the implementation of development projects (of Repelita) are regulated on the bases of President Instruction No.04/1969. The Governor coordinates bureaux and projects within his territory.

F. TREASURY

The execution of State Revenue and Expenditure, including the development of projects are regulated in President Decree No.14/1971:

1. Main Guidance in in the surveillance of state treasury,
2. Guidance for the execution of Development Expenditures,
3. Guidance for the execution of Routine Expenditures,
4. Guidance for the execution of West Irian Expenditures,
5. Guidance for the execution of State Revenue & Expenditures in the field of Defence & Security (Hankam).

In case of the execution of development expenditures, there are for each Pelita (Five Years Development Plan) Project two responsible parties: the Head of the project and the project's Treasurer. These receive a delegation of authority from the Minister by a formal Decree (Surat Keputusan) to execute and take responsibility for the project.

The work-procedure and finance of development projects is as follows:

1. Each Departments submits a Project Recommendation (Daftar Usulan Proyek) to the National Planning Board (Bappenas) which evaluates it according to certain development policy criteria (see below), and to the Treasury Department which evaluates the budget availability.
2. When the List of Proposed Projects has been selected and approved by the National Planning Board and Treasury Department, then the Departments fill in the Project Specifications (Daftar Isian Proyek -- "DIPs").
3. After the Project List is legalized by the chairman of the National Planning Board and Treasury Minister, then the Ministers associated with these projects submit an Authorization Decree (SKO -- Surat Keputusan Otorisasi). The legalized Project List and the Authorization Decree are then handed over to the Project Manager/Head.
4. The Project Manager then submits a Request for Payment (SPP -- Surat Permintaan Pembayaran). On this Request for Payments, the Office of the State Treasurer (Kantor Bendahara Negara) will give a Payment Instruction (SPMU -- Surat Perintah Membayar Uang) according to the Authorization Decree received. This Payment Instruction is cashed by the Project Treasurer at the State Treasury (Kas Negeri).
5. The Project Manager then makes an implementation programme based on the programme stated formerly in the Project Specifications (DIP).
6. The Project Manager then executes the project according to:
 - a. Implementation programme,
 - b. Regulations prevailing, especially Presidential Decree on the execution of the State Revenue & Expenditure Budget (APBN),
 - c. Guidance/Manual by the Department in question.

Central Government Revenue and Expenditure Realization
(in million Rp.)

	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74
Routine Revenues	195.6	243.8	344.6	428.0	590.6	671.0
Routine Expn'ds	195.6	216.5	288.2	349.0	439.1	518.3
Dev't Revenues ¹⁾	48.4	65.7	78.9	90.5	95.5	108.4
Dev't Expenditures	48.2	118.2	176.9	214.4	310.3	344.1

1) Does not include foreign assistance of most kinds.

Source: Ministry of Finance.

Budgets tend to be modified during the execution period due to:

- a. Government Regulation No. 16 dated April 17, 1967,
- b. The admission of the substitute of Automatic Allocation of "Devisa" (ADO -- Alokasi Devisa Otomatis) both as a revenue and as an expenditure in the execution of 1970/71 state Revenue and Expenditure Budget:
- c. Other miscellaneous causes.

Endeavors which must be carried out in the execution of economic development are:

1. To exploit potential natural endowment for real prosperity,
2. To increase the efficiency of existing productive activities as well as the modernization, extensification and rehabilitation of projects with decreasing productivity.

These endeavors demand an immense capital investment which may be accumulated through the acquisition of funds by public saving and foreign aid. Of investment of internal capital (in 12 fields of activities) there were 546 projects with a total capital investment of Rp.203.2 milliard from 1969 to August 1970 of which 369 projects with a total capital investment of Rp.110.6 milliard were approved by the sub-committee of Internal Capital Investment to have their requested facilities given. This is mostly directed towards industry and agriculture. There is also foreign capital investment which may be divided into two forms: direct and joint investments.

In the case of direct investment, the investors invest their capital directly in the activity desired by applying for foreign capital investment facilities according to the prevailing regulations, i.e., Act.No.1/1967 on foreign capital investment with supplements and modifications. Joint investments are the merging of internal (private or government) capital with foreign capital generally with the application for foreign technical services.

There were up to August 1970, 281 Project Recommendations for foreign/joint investment with a total capital to be invested of \$1.2 milliard, specified into 71 direct foreign investment (US \$ 0.9 milliard) and 210 joint investment (US \$ 0.3 milliard). The realization up to August 1970 was US \$ 21,061,000.00 of a US \$ 95,536,000 total. The largest investors are the U.S.A., Japan and Hongkong.

II. Case Studies of Departments

A. NATIONAL PLANNING BOARD (BAPPENAS):

Legal Base

The formulation/foundation of the National Planning Board was based upon:

1. Paragraph 4 verse 1 "Undang-Undang Dasar 1945",
2. Presidential Decree No. 80/1967,
3. Presidential Decree No. 105/1967,
4. Presidential Decree No. 183/1968.

Other bases for the execution of its present functions are:

1. Presidium Cabinet Instruction (Kabinet Ampera) No.15/EK/In/3/1967, dated March 14, 1967,
2. Presidium Cabinet Instruction (Kabinet Ampera) No. 26/U.In/5/1967.
3. President Instruction No.03/1967, dated June 8, 1967,
4. President Decree No.267/1968, dated August 13, 1968.

Organizational Structure

The National Planning Board has the following organizational structure:

- a. Chairman: appointed by Presidential Decree, is assisted in the line of function by a staff of specialist advisors,
- b. Planning Deputies: there are five deputies helping the Chairman to carry out his functions.

These are:

- Infra-structure and Physical Development Planning Deputy,
 - Mental and Spiritual Planning Deputy,
 - Monetary and Finance Planning Deputy,
 - Programme and Execution Planning Deputy,
 - National and Provincial Planning Deputy.
- c. There is also a Secretariate, which carries out administrative affairs of the National Planning Board, directed by a Secretary, and the "Gedung Pola," an autonomous section under a Head.

General Policies

Executive policies in the determination of projects for development are based upon the following considerations:

1. The existence of foreign aid,
2. Is it a complementary project (proyek lanjutan) ?
3. Is it a quick yielding project ?
4. Is it relatively short time project ?

B. DEPARTMENT OF INTERNAL AFFAIRS

Legal base

Formed according to President Decree No.183/1968.

Organizational structure

The structure of the Department of Internal Affairs based on Pre - sidium Cabinet Decree No.75/U/Kep/11/1966 and modified on the basis of President Decree No.183/1968, is as follows:

- a. *Minister*: The Head/Chief of the Department with special staff to assist in his daily duties.
- b. *Secretary General*: The Assistant of the Minister especially in technical and administrative matters in the operation of the Department.
- c. *Directors General*: Executive officers of the Department, responsible for the task which is given to him.

Coordination

The Minister of Internal Affairs is the assistant of the President on matters of Local Government: Governors, Mayors, Bupatis, Camats, the respective heads of local government in descending order, are responsible to the President, through the Minister of Internal Affairs.

At the subordinate level all central agencies (vertical institutions) are technically, organizationally and administratively responsible to their Minister (command relation). But operationally they are subject to the coordination of the Governor/Local Head (Kepala Daerah) according to President Instruction No. 48/1967).

Autonomous Institutions have a command relation with the Local Head (Kepala Daerah), and a technical one also related to their Departments (Pres.In.No.48/1967). The Government/Local Head receives advisory aid in his management of the local government from the council of Local Head/"Muspida" (Pres.In. No. 05/1967).

General Policy

Policies for the perfection of organization structure are:

- a. The perfection and simplification of the central government administrative structure through a better formulation of the main functions of the government organs.
- b. Perfection of the central-local relationship in the attempt at decentralization, deconcentration and local autonomy.
- c. Correction of the structure of government organs; including work relations and rules, delineation of authority and responsibility, nomenclature.
- d. Perfection of coordination, integration and synchronization of the activities between government organs, especially in fields which demand a consistency of endeavor, e.g. among organs responsible for the administration, provision and distribution of financial capital.

Policies for the perfection of procedures:

- a. Macro-procedures (e.g. import/export procedures, interinsular trade, permits for the development of industries, internal capital investment, etc.) are to be simplified to guarantee efficiency, without disregarding the productive direction principles.
- b. Policies specially directed at the development of localities (Province, Municipalities, etc.) seek a maximization of coordination in development activities as outlined in the Five Year Development Plan, giving the correct administrative infra-structure to perfect development project procedures. These assist local projects as outlined in the President Instruction No. 20/1970 and its implementation guidance which was a combined decree of the Minister of Internal Affairs, Minister of Treasury and Chairman of the National Planning Board, No.16 year 1971, No.Kep.103/MK/IV/2/1971, No. Kep. 014/ket/2/1971, the policies of development are directed towards:
 - Labor oriented projects to absorb "disguised employment",
 - Creation of a favorable condition for spontaneous development, guidance of planning orientation in localities and increasing public participation in development.

S e r v i c e s

The services provided by the Department of Internal Affairs are in the form of government administrative infra-structure. The provision of urban services is as follows:

- a. Providing more autonomy in the management of local affairs,
- b. Improving the financial legalization procedure of development projects by stimulating central institutions.
- c. Giving subsidies to certain cities in the form of budget support,
- d. Coordinating the development of Districts and Municipalities according to President Instruction No.1/1970, so as to assure attention to the right priorities.

The budget of the Internal Affairs Department is as follows:

a. State Routine Budget 1971/72	Rp.2,286,420,400.00
b. Development Budget 1971/72	
- economy (especially rural and village dev't)	Rp. 129,000,000.00
- social (especially education and culture)	Rp. 540,000,000.00
- general (especially general government)	Rp. 670,000,000.00

Beside the above mentioned budgets, the Internal Affairs Department also coordinates provincial development according to President Instruction No.1/1970, which is a presentation of central government aid amounting to Rp.75 per capita with a minimum amount of Rp. 7.5 million for each District/Municipality. In 1970, the figure was Rp.50/capita, in 1972 Rp.100/capita, and in 1973 Rp.150/capita.

The financing procedure of aided development projects is as follows (based on the Instruction of the Minister of Internal Affairs No.5 year 1971) :

- a. The District/Municipal Government submits a Project Recommendation to the Governor for his legalization,
- b. The legalization is then submitted to:
 - (1) "Bupati"/Mayor as the project manager,
 - (2) Treasurer of the project,
 - (3) The associated branch of Bank Rakyat Indonesia (B.R.I.),
 - (4) Minister of Internal Affairs, Director General "PUOD" (c.q. Dinas Pembinaan Pembangunan Daerah/ Bureau of Development Promotion),
 - (5) Minister of Treasury, Director General of Budget,
 - (6) Chairman of the National Planning Board,
 - (7) Secretary of the Operational Control of Development/"Binagraha" in Jakarta.
- c. The distribution of financial money to District/Municipal projects is done by the local/nearest branch of B.R.I..

C. DEPARTMENT OF INFORMATION

Legal base

The Department of Information in the present "Pembangunan" Cabinet was formed by the President Decree No.183 year 1968. The formulation and implementation of policies and its operating rules are directed by Ministerial Decrees. The organization structure and separation/delegation of authority, tasks and responsibility of the Department executive echelons are directed by the Ministerial Decree No.12/Kep/Menpen/1970.

A g e n c i e s

The operational functions and authorities within the Department of Information are stated in the Minister Decree No. 11/kep/Menpen/1970. This Department is divided into General Executive and Functional Executive echelons, the latter are executives of physical operations of the Department. There are general and functional executive organs at the provincial level, and Information (or "Public Release") Offices at the lower levels.

Coordination among organs and agencies within the Department are stated in the Minister Decree No.11/Kep/Menpen/1970. The Department does have coordination with other departments/organs in order to get publication materials from them.

General Policies

The general policies of this Department are directed towards the working programme of the Government especially in the field of community development including public opinion as a pre-condition for popular participation in developing a "Pancasila community." The general policies are thus directed toward an awakening of social consciousness and responsibility for a better standard of living by simple, practical, pragmatic, physical and logical methods without disregarding national long range goals.

S e r v i c e

The service given is mainly the presentation of information to the community according to its policies. In addition there are services given directly through radio and television coordination by the Department through its execution and finances.

The proposed 1971/72 Expenditure Budget of the Information Department is Rp.2,694,318,800 including Rp.1,006,000,000 for development expenditures.

D. DEPARTMENT OF TREASURY.

Legal Base

The present legal base is the Presidential Decree no.183, dated June 16, 1968. The operational implementations were based on Minister Decrees.

Organization Structure

The organization structure was made according to the Decree of the Treasury Minister No.57/Menkeu/67 which was renewed and perfected by the Decree of the Treasury Minister No. Kep-238/MK/V/4/1969, No. Kep-366/MK/II/6/1969, No. Kep-638/MK/7/9/1968, No. Kep-756/MK/III/11/1969, and No. Kep-855/MK/I/12/1969. President Decree no.87 year 1969 specified the following structure:

- a. Secretariate General,
- b. Directorate General:
 - (1) Directorate General for the Surveillance of National Treasury,
 - (2) Tax Directorate General,
 - (3) Customs and Duties Directorate General,
 - (4) Budget Directorate General,
 - (5) Treasury Directorate General.

A g e n c i e s

Administration of the Treasury Department at the provincial and lower levels is done through the following agencies:

- a. *State Treasurer Office*: as the agency of the Budget Directorate General in the Provinces, Municipalities and Districts that deposit and receives money.
- b. *Tax Office*: as the agency of the Tax Directorate General in the Provinces, Municipalities and Districts.
- c. *IPEDA Office* (Local contribution for development or land tax): as and agency of Customs and Duties Directorate General, established in every District.
- d. *Customs and Duties Office*: An agency of Customs and Duties Directorate General as is Duane in every harbors.
- e. *Office for the Surveillance of National Treasury* (accountant) : an agency of the Directorate General for the Surveillance of National Treasury.

General Policy

The main policy of the Treasury Department is to coordinate national monetary revenues and expenditures, and match them with the existing budgets. This policy coincides with the Five Year Development Plan. The revenue policy includes a tax system to induce development by increasing government deposits by increasing revenues, inducing public saving, inducing investment and production and helping to create a better balanced and easily administered distribution of income. The expenditure policy goal is to promote a programme-oriented budget system which reflects development and eases the necessity for surveillance of financial operations.

B u d g e t

- a. The proposed 1971/72 Routine Expenditure Budget of the Treasury Department is Rp.6,784,100.00
- b. The proposed total Development Budget is Rp.1,680,000,000.00.

E. DEPARTMENT OF COMMERCE.

Legal Base and Organization Structure:

Based upon the Commerce Minister Decree No. 55/Kp/VIII/1968, dated August 27, 1968.

F u n c t i o n s

The enforcement of commercial regulations and commercial institutions for import and distribution affairs and for the execution of commercial policies and operational approaches, including some food commodities (rice, flour and sugar) and processing of production (fertilizers, cotton/thread, cloves). The import and distribution of rice is done by Badan Urusan Logistik (BULOG, the Logistics Board) under the surveillance of a National Stabilization Committee.

Other commodities are managed by "handling agents", appointed by the Department of Commerce or syndicates in the form of "single buyer." The importation of fertilizers is done with foreign loans (devisa credit) or grants through a tender system by the Department of Commerce, except in the case of foreign aid programs with tender/buying done in the donor state.

B u d g e t

The proposed 1971/1972 Routine Expenditure Budget of the Department of Commerce is Rp.733,041,000.

The 1971/1972 Expenditure Budget for Development in the Social, Education and Cultural fields only, amounts to Rp.386,500,000.

F. DEPARTMENT OF PUBLIC WORKS & ELECTRIC POWER.

Legal Base

The Department of Public Works and Electric Power (P.W. & E.P.), in the present "Kabinet Pembangunan," was founded on the basis of President Decree No.183/1968.

F u n c t i o n s

- a. To take charge of, to manage, and to complete infra-structure and to exploit land, water, and mineral resources.
- b. To guide the construction of economic, social/welfare and production infra-structures, in the following fields:
 - (1) Power and Electricity,
 - (2) "Bina Marga" (Roads),
 - (3) "Cipta Karya" (Housing, sanitation and planning),
 - (4) Irrigation.

Coordination

The delegation of authority for the execution of Public Works and

Electric Power activities from the central government to the local governments is based upon Government Regulation No.18/1953. There are, because of the Department's nature, some vertical installations/agencies of the Department which execute direct operations. Proposals by the localities may be done through the agencies to reach the Directorate concerned.

P o l i c i e s

Policies of the Department of P.W.& E.P. cover the following fields:

a. *Electric Power:*

The qualitative objectives of the development of electric power are:

- (1) To increase efficiency in the utilization of electric power plants through rehabilitation and enlargement of electric power capacity and the distribution and transmission networks.
- (2) To increase the creation of electric power, by investment in new electric power plants and new distribution and transmission networks (target: 10 watt capacity per capita).

b. *"Bina Marga":*

The general policy on roads is: The upgrading of road and bridge by class; the rehabilitation of the road network; research, planning and preparation for the construction of new roads; and surveillance of road utilization by appropriate vehicles (tonnage) according to road class/capacity.

c. *"Cipta Karya":*

This Directorate General is especially concerned with low cost housing, sanitation and city systems (tata kota).

The courses to be taken are generally: land acquisition, tax repressions, water provision, roads, drainages, and waste disposal within city systems.

Sanitation activities are mainly water supply promotions with artesian/well water and are both intensive and extensive. Other activities are in waste disposal and the prevention of city floods, as well as rehabilitation and extensification of drainage/sewerage facilities. The first development priority is the provincial capitals.

Urban-regional system: Priority is given to cities of extreme population increase with grave social-economic problems.

Housing: Only the following objectives were reached in the first Five Year Development Plan:

- Review of housing conditions and compliance with the hygienic prerequisite,
- Standardization.

d. *Irrigation:*

Promotion of such infra-structure to support agricultural production comprises the following projects: land and water conservation; river training and improvement; irrigation intensification pro -

gramme and new irrigation development programme.

S e r v i c e s

The services given by Public Works & Electric Power Agencies to cities, include:

- Low cost housing including pilot projects, standards for low cost housing, and land development,
- Water supply: to construct/rehabilitate water supply installations; the exploitation is left to the local government,
- City and regional systems planning,
- Electricity: to construct/repair electric power plants, while exploitation remains in the hands of the central government (P.L.N.-- the National Electricity Corporation),
- Gas: development in only a few cities,
- Roads: technical assistance provided by the central government, but the construction materials and investment capital are the burden of those directly concerned (provincial and district government). State (national) roads are however completely the responsibility of the central government.

Treasury

The proposed Routine Budget for 1971/72 is Rp.1,591,364,000.

The Development Budget for 1971/72 is Rp.52,753,500,000 and specified as follows:

irrigation	Rp.21,338,000,000
electric power	Rp.10,250,000,000
communications	Rp.17,412,000,000
education	Rp. 585,500,000
housing and water supply	Rp. 2,646,000,000
general government section	Rp. 304,000,000

G. DEPARTMENT OF COMMUNICATIONS.

Legal Base

The present Department of Communications was founded according to President Decree No.183/1968.

General Policy

The basic communications policy is to maximize those activities which really are the functions and duties of the government, especially in the provision and construction of infra-structure. Transportation activities and endeavors are left to the initiative of the public, in which case the Department is responsible for the creation of a

favourable condition so as to induce civilian endeavors according to regulations. Policies are also directed towards the perfection of institutions and boards related to communications in an effort to increase the overall communications efficiency.

S e r v i c e s

The services given are all direct services. But it is obvious that all activities are controlled by the central government since their status is as government corporations, such as the Telecommunications Corporation (Perum), "P.N.Pos & Giro," "P.J.K.A." (Railways), and Garuda Indonesian Airline Corporation.

T r e a s u r y

- a. The proposed 1971/72 Routine Budget is Rp.3,063,882,400.
- b. The proposed /1971/72 Development Budget is Rp.14,255,000,000, specified as follows:

communication and tourism	Rp.13,965,000,000
e d u c a t i o n	Rp. 140,000,000
general government section	Rp. 150,000,000.

H. DEPARTMENT OF EDUCATION & CULTURE.

Legal Base

The present Department of Education and Culture is a continuation of the former Ministry of Education, Teaching and Culture, which was founded at the time of the formation of the first Presidential Cabinet in September 2, 1945. The present Department was formed by a President Decree No.183/1968 combining the Elementary Education & Culture Department, Higher Education & Science Department (Dept. Perguruan Tinggi dan Ilmu Pengetahuan) and the Physical Training Department of the Ampera Cabinet.

A g e n c y

Agencies are at the provincial capitals and D.K.I. Jakarta. The executive organs are at the district capitals, municipalities and sub-district capitals and are established according to need. Other institutional organs are managed according to need.

General Policy

The problems in the field of education at present can be stated as follows: the isolated condition of schools in the community; horizontal imbalance; and vertical imbalance.

The Department's policy regarding these problems is: education oriented towards supporting development. This is carried out in the arrangement of curricula, method and the directing of education to technical subjects (pendidikan kejuruan).

S e r v i c e s

Stress is mainly upon pedagogic aspects. The provision of educational preconditions for the levels of Junior High to University are the responsibility of the Department, but that for the elementary level is the responsibility of the local government concerned except the pedagogic aspects (according to Government Regulation 65/1951).

T r e a s u r y

The proposed Routine Expenditure Budget of 1971/72 for the Education and Culture Department is Rp.20,904,615,200 and is comprised of:

personnel expense	Rp.17,757,708,100
material expense	Rp. 3,146,907,100.

I. DEPARTMENT OF HEALTH H E A L T H

Legal Base

The Department of Health is a continuation of the Health Ministry which was founded at the time of the first Indonesian Cabinet on September 5, 1945. The present Department of Health was formed on the basis of President Decree No.183/1968.

A g e n c y

The formation base for the organization structure of agencies is the Health Minister Decree No.631/B II-0.P./VIII/'68 dated August 10,1968, in which were stated the following distribution of responsibilities:

- a. To the provincial governments:
 - to build and operate hospitals, general and special clinics, and to control health activities of other Departments and civilian organs,
 - to carry out preventive and repressive measures against epidemic and communicable diseases, except those which by regulations are the responsibility of the central government,
 - to perform vaccinations.
- b. To the district governments:
 - to build and operate hospitals and general and special clinics,
 - to carry out preventive and repressive measures against epidemic and communicable diseases, except those which by regulations are

- the responsibility of the central government,
- to establish and operate Mother and Child Welfare Clinics (Post Natal Clinics), School Clinics and Health Education Clinics (Balai Pendidikan Kesehatan Masyarakat) for the community.

General Policies

Endeavors in the field of health are done according the "public health" concept. The important principle in the execution of "public health" is the integration of curative and preventive activities by a functional integration of organizational units of health bureaux and "approach teams" in the repression of health problems by the operations officers. This principle is also necessary for the achievement of maximum efficiency with a relatively limited number and capacity of facilities.

Rehabilitation of health facilities are given priority while the construction of new ones is only carried out in relatively under-developed Provinces and Districts. The development/improvement of health conditions in villages (village health centers) and surplus (export) areas is given top consideration according the Five Year Development Plan policies which give priority to agriculture and "devisa" producing sections.

Provincial governments need to adapt their budget (matching budget) to these central policies (central approach). They also provide Provincial Health Conferences for the making of plans for health development with guidance from the central Health Department. The formation of central and provincial plans does however create many difficulties, which are mainly due to the insufficient financial capital of the Province concerned.

Because of this a more "regional approach" policy is taken in the planning procedure; the programme formulation by the Department stresses priorities desired by the Provinces, and assistance given by the Health Department is based upon the ability of the Province to supply the matching budget.

T r e a s u r y

The main policies in the monetary and material field are stated in President Decrees No.33/1969 and No.24/1970. These decrees are also guidances for the entire Department. The proposed Routine Expenditure Budget of 1971/72 is Rp.5,219,838,400.

The Development Budget of 1971/72 is Rp. 4,700,000,000 and is specified as follows:

- education and culture	Rp. 268,793,000
- health & family planning	Rp.4.332,707,000
- housing & water supply	Rp. 10,000,000
- general government section	Rp. 88,500,000.

K. DEPARTMENT OF MENTAL AND SPIRITUAL AFFAIRS.

Legal Base

The Mental and Spiritual Affairs Department was formed on the basis of Government Decree (Penetapan Pemerintah) No.I/SD, dated January 3 1946. The present Department of Mental and Spiritual Affairs (kabinet Pembangunan) was formed on the basis of President Decree No.183/1968.

A g e n c y

The Department has agencies in Provinces, Districts, and Sub-districts as stated in the Decree of Mental and Spiritual Affairs Minister No.53/1971. The agencies are to carry out the Minister's policies in their territory. The agencies constitute a vertical institution, technically, organizationally and administratively responsible to the Minister, but operationally they are subordinate and subject to coordination by the Governor/Province Head (legal base: President Instruction No.48/1967).

General Policy

Objectives in the Mental and Spiritual field are to be achieved by the following endeavors:

- a. To save and guide the irreligious, the unbelievers and the ignorant, including those in atheist, animist and deist groups,
- b. To strengthen the faith and benevolence of the believers, according to their religion,
- c. To guide and promote spiritual toleration among believers of different religions.

The stages for an efficient and systematic inculcation of the endeavors are:

- to rehabilitate/perfect and make effective use of worship places, religious centers, "pesantren", etc.,
- to up-grade religion teachers and educators,
- to correct/perfect the curriculum and content taught of religion, and the education methodology thereof,
- to make sufficient the supply of sacred books of each religion,
- to increase the activity of the Inter-Religion Consultation Board (Badan Musyawarah Antar Agama) on spiritual toleration guidances, by way of activating the Board with more definite programmes,
- to construct infra-structure for religious living.

T r e a s u r y

The proposed Routine Expenditure Budget for 1971/72 is Rp.11,337,394,300 and the Development Budget is Rp.1,100,000,000.

L. DEPARTMENT OF SOCIAL AFFAIRS

Legal Base

The present Social Affairs Department in the Kabinet Pembangunan is a continuation of the Social Affairs Department during Kabinet Ampera which was established based on a Decree of the Presidium "Ampera" Cabinet No.75/U/Kep/11/1966.

Organizational structure

The Social Affairs Department's organizational structure is according to the Minister of Social Affairs Regulation No.15/1967. Agencies exist down to the level of Sub-Districts (Kecamatan). There is a separation of tasks and functions to be carried out by either Bureaux or agencies according to existing regulations and a special regulation of the Minister of Social Affairs No.16/1967 (see Appendix No.46).

General Policy

The overall policy of the Social Affairs Department is to settle social problems and to execute supervision on social matters:

- a. To assist/guide each individual/community towards a self-sustaining condition,
- b. To assist/guide each individual/community towards an adaptation to its social environment,
- c. To assist/guide each individual/community back to the social norms/functions.

The Social Affairs Department policy for operation is to give priorities to villages (in the form of village social institution) and communities of isolated tribes.

The housing policy is to assist in housing construction by way of "gotong royong" (mutual assistance). This policy, mainly executed in the village communities, can be specified as follows:

- a. To guide towards habitable low cost housing,
- b. To provide technical guidance for the construction of low cost housing by way of cooperating with the Department of Public Works and Electric Power,
- c. To promote a desire for development within the community.

Policies directed directly to the urban communities are:

- a. Social insurance,
- b. Assistance to unemployed immigrants, by way of
 - (1) urbanization research (cooperation with UNICEF); and
 - (2) establishment of centers for job training (cooperation with the Department of Transmigration and Co-operatives).

S e r v i c e s

Most of the services given by this Department concerned with the settlement of urbanization problems are by way of:

- a. tackling and diminishing negative consequences of urbanization (finding unemployed immigrants, giving them job training, and guiding them in their problems of adaptation) occurring within the city; and
- b. observing and promoting the social activities in villages so as to prevent urbanization.

The Department also provides direct assistance to those suffering from natural disasters and accidents.

T r e a s u r y

The 1971/72 proposed Routine Expenditure Budget of the Department of Social Affairs is Rp. 1,298,848,500 and the Budget for Development Expenditure is Rp. 370,000,000.

Part Two

THE DEVELOPMENT FINANCING SYSTEM

Budgets of Indonesian governmental units at all levels are divided into revenues and expenditures of two types: *routine* and *development*. The former is generally, although not always, financed through taxes and other forms of local revenue and goes primarily to staff salaries. The latter may have additional sources of revenue, as from foreign aid and special dispensations from higher levels of government and is mainly for capital improvements. Both routine and development resources in a given fiscal year are supposed to retain a balance within each project of income and outgo no matter what the sources.

In Municipalities, the money specifically available to finance urban services come from the municipal, provincial and central governments in the forms of grants, subsidies and loans; and from the profits of local government-owned enterprises which may be of a variety of types from actual commercial businesses to public amusement parks. Grants, loans or subsidies from higher levels of government may be for the complete costs of a project; or the local government may share these costs.

A special type of central subsidy applied in Municipalities and Districts is for village development (Inpres), with increasing amounts (1973 = Rp.150) given annually to the local government *per capita* and Rp.100,000 given annually per village (*desa*) for local improvements, especially roads, irrigation and similar infra-structure having a direct impact on the physical improvement of settlements. These are managed by the municipal or district governments. The money is intended primarily for materials, with the labor involved to be supplied locally, either voluntarily or at cost to the local authority, often in the form of food (e.g. bulgur).

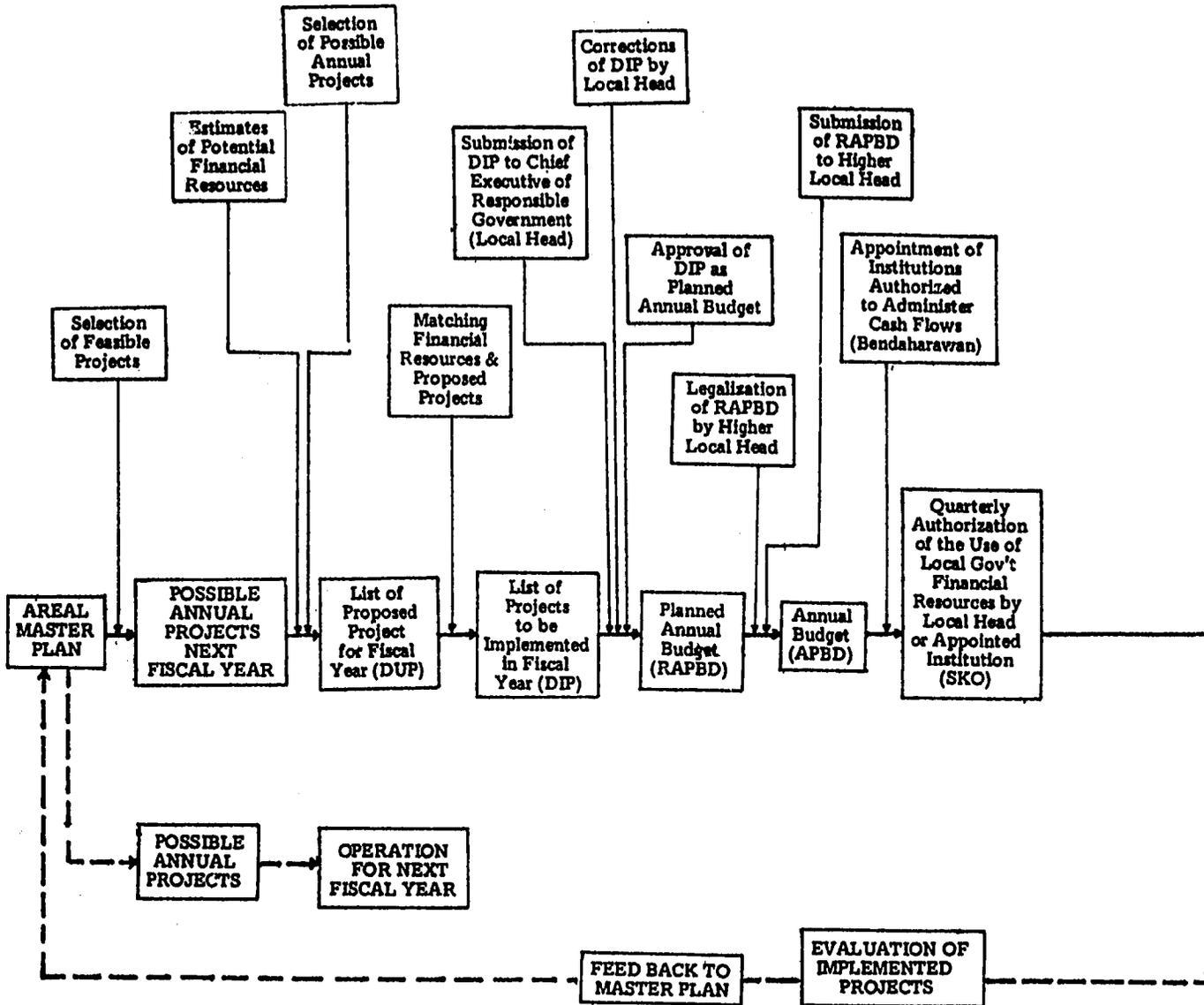
Important development projects located in a Municipality generally have financing from a higher level of government, at least in part, and therefore are involved with the various levels of central and provincial government bureaucracy. The process of municipal project financing is pictured in an accompanying diagram. Provincial/project financing follow a similar format. The budgets of these projects do not appear in the municipal accounts. With these there is a specific development project generation financing, implementation and monitoring procedure that is currently in the process of being refined under the direction of the Department of Internal Affairs and the National Planning Board. Its elements as of now are displayed in accompanying diagrams and flowcharts.

Briefly, the ideal flow of project activity begins in the development planning office of the Municipality or Province, which has the responsibility delegated by the chief executive (Mayor or Governor) to plan overall development of the area, both in physical and socio-economic respects. At various points project proposals require the approval of local and higher legislative and executive authorities. The concentration of review is on the *cost* of the project and the *timing* and source of expenditures. Thus the series of documents to and beyond "DIPs" reflect a refining of the financial aspects of the project and the timing of acquisition and expenditure of funds by the project manager and financial manager of each project. These actions are reviewed after the completion of the project to see that the money was indeed spent as intended. Ordinarily projects are intended to begin at the start of the fiscal year (April first) and disbursements and reporting of expenditures are made quarterly, with a yearly review.

The illustrations of this process are self-explanatory but inspection of them will reveal that a kind of quantitative and a kind of qualitative monitoring of project success have not yet been formalized into the development project planning and implementation system. We would suggest that the fulfillment of *physical* targets of projects (e.g. length of roads improved or constructed in the desired pattern and sequence) are not readily presented such that feedback to the planners is complete, and subsequent project planning is optimally informed.

Secondly, for most projects a qualitative goal that transcends the physical completion according to design of the project is undoubtedly in the minds of the planners and the officials who approved the project. This may for example, be in terms of increased employment or access, enhanced quality of life for a segment of the population, or smoother flow of an economic activity. It would be generally impossible to assess the success of a project along these lines in the course of its construction. But monitoring of its impact subsequently in a way that is made a formal part of the process of planning and programming of project activity will be necessary to long-term development. This kind of feedback might be supplied by a section of the Master Planning Department of a municipal government or contracted to local university research teams. But its foremost quality should be that it be formal, systematic and comprehensive over all projects undertaken under the auspices of the city and provincial governments. With this, a constant review of general development concepts, theories and processes would be facilitated. And that can be persuasively argued as particularly important to the development policy activity of local governments, whose responsibility, after all, is to care for and nurture the delicate ecological systems of small areas, for which the theory of development is particularly inadequate currently in the world at large.

**23. PROCEDURE FOR ESTABLISHING
DEVELOPMENT BUDGET FOR LOCAL
GOVERNMENT PROJECT DEVELOPMENT**



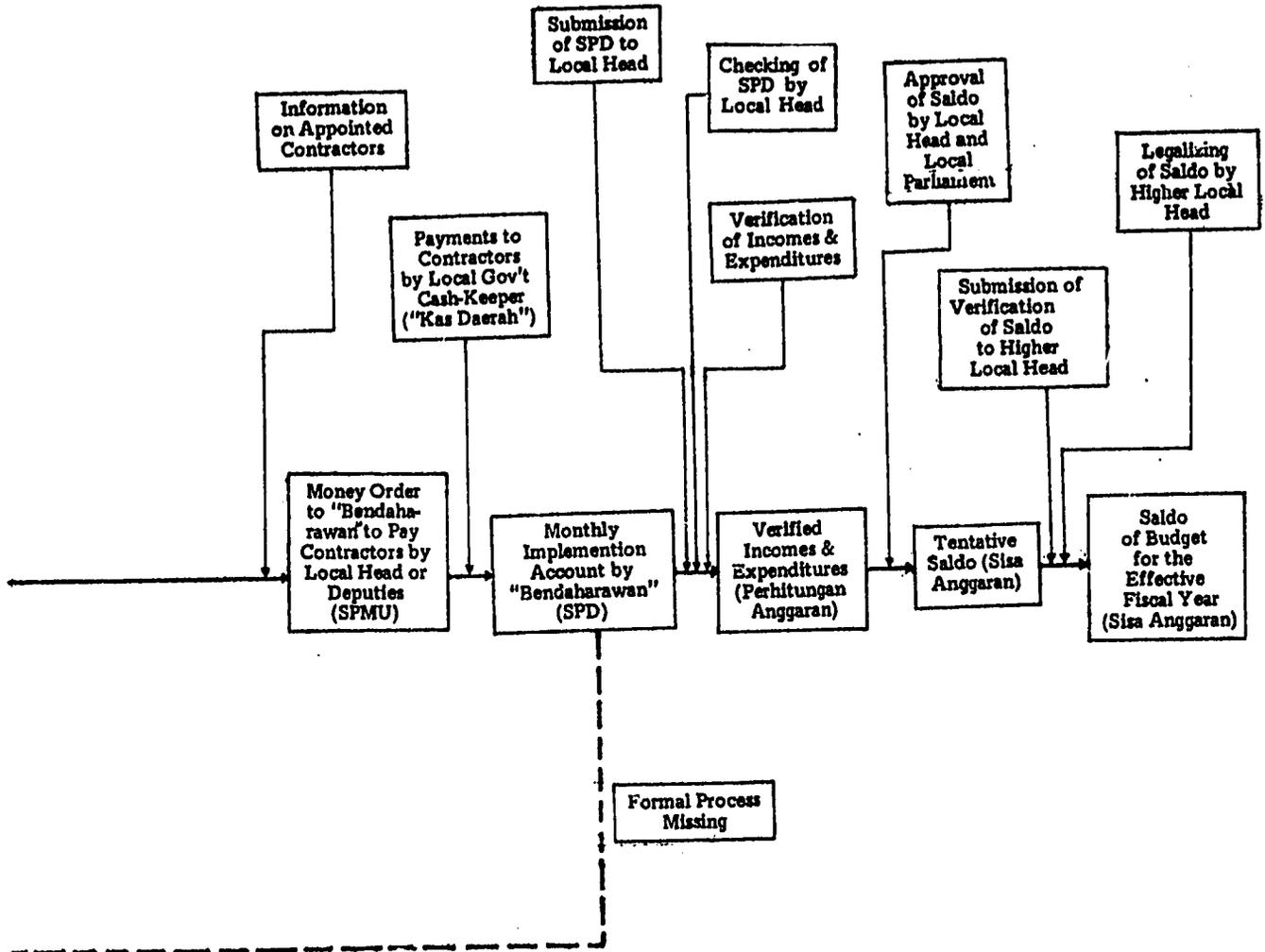
January 31st

April 1st



P L A N N I N G

F I S C A L Y E A R



March 31st

September 30th

December 31st



VERIFICATION

Appendix C

QUANTITATIVE ANALYSIS OF REGIONAL AND CITY SYSTEM DATA.

The object of this brief Appendix is to present a newer collection of regional (Provincial) data than that available when Chapter II was written and to suggest the underlying structure of regional distributions of economic, demographic, and development policy indicators across Provinces by the presentation of the results of some simple machine computations. Ninety-nine variables were mapped for 24 Provinces in Indonesia. Most data from 1971-1974. This preliminary analysis is presented as a complement to the assertions in the text of this report and as a service to those who wish to pursue geographical analysis on Indonesia at this scale.

The basic tables present the variables' names and definitions (Table C-a), the variables' values (Table C-b)*, and the variables' Means and Standard Deviations (Table C-c). The analytical tables present the ranks of the five case Provinces plus Jakarta on selected variables, especially those concerning development policy and urban phenomena (Table C-d), some Pearson Product Moment Correlation Coefficients (Table C-e), Factor Scores (Table C-f), and the Rotated Matrix of Factor Loadings resulting from a Varimax Rotated Factor (Principal Components) Analysis (Table C-g).

Various computations confirm the tri-partite division of Indonesian Provinces and the primate character of Jakarta. Jakarta actually has been planned to receive both more development expenditures in significant categories in per capita amounts, as may have been expected, but also in absolute amounts. This must reflect the administrative function of the city and the continuing need for added governmental infra-structure there. The "poor acumens", consisting of the other Provinces of Java, while ranking high for absolute amounts of development expenditures falls to near the bottom of Provincial ranks in the per capita expenditures.

* The small number of variables and a few imperfections in the punching of variables names and other inconsequential should be taken as an indication of the preliminary nature of this exercise. Further refinement and enlargement of the data base, with an extraction of Middle City variables for a separate set of computation runs will be the object of additional research by the author in 1974-1975.

An additional Cluster Analysis groups the relatively poor Outer Island Provinces of Aceh, Sumatra Barat, Riau, Jambi, Kalimantan Barat, Kalimantan Tengah, Kalimantan Selatan, Sulawesi Utara, Sulawesi Tengah, Sulawesi Tenggara, Bali, the Nusantara and Maluku with Coefficients of (paired) Similarity greater than .650 across all 99 variables. It clusters Jakarta separately and likewise Java Barat, Java Tengah and Java Timur in another cluster.

The variables that reflect urbanization of Provinces and proportions of the development expenditures to Provinces that go to Kotamadyas within them correlate highly with Provincial population density, indicators of modernization such as number of physicians and cinema attendance, and investment. Not surprisingly they correlate highly as well with most development policy planned expenditures in absolutes and per capita, except PUTL and Industry and Mining per capita.

The most interesting fact in the five case Provinces' rank-ordering is the consistently high place on expenditure variables, especially per capita ones, achieved by Sumatra Barat, contrasting with its much lower rank on private investment. The special character of the regions surrounding Medan and Ujung Pandang is also well-delineated in the various analyses.

JO 6-74

TABLE C-a

INDONESIAN PROVINCIAL DATA MATRIX: 99 VARIABLES FOR 24 OBSERVATIONS*

card	variable name	variable number	variable meaning	unit
1	AREAKMSQ	01	area	km ²
	POPNI961	02	1961 population	000's
	DENSTY61	03	1961 population density	" /km ²
	POPNI972	04	1972 population	000's
	DENSTY72	05	1972 population density	000's/km ²
	ANPG6172	06	1961-1972 annual population growth %	%
	HOTLED68	07	hotel beds 1968	#
	AUTONM69	08	non-military automobiles 1968	#
	WAAVG712	09	1971-1972 PUTL daily wages av.	Rp.
2	TFTP6973	10	transmigrant families arrivals 69-73	#
	GHOSP672	11	1972 general hospital beds	#
	PHYSIC72	12	1972 physicians	#
	PRPUPC71	13	1971 primary school pupils/10,000 pop.	#
	JHPUPC72	14	1972 junior h.s.	"
	SNPUPC72	15	1972 senior h.s.	"
	LIBKRC72	16	library books/100,000 population	#
	CINATT72	17	1972 cinema attendance	000's
	CNHKAT72	18	1972 attendance at Hong Kong films	/10,000 pop 000's
3	MPII6973	19	1969-1973 Moslem pilgrims	#
	DMATR72	20	Divorces/marriages+reconciliations	%
	MAIZEP70	21	1970 maize production	tons
	CASSAP70	22	1970 cassava production	"
	SWEETP70	23	1970 sweet potato production	"
	PEANUT70	24	1970 peanut production	"
	SOYABP70	25	1970 soya bean production	"
	VEGETP70	26	1970 vegetable production	"
	FRUITP70	27	1970 fruits production	"
4	TOTLRD68	28	1968 total length of roads (Jan)	km
	NATLRD68	29	1968 " " " national roads	"
	PROVRD68	30	1968 " " " provincial roads	"
	ELCOTO67	31	1967 total electricity consumed	000'skwh
	ELCOIN67	32	1967 electricity consumed by industry	000'skwh
	FA5.0+63	33	1963 farms greater than 5.0 ha.	Ha.
	FATOTL63	34	1963 total farm area	"
	RICEPR70	35	1970 total padi production	000's tons
	RICEPC70	36	1970 consumption of rice per cap.	kg/yr

* Irian Java not included, Bengkulu combined with Sumatra Selatan for historical data reasons.

5	AVPDP972	37	1970-72 av. annl. prov d.expen/cap	Rp.
	AVLAD972	38	variable #37 less ADO	"
	AVANB972	39	prov av. annl. budget 1969-1972	Rpm11
	PBCUR273	40	prov budget 1972/3	current rev.
	PBDVR273	41	"	develt rev.
	PBTEX273	42	"	total expens
	PBDEX273	43	"	develt expens
	PBCTR273	44	"	cen gov trans to rev
	PBADO273	45	"	transf i.l. ADO
	6	PBCT%273	46	"
PBAD%273		47	"	ADO % of develt expen
PBTPC273		48	"	total expens/cap.
PBDPG273		49	"	dev expens/cap.
PBCTP273		50	"	cen g. trans/cap.
PBATC273		51	"	ADO transfer/cap
AIPDIL73		52	approved domestic investment projects	Rpbil
AIPFIL73		53	approved foreign investment projects	"
AIPTOT73		54	approved total investment projects	"
7		NONDTOTL	55	1971/2+72/73+74/75 pl d.p. expen non-dept
	DALATOTL	56	"	interior
	KEHATOTL	57	"	justice
	PENRTOTL	58	"	information
	KEUATOTL	59	"	finance
	HITUTOTL	60	"	calcuatna
	DAGATOTL	61	"	commerce
	PERTOTL	62	"	agriculture
	INDYTOTL	63	"	industry&Mine
	8	PULLTOTL	64	"
HUBUTOTL		65	"	communication
PEDATOTL		66	"	education
KESETOTL		67	"	health
AGAMTOTL		68	"	religion
TKKTOTL		69	"	manpower
SOSITOTL		70	"	social
TRANTOTL		71	"	transmign
TOTLTOTL		72	"	total
9		NONDPERC	73	"
	DALAPERC	74	"	interior
	KEHAPERC	75	"	justice
	PENRPERC	76	"	inform
	KEUAPERC	77	"	finance
	HITUPERC	78	"	calcuns
	DAGAPERC	79	"	commerce
	PERTPERC	80	"	agri
	INDYPERC	81	"	indust&mine

10	PUTLPERC	82	"	"	"	"	"	pubwks	"
	HUBUPERC	83	"	"	"	"	"	communtns	"
	PEDAPERC	84	"	"	"	"	"	education	"
	KESEPERC	85	"	"	"	"	"	health	"
	AGAMPERC	86	"	"	"	"	"	religion	"
	TTKKPERC	87	"	"	"	"	"	manpower	"
	SOSIPERC	88	"	"	"	"	"	social	"
	TRANPERC	89	"	"	"	"	"	transmign	"
	TOTLPERC	90	"	"	"	"	"	total	"
11	MIGN6171	91	in-out migration 1961-71 + 2mil*					000's	
	KOTPOP72	92	population of kotamadyas					"	
	KOTP%P72	93	% kotamadyas of provincial population					%	
	A%CEK173	94	1971-73 ave. % cent dev expen to kotyas					%	
	PDEC%172	95	1971/2+72/3 % provl dev expen of central					%	
	KKDEV173	96	1971-73 expens to kotya/kabus(Inpres) totl Rpmil						
	KKRDS173	97	"	"	"	"	"	roads	"
	KKRS173	98	"	"	"	"	"	bridges	"
	KKDRI173	99	"	"	"	"	"	dran&irrg	"

* N.B. subtrace 2000 from card data.

TABLE C-b

010KI JAKARTA	01	592	2973.0	5022	4450.2	77.17	4.5	13798	17445	350
011 JAKARTA	02	.0001	4910	1554	1177.5	24.57	53.00	2961	16261	1452
012 JAKARTA	03	10218	14.0	2642	4217.4	7461	1893	.0001	170030	96885
010KI JAKARTA	04	478	28	450	3751.8	41899	120	23120	33.8	125
010KI JAKARTA	05	1073	1149	4911	1370	1130	15000	9000	6000	350
010KI JAKARTA	06	100.0	3.9	3278	267	1311	76	246.5	205.4	451.9
010KI JAKARTA	07	2727	3842	1873	3766	4834	4379	1078	10817	5030
010KI JAKARTA	08	47367	24101	14401	10955	1906	2495	738	2866	150542
010KI JAKARTA	09	612	863	421	846	1086	984	242	2403	1130
010KI JAKARTA	09	10643	5416	3238	7462	428	561	166	644	33830
010KI JAKARTA	11	3008	4450	100	100.0	18.0	1.07	.772	.05	.075
02JAWABARAT	01	4914517614.6	35821828.6	444	2.2	15208	10187	212		
02JAWABARAT	02	.0001	5725	525	977.7	13.46	15.30	459	5967	22
02JAWABARAT	03	12402	32.2	3067992017700	297903	73600	19300	444964	391424	
02JAWABARAT	04	7878	623	1855	487812	66058	119292151384	4817.2	110	
02JAWABARAT	05	32	-12	683	12280	1485	13765	1530	10001	957
02JAWABARAT	06	81.7	62.5	636	71	462	44	141.3	90.9	232.2
02JAWABARAT	07	951	192	249	17	318	652	280	18766	3858
02JAWABARAT	08	31862	7358	35122	1116	199	278	179	209	60781
02JAWABARAT	09	44	9	11	1	15	30	13	860	177
02JAWABARAT	09	14600	377	1609	51	9	13	8	10	.2785
02JAWABARAT	11	1993	1625.4	6	11.8	7.6	4.80	2.87	.64	.523
03JAWATENGGAH	01	3435318407.5	53622265.5	648	1.9	7033	10225	136		
03JAWATENGGAH	02	.0001	7268	446	1107.5	33.80	29.83	1125	5174	26
03JAWATENGGAH	03	4285	32.8	4519272185694	286095	60731	66990	291000	107455	
03JAWATENGGAH	04	9297	409	1801	206879	23180	80202623343	3113.9	80	
03JAWATENGGAH	05	53	31	1165	14270	677	14947	1921	11383	490
03JAWATENGGAH	06	87.4	25.5	683	88	520	22	50.0	14.0	64.0
03JAWATENGGAH	07	36	220	327	85	354	726	30	2373	380
03JAWATENGGAH	08	26832	3791	2484	1353	148	324	142	461	41764
03JAWATENGGAH	09	2	10	15	4	16	33	1	107	17
03JAWATENGGAH	09	1205	170	112	61	7	15	6	21	1876
03JAWATENGGAH	11	1265	1486.2	6	12.1	15.2	5.13	3.06	.89	.734
040IYONGYAKARTA	01	3090	2241.5	725	2510.6	812	1.1	321	2500	132
040IYONGYAKARTA	02	.0001	2340	218	1406.8	40.40	64.07	1800	532	40
040IYONGYAKARTA	03	188	20.8	21275	176952	14917	12718	11015	43285	32575
040IYONGYAKARTA	04	990	32	113	25580	1463	651	327637	257.4	70
040IYONGYAKARTA	05	30	26	74	2647	57	2704	166	2215	10
040IYONGYAKARTA	06	87.3	6.0	1086	67	890	4	5.0	.00001	5.0
040IYONGYAKARTA	07	43	124	41	80	48	170	8	490	366
040IYONGYAKARTA	08	3489	762	2845	578	159	81	49	138	9633
040IYONGYAKARTA	09	17	79	16	32	19	68	3	195	146
040IYONGYAKARTA	09	1390	304	1133	230	63	62	20	55	3837
040IYONGYAKARTA	11	1757	341.5	13	20.0	5.5	0.61	0.22	.07	.142
05JAWATIMOR	01	4686621823.0	46525712.9	549	1.6	9395	16084	215		
05JAWATIMOR	02	.0001	8033	967	348.1	22.21	19.17	627	10238	67
05JAWATIMOR	03	13040	36.4	8794463175490	346117	87702	222457	4061221037592		
05JAWATIMOR	04	10733	521	2689	332873	43279	131472826433	3463.0	80	
05JAWATIMOR	05	69	15	1110	13094	1978	15075	1804	11472	1388
05JAWATIMOR	06	86.4	76.9	591	71	449	54	67.5	36.8	104.3
05JAWATIMOR	07	38	203	282	21	313	899	33	2822	260
05JAWATIMOR	08	25823	7424	3522	1331	228	349	142	641	49387
05JAWATIMOR	09	2	8	11	1	12	35	1	110	10
05JAWATIMOR	09	1004	289	137	52	9	14	6	25	1765
05JAWATIMOR	11	720	2577.6	10	12.2	11.8	5.94	3.57	.88	.942
060TACEM	01	59904	1629.0	27	2039.5	34	2.3	1072	1920	253
060TACEM	02	.0001	1260	26	934.7	23.77	14.79	2142	1155	114
060TACEM	03	589	32.1	4000	35123	28000	2800	2450	.0001	.0001
060TACEM	04	6117	489	1042	8436	53	5469	261983	809.0	150
060TACEM	05	240	38	482	2542	820	3362	817	2229	406

06DIACEH	06	87.5	49.7	1673	407	1110	202	6.5	3.9	10.4
06DIACEH	07	8	131	141	26	103	36	7	626	117
06DIACEH	08	4877	587	599	178	260	15	2	12	7740
06DIACEH	09	4	64	69	13	51	18	3	307	57
06DIACEH	09	2391	288	294	87	128	7	1	6	3795
06DIACEH	11	2082	69.5	3	24.0	31.4	0.48	0.15	3.08	.020
07SIIMITARA	01	71104	4964.7	70	6650.9	94	3.1	590	10077	404
07SIIMITARA	02	.0001	8210	425	1509.1	27.15	31.51	302	5163	216
07SIIMITARA	03	1931	13.9	29363	198062	173241	4982	9238	75128	81504
07SIIMITARA	04	7104	786	2388	61718	8722	25816	685128	1832.9	132
07SIIMITARA	05	675	-78	4468	5798	5278	11076	4761	4672	4990
07SIIMITARA	06	74.0	104.8	1672	719	705	753	56.1	39.8	95.9
07SIIMITARA	07	11	217	117	129	243	84	4	1474	135
07SIIMITARA	08	7718	4211	1738	286	129	309	22	132	16878
07SIIMITARA	09	2	33	18	19	37	13	1	222	20
07SIIMITARA	09	1161	633	261	43	19	47	3	20	2538
07SIIMITARA	11	2464	856.4	12	10.9	1.1	1.53	0.71	.09	.144
08SIIMBARAT	01	49333	2519.1	47	2849.5	58	2.1	1834	3633	308
08SIIMBARAT	02	.0001	1165	141	1419.1	38.99	30.63	595	2182	70
08SIIMBARAT	03	1053	16.1	5574	89864	26035	2906	585	15475	35268
08SIIMBARAT	04	3567	567	1080	17447	632	4268	323381	895.9	132
08SIIMBARAT	05	139	-39	387	2580	607	3186	467	2281	498
08SIIMBARAT	06	83.4	104.8	114	167	817	178	12.2	0.6	12.8
08SIIMBARAT	07	8	151	88	16	76	44	24	541	793
08SIIMBARAT	08	9301	1097	1099	271	178	35	46	121	13925
08SIIMBARAT	09	3	53	31	6	27	15	8	190	278
08SIIMBARAT	09	3264	385	386	95	63	12	16	42	4887
08SIIMBARAT	11	1944	395.7	12	7.5	7.8	0.85	0.45	.08	.047
09RIAI	01	124084	1235.0	10	1606.4	13	2.7	938	2139	404
09RIAI	02	200	641	41	1138.6	20.88	16.45	2670	2231	201
09RIAI	03	659	13.6	4781	47596	15617	534	55	10197	35044
09RIAI	04	1592	95	656	12467	381	26232	163907	265.8	132
09RIAI	05	1038	385	1705	1933	1267	3199	1604	1505	1072
09RIAI	06	94.4	66.8	1948	977	917	653	4.7	9.5	14.2
09RIAI	07	.0001	168	194	45	51	27	13	299	25
09RIAI	08	2351	1537	410	134	43	17	26	137	5516
09RIAI	09	.0001	105	121	28	32	17	8	186	16
09RIAI	09	1464	957	255	83	27	11	16	85	3434
09RIAI	11	2124	148.2	9	11.6	99.6	0.36	0.14	.05	.089
10JAMBI	01	62150	744.4	12	1022.3	16	3.4	615	1144	358
10JAMBI	02	1750	172	31	1207.0	21.53	12.66	719	321	86
10JAMBI	03	1415	13.0	3115	23770	11056	370	151	11567	.0001
10JAMBI	04	1621	433	574	7103	831	9848	75630	311.5	132
10JAMBI	05	861	-19	866	1769	979	2748	1644	1001	885
10JAMBI	06	90.8	53.8	2732	1634	995	880	2.1	3.3	5.4
10JAMBI	07	.0001	134	41	47	66	19	.0001	227	15
10JAMBI	08	1895	503	280	167	41	21	104	717	4324
10JAMBI	09	.0001	131	40	46	65	19	.0001	222	15
10JAMBI	09	1854	492	245	163	40	21	102	701	4230
10JAMBI	11	2092	152.3	14	7.2	149.6	0.22	0.11	.05	.025
11SIUMSELATAN	01	157522	4847.2	31	3987.9	25	-1.6	1663	9476	650
11SIUMSELATAN	02	6954	1839	187	1300.0	25.00	21.00	1750	3643	230
11SIUMSELATAN	03	2079	13.3	8059	161386	25875	945	597	34514	110512
11SIUMSELATAN	04	6976	663	3467	84393	9782	61322	429685	921.0	132
11SIUMSELATAN	05	1371	300	5345	3954	4431	8415	5258	2822	4194
11SIUMSELATAN	06	89.0	80.0	2110	1318	708	1052	50.2	17.4	67.6
11SIUMSELATAN	07	8	297	282	69	142	58	9	706	307
11SIUMSELATAN	08	8240	3689	694	407	117	1578	207	780	17260
11SIUMSELATAN	09	2	75	71	17	36	15	2	177	77
11SIUMSELATAN	09	2066	925	174	102	29	396	52	196	4328

15INSFLATAN	11	2776	667.0	16	21.9	96.1	0.90	0.46	.21	.103
21AMPIUNG	01	28783	1533.6	53	2836.8	99	7.7	1072	2500	260
21AMPIUNG	02	4517	540	50	1084.2	16.76	10.45	340	770	90
21AMPIUNG	03	1038	17.8	47218	219624	15719	1921	6571	12279	49085
21AMPIUNG	04	3010	244	515	21907	1298	15536	268768	455.1	100
21AMPIUNG	05	465	-71	1291	1423	1748	4202	1959	1122	1488
21AMPIUNG	06	50.9	76.0	1513	705	404	536	7.8	3.7	11.5
21AMPIUNG	07	5	172	55	.0001	25	29	8	580	34
21AMPIUNG	08	5294	798	765	713	170	133	183	854	8854
21AMPIUNG	09	2	4	19	.0001	9	10	3	205	12
21AMPIUNG	09	1866	281	270	61	60	47	65	301	3121
21AMPIUNG	11	2776	193.6	6	5.7	28.1	0.57	0.22	.09	.208
13KALBARAT	01	157066	1581.0	10	1842.1	12	1.5	769	749	440
13KALBARAT	02	752	1112	37	1005.1	7.89	10.83	214	2405	756
13KALBARAT	03	460	7.0	4077	201790	6745	78	300	.0001	.0001
13KALBARAT	04	1930	449	985	14720	1533	23848	175454	415.9	140
13KALBARAT	05	657	69	1328	1943	1872	3815	1994	1767	1187
13KALBARAT	06	97.0	59.5	1889	987	875	588	13.5	2.7	16.2
13KALBARAT	07	.0001	167	50	17	97	37	17	232	36
13KALBARAT	08	3192	384	488	169	76	22	34	218	5351
13KALBARAT	09	.0001	91	27	9	53	20	9	126	20
13KALBARAT	09	1733	209	265	92	41	12	19	118	2905
13KALBARAT	11	2076	180.7	7	7.0	131.6	0.40	0.30	.03	.053
14KALTENGGAH	01	156552	496.5	3	715.9	5	4.0	35	67	437
14KALTENGGAH	02	1106	257	11	1343.4	21.41	47.30	138	95	4
14KALTENGGAH	03	504	16.0	3538	45925	6621	68	12	425	6788
14KALTENGGAH	04	270	79	76	433	.0001	20213	73469	167.6	140
14KALTENGGAH	05	836	377	585	1914	1019	2933	1050	1662	321
14KALTENGGAH	06	88.3	30.6	4190	1500	2374	459	19.0	6.8	25.8
14KALTENGGAH	07	.0001	157	53	.0001	39	21	5	89	.0001
14KALTENGGAH	08	375	220	235	107	35	13	21	284	1756
14KALTENGGAH	09	.0001	219	74	.0001	55	29	7	124	.0001
14KALTENGGAH	09	524	307	328	150	49	18	29	397	2453
14KALTENGGAH	11	2082	29.4	4	7.5	219.9	0.18	0.08	.02	.030
15KALSELATAN	01	33966	1473.2	43	1707.4	50	1.4	1289	1595	277
15KALSELATAN	02	990	674	34	989.2	19.37	20.58	1502	2692	371
15KALSELATAN	03	5204	20.8	2591	23109	7611	657	446	3040	7215
15KALSELATAN	04	2601	285	486	9819	204	3717	202744	516.2	140
15KALSELATAN	05	273	-83	464	1694	832	2526	810	1593	605
15KALSELATAN	06	92.8	74.7	1487	477	938	356	2.9	27.2	30.1
15KALSELATAN	07	.0001	190	61	2	143	33	5	460	408
15KALSELATAN	08	5095	1252	428	150	108	33	62	270	8778
15KALSELATAN	09	.0001	111	36	1	84	19	3	269	239
15KALSELATAN	09	2984	733	251	88	63	19	36	158	5141
15KALISFLATAN	11	1889	283.2	16	16.1	29.6	0.39	0.22	.10	.068
16KALTIMOR	01	202619	550.8	3	756.8	4	3.4	35	971	602
16KALTIMOR	02	1175	715	45	1166.4	35.27	31.29	1181	1096	1029
16KALTIMOR	03	2607	13.5	3665	24935	12473	387	350	2327	13737
16KALTIMOR	04	601	202	223	9344	195	4016	51704	181.4	140
16KALTIMOR	05	1302	79	956	2491	3117	5608	2895	2114	898
16KALTIMOR	06	77.9	31.0	7640	3944	2880	1223	53.5	123.1	176.6
16KALTIMOR	07	.0001	108	30	17	97	17	8	198	.0001
16KALTIMOR	08	7075	1296	281	104	51	252	99	194	7134
16KALTIMOR	09	.0001	143	40	22	128	22	11	262	.0001
16KALTIMOR	09	5385	1712	371	137	67	333	131	256	9427
16KALTIMOR	11	2020	287.2	37	26.3	138.4	0.19	0.10	.01	.006
17SILAITARA	01	55776	1310.1	24	1748.2	3	3.0	1966	817	314
17SILAITARA	02	160	1565	92	2616.4	50.73	45.05	815	560	103
17SILAITARA	03	100	5.0	51840	126453	55329	835	144	.0001	.0001
17SILAITARA	04	1178	717	377	31108	1510	8182	129444	159.2	88

C-9

17SILAITARA	05	548	317	941	2450	669	3119	814	1960	397
17SILAITARA	06	85.0	48.8	1815	474	1144	231	28.0	32.2	60.2
17SILAITARA	07	6	186	84	40	100	29	37	607	124
17SILAITARA	08	4029	1358	670	182	39	21	49	124	7669
17SILAITARA	09	3	106	48	23	57	17	21	347	71
17SILAITARA	09	2305	777	283	104	22	12	28	71	4387
17SILAITARA	11	2171	249.2	14	17.0	44.1	0.39	0.19	.11	.055
18SILATENGGAH	01	57879	693.2	12	938.1	16	3.2	84	409	223
18SILATENGGAH	02	2452	375	20	1666.2	46.91	24.09	748	445	91
18SILATENGGAH	03	384	11.1	29225	42550	14200	2403	790	6155	16138
18SILATENGGAH	04	4632	595	614	198	.0001	8182	129444	157.7	88
18SILATENGGAH	05	753	521	688	1976	296	2272	377	1139	212
18SILATENGGAH	06	60.1	56.2	2486	412	1246	232	1.3	2.5	3.8
18SILATENGGAH	07	.0001	163	54	28	143	30	6	203	992
18SILATENGGAH	08	2506	185	244	126	128	36	85	242	3825
18SILATENGGAH	09	.0001	174	58	30	152	32	6	216	1058
18SILATENGGAH	09	2671	197	260	134	134	38	91	258	4077
18SILATENGGAH	11	2174	000.	.000	.0001	33.7	0.18	0.05	.03	.073
19SELATANG	01	77637	4516.5	58	5259.6	68	1.5	621	3217	244
19SILASELATAN	02	2291	2343	104	1261.6	29.32	24.32	769	3235	128
19SILASELATAN	03	4022	14.5	325398	377322	79729	36369	7958	47780	.0001
19SILASELATANG	04	4011	583	1234	36361	4974	6036	410616	1603.4	88
19SILASELATANG	05	87	-71	453	1074	152	1226	496	986	113
19SILASELATANG	06	91.4	25.9	754	1.2	592	29	7.5	41.5	49.0
19SILASELATANG	07	15	178	143	49	111	76	12	1105	176
19SILASELATANG	08	8477	1452	1580	344	22	247	47	813	14994
19SILASELATANG	09	3	34	27	9	21	15	2	210	34
19SILASELATANG	09	1612	276	300	65	4	47	9	155	2851
19SILASELATANG	11	1678	603.6	11	20.6	12.7	1.20	0.42	.44	.090
20SILATENGGARA	01	38886	559.5	14	731.7	19	2.8	128	357	208
20SILATENGGARA	02	1262	292	11	1605.2	85.84	33.03	1881	.0001	.0001
20SILATENGGARA	03	162	14.5	36396	149099	28444	786	26	477	3442
20SILATENGGARA	04	2046	189	238	839	1	1509	102654	80.4	88
20SILATENGGARA	05	514	356	367	3453	485	3938	579	3070	150
20SILATENGGARA	06	135.1	22.8	1717	695	1381	158	11.2	.0001	11.2
20SILATENGGARA	07	.0001	137	52	3	33	16	4	140	29
20SILATENGGARA	08	1039	121	367	131	90	35	170	362	2593
20SILATENGGARA	09	.0001	187	71	4	45	22	6	191	40
20SILATENGGARA	09	1420	165	502	179	123	48	232	495	3544
20SILATENGGARA	11	1678	000.	.0001	.0001	70.0	0.16	0.10	.02	.0001
21RALI	01	5623	1782.5	317	2151.6	383	1.9	6780	1510	162
21RALI	02	.0001	1118	40	1171.2	17.61	26.63	291	801	55
21RALI	03	9	14.3	61791	179288	219977	7895	9005	25771	42692
21RALI	04	1751	389	310	7211	267	4335	264919	531.4	100
21RALI	05	137	98	290	1601	120	1725	117	1363	82
21RALI	06	84.8	74.5	814	55	643	39	4.2	5.3	9.5
21RALI	07	5	166	199	21	32	214	20	627	54
21RALI	08	3935	2068	840	290	43	49	27	192	9661
21RALI	09	2	77	93	10	15	100	9	291	25
21RALI	09	1829	961	390	135	20	23	13	89	4490
21RALI	11	1931	000.	.0001	6.2	3.9	0.48	0.32	.04	.075
22MISARARAT	01	21740	1807.8	83	2249.3	103	2.2	32	700	205
22MISARARAT	02	.0001	448	20	915.0	11.17	14.10	196	269	29
22MISARARAT	03	2900	12.3	21944	133159	99743	6698	19741	51815	53779
22MISARARAT	04	2264	486	67	3786	36	4258	249556	495.3	100
22MISARARAT	05	64	53	142	1346	100	1454	152	1125	24
22MISARARAT	06	86.4	15.8	660	69	511	11	0.2	0.8	1.3
22MISARARAT	07	4	141	59	27	20	35	.0001	339	23
22MISARARAT	08	973	304	345	128	21	68	33	40	2566
22MISARARAT	09	2	63	26	12	9	16	.0001	151	10

22NISABARAT	09	633	135	153	57	9	30	15	18	1141
22NISABARAT	11	1982	000.	.0001	.0001	21.9	0.51	0.14	.05	.212
23NISATIMOR	01	48889	1967.3	40	2337.5	48	1.7	32	663	178
23NISATIMOR	02	.0001	1039	24	1481.4	33.37	16.72	372	155	18
23NISATIMOR	03	96	5.1	111230	549265	106020	2558	113	1095	46252
23NISATIMOR	04	2911	1226	304	1758	.0001	10350	193618	145.9	100
23NISATIMOR	05	36	-22	83	2929	177	3106	200	2621	134
23NISATIMOR	06	90.2	67.0	1323	87	1142	58	0.6	0.9	1.3
23NISATIMOR	07	.0001	136	113	25	37	40	8	235	40
23NISATIMOR	08	2145	695	232	142	22	19	72	13	4008
23NISATIMOR	09	.0001	58	48	11	16	17	3	101	17
23NISATIMOR	09	918	297	99	61	9	8	31	6	1715
23NISATIMOR	11	1874	000.	.0001	10.6	17.2	0.53	0.03	.11	.185
24MALIKU	01	83675	789.5	9	1144.7	14	4.1	32	574	178
24MALUKU	02	150	838	39	1605.2	58.34	34.06	939	.0001	.0001
24MALUKU	03	753	12.5	16274	174961	45298	31	96	6	2150
24MALIKU	04	859	77	223	5325	14	.0001	.0001	6.6	18
24MALIKU	05	-84	-136	614	1616	1521	3137	763	1215	762
24MALUKU	06	88.4	43.2	2881	1619	1157	700	9.6	37.3	46.9
24MALUKU	07	.0001	155	100	.0001	88	20	11	184	32
24MALUKU	08	1164	654	537	159	142	22	22	75	3389
24MALIKU	09	.0001	135	87	.0001	77	18	10	161	28
24MALIKU	09	1017	571	469	139	124	19	19	66	2961
24MALIKU	11	1887	000.1	.0001	13.2	193.3	0.24	0.09	.01	.0001

TABLE C-c

INTERCORRELATION MATRIX INDONESIA PROVINCES 1974 (29X24)

MEANS AND STANDARD DEVIATIONS

VARIABLE	MEAN	STD. DEV.	VARIABLE	MEAN	STD. DEV.	VARIABLE	MEAN	STD. DEV.
1 AREAKMSO	6.7801D 04	5.3866D 04	34 EATDTL63	5.0599D 05	8.0371D 05	67 KESETOTI	8.1338D 02	2.1931D 03
2 POPN1961	4.0775D 03	6.0428D 03	35 RICEPR70	9.0156D 02	1.2366D 03	68 AGAMTOTL	1.8146D 02	3.7382D 02
3 DENSITY61	3.3217D 02	1.0185D 03	36 RICEPC70	1.0856D 02	3.0923D 01	69 TTKKTOTI	2.6883D 02	5.7270D 02
4 POPN1972	4.9727D 03	7.2416D 03	37 AVDPDP972	4.6538D 02	4.4138D 02	70 SOSITOTL	1.0671D 02	1.4745D 02
5 DENSITY71	4.5975D 02	1.5209D 03	38 AVLAN972	1.3679D 02	2.8137D 02	71 TRANTOTI	4.1229D 02	5.8506D 02
6 ANPG6172	2.5708D 00	1.6565D 00	39 AVAN8972	1.2249D 03	1.4866D 03	72 TOTLTOTL	1.8930D 04	3.1767D 04
7 HQTIND68	2.7226D 03	4.3943D 03	40 PDCUR273	4.1603D 03	4.2459D 03	73 NONDPERC	2.9167D 01	1.2449D 02
8 AUTOMN69	4.1233D 03	5.1450D 03	41 PBDVR273	1.2840D 03	1.3278D 03	74 DALAPERK	1.1800D 02	1.6902D 02
9 WAANG712	2.9792D 02	1.3666D 02	42 PBTEX273	5.5224D 03	4.7014D 03	75 KESAPERK	6.1542D 01	8.1734D 01
10 TFTP6973	9.8996D 02	1.6862D 03	43 PBDEX273	1.7158D 03	2.0445D 03	76 PENRPERC	4.7667D 01	1.7048D 02
11 GHOSPR72	2.2033D 03	2.5651D 03	44 PACTR273	3.2216D 03	3.2128D 03	77 KEUAPERK	8.8208D 01	2.1564D 02
12 PHYSIC72	2.1203D 02	3.6553D 02	45 PBAD0273	9.0054D 02	1.2215D 03	78 HITUPERK	6.6000D 01	1.9652D 02
13 PREURECTI	1.2924D 03	3.6140D 02	46 PBCI273	8.7092D 01	1.4821D 01	79 DAGAPERK	1.5500D 01	4.8497D 01
14 JHPUPC72	3.0240D 01	1.7230D 01	47 PBAD273	5.2529D 01	2.8107D 01	80 PERTPERC	3.1804D 02	4.6850D 02
15 SPCUPC72	2.6952D 01	1.3986D 01	48 PBIPC273	1.9051D 03	1.5544D 03	81 INDYPERC	1.4571D 02	3.0176D 02
16 LIHKPC72	1.0215D 03	8.0177D 02	49 PROPC273	7.7130D 02	9.0178D 02	82 PUTLPERC	2.7391D 03	3.2668D 03
17 CINAII72	2.7246D 03	3.7958D 03	50 PRCIP273	1.0071D 03	5.8074D 02	83 HUBUPERK	7.0238D 02	1.0688D 03
18 CNHKAT71	2.1650D 02	3.5938D 02	51 PBATC273	3.5575D 02	3.6205D 02	84 PEDAPERK	4.9104D 02	6.7266D 02
19 MPJ16973	2.7541D 03	3.8297D 03	52 AIPDI173	3.3392D 01	5.5750D 01	85 KESEPERC	2.0129D 02	4.8382D 02
20 ZOOMAR72	1.6775D 01	0.5206D 00	53 AIPFI173	2.9400D 01	4.8188D 01	86 AGAMPERC	6.4458D 01	8.7773D 01
21 MAIZEP70	1.0134D 05	2.0395D 05	54 AIPIT173	6.2796D 01	1.0095D 02	87 TTKKPERC	7.5542D 01	1.4201D 02
22 CASSAP70	4.3181D 05	8.1355D 05	55 NONDTOTL	1.6104D 02	5.7950D 02	88 SOSIPERC	4.6417D 01	5.8452D 01
23 SWEETP70	8.0426D 04	1.0437D 05	56 DALATOTI	3.2229D 02	7.5023D 02	89 TRANPERC	1.7475D 02	2.0122D 02
24 PEANUT70	1.2911D 04	2.5067D 04	57 KEHATOTL	1.9533D 02	3.6799D 02	90 TOTLPERC	4.6972D 03	6.4561D 03
25 SOYABP70	1.5766D 04	4.6238D 04	58 PENRDI1	1.8875D 02	7.6260D 02	91 ZGR6170	2.0183D 03	4.6713D 02
26 VEGETA70	6.8894D 04	1.2814D 05	59 KEUATOTL	3.1304D 02	9.6776D 02	92 KOTPOP72	6.0820D 02	1.0338D 03
27 FRUITP70	9.0606D 04	2.1735D 05	60 HITUTOTI	3.2046D 02	8.9869D 02	93 KOTPEP72	1.2417D 01	2.0372D 01
28 TOTLRD69	3.4757D 03	2.9391D 03	61 DAGATOTL	6.7792D 01	2.2222D 02	94 AZCEK173	1.5392D 01	1.5441D 01
29 NATLRD68	4.2363D 02	2.8482D 02	62 PERITOTI	1.8392D 03	4.2129D 03	95 PDEC273	5.7837D 01	6.4563D 01
30 PROVRD68	9.0696D 02	9.0870D 02	63 INDYTOTL	5.5142D 02	1.2370D 03	96 KKDEV173	1.1379D 00	1.6491D 00
31 E.COTD67	7.3025D 04	1.3500D 05	64 PUTLTOTI	8.9603D 03	1.1813D 04	97 KKRS173	6.1550D 01	1.0093D 00
32 ELCOTM67	8.5963D 03	1.7399D 04	65 HUBUTOTL	2.7436D 03	4.9925D 03	98 KKRS173	2.9792D 01	6.4761D 01
33 FA5.0+63	1.1544D 04	1.3704D 04	66 PEDATOTI	2.9255D 03	7.4400D 03	99 KKORI173	1.6247D 01	2.3658D 01

TABLE C-d

Ranks of Case Provinces on Selected Variables

	Jakarta	Java Tengah	Java Timor	Sumatra Utara	Sumatra Barat	Sulawesi Selatan
1. Population of Kotamadyas	1	4	2	5	8	7
2. Per cent Kotya of Prov. op.	1	14	11	9	8	10
3. 1971-73 ave. central develt. expens to kotyas.	1	11	10	7	17	5
4. 1971/2+1972/3 Prov/central develt. expens.	15	17	19	24	20	18
5. 1970-72 ave. annual Prov. expens/capita	3	20	18	8	15	17
6. No. 5. less ADO	1	13	15	6	19	21
7. 1972-73 Prov. develt. expens.	1	7	8	3	19	21
8. No. 7. per capita	2	17	20	9	16	24
9. Total approved investment to '73	1	7	4	5	15	9
Central govt. planned develt. expens for 1971/2+1972/3+1974/5:						
10. Total	1	4	3	6	8	7
11. Total per capita	1	20	21	17	4	16
12. Commerce	1	5	4	22	6	10
13. Commerce per capita	1	21	20	17	4	16
14. Industry	1	6	9	11	4	10
15. Industry per capita	1	16	22	15	3	11
16. Public Works and Electric Power (PUTL)	1	3	4	8	5	6
17. PUTL per capita	2	18	21	19	4	14
18. Communications	1	5	2	4	13	9
19. Communications per capita	1	22	16	8	11	19
20. Education	2	5	3	6	8	7
21. Education per capita	1	23	22	15	7	10
22. Health	1	2	3	10	11	8
23. Health per capita	1	19	22	24	12	17

TABLE C-e

INTERCORRELATION MATRIX INDONESIAN PROVINCES 1974-1992/241

CORRELATION COEFFICIENTS

	37	38	39	40	41	42	43	44	45	46
i	AVPDR972	AVLAD972	AVANR972	PBCUR273	PRDVR273	PBTEX273	PBDEX273	PBCIR273	PBADD273	PBCIZ273
38 AVLAD972	0.5712									
39 AVANR972	0.6212	0.4708								
40 PBCUR273	-0.0988	0.2574	0.3563							
41 PRDVR273	0.5269	-0.0684	0.7377	0.1625						
42 PBTEX273	0.0702	0.2329	0.5496	0.9584	0.4323					
43 PBDEX273	0.6103	0.5803	0.9170	0.4959	0.6027	0.6459				
44 PBCIR273	-0.2256	0.0351	0.2034	0.9587	0.1722	0.9146	0.2949			
45 PBADD273	0.4130	-0.1222	0.7581	0.1273	0.9379	0.7818	0.5293	0.1487		
46 PBCTZ273	0.0087	0.2446	-0.0280	0.0813	-0.2096	-0.0026	0.0271	0.0568	-0.2245	
47 PBAPZ273	0.0095	-0.3048	0.1809	-0.0965	0.4475	0.0345	-0.0337	0.0100	0.5671	-0.369
48 PBTPC273	0.6818	0.3009	0.1666	-0.1694	0.3281	-0.0563	0.3226	-0.2530	0.0419	-0.050
49 PBOPC273	0.7260	0.2880	0.3218	-0.0976	0.4443	0.0466	0.4792	-0.2053	0.1677	0.022
50 PBCTP273	0.5152	0.3160	-0.0725	-0.2391	0.0748	-0.2011	0.0861	-0.2907	-0.1914	0.132
51 PBATC273	0.7120	-0.0804	0.4064	-0.3175	0.7151	-0.0853	0.3271	-0.3241	0.5053	-0.161
52 AIPDIL73	0.2501	0.5833	0.5924	0.7663	0.2553	0.7801	0.7981	0.5873	0.1464	0.089
53 AIREIL73	0.3278	0.5105	0.4496	0.5226	0.2440	0.5629	0.7285	0.3367	0.0390	0.049
54 AIPOT73	0.2945	0.5659	0.5513	0.6726	0.2578	0.7039	0.7885	0.4850	0.0995	0.068
55 NONDITL	0.2028	0.6930	0.4802	0.5752	-0.0139	0.5457	0.7207	0.3390	-0.0003	0.150
56 DALATOTL	0.3020	0.7681	0.5616	0.4671	0.0037	0.4556	0.7801	0.2054	-0.0603	0.179
57 KEHATOTL	0.2499	0.7395	0.5860	0.5932	0.0248	0.5729	0.7879	0.3510	-0.0255	0.184
58 PENRTOTL	0.2980	0.7639	0.5484	0.4568	-0.0074	0.4428	0.7720	0.1939	-0.0729	0.180
59 KEUATOTL	0.2757	0.7504	0.5516	0.5251	0.0100	0.5087	0.7810	0.2702	-0.0610	0.170
60 HITUTOTL	0.1767	0.7022	0.5034	0.6596	-0.0195	0.6204	0.7442	0.4316	-0.0880	0.164
61 DAGATOTL	0.2247	0.7220	0.4962	0.5571	-0.0207	0.5202	0.7366	0.3120	-0.0961	0.161
62 PERTOTL	-0.0858	0.2497	0.2258	0.6911	0.0517	0.6516	0.3865	0.6117	0.0061	0.004
63 INDIOTL	0.0879	0.5664	0.3726	0.6205	-0.0303	0.5817	0.5777	0.4430	-0.0009	0.040
64 PUTLTOTL	-0.0039	0.4081	0.4297	0.9115	0.0990	0.8722	0.6350	0.7874	0.0371	0.037
65 HUBUTOTL	0.2090	0.6463	0.6118	0.7221	0.1517	0.7229	0.8091	0.5148	0.0710	0.110
66 PEDATOTL	-0.1352	0.1531	0.1313	0.6158	0.0306	0.5733	0.2707	0.5671	-0.0096	-0.012
67 KESEJOTL	0.2264	0.7242	0.5309	0.5780	-0.0117	0.5524	0.7668	0.3326	-0.0767	0.150
68 AGAMTOTL	0.2329	0.7210	0.5332	0.5227	0.0083	0.5082	0.7618	0.2740	-0.0574	0.139
69 TIKETOTL	0.4568	0.6725	0.8103	0.5101	0.3310	0.5813	0.8993	0.2916	0.2747	0.125
70 SOSITOTL	0.3383	0.7197	0.5815	0.5894	0.0787	0.5913	0.7941	0.3598	0.0134	0.166
71 IRANITOTL	0.3572	0.6668	0.5851	0.4633	0.0649	0.4751	0.7806	0.2285	0.0280	0.110
72 TOTLTOTL	0.1173	0.5984	0.5226	0.7621	0.0630	0.7517	0.7438	0.5872	0.0030	0.110
73 NONDHRC	0.2705	0.7557	0.5202	0.4757	-0.0275	0.5543	0.7547	0.2160	-0.0983	0.170
74 DALAPERC	0.4290	0.8549	0.4428	0.2614	-0.0737	0.2413	0.6686	-0.0034	-0.1798	0.287
75 KESAPERC	0.1906	0.8386	0.5038	0.2729	-0.0557	0.2582	0.6827	0.0102	-0.1245	0.273
76 PENRPERC	0.3240	0.7774	0.5354	0.4267	-0.0224	0.4110	0.7617	0.1601	-0.0705	0.177
77 KEUAPLSC	0.3374	0.7946	0.5156	0.3916	-0.0069	0.3824	0.7518	0.1243	-0.1056	0.150
78 HITUPIPC	0.2663	0.7667	0.5025	0.4527	-0.0560	0.4260	0.7367	0.1925	-0.1246	0.164

TABLE C-f

FACTOR SCORES

01DKIJAKARTA	1	4.66464	0.06793	-0.23956	0.03805	-0.14655	0.00501
02JAWABARAT	1	-0.24757	-1.94709	-0.28426	-0.16533	-3.99423	-0.35548
03JAWATENGGAH	1	-0.17240	-2.13766	-0.43650	-0.25685	1.00173	0.31545
04DIYOGYAKARTA	1	-0.05376	0.24418	-1.12858	-0.55168	0.29660	0.81194
05JAWATIMOR	1	-0.14865	-3.31697	-0.07702	0.10247	1.75801	-0.23892
06DIACEH	1	-0.12252	0.39732	-0.54206	-0.38516	0.60832	-2.19046
07SUMITRA	1	-0.19066	-0.22400	2.41087	-0.71564	-0.33481	0.74960
08SUMBARAT	1	-0.22780	0.45046	-0.01616	-0.97437	-0.29991	-0.03510
09RIAU	1	-0.13876	0.49160	0.26512	0.39927	0.48307	-0.88350
10JAMBI	1	-0.24783	0.54432	-0.01006	0.76851	0.08195	-0.50129
11SUMSELATAN	1	0.13387	0.08005	3.46117	0.06705	0.62143	0.11177
12LAMPUNG	1	-0.22880	0.60269	0.47637	-0.52478	-0.36952	-0.63030
13KALBARAT	1	-0.30761	0.49458	0.45783	0.41235	0.03949	-1.18335
14KALTENGAH	1	-0.37566	0.41585	-0.43203	1.69516	0.03931	-0.04773
15KALSELATAN	1	-0.11984	0.48846	-0.37695	-0.22792	0.13407	-1.17730
16KALTIMOR	1	-0.19979	0.13853	0.08115	3.54353	-0.48504	-0.19349
17SULUTARA	1	-0.23000	0.50598	0.02444	-0.39906	-0.44643	2.05459
18SULTENGAH	1	-0.15130	0.69486	-0.05101	-0.48200	-0.32911	1.03799
19SELATAN	1	-0.21237	0.01041	-0.36144	-0.62210	0.33205	-0.20913
20SULTENGGAR	1	-0.13386	0.25541	-0.90620	0.54729	0.80056	2.00776
21BALI	1	-0.18532	0.47133	-0.59809	-1.05252	-0.07261	-0.38870
22NUSABARAT	1	-0.34979	0.47181	-0.76630	-0.82909	0.15671	-0.86082
23NUSATIMOR	1	-0.39520	0.46923	-0.22767	-1.01523	-0.06462	0.37942
24MALIKU	1	-0.36302	0.33081	-0.68303	0.62828	-0.01060	1.42096

TABLE C-g

SUM OF SQUARED ROTATED FACTOR LOADINGS		
	SUM FOR EACH COLUMN	PERCENT CF TRACT
FACTOR 1	60.4804	40.85
FACTOR 2	24.0298	24.27
FACTOR 3	7.6850	7.76
FACTOR 4	6.9959	6.66
FACTOR 5	4.3121	4.36
FACTOR 6	2.9425	2.97

TABLE C-8 (cont.)

INTERCORRELATION MATRIX INDONESIAN PROVINCES

THE ROTATED MATRIX OF FACTOR LOADINGS

		FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR
ABEAKNSC	1	-0.24308	0.13015	0.44020	0.72572	0.00213	-0.12546
POPNI961	2	-0.02290	0.93129	0.03787	-0.12598	-0.07176	-0.04446
DENSTY61	3	0.58313	-0.10854	-0.10332	-0.04048	-0.01960	0.01451
POPNI972	4	-0.00400	-0.97876	0.30976	-0.12947	-0.10446	-0.04421
DENSTY71	5	0.58409	-0.08459	-0.09182	-0.03054	-0.02503	0.00860
ANPG6172	6	0.19228	0.20730	-0.24822	0.19114	-0.19326	0.07351
HOTIND66	7	0.54109	-0.66034	-0.08962	-0.12205	-0.34484	-0.09331
AUTOMN69	8	0.58380	-0.72244	0.32439	-0.12781	-0.00091	-0.02371
HAUVG712	9	0.11663	0.22059	0.69652	0.59227	-0.01241	-0.16681
TFTP6973	10	-0.06915	0.20599	0.60980	0.09688	0.08817	-0.00811
GHO5P972	11	0.24114	-0.82406	0.23534	-0.19038	-0.03705	0.08531
PHYSIC72	12	0.79132	-0.57616	0.06289	-0.06799	-0.01424	0.03061
PRPUPC71	13	-0.07390	0.29541	0.06117	-0.07629	-0.01726	0.01921
JHPUPC72	14	-0.05937	0.12765	-0.21979	0.10641	0.18972	0.81171
SVRUPC72	15	0.40417	0.07344	-0.21276	0.12890	0.09059	0.56711
LIBKPC72	16	0.57018	0.08444	-0.02690	0.13709	0.26909	0.03801
CIMAIT72	17	0.77579	-0.56346	0.16390	-0.04270	-0.00902	-0.10471
CNHKAT71	18	0.73373	0.10870	0.13420	0.42258	-0.04845	-0.19446
NPIL6973	19	0.42093	-0.72437	-0.03466	0.01362	-0.24726	-0.13231
XDOMAR72	20	-0.03655	-0.76418	-0.19137	-0.05045	0.02037	-0.33811
HAIZEP70	21	-0.09495	-0.51301	-0.10621	-0.11072	0.19322	-0.00531
CASSAP70	22	-0.10819	-0.97089	-0.00018	-0.09105	-0.00439	-0.01191
SUEEP70	23	-0.15211	-0.95534	-0.02378	-0.26953	-0.12250	0.01561
PEANUT70	24	-0.08570	-0.94808	-0.13696	-0.12558	-0.10725	-0.05621
SOYABO70	25	-0.06044	-0.84433	-0.05011	-0.04237	0.36432	-0.05101
VEGETA70	26	0.17459	-0.93578	-0.04755	-0.09482	-0.24874	-0.05121
EPUIT970	27	0.01986	-0.85520	0.04441	-0.03580	0.07902	-0.07001
TOTLRD69	28	-0.17660	-0.80048	0.35521	-0.30035	0.02989	-0.09241
MATLRD68	29	-0.30512	-0.11962	0.35769	-0.46688	-0.17182	0.05451
PROVRD68	30	-0.04699	-0.61543	0.71299	-0.16536	0.05482	-0.08951
ELCOT067	31	0.48396	-0.72435	0.01772	-0.05201	-0.17601	-0.04751
ELCOIN67	32	0.41362	-0.78997	0.02579	-0.05170	-0.41539	-0.04321
EAS.0443	33	-0.13471	-0.03684	0.87579	0.06934	0.05540	-0.12141
FATOTL63	34	-0.11226	-0.97014	0.00754	-0.13397	-0.03320	-0.04891
RICEPR70	35	-0.13637	-0.88663	0.09345	-0.17355	-0.32471	-0.13171
RICEPC70	36	0.13069	0.23000	0.36905	0.22775	-0.11238	0.61301
AVROR972	37	0.32898	0.30084	0.56429	0.57368	0.04386	-0.01741
AVLAD972	38	0.78015	0.14783	0.02638	0.14107	0.05076	0.19531
AVANB972	39	0.57441	-0.07348	0.79037	0.03000	0.04647	0.04971
PBCUR273	40	0.45865	-0.84602	0.02843	-0.04394	-0.10299	0.05541
PRDVR273	41	0.01190	-0.17292	0.85669	0.30881	-0.05985	0.00201
PBTEX273	42	0.44994	-0.80667	0.27128	0.04274	-0.11430	0.04461
PRDEX273	43	0.78613	-0.13067	0.56681	0.19024	-0.02280	-0.02601
PBCTR273	44	0.19708	-0.94512	0.01841	-0.05014	-0.08316	0.04571
PRADN273	45	-0.05038	-0.14545	0.92726	0.07164	-0.00951	0.01921
PBCT273	46	0.19159	-0.00487	-0.24839	0.14423	0.28796	0.16871
PRAD3273	47	-0.35163	-0.04745	0.56466	-0.29126	-0.13471	-0.16881
PBTPC273	48	0.17637	0.26663	0.09300	0.88873	-0.04927	0.06101
PRORC273	49	0.27699	0.23113	0.19846	0.87571	-0.03673	0.00951
PBCTP273	50	0.08913	0.32140	-0.13980	0.80908	-0.00676	0.15541
PRATC273	51	-0.14551	0.27854	0.68261	0.69319	0.00379	-0.05941
ATPDL73	52	0.81793	-0.41592	0.12298	0.11132	-0.34561	0.03021

AIPEL173	53	0.77223	-0.21865	0.02561	0.34917	-0.33302	0.31
AIPTOT173	54	0.82035	-0.33453	0.08006	0.22815	-0.34982	0.32
ACND173	55	0.93478	-0.13937	-0.07130	-0.00928	-0.35532	-0.01
DALATOTL	56	0.99519	-0.00644	-0.01272	-0.00518	-0.02887	0.01
KEMATOTL	57	0.97492	-0.16027	0.01693	-0.04725	-0.01567	-0.02
PENATOTL	58	0.99457	0.00683	-0.03088	-0.00251	-0.02487	0.00
KEMATOTL	59	0.99112	-0.07136	-0.02860	0.03229	-0.01553	0.01
HITUTOTL	60	0.95929	-0.25035	-0.07503	-0.02300	-0.04027	-0.03
DAGAYOTL	61	0.95999	-0.11037	-0.06715	-0.00858	-0.23339	-0.00
PERTOTL	62	0.44711	-0.45283	-0.05346	-0.06439	-0.73939	-0.04
INDYOTL	63	0.76868	-0.25561	-0.06771	-0.08456	-0.54109	-0.01
POTL173	64	0.70139	-0.65334	0.00279	-0.05148	-0.22090	-0.06
HUBUTOTL	65	0.91770	-0.34877	-0.08204	-0.03280	-0.13040	-0.01
PEDATOTL	66	0.32174	-0.47008	-0.07836	-0.06057	-0.77208	-0.05
KESEOTL	67	0.98255	-0.14072	-0.05150	-0.02227	-0.03997	-0.00
AGAMOTL	68	0.98362	-0.07568	-0.04383	-0.02932	-0.03946	-0.02
ITKKOTL	69	0.86398	-0.11951	0.39855	0.03018	0.02406	0.01
SOSIOTL	70	0.92480	-0.17147	0.07337	0.05038	-0.08318	0.07
TRANTOTL	71	0.90520	-0.10174	0.10053	0.03423	0.07437	-0.02
TOTL173	72	0.88646	-0.41535	-0.00601	-0.05597	-0.18243	-0.03
NONUPERC	73	0.99128	-0.05122	-0.06034	-0.00254	-0.03761	-0.00
DALAPERC	74	0.92839	0.19457	-0.11446	0.19794	0.03842	0.10
KESAPERC	75	0.93123	0.17866	-0.04878	0.17358	0.03740	0.01
PENPPERC	76	0.99312	0.03886	-0.04003	0.01515	-0.02611	0.03
KEMAPERC	77	0.97986	0.07159	-0.04952	0.09827	-0.04086	0.02
HITUPERC	78	0.99045	0.00328	-0.08408	-0.00909	-0.02786	0.00
DAGAPERC	79	0.98601	0.02917	-0.06504	0.03204	-0.02175	0.03
PERTPERC	80	0.94349	-0.05403	-0.06820	-0.00557	-0.30460	-0.02
INDYPERC	81	0.70510	-0.11715	-0.06259	-0.14100	-0.13472	0.13
POTLPERC	82	0.51477	-0.26057	-0.04669	0.10978	0.76032	-0.09
HUBUPERC	83	0.94357	0.07159	0.06272	0.18920	-0.05559	-0.00
PEDAPERC	84	0.86730	-0.08456	-0.17266	0.00844	-0.36889	0.05
KESEPERC	85	0.99071	0.05306	-0.08165	0.04215	-0.01532	0.03
AGAMPERC	86	0.88230	0.20109	-0.15825	0.10976	0.02163	0.07
ITKKPERC	87	0.76532	0.05298	0.36524	0.33577	0.01154	0.03
SOSI173	88	0.44812	0.23020	-0.08232	0.41856	0.05306	0.34
TRANTPERC	89	0.69473	0.28134	-0.02912	0.41059	0.06371	0.10
TOTLPERC	90	0.96500	0.13034	-0.02318	0.15213	0.01338	0.00
TPG2A173	91	0.45896	0.59453	0.48559	-0.00280	-0.33110	-0.06
KOTPOP72	92	0.80239	-0.57845	0.06183	-0.02981	-0.03762	-0.01
KOTPP72	93	0.92471	-0.00130	0.08425	0.23793	-0.04061	-0.03
ASCEK173	94	0.93815	-0.02948	0.02564	0.11133	-0.00880	-0.06
PDFC2273	95	-0.16145	0.28620	0.05153	0.74657	0.07560	0.04
KKOEVI73	96	0.00300	-0.98053	0.00797	-0.13168	-0.08159	-0.04
KKRDS173	97	0.04541	-0.97956	-0.00383	-0.09067	-0.08685	-0.04
KKRPS173	98	-0.05816	-0.29736	-0.12257	-0.13666	0.13200	-0.45
KKOR1173	99	-0.07110	-0.53909	-0.03758	-0.17184	0.06443	-0.06

Appendix D
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