

THE MANAGEMENT OF THE JAPANESE URBAN SYSTEM:
REGIONAL DEVELOPMENT AND REGIONAL
PLANNING IN POSTWAR JAPAN

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Preface

This paper reports on research undertaken within the context of the IIASA research task on Human Settlement Systems: Development Processes and Strategies. It is one of a series which examines the nature and significance of the Japanese urban system in a international context. Professor Glickman has written three other papers (RM-77-39, RM-77-46, RM-77-48). Professor Tatsuhiko Kawashima has written another (RM-77-25).

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17. Tatsuhiko Kawashima, *Changes in the Spatial Population Structure of Japan*, RM-77-25, June 1977.
18. Norman J. Glickman, *Growth and Change in the Japanese Urban System: The Experience of the 1970s*, RM-77-39, July 1977.

Abstract

The record of Japanese postwar economic growth and growth management through fiscal and monetary policy and national economic planning are reviewed. It is found that national planning did not greatly influence economic development. Regional planning is viewed as a component of national planning. The stages of regional planning goals and strategies and the implementation of regional planning laws are analyzed. It is found that regional planning was not very effectively implemented in the 1960s. A comparison is made with regional planning strategies in other developed countries.

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The Management of the Japanese Urban System: Regional
Development and Regional Planning in
Postwar Japan

1. REGIONAL DEVELOPMENT AND REGIONAL PLANNING IN POSTWAR JAPAN

In the postwar period, the Japanese economy experienced a very high level of economic growth as it recovered from the war and rebuilt its economy and its cities. This growth brought with it important structural change: a sharp reduction of the proportion of the population employed in primary industry and the migration of large numbers of people from rural to urban settings. We have discussed these urban development and migration patterns at greater length in Glickman [1977b, 1977c] and Glickman and McHone [1977] so that they need not be related again here. Structural change had important ramifications for Japan's regions for three principle reasons. First, there occurred some depopulation of many rural areas. These regions, which include more than a third of the nation's municipalities, were seen to be inefficient to support the remaining population which was largely old and employed in low-productivity agriculture. Second, there was great overcrowding in Japan's large cities resulting in several well-known negative externalities such as pollution and congestion. Third, there was income gap between the richer and poorer rural centers which many viewed as being too large.

The government, at various hierarchical levels, was asked to respond to these perceived problems and it did so in at least two ways. First, it formulated a series of regional plans--components of national plans--which were implemented during the postwar period. The experience of Japan in relation to national planning and regional development is the primary subject of this paper. The second method used to attack regional problems was workings of the tax system in which revenues collected by the central government were allocated to local governments, in part on the basis of need. The system of intergovernmental relations and revenue sharing

is the subject of other essays (see Gencer and Glickman [1976] and Glickman [1977a]). These two techniques should be viewed as complimentary--regional planning and public investment in relation to local public finance--although, as we argue below, it appears that the tax system was relatively more successful at accomplishing many of the goals of overall government policy towards regions.

This paper has four additional sections. In Section 2, we review the experience of national economic development and planning so that the regional planning efforts, discussed in Section 3, can be placed in proper perspective. In Section 3, we review the goals and strategies of regional planners, the implementation of plans, some of the experience with developing nodal "new" industrial cities, and the interlocking tax system. We compare the planning experience of Japan with that of some other OECD countries, especially France, in Section 4. Some conclusions are offered in Section 5.

2. POSTWAR ECONOMIC GROWTH AND NATIONAL ECONOMIC PLANNING

2.1 Nature and Sources of Postwar Growth

In this section, we outline the dimensions and sources of postwar economic growth in Japan and discuss the management of this development through central government fiscal and monetary policy and through national economic planning. During the period under study, growth of the economy was rapid and sustained and was accompanied by growth-oriented government policies. We examine the process and nature of national economic planning and see how government planners and private decision-makers interacted. As we shall note in Section 3, regional planning and regional development are best viewed within the context of national planning and national growth.

2.1.1 Nature of Economic Growth

Patrick and Rosovsky [1976] and Denison and Chung [1976] provide data and analysis of Japanese economic growth in the postwar period. They, and other commentators, show that economic growth in Japan was spectacular and was accompanied

by vast economic and social change which was structural in nature, and massive urbanization. According to Denison and Chung, the real growth of national income was 8.77 percent per year between 1953 and 1971.¹ Over the twenty year period 1952-1972, current value GNP per capita increased fifteenfold, from \$182 to \$2,823 and real wages increased by a factor of three.² Although there has been a decline in growth in the 1970s, especially after the so-called "oil shock" of 1973, Japanese growth rates continued to be higher than those of the most advanced capitalist nations.³ Full employment has been the norm for Japan, with unemployment at essentially frictional levels, ranging between 1 and 1.8 percent between 1960 and 1974. However, growth was accompanied by considerable price inflation which averaged 5 to 6 percent per year from 1960 to 1972 and which was much higher in the mid-1970s; particularly, there was a very rapid increase in the price of land during that time span.⁴ The inflation was not as burdensome to Japan, however, as to other countries since the real rate of growth was so high.

¹For the subset years of 1953-1961 and 1961-1971, average annual growth rates were 8.13 percent and 9.20 percent respectively.

²The relative strength of Japanese growth relative to other countries can be seen from the Denison and Chung [p. 96] Table 2-12 where growth rates for eleven industrial countries are calculated and comparisons with Japan undertaken. For Japan, after standardization is made for national income accounting practices, the 1953-1971 average annual GNP growth was 9.17 percent. This can be compared to 3.85 percent per year for the United States (1948-1969), 2.29 percent for the United Kingdom (1950-1962) and 7.26 percent for West Germany (1950-1962). For further analysis and comparison, see Denison and Chung [pp. 95-100]. For the time period 1960-1975, OECD [1976a] data show Japan's real annual rate of GNP growth at 8.9 percent compared to 3.2 percent for the United States, 2.4 percent for the United Kingdom, and 5.2 percent for France.

³For the first time in postwar history, real GNP declined absolutely in 1974, (by 1.7 percent), although less than in other countries.

⁴Between 1952 and 1975, the price index of urban land went up by a factor of 58. That index increased by 30 percent in 1973 alone. For further analysis of Japanese land prices and land use, see Glickman and Oguri [1976].

2.1.2 Sources of Economic Growth

The sources of long-term economic growth in Japan were many and have been reviewed extensively by several authors. Most have argued that there have been several elements in the dynamic change which occurred within the Japanese economy. First, Japan has possessed a well-educated, well-trained and hard-working labor force which was, in a significant way, underemployed in low productivity efforts, particularly in the primary sector. Over the postwar period, labor was shifted from these low-productivity jobs to one in higher-productivity areas, particularly manufacturing. A second source of growth has been the tremendous increase in the physical stock of capital. There has been a very high rate of investment in plant and equipment, with the capital stock increasing faster than the growth of the labor force.⁵ This high investment rate has been made possible by a very high rate of personal savings among Japanese families and a high level of reinvestment by Japanese firms.⁶ Thus, one of the reasons for low labor productivity--that the level of capital per worker was very low--dramatically changed in the course of the 1960s and 1970s as there was robust capital stock growth.

A third major source of growth has been technological change in Japanese industry. Some of this technology has been imported from foreign sources, but much has been developed through research and development efforts of the Japanese themselves. Fourth, the government has been supportive of growth and has fostered growth-oriented policies. The Liberal Democratic Party which has governed Japan since 1955 has been responsive to demands of its major financial backer,

⁵Investment in plant and equipment in the private business sector increased at an average annual rate of 14.4 percent between 1952 and 1973; the labor force increased by only 1.49 percent per year over roughly the same period.

⁶For example, gross private investment as a percent of GNP increased from 17.2 percent in 1952-1954 to 30.5 percent in 1970-1971. Gross private savings rose dramatically over the same time span from 16.5 percent to 31.9 percent; the latter figure is roughly twice the level for the United States; see Denison and Chung [pp. 116-119]. Among the reasons given for the high savings rate in Japan have been the low level of retirement benefits and support for the aged and the culture which encourages hard work and savings.

the business community,⁷ in providing many kinds of active policies such as subsidies, import protection and related items for the purpose of stimulating private business growth.

There are, of course, other reasons for Japanese economic growth, among them the liberation of foreign trade, the impact of greater economies of scale, the procurement from American military installations (especially during the Korean War) and the very low level of non-productive defense expenditures.⁸

An important aspect of the growth process has been the systematic starvation of the public sector for the sake of private sector activity. This is manifested in data on the public sector, both in terms of comparisons to other Japanese economic aggregates and in comparisons to the public sectors of other nations. Thus, government consumption grew at an average annual rate (in current yen terms) of 14.8 percent between 1955 and 1974 while private sector activity grew faster. For instance, gross domestic fixed capital formation (GDFCF) grew by 17.6 percent and exports by 16.1 percent. Government consumption as a proportion of GNP was relatively stable between 1955 and 1974, at around 9 percent. At the same time, GDFCF increased from 20.1 percent of GNP in 1955 to 35.0 percent in 1970 and 33.1 percent in 1974.⁹ Therefore, it appears, that private sector investment and export growth--the explicit objects of public policy--were achieved, in part at the expense of the public sector.¹⁰

⁷For an analysis of this, see Halliday [1975].

⁸Denison and Chung, in analyzing the growth of the Japanese economy during the period 1961-1971, divide the components of the growth process in the following way: additional capital represented a 26.9 percent contribution to that decade's growth rate, advances in knowledge represented 25.4 percent of the growth rate and economies of scale were responsible for 20.5 percent of Japan's rapid growth. Elements pertaining to the labor force were responsible for 28.0 percent of the growth rate; divided among greater man-hours, a more efficient allocation of labor among sectors, and a greater labor productivity due to educational factors.

⁹See Japan Bureau of Statistics Office of the Prime Minister [1976].

¹⁰Growth was also accompanied by a fall in the share of Gross National Expenditures going to private consumption. According to EPA data cited by the Japan Economic Research Center [1975], the rates of private consumption expenditures to GNE fell from 64.1 percent (1955) to 51.1 percent (1973). Japan's public sector is also dwarfed by those of other countries. Patrick and Rosovsky [Table 1-11] show that in 1971, Japan's government current expenditures as a proportion of GNP was 58 percent of similar expenditures for the United States and 42 percent of the United Kingdom.

The major share of public capital was devoted to business-oriented investments such as for ports, sewers, water supply, land reclamation, and roads; relatively little money was spent on social programs such as public housing. As Patrick and Rosovsky [p. 44] say:

Government social overhead investments in roads, sewage systems, water supplies, and public housing was relatively neglected as were welfare and social insurance programs, and defense expenditures were kept below 1 percent of GNP.

For instance, according to the Japan Economic Planning Agency [1975] industry-related public investment was 57 percent of total investment between 1959 and 1966; it fell to 51 percent by 1973, in part under the impact of protest by citizens who demanded more social (or "life-related") public spending.

2.2 Consequences of Economic Growth

The growth which occurred in postwar Japan was accompanied by a dramatic structural shift in the organization of the economy and the spatial distribution of population and employment. Patrick and Rosovsky indicate this through their analysis of the change in the proportions of the labor force and gross domestic product by sector. There was a shift from primary industry to the secondary and the tertiary sectors. For instance, between 1956 and 1971 the share of labor in the primary sector fell from 41.9 to 17.4 percent. Concomitantly, the labor force proportion in manufacturing rose from 17.7 to 27.2 percent; the tertiary sector increased from 34.1 to 47.2 percent during the same period. Within these broad categories one also sees interesting changes. For instance, there was a decline in labor-intensive light industries (such as textiles) and an increase in activity in electrical machinery (especially consumer electronics), transport, and equipment. There was, therefore, a shift from backward, low-productivity industry to more modern higher-technology sectors.¹¹

¹¹As by Bieda [1970] and other have indicated, the Japanese economy continues to be highly dualistic, with a large-scale, high-technology sector operating beside a more primitive, low-technology sector.

Another ramification of postwar growth and development was the rapid change in the spatial distribution of people and jobs within Japan. As we have noted in other studies (Glickman [1976, 1977b, 1977c]), there has been an increasing concentration of an economic activity along the Tokaido belt where heavy industry is located. Thus, there were tremendous increases in migration to the major metropolitan centers--Tokyo, Osaka, and Nagoya--during the 1950s and 1960s. This concentration reflected a desire for economically-efficient spatial allocation of production. Firms which located in the Tokaido area were able to take advantage of agglomeration economies, and to have access to both foreign and domestic markets. Although there was some spatial deconcentration beginning in the late 1960s, the period of highest economic growth (1955 to 1969) saw population increasingly clustered in a small number of large metropolitan areas. This resulted in many urban and social problems which have been associated with high density living; these, of course, include pollution, congestion, social alienation, and high and rising land prices. Such problems were heightened by the low levels of public infrastructure devoted to social problems.

The ramifications of social priorities which fostered economic growth on the quality of life can be seen by comparing changes of important social indicators with the growth of the economy. Patrick and Rosovsky [pp. 28-35] report a set of social indicators for Japan, including those for safety, health, residential environment, education and culture, work and safety and environmental pollution. We have calculated the growth rate of these indicators in Table 1 and compared them to changes in economic variables. The indicators of social well-being grew at approximately 5 percent per year during the 1960s. This was less than half of the economic growth rate. It can be argued, therefore, that governmental (and societal) priorities with respect to growth resulted in relatively slow increases in non-income components of the quality of life. This has resulted in a great amount of citizen protest over social conditions during the 1970s.

Table 1

Average Annual Growth Rates of Major Economic
and Social Indicators, 1960-1970

Gross National Expenditures (constant prices)	11.1
Private Business Investment	15.4
Safety	5.0
Health	2.3
Residential Environment	6.0
Work and Social Welfare ^a	5.5
Education ^b	3.4
Environmental Pollution ^a	0.4

Source: Patrick and Rosovsky [1976; Table 1-4] and
Japan Economic Research Center [1975] citing
data from Japan Economic Planning Agency
Annual Report on National Income Statistics.

^aFor 1960-1969.

^bUniversity, college and high school students per age
group and pupils per teacher in elementary and secondary
schools.

2.3 The Management of Growth: Macroeconomic Policy and National Economic Planning¹²

2.3.1 General Themes

From the earliest postwar governments, the major goal configuration of economic policy can be described, following Ackley and Ishi [1976], as a "triad": growth, investment and exports. Growth, especially of exports and investment, was seen as both a means of recovery from the ravages of the war, but, in later years, as the basis of national economic survival. This set of goals was proclaimed by Japan's ruling elite, but was accepted and widely admired within Japanese society. And the goal of growth was supported by strategic government policy in the macroeconomic arena: fiscal, monetary policy and national economic planning.¹³ Much less important were questions of equity. Relatively little in the way of income redistribution programs were undertaken (either through taxes or transfers) which in any way interfered with the major goal of economic growth through greater economic efficiency. Although the policy of growth management was highly successful, "the benefits of growth have not been distributed evenly," say

¹²Useful references on economic planning and macroeconomic policy include Ackley and Ishi [1976], Fukui [1972], Komiya [1975], Okita [1974], Trezise and Suzuki [1976], and Watanabe [1970].

¹³There were other government macroeconomic and micro-economic policies aimed at growth and development. These include industrial development policies which try to develop particular industries through tax and subsidy schemes. These plans are made by coordinating offices for particular industries (called genkyoku) within the government (particularly within the Ministry of International Trade and Industry) and with the private industry associations; on this subject see Komiya [especially pp. 13-17], and Trezise and Suzuki [pp. 792-797]. Ackley and Ishi [pp. 236-239] also discuss the method of "administrative guidance" which the government gives to firms and individuals in order to influence their behavior.

Patrick and Rosovsky [p. 35].¹⁴

We shall see in Section 3 that interregional equity was not an important policy goal in the regional planning process either.

2.3.2 Fiscal and Monetary Policy

Fiscal policy was used to encourage savings and investment as well as exports. Also, fiscal policy involved the government in direct investment in productive capital formation. Through most of the postwar period, fiscal policy served to restrain the economy: largely through the conservative influence of the Ministry of Finance, the government's budget has often showed a surplus until 1970, which has been used to provide credit for private investment. Monetary policy has been expansionary and has been employed to keep interest rates low and to make sure that credit was made available to the business community for the stimulation of capital-intensive, private investment; little in the way of investment funds were devoted to social capital such as housing or consumer durables, however.

¹⁴It is not clear how the income distribution has changed during the postwar period. Although Patrick and Rosovsky argue that wealth distribution has become more concentrated, they say that income distribution is probably more even than it was during the 1950s. However, their income distribution data do not include capital gains in the definition of income, thus confusing intertemporal comparisons. Data on the size distribution of income described by Sawyer [1976] show that there was some increase in income equality. The lowest quintile of families increased its share from 7.8 to 8.7 percent of income, while the upper quintile registered a declining share (from 40.2 to 38.2 percent) between 1962 and 1972. Although per capita income distribution figures are not available and international comparisons difficult, Japan (along with Sweden and Australia) had among the most egalitarian income distribution, as measured by Gini coefficients and other measures, of the ten countries discussed by Sawyer. On the other hand, Denison and Chung [pp. 86-87], show that the share of labor income in national income fell from 77.6 percent (1952-1959) to 72.7 percent (1960-1971). This might indicate a widening of the income distribution. Japan was the only country among eleven described by Denison and Chung in which the labor share fell over time and Japan's labor share was the smallest among the eleven. We shall discuss in more detail interregional income disparities in Section 3.5.3 below.

Economic planning was usefully employed to set economic goals for the society and to indicate the potential growth and distribution of the society's resources. As we shall argue, however, economic planning accomplished little that could not have been achieved by the confluence of monetary and fiscal policy, buoyant domestic aggregate demand and the rapid growth of Japan's share of world trade. It is to economic planning that we now turn.

2.3.3 National Economic Planning

National economic planning began during the American occupation and between 1949 and 1976 the Japanese government formulated ten long-term and medium-term plans.¹⁵ Throughout, the emphasis was on the promotion of economic growth, although some consideration was given to the development of social welfare measures in later plans.¹⁶ It is clear that economic planning, consistent with other governmental policy, aimed at trying to expand the private sector. For, as Okita [p.1] points out in speaking of economic planning: "Japan's economic system is not a planned economy but a predominantly private enterprise economy."

¹⁵These were: "Economic Rehabilitation Plan" (1949), "Economic Self-Support Plan" (1951), "Five Year Plan for Economic Self-Support" (1955), "New Long-Range Economic Plan" (1957), "Plan for Doubling National Income" (1960), "Medium-Term Economic Plan" (1963), "Economic and Social Development Plan" (1967), "New Economic and Social Development Plan" (1970), "Basic Economic and Social Plan" (1973), and "Economic Plan for the Second Half of the 1970's" (1976).

¹⁶There were various stages in the economic planning. The first plans put emphasis on recovery from the war and industrial development through export and investment growth. Later, some lip-service was given to (an ill-defined) "balanced growth" along with price stability and international cooperation. In still later stages, beginning in the late 1960s, social welfare, quality of life and environmental considerations were alleged to be important. Okita [1974] has called these stages the "rehabilitation," "self-supporting," and "development" stages respectively. On this subject, also see Komiya.

Each plan¹⁷ consists of a set of forecasts of the major sectors of the nation's economy (e.g., GNP, exports, investments, government spending) which have often been made using econometric techniques. In addition, especially in the later plans, there have been qualitative goals as well, although they have often been quite vague and general. For instance, in the 1973 Basic Economic and Social Plan goals for air pollution, water quality and city parks are mentioned. The latest plan, The Economic Plan for the Second Half of the 1970s, was formulated in 1976¹⁸ primarily focuses on Japan's economic situation in a transition period from a high-growth to a lower-growth society. Lower growth is expected by Japanese planners because of the significant change in the terms of trade between resource-using and resource-consuming nations. Japan is facing serious problems because it must now pay much higher prices for the resources that it imports from abroad, especially oil. This has resulted in a slowing of the growth rate of the economy and considerable price inflation since 1973. Thus, the planners predict a growth rate of only 6 percent per year in real terms between 1976 and 1980. The plan also involves a large number of qualitative targets involving social policy, although in many cases the goals are quite vague.

Scholars have paid considerable attention to the quantitative economic forecasts which have been made in connection with national planning. As we show in Table 2, the long-term

¹⁷Plans have been constructed by a secretariat which primarily consisted of the staff of the Economic Planning Agency, with the participation of other elements in the Central Government bureaucracy. In addition, there was the constant interaction with the private sector, formally through the Economic Council (consisting of thirty members from the private sector) which had to approve plans, and informally through the day-to-day consultation with private industry which characterizes Japanese political economy. Final approval of each plan has been given by the Cabinet, which has never altered draft plans.

¹⁸Japan Economic Planning Agency, [1976].

Table 2

Planned and Actual Growth of GNP
Under National Economic Plans

<u>Plan</u>	<u>Planned Growth</u>	<u>Actual Growth</u>
Five Year Plan for Economic Self Support (1955)	5.0	9.1
New Long-Range Economic Plan (1957)	5.0	10.0
Plan for Doubling National Income (1960)	7.2	10.9
Medium-Term Economic Plan (1965)	8.1	10.8
Economic and Social Development Plan (1967)	8.2	9.9
New Economic and Social Development Plan (1970)	10.6	7.5
Basic Economic and Social Plan (1973)	9.4	2.4 ^a
Economic Plan for the Second Half of the 1970s (1976)	6.0	n.a.

Source: Okita [Table 6], Japan Economic Planning
Agency [1976] and OECD [1977].

^a1973-1976 growth.

prospects of the Japanese economy have, at least until very recently, been grossly understated by plan-makers. For example, the actual growth following the 1957 New Long-Range Plan was twice the predicted rate. During the National Income Doubling Plan (begun in 1960), the planned 1970 private investment level was reached in 1961. This constant under-estimation of growth has made the plans quickly obsolete and has forced the government to make new plans often.¹⁹ Thus, Watanabe [1970] has called Japanese plans "decorative" rather than "indicative".

Moreover, the plans are not binding on either private or public decision-makers. As Komiya [pp. 11] points out: "Nobody feels much obligation to observe its [the plan's] figures." Even the planners themselves say that the plans are not compulsory. In the introduction to the 1976 plan (Japan Economic Planning Agency [1976; p.1] it is stated:

Of course, it should also be noted that our system is based upon a market economy, and the economic plan is not intended to regulate minutely all sectors of the economy, nor is there anything compulsory about it. Rather, Japanese economic plans are attempts (1) to clarify preferable directions for economic and social development in view of the long-term domestic and international outlook, (2) to indicate basic policy orientations which should be adopted by the government for achieving such development, and (3) to provide guidelines for personal and corporate behavior.

Therefore, the plans are not followed by actors in the private sector, who are anxious to exploit economic advantage that they may see, whether or not there is a plan.

¹⁹ Some observers have attributed this underestimation to poor forecasting procedures. Watanabe [1970] also attributes this to purposeful policy on the part of the government. Watanabe argues that the Ministry of Finance has been anxious to keep down the level of government spending, so that it makes bearish forecasts of the future growth of the economy. This allows the government's fiscal policy to be one of restraint as budget surpluses result. For examples of the uses of econometric analysis and models in Japan, see Kosobud and Minami [1977]. Japan Economic Planning Agency [1967, 1973], and Glickman [1972].

More surprisingly, plans are not even followed by public spending, since individual ministries determine their spending targets independently. By and large, government capital formation is determined through the annual budgetary process, which is significantly unrelated to the long-term considerations of the plans. Furthermore, the post-1960 plans all called for relative increases in social overhead capital. Yet, the ratio of public to private capital formation was virtually unchanged between 1961 and 1973.²⁰ Additionally, monetary and fiscal policy were determined outside the scope of the plan. It is especially clear that short-term monetary and fiscal policy targets dominated long-term considerations of the plans.

Though the plans set goals and targets for the private and public sectors, in an effort to reduce economic uncertainty and to help private economic planning, most scholars argue that the plans had little to do with increasing growth. This is obvious since actual growth has nearly always exceeded planned growth. Plans may have helped to reduce potential bottlenecks within the economy by showing constraints (in an input-output format) that might exist under differing scenarios of growth. But, as Ackley and Ishii say, the plans' contribution was modest in this respect since a) the plans became obsolete so quickly, b) entrepreneurs acted independently of plans, and c) MITI and other agencies had independent lines of communication with their private sector clients and did not need the plans' projections.

The major accomplishment of long-term economic planning at the national level seems to have been the exchange of information among the ministries of the government and between the private and public sectors. Thus, even though the plans have not been implemented in an optimal fashion, the planning process itself has been useful in that it has allowed the government to undertake internal discussion of policy and to signal the results of these discussions to the private sector. At the same time, the private sector participates in these deliberations and makes known its goals to the public bodies.

²⁰See Trezise and Suzuki [p. 791].

But, it should be added, such signals could be made without formal planning. The government could merely set monetary and fiscal policy--as it has done anyway--and use these macro-economic tools to guide the economy. The signals of the private sector to the public sector could (and have been) be made through the normal interaction between the two sectors, especially through the activities of the genkyoku of MITI and other ministries.

In sum, then, economic growth was accompanied by macro-economic policy that helped set the stage for further growth. It seems clear that monetary and fiscal policy were used to manage growth and that national economic planning was much less important in this process. Planning lacked "teeth" to enforce the goals of planners and private economic activity was unencumbered by planners' dictums. Also, even public sector decision-makers did not follow the outlines of the plans in making decisions. Therefore it cannot be said that economic planning had an important impact on the course of economic events in postwar Japan.

3. POSTWAR REGIONAL ECONOMIC AND LAND-USE PLANNING

3.1 Introduction

As we note in this section, regional economic planning is best viewed as a component of national economic planning and overall national economic policy. Historically, most of the national economic plans had parallel regional components which were augmented with specific regional planning laws to foster national goals. Therefore, it is difficult to comprehend regional planning in Japan without a full understanding of national planning and national policy. Hopefully, the review in Section 2 helped the reader in this regard.

During the postwar period, the major goal of regional policy was to make the spatial economy more efficient so as to foster economic growth. Efficiency, especially in the 1950s, meant taking advantage of agglomeration economies within the private sector which were particularly strong in

the Tokaido megalopolis. Therefore, public investment was spatially concentrated in that region and economic development was encouraged there, especially for heavy industry such as steel, petrochemicals and shipbuilding. The spatial distribution of production made Japan more efficient in its drive for export-induced growth. Also, concentration along the Pacific belt allowed for more efficient trading with Japan's major trading partner, the United States.

However, several regional problems resulted from these policies. First, there was the tremendous overcrowding which occurred in Tokyo and other large cities. Second, there was the need to develop backward areas such as Hokkaido and Tohoku, which were drained of migrants to the metropolitan areas. Thus there was a polarization of population into overcrowded cities, on the one hand, and depopulated rural areas on the other. Finally, there was a perceived need to reduce interregional income disparities between the metropolitan regions and the more rural, less developed ones.

In this section, we will discuss the techniques and instruments used to deal with these three principal regional problems. Government analysts have believed that these problems required a policy of decentralization of jobs and population. The Japanese government has attempted to decentralize the economy, and has had several approaches to regional development: nodal development of cities such as in the New Industrial Cities and Special Areas, large scale projects such as port development in Tohoku and elsewhere, infrastructure development through grants to local governments and direct investments by the central government, industrial relocation schemes through incentives to manufacturers, and "steering" policies in which on an informal basis the government gave advice to businessmen on where they should locate their plants. Additionally, the government has tried to foster decentralization and, particularly interregional income distribution, through complicated tax and subsidy programs.

However, despite rhetoric to the contrary, the government has never had a very strong decentralization policy. Public

investment remained heavily concentrated in regions central to the economy until the late 1960s and was not destined for the more backward regions until later. We shall show this in Section 3.3.1 below. As with the case of national planning, the "equity-versus-efficiency" trade-off has been a difficult one and, in general, regional planning efforts have been used to increase the efficiency of the economy through spatially concentrated public investment at the expense of interregional and interpersonal equity. There have been some decreases in interregional income disparities and, although there has been some decentralization of jobs and population (see Glickman [1977b]), these phenomenon have not been primarily the result of planning.

In Section 3.2 we offer some notes on regional economic planning and its relationship to national planning during the postwar period, observing the evolution of planning objectives. The implementation of regional planning with respect to public investment trends and evaluation of the New Industrial Cities and Special Areas programs are the major concerns of Section 3.3. The relationship between regional planning and the tax system is studied in Section 3.4. Some additional evidence and conclusions are offered in Section 3.5.

3.2 Regional Planning and National Economic Planning

3.2.1 Introduction

Regional planning in Japan is best viewed as an offshoot of national economic planning as it has reflected national goals and a style of planning used at a national level. Thus, regional planning has reflected the growth orientation of national plans in the early years and a somewhat more balanced approach and environmental concerns of the national planners in later years; we shall see this in the section 3.2.2 below. Additionally, regional planning was organized along "top-down" principles, with national goals and organizations²¹ dominating those on the regional and local levels.

²¹ See Miyasawa [1977] and Glickman [1972] on this issue. For analyses of Japanese organizational structures and decision-making processes in general, see Vogel [1975].

Finally, regional planning--like national planning--lacked the enforcement procedures necessary to significantly influence private decision-makers to act in ways that planners desired. As in the case of national planning, private and public decision-makers acted somewhat independently of plans.

3.2.2 Stages of Regional Development Planning²²

As with national planning, there were various stages of thinking about regional problems and regional development policy. There have been five such stages within the postwar period.²³ In this section, we review these stages and indicate how the goals and methods of the planning process changed over time. Table 3 summarizes the major national and regional planning laws. We will note the many goals set by regional planners (some of which were mutually contradictory) and the relatively large number of regions over which development funds were to be spread.

The first regional planning stage was related to the problem of restoration of Japan from the war, and occurred between 1945 and roughly 1950. The goals were to repair war damage, to employ the many repatriated Japanese returning from overseas, to sharply increase food production, and to reconstruct the industrial base and the cities.²⁴

The second phase of Japanese regional planning took place in the first half of the 1950s during the stage of economic reconstruction. In part under the impetus of the supply activity connected with the U.S. involvement in the Korean war, Japan

²²For other discussions of regional planning, see Beika [1975] and OECD [1971, 1976b].

²³There was also considerable regional planning in the prewar period. In 1941, a Planning Committee (Kikaku-in, in Japanese) was established as part of the Great East Asian National Land Planning Act. There was a 15-year time horizon to deal with national defense, industrial development, food production, and transportation. There was an effort to have a "harmonious" relationship between urban and rural activity and a regional balance in industrial location. Here, however, strategic national defense was the main policy objective.

²⁴Laws were passed in this time period including the Livelihood Protection Law (1946) the Temporary Special City and Town Planning Act (1946), and the Employment Security Act (1947).

Table 3

Major Legislation Concerning Regional Development

PERIOD	YEAR	NATIONAL COMPRE- HENSIVE PLANNING	DEVELOPMENT ACT	REGIONAL DEVELOP- MENT PLANNING ACT	OTHER COMPREHENSIVE PLANNING AND DEVE- LOPMENT ACTS
1) First Period 1945-1950	1946		Temporary Special city and town plan- ning Act (abolished 1954)		
2) Second Period 1950-1955	1950		General National Land Development Act Port Act	Hokkai-do Develop- ment Act National Capital Construction Act	
	1951		Amendment to River Act		Establishment of Kyushu Electric Company
	1952		Electric Resources Development Promo- tion Act		
	1953		Port Adjustment Promoting Act Cho, Son Annexation Promoting Act		
	1954		Land Reorganization Act		
3) Third Period	1955			Aichi Irrigation Cooperation Act	
	1956		Principle Driveaway Construction Act Water Works for Industry Act Airport Adjustment Act New Shi, Cho, Son Construction Promoting Act	National Capital Metropolitan Region Act	
	1957		National Highway Construction Act for National Land Development Specific Multi- Purpose Dam Act	Tohoku Development Act	
	1958	Five year Street Adjustment Plan	Industrial Water Channel Construc- tion Act Industrial Water Quality Protection Act		
	1959			Industrial Develop- ment Control Act in the Redy-Developed Areas of the National Capital Metropolitan Region Kyushu Development Act Special Measurements for Adjustment of Spe- cific Facilities in Port and River Act	Establishment of National Capital Transportation Co- operation

Table 3 (continued)

PERIOD	YEAR	NATIONAL COMPREHENSIVE PLANNING	DEVELOPMENT ACT	REGIONAL DEVELOPMENT PLANNING ACT	OTHER COMPREHENSIVE PLANNING AND DEVELOPMENT ACTS
4) Fourth Period	1960	Ten Year Income Doubling Plan		Shikoku Development Act Hokuriku Development Act Chugoku Development Act Tokaido Trunk Highway Act	
	1961	The Pacific Ocean Belt Plan	Emergency Measurement Act of Port Adjustment Water Resources Development Promotion Act Water Resources Cooperation Act	Expediting Industrial Development Act of under-developed Areas Temporary Measurement Act for Promotion of Coal Mining Areas	
	1962	National Comprehensive Development Plan		New Industrial City Construction Expediting Act	Establishment of Water Resources Cooperation Establishment of Committee Tokyo Bay Comprehensive Development Promotion
	1963			Kinki Region Act	Report of Committee for Temporary Administrations
	1964		River Act	Special Areas for Industrial Consolidation Expediting Act	Japan Railroad Construction Cooperation Designation of New Industrial Cities
	1966		National Trunk Highway Construction Act for National Land Development	Chubu Region Development Act	Establishment of New Tokyo International Airport Cooperation
	1967		Fundamental Act for Environmental Control		
	1968		City Planning Act		General Principles for Urban Policy of the Liberal Democratic Party
	1968		City Planning Act		General Principles for Urban Policy of the Liberal Democratic Party
5) Fifth Period	1969	New Comprehensive National Development Plan	Urban Renewal Act		
	1970		National New Trunk Railway Adjustment Act		
	1971		Induction of Industry to Agricultural Land Act		
	1972	Tanaka Plan for Building a New Japan	Industrial Relocation Expediting Act		
	1974		National Land Use Act		

began to grow. And the goals of regional planning during the period 1950 to 1955 were to contribute to the growth process: to increase employment, to increase food production with the development of underdeveloped regions, to consolidate the rapidly growing areas (in this regard, areas with great growth potential were targeted for special development), and to undertake electric power and water resources development in an effort to increase industrial production.

The major piece of legislation during that period was the Comprehensive National Land Development Act (CNDLA)²⁵ which was passed in 1950. It was Japan's first nationwide regional development law and it had economic growth as its most important goal. It also indicated a "top-down" approach to regional development planning: national laws were to be passed to deal with regional problems. The CNLDA's aims were to develop and to conserve the national land in a comprehensive manner, to have a more efficient spatial industrial distribution, to improve social welfare, to have comprehensive planning at each governmental level, to increase food production and to develop power resources, especially water power. The planners set up twenty one river basin districts²⁶ as special areas and attempted comprehensive planning for those regions. This was quite similar to the TVA model which had been implemented in the United States beginning in the 1930s.²⁷

The next period of regional development planning took place between 1955 and 1960, with very vague and general plans made with respect to regions. There was a political realization that the overcrowding in the major metropolitan areas was in some way bad and that there was a need for more efficient land utilization, implying the necessity to spatially decentralize

²⁵In Japanese, Kokudo Sogo Kaihatsu Ho

²⁶Originally 42 of Japan's 47 prefectures were selected as special areas for development under the CNDLA. This was regarded as a situation in which resources were being spread too thinly and, as a political compromise, the 21 river basins were chosen. This was still a large number of regions for a then-poor country.

²⁷Most observers argue that the CNDLA did not succeed because of administrative problems; on this subject see Beika.

the economy. However, the goal of having a more balanced distribution and a more equitable interregional distribution of income came into conflict with the goal of growth during this period of high growth for the Japanese economy. In terms of regional planning, there was an emphasis on heavy and chemical industries along the Pacific coast and there was much public works investment for industrial development near the large cities, but not in poor, remote regions.²⁸ As a result, economic efficiency goals dominated those of interregional equity.

The period from 1960 to 1969 constituted the fourth stage of regional planning in Japan. This was the era of the Income Doubling Plan in which high national growth was forecasted and attained. On the regional level, planners got more specific with respect to regions (in contrast to the more general notions of regional development in a previous period), and growth pole development was initiated. In general, the major goals of planning during the 1960s, in addition to growth pole development, was for "big project" regional development of ports and other infrastructure, the establishment of national transportation networks (especially the Shinkansen high speed railroad), the promotion of rural areas, the continuing need to decentralize population from metropolitan areas, and the reduction of income disparities among regions. However, for reasons of economic efficiency, planners also aided the development of heavy and chemical industries along the Pacific belt. As noted in Table 3, several laws were passed during that period including the Comprehensive National Development Plan (1962) and two laws which were passed in connection with the CNDP: the New Industrial City Construction Act (1962)²⁹ and the Act for Promotion of Special Areas for Industrial Development (1964).³⁰

²⁸During this period there were regional planning acts passed for National Capital Region (1956) and those for underdeveloped regions such Kyushu (1959), Tohoku (1959) and Shikoku (1960); see Japan National Capital Region Development Commission [1971].

²⁹Shin Sangyo Toshi-Sokushin Ho

³⁰Kogyo Seibi Tokubetsu Chiiki Kogyo Kaihatsu Sokushin Ho

The 1962 CNDP sought to reduce overconcentration in the major metropolitan areas and to help develop rural ones: thus, "balanced growth" in an interregional sense was the key element here. Few new organizational structures were instituted under the Plan, but there was a reshuffling of old ones for purposes of better coordination. Importantly, the notion of nodal or growth pole development was initiated as the major format for regional development. The plan conceptualized some fairly large growth centers away from Tokyo and the other large regions, and some smaller centers which were related to the larger ones through transportation and communication links; central management functions were to be concentrated in the larger growth centers.

The CNDP divided the nation into three areas. The first was for those of the "excessive concentration" (the large cities) where measures were instituted in order to restrain further growth; these included restrictions on industrial development and assistance to factories seeking to relocate.³¹ The second category of land use was for cities outside of the large cities known as "areas of adjustment". Here, the effort was to establish suburban growth centers--thus expediting metropolitan decentralization--and to induce industrial development there. The third set of areas, the "development areas", were the targets of large-scale regional development efforts. It was here that the sixteen New Industrial Cities and five Special Areas were designated in efforts to further deconcentrate the major cities and to attract industry in order to stem the flow of migration away from agricultural land. These three interrelated area-specific programs were aimed at the goal of furthering economic growth by more efficiently using land in a decentralized manner.

The final stage in postwar regional planning occurred beginning in the late 1960s and manifested itself in part as to a reaction to the high growth of the 1960s, to environmental disruption and to high and rising land prices. The goals of

³¹ Among the "push" factor which restrict development in large cities were prohibitions of factories which use more than 500 m² or schools which use more than 1500 m² of land. According to many government officials these prohibitions have not been strictly enforced.

this period were to have more effective utilization of land and better land planning, a more comfortable environment, the promotion of small cities, a more effective allocation of social overhead capital, a better balance between large cities and small cities on an interregional basis, better interregional transportation systems, an emphasis on "knowledge-intensive" industries rather than heavy and chemical industries, and the promotion of industrial parks. This era began with the 1969 New Comprehensive National Development Plan which sought to develop regional policy to 1985. The 1969 Plan was necessary because of inability of the 1962 Plan (i.e., the CNDP) and related measures to carry out regional development in the face of continued rapid economic growth. The key problems of the early 1960s--overcrowdedness and sparsely-populated rural areas--continued to plague Japanese planners and Japanese society. Also, the increased political consciousness of citizens forced planners to pay more attention, at least formally, to citizens preferences with respect to environmental conservation, pollution and congestion.

The 1969 Plan divided Japan into seven major regions³² with emphasis on large scale projects and extensions of the nodal development efforts of earlier periods. There was an effort to have more comprehensive planning and to synthesize the overall development of the national economy. Here there were attempts to integrate central management functions of government and industry, to establish better transportation systems for provincial regions, to decentralize footloose industries and to improve metropolitan region transportation systems. The most notable impact of the 1969 Plan was to place a strong emphasis on communications and transportation systems; this involved the construction of high-speed trunk railroads (such as the extensions of the Shinkansen), highways, telephone systems and tunnels. Furthermore, the New Comprehensive National Development Plan aimed at the construction of entirely new cities; this is in distinction to the 1962 plan in which

³²The regions were Hokkaido, Tohoku, the capital region, Chubu, Kinki, Chu-Shikoku, and Kyushu.

existing cities were used.

The 1969 Plan was followed in a non-legislative way in 1972 by the so-called Tanaka plan (Tanaka [1972]). The Tanaka plan, set forth during Kakuei Tanaka's campaign for the Prime Minister's position, contained several elements for changing the shape of the Japanese archipelago with regard to regional development. First, Tanaka envisioned the development of much larger super-express train and highway networks. Second, Tanaka proposed a large amount of industrial relocation to deal with the problems of overcrowding in the major cities and with the underpopulation of some of the local areas. His plan was to relocate industries from metropolitan areas to those in areas with low density of development. There would be considerable tax exemptions for relocating industry from congested to non-congested areas. Third, it was proposed that there would be large-scale development for cities with population of approximately 250,000 persons. These were growth poles in the spirit of the New Industrial Cities of the 1960s. This plan was never implemented, but it did have a substantial impact on land values in cities which were designated for rapid growth.³³

In an effort to come to grips with the problem of slow growth and rapidly rising land prices, the National Land Use Planning Act was passed in 1974. The National Land Use Planning Act instituted the National Land Agency which was organized to administer overall land use policy for Japan and consisted of elements of the central government bureaucracy formerly in the Economic Planning Agency and elsewhere; see Japan National Land Agency [1974, 1975]. The NLA was empowered to take an active role in the transaction involving land and with implementing regional development policies under

³³For example in Tsuyama in Okayama prefecture, one of the cities designated for development under the Tanaka plan the land cost in the central area of the city went from about \$ 0.65 per square foot to nearly \$ 28.00 per square foot within two years following the announcement of Tanaka's plan.

both the CNLDL and the National Land Utilization Law of 1974. Here the NLA undertakes measures to try to develop the poorly developed regions in Japan through integrated planning and to disperse development which has already taken place in and around the three major cities.³⁴

3.3 The Implementation of Regional Development Policy

3.3.1 Trends in Central Government Public Investment

As in our discussion of national planning in Section 2, the planning process and planning mechanisms were heavily influenced by the activities of the individual ministries within the national government. Although the regional plans, however vague, called for significant amounts of decentralization of public investment within the Japanese urban system, the actual distribution of public and private investment continued to be relatively centralized until the late 1960s. These patterns indicate the distribution of public investments by major regions as can be seen in Tables 4 and 5.

In Table 4, we see total public investment for each of the major regions and observe that, in 1958, the coastal part of the Tokyo metropolitan region (Coastal Kanto) had 19.3 percent of total public investment by the central government in that year. This proportion increased during the 1960s, reaching a maximum of 24.4 percent in 1970, before declining between 1970 and 1973. Similarly, the Osaka region (Coastal Kinki), increased its share of total public investment from 11.9 percent to 15.1 percent in 1965; the share going to the Nagoya (Tokai) region also increased between 1958 and 1960 although it has declined since then. Overall then, the share going to the major metropolitan regions increased from 44.0 percent of total public investment in 1958 to a maximum of 50.2 percent in 1965 before declining to 46.7 percent in 1973;³⁵ the peripheral (sub-urban) regions increased their share slightly over the period so that the non-metropolitan, non-suburban cities--those which

³⁴See Japan National Land Agency [1975a].

³⁵Miyasawa [1977] has discussed this point as well.

Table 4

Share of Total Central Government Investment
by Major Region, 1958-1973

	1958	1960	1965	1970	1971	1972	1973
Japan	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Hokkaido	7.3	6.6	6.8	7.2	7.3	6.5	6.8
Tohoku	11.8	10.9	10.7	10.4	10.0	10.5	10.6
Inland Kanto	6.5	6.7	6.0	7.2	6.8	7.1	7.2
Coastal Kanto	19.3	20.9	24.1	24.4	24.3	23.3	23.1
Tokai	12.7	15.5	11.0	10.9	10.4	10.7	10.5
Hokuriku	3.4	3.3	3.3	3.0	3.0	3.4	3.3
Inland Kinki	3.9	4.5	3.4	3.3	3.2	3.5	3.8
Coastal Kinki	11.9	11.8	15.1	14.0	14.4	13.2	13.1
Chugoku	7.0	6.4	6.2	6.0	6.5	7.0	6.5
Shikoku	4.2	3.4	3.6	3.9	3.9	3.9	3.1
Kyushu	11.9	10.0	9.7	9.9	10.3	10.9	11.4
Metropolitan	44.0	48.2	50.2	49.2	49.1	47.2	46.7
Peripheral	10.4	11.2	9.4	10.5	10.0	10.6	11.0
Others	45.6	40.6	40.3	40.3	40.9	42.3	42.3

Source: Japan Economic Planning Agency [1975].

were supposed to be receiving significantly more investment through the various planning programmes--had an actual decline in total public investment shares, from 45.6 percent (1958) to 42.3 percent (1973).

Table 5 shows public investment by the central government on a per capita basis by region and for type of investment. Once again, we see that the major metropolitan areas, at least through the end of 1960s, were still getting more public investment per capita than many of the poorer regions, although the gap was narrowing. Exceptions are the cases of Hokkaido and Shikoku which showed increasing shares of per capita public investment during the period. For industry-related investment per capita, the picture is one in which there is a relative increase in the amounts going to non-metropolitan regions. Thus, Tohoku increased its index (the Japan average was 100.0) of per capita public investment for industry from 0.98 (1959-1961) to 1.36 (1973) and Shikoku went from 0.91 to 1.08 over the same time span. At the same time, Coastal Tokyo went from 1.07 to 0.63; however, the move towards suburbanization as shown in the data for Inland Kanto (suburban Tokyo) where the index went from 0.62 to 1.08. Life-related (i.e., social welfare) investment continues to be concentrated in the major metropolitan areas such as Tokyo (1.36 index in 1973) and Osaka (1.30 index in 1973). The other regions seemed to be relatively neglected in terms of life-related public investment.

Overall then, the pattern of public investment by region continues to be relatively concentrated in the major metropolitan areas, although less so than in the 1950s. During the period of major economic growth (the 1960s) investment was highly concentrated in the more central regions despite public rhetoric which indicated that public investment should and would be decentralized. Not until the late 1960s and early 1970s did the pattern of public investment change spatially. Then, there was a considerable amount of investment in non-metropolitan regions, most of it industry-related.

Table 5

Index of Public Investment Per Capita by Major Regions by Type of Investment, 1959-1973												
	Total Public Investment			Industry-Related			Life-Related					
	1959-61	1964-66	1969-71	1973	1959-61	1964-66	1969-71	1973	1959-61	1964-66	1969-71	1973
Japan	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hokkaido	1.26	1.30	1.42	1.42	1.83	1.68	1.34	1.85	0.87	0.81	0.80	0.88
Tohoku	0.87	0.92	0.94	1.01	0.98	0.98	1.12	1.36	0.66	0.66	0.60	0.63
Inland Kanto	0.81	0.78	0.88	0.94	0.62	0.70	0.99	1.08	0.64	0.64	0.65	0.74
Coastal Kanto	1.08	1.08	1.04	0.97	1.07	0.99	0.78	0.63	1.60	1.59	1.47	1.36
Tokai	1.32	1.05	0.93	0.92	1.25	1.31	0.95	0.94	1.13	0.92	0.91	0.94
Hokuriku	1.13	1.18	1.11	1.27	1.03	1.04	1.33	1.65	0.83	0.82	0.67	0.73
Inland Kinki	1.13	0.89	0.87	0.95	1.05	0.76	0.69	0.68	0.85	1.03	1.08	1.25
Coastal Kinki	1.11	1.22	1.12	1.02	1.06	1.10	1.01	0.84	1.45	1.38	1.42	1.30
Chugoku (Sanin)	1.06	1.21	1.08	1.25	1.00	1.21	1.31	1.42	0.63	0.64	0.69	0.75
Chugoku (Sanyo)	0.83	0.82	0.89	0.94	0.91	0.77	0.93	1.02	0.76	0.70	0.76	0.72
Shikoku	0.80	0.90	1.00	1.00	0.91	1.03	1.18	1.08	0.57	0.63	0.63	0.78
Northern Kyushu	0.76	0.76	0.86	0.93	0.78	0.65	0.90	1.00	0.72	0.71	0.78	0.83
Southern Kyushu	0.70	0.79	0.86	0.93	0.75	0.81	1.05	1.21	0.55	0.56	0.51	0.56
Okinawa	-	-	-	1.33	-	-	-	2.00	-	-	-	1.05

Source: Japan Economic Planning Agency [1975].

3.3.2 The New Industrial Cities and Special Areas Programs

Nature of New Industrial Cities and Special Areas: In this section we review two related regional development programs which were devised in the early 1960s: the New Industrial Cities and Special Areas. Both were aimed at solving the principal regional problems of that era and were implemented under the 1962 National Comprehensive Development Plan.

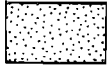
The New Industrial Cities Construction Expediting Act was passed in 1962 and 13 areas were designated³⁶ the following year; two more regions were added later (see Figure 1 for the location of New Industrial Cities). The purpose of the Act was to alleviate overconcentration of population and industry in the metropolitan areas and to increase employment in smaller areas. The idea was to promote new local cities as the development cores of regions and to have a balanced utilization of economic development. Targets were set for each nodal city with respect to industrial development, labor supply and demand, and other elements such as land use and the construction of industrial facilities. The target years of the Plan were 1975 for industrial development and 1980 for population. Provisions of the law allowed for specially-financed loans and grants to local governments for public facilities, housing, harbors and related facilities; these consisted of low-interest loans to local governments for infrastructure extensions and prefectural low-interest loans for similar types of activities. There were provisions with respect to the National Comprehensive Development Plan to coordinate the activities of several ministries with respect to the New Industrial Cities. In the NICs in Hokkaido and Tohoku there were special development

³⁶ Each New Industrial City in fact consisted of several cities, towns and villages within a region. In all, there were 94 cities and 288 towns and villages designated under this act. Therefore these were not "new towns" in the commonly understood meaning of the term, but clusters of existing municipalities. Although there was a delicate political compromise in the selection of the 15 cities, several criteria were used in selecting them. Among them, the city-region had to be relatively undeveloped, and second, the NIC had to have some established infrastructure and considerable available land and water.

Figure 1

The New Industrial Cities and the Special Areas for Industrial Development

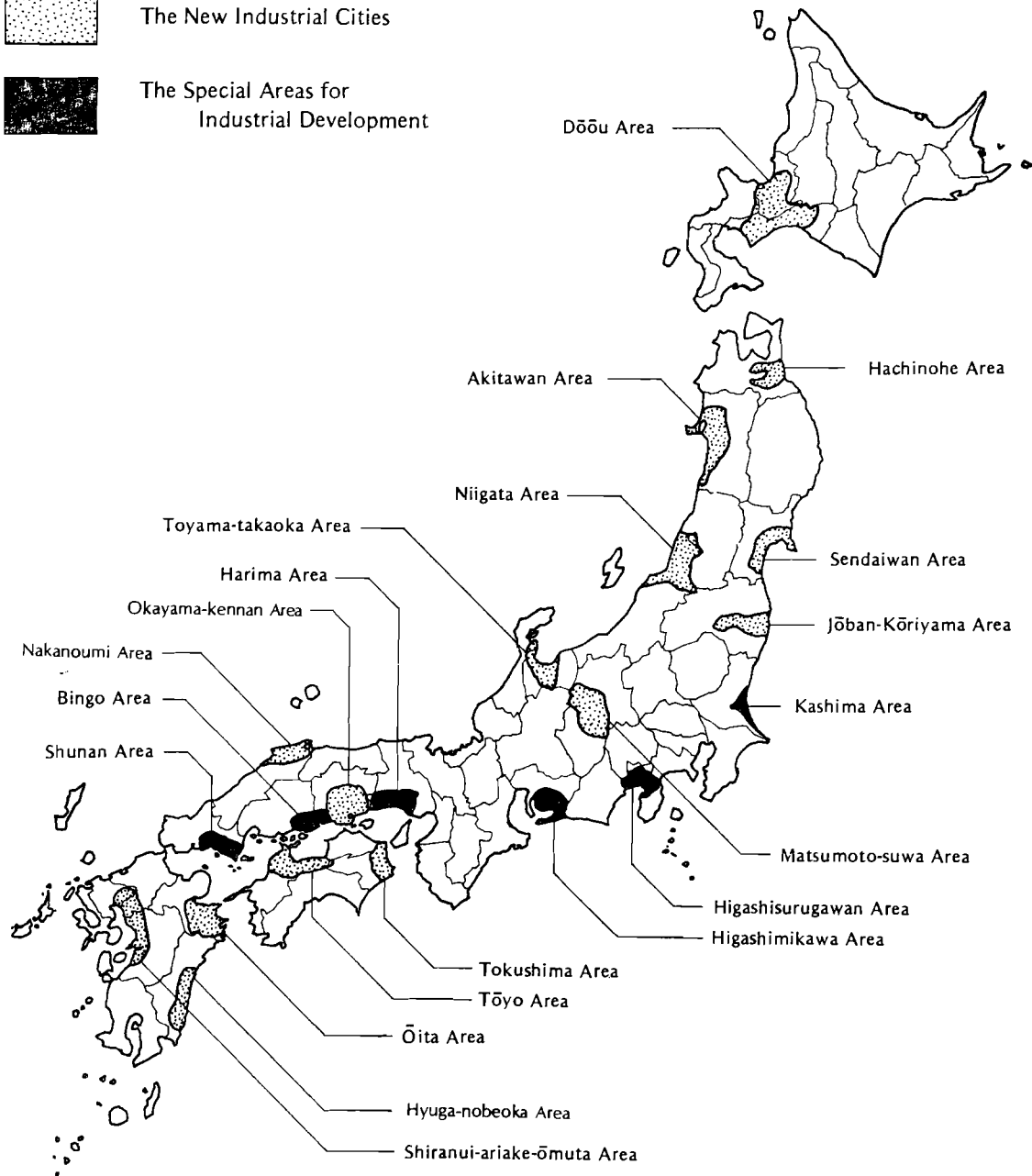
Introductory Notes:



The New Industrial Cities



The Special Areas for Industrial Development



loans as well. The planning for the NICs was also partly under supervision of private industry through the Ministry of International Trade and Industry, with supervisory committees for each New Industrial City.

The other major growth-pole law was the Special Areas for Industrial Consolidation Expediting Act of 1964. Six Special Areas (see Figure 1) were designated under this act, most of them in the Pacific Belt between the major metropolitan areas. These Special Areas (SAs) could be used to locate industry which was decentralizing from cores of the major metropolitan areas, thus increasing overall economic efficiency. As with the NICs, the SAs had targets for the consolidation of factories, for the size of a population and industrial facilities plans.

Public Investment Patterns in New Industrial Cities and Special Areas: given the designation of the NICs and SAs in the early 1960s, what was the pattern of public investment in these regions and what was the resulting rate of economic and social development? Investment plans formulated in 1965 called for approximately 4,655 trillion yen (about \$ 15.5 billion) in investments for the NICs and 2,118 trillion yen (about \$ 7.1 billion) for the SAs between 1965 and 1975. The actual cumulative investment to 1974 for the NICs was 5,959 billion yen and 2,644 trillion yen for the SAs. As shown in Table 6, the NICs and SAs accomplished 128.0 and 106.1 percent of their plans respectively. However, when one accounts for the effects of inflation which occurred between 1965 and 1975, and measures investment in real terms, it is shown that the NICs achieved only 92.1 percent of planned investment by 1974 and the SAs only 76.6 percent of investment. Furthermore, with the exception of Do-ou, Sendai-wan and Niigata, none of the individual NICs or SAs achieved planned investment targets. Some, such as Toyo (56.8 percent of planned investment) and Shunan (56.6 percent) showed relatively little accomplishment of planned goals.

Table 6

Planned and Actual Public Investment in New Industrial Cities and Special Areas 1965-1974						
(real figures in 1965 billions of yen)						
	Amount of the basic plan		1974 Cumulative		Percent achievement:	
	Current value	Real value	Current value	Real value	of the basic plan	Real value
				Total	Current value	
New Industrial Cities						
Do-ou	722	760	1,449	1,071	201	141
Hochinohe	167	175	197	149	118	85
Sendai-wan	360	379	499	381	138	101
Akita-wan	157	165	189	143	120	87
Joban Koriyam	330	347	369	272	112	78
Niigata	332	350	459	352	138	100
Matsumoto-Suwa	224	236	265	200	118	85
Toyama-Takooka	324	341	359	280	111	82
Nakonoumi	190	200	239	182	126	91
Okayama Kennan	589	620	579	445	98	72
Tokushima	228	240	287	219	126	91
Toyo	211	222	163	126	77	57
Oita	241	253	279	213	116	84
Hyuga Nobeoka	140	148	140	106	100	72
Shiranui-Ariake-Omuta	439	462	488	371	111	80
Total	4,655	4,900	5,959	4,511	128	92
Special Areas						
Kashima	189	199	258	194	136	97
Higashi-suruga wan	377	397	303	238	80	60
Higashi-mikawa	286	301	280	213	98	71
Harima	688	724	812	609	118	84
Bingo	331	349	406	307	123	88
Shunan	247	260	189	147	77	57
Total	2,118	2,230	2,248	1,709	106	77

Source: Japan National Land Agency [1975b]

In addition to the fact that the planned level investment by authorities was not reached, it is clear that if one looks at public investment per capita for the New Industrial Cities and Special Areas that Japan's lack of a fundamental industrial decentralization policy becomes even more clear. In Table 7 we see an index of public investment per capita for all of the NICs and SAs as well as for the major regions in Japan for 1965, 1970 and 1973. This index (the average per capita level for Japan is 100.0) shows the level of per capita investment for all the NICs for 1965 was 81.0, increasing to 93.5 by 1973; for the Special Areas, the index went from 71.0 to 89.2. This means that even though the central government claimed that it was investing heavily in these underdeveloped areas, the per capita investment index shows that this is not the case: levels of public investment per capita were much lower in the NICs and SAs than in all of Japan. Furthermore, if one compares individual NICs and SAs with the major regions in which they are located, one sees that the level of public investment per capita in the NICs is even lower than in the larger regions in most cases. For instance, all five NICs in Tohoku have indexes for 1973 well below the average for that region.

Population and Output Growth: the New Industrial Cities failed to achieve their target levels of population growth as shown in Table 8. It was planned to have 12.3 million people in 1970 and 13.4 million people in 1975 within the NICs. However, according to available data³⁷ the population of the New Industrial Cities reached only 11.2 million people in 1970 and 11.8 million people in 1975, or 89.9 percent and 88.0 percent of planned population respectively. None of the individual NICs achieved their planned growth by 1975, only a few of the NICs, (Sendai-wan, Do-ou and Nakanoumi) coming close. Many others lagged significantly from planned totals, however.

37

See sources to Table 8.

Table 7
Public Investment Index Per Capita By Major Regions,
New Industrial Cities and Special Areas

	1965	1970	1973
All Japan	100.0	100.0	100.0
Hokkaido	129.0	143.8	140.5
Tohoku	91.4	94.4	101.2
Kanto (Inland)	74.5	92.1	93.7
Kanto (Coastal)	112.9	104.8	96.9
Tokai	99.2	95.7	92.1
Hokuriku	117.3	112.0	125.2
Kinki (Inland)	89.7	84.1	96.7
Kinki (Coastal)	123.5	108.7	101.9
Chugoku	89.3	89.4	98.7
Shikoku	87.8	102.3	100.0
Kyushu	77.3	84.8	94.9
New Industrial Cities			
Do-ou ^a	101.2	115.8	188.6
Hachinohe ^b	92.6	79.4	89.9
Sendai wan ^b	98.8	82.2	87.8
Akita wan ^b	91.6	111.3	94.6
Joban Koriyama ^b	59.8	61.8	84.3
Niigata ^b	78.2	98.4	78.6
Matsumoto Suwa ^c	76.8	74.7	72.0
Toyama-Takaoka ^d	87.0	84.4	62.2
Nakanoumie ^e	64.8	67.1	69.9
Okayama-minami ^e	81.8	92.9	81.9
Tokushima ^f	75.7	124.3	88.4
Toyof ^f	50.7	76.3	38.5
Oita ^g	120.6	85.2	70.3
Hyuga-Nobeoka ^g	124.5	85.4	93.7
Shiranui-Ariake ^g	52.7	50.1	53.9
All New Industrial Cities	81.0	85.1	93.5
Special Areas			
Kashima ^c	122.2	321.9	162.2
Higashi-suruga wan ^h	57.4	73.8	42.4
Higashi-mikawa ^h	64.0	98.9	78.5
Harimai ⁱ	75.0	82.3	124.0
Bingo ^e	58.6	92.2	79.7
Shunan ^e	93.7	88.6	70.8
All S.A.	71.0	98.1	89.2

Source: Japan Economic Planning Agency [1975] and Japan National Land Agency [1975b].

^aHokkaido region

^bTohoku region

^cInland Kanto

^dHokuriku region

^eChugoku region

^fShikoku region

^gKyushu region

^hTokai region

ⁱInland Kinki region

Table 8

Planned and Actual Population of New Industrial Cities,

1960-1975 (000)

New Industrial Cities	Actual Population				Planned Population	
	1960	1965	1970	1975	1970	1975
Do-ou	1,292	1,558	1,804	2,057	1,841	2,069
Hachinohe	325	344	359	372	390	440
Sendai-wan	800	866	957	1,015	950	1,050
Akita-wan	298	306	322	347	383	430
Joban-Koriyama	823	810	811	831	971	1,011
Niigata	697	720	746	779	840	900
Matsumoto-Suwa	526	537	554	579	604	670
Toyama-Takaoka	750	750	764	802	887	917
Nakanoumi	540	536	543	656	562	611
Okayama-minami	896	942	1,052	1,176	1,266	1,385
Tokushima	454	460	471	514	537	619
Toyo	486	477	477	497	579	638
Oita	446	466	497	551	560	640
Hyuga-Nobeoka	214	220	233	239	323	359
Shiranui-Ariake-Omuta	1,514	1,455	1,437	1,463	1,560	1,662
Total	10,060	10,448	11,016	11,787	12,262	13,401

Source: Japanese Population Census for 1960, 1965, 1970 and 1975, and Japan Ministry of Home Affairs [1975b] and Japan National Land Agency [1975].

In relation to the nation, the share of population in the New Industrial Cities increased by only 0.1 percent between 1965 and 1975 and, therefore, no clear trend towards decentralization towards New Industrial Cities from other regions can be observed.

Furthermore, interesting patterns can be seen in the spatial development within the NICs. Our data (see Table 9) indicate that of the population growth which did occur within the NICs, 77.1 percent took place within the large cities. The NICs' rural portions either had little population growth or declined absolutely. The latter is the case in Akita-wan, Joban-Koriyama and Chukai. Thus, in some cases, depopulation of nearby areas occurred within the New Industrial Cities. It can also be shown that the NICs often grew more slowly than most of the cities in Table 10 where comparisons are made between 1970-1975 population growth of the NICs, the prefectures in which they are located, and all cities in those prefectures. Although the NICs grew faster than their predominantly rural prefectures in most cases, in seven of the fifteen NICs there was faster growth among the other cities in the prefectures.

Another question which we investigated was whether or not the NIC cities were growing faster than other cities of similar characteristics which were not specially-designated for development. It could be argued, for instance, that since public investment was not heavily concentrated in the NICs, that there would be no particular reason for them to grow faster than other cities. We thus selected 19 cities of similar size and population characteristics to the NICs and compared the sample cities with the NIC core cities for 1960 to 1975. The characteristics used for selecting the cities to be paired with the NICs were as follows: (1) the selected cities should have population sizes similar to the NIC core cities; (2) the cities should be in the same prefecture or same major region as the NIC (this would help us select cities with similar socio-economic characteristics); (3) the compared cities should have similar access to major markets as measured by distance and travel time to Tokyo or Osaka; and (4) the cities should have

Table 9

Population Growth of Major Cities within
New Industrial Cities, 1965-1975

<u>New Industrial City</u>	<u>Major City</u>	<u>Increase in Population, 1965-1975 (000)</u>		<u>Percentage Increase of Population Accounted for by Major City</u>
		<u>New Industrial City</u>	<u>Major City</u>	
Do-ou	Sapporo	574.0	445.7	77.5
Hachinohe	Hachinohe	41.5	34.8	83.9
Sendai-wan	Sendai	192.9	134.6	79.6
Akita-wan	Akita	40.7	44.7	109.6
Joban-Koriyama	Iwaki and Koriyama	8.0	37.7	471.3
Niigata	Niigata	95.4	66.9	70.1
Matsumoto-Suwa	Matsumoto	45.8	31.5	68.8
Toyama-Takaoka	Toyama	52.8	34.2	64.8
Okayama-minami	Okayama	278.5	221.7	79.6
Tokushima	Tokushima	81.2	26.0	32.0
Toyo	Niihama	18.1	6.5	35.9
Oita	Oita	96.7	93.8	97.0
Hyuga-Nobeoka	Nobeoka	13.2	10.5	79.5
Shiranui-Ariake-Omuta	Kumamoto	106.0	81.0	76.4
Chukai	Yonago and Matsue	29.4	31.2	106.1
All New Industrial Cities		1,674.2	1,300.8	77.7

Source: Japanese Population Census for 1965, 1970 and 1975.

Table 10

Comparison of Population Growth Rates between
New Industrial Cities and their Prefectures,
1970-1975

<u>New Industrial City</u>	<u>Percent Change</u>	<u>Prefecture</u>	<u>Percent Change</u>	
			<u>Cities in Prefecture</u>	<u>Entire Prefecture</u>
Doou	16.8	Hokkaido	8.2	3.0
Hachinohe	5.8	Aomori	7.2	2.9
Sendai-wan	10.7	Miyagi	13.4	7.5
Akita wan	7.5	Akita	3.2	-0.7
Joban Koriyama	0.9	Fukushima	4.8	1.3
Niigata	6.2	Niigata	4.0	1.3
Matsumato Suwa	5.3	Nagano	5.2	3.1
Toyama-Tokaoka	5.1	Toyama	4.8	4.0
Chukai	4.1	Tottori and Shimane	4.8	0.6
Okayama Kennan	12.9	Okayama	8.5	6.3
Tokushima	6.5	Tokushima	5.4	1.8
Toyo	3.8	Ehime	6.6	3.3
Oita	13.3	Oita	8.4	3.0
Hyuga Nobeoka	4.6	Miyazaki	6.0	3.2
Shironuhi-Ariake and Omuta	2.3	Fukuoka and Kumamoto	6.3	4.9

similar historical and cultural characteristics.³⁸ The results of our calculations are given in Table 11 where the distribution of comparisons of growth rates between pairs of cities is tabulated. Although the NICs showed more rapid growth in the 1965-1970 period (in 11 of 19 comparisons), this is not the case. Between 1970 and 1975 the NICs grew faster than their comparative pair in only 8 cases. The other cities grew faster in 8 cases and little difference could be seen in the remaining 3. Since the effects of a public investment program should be felt with some lag, we would have assumed that, if the NIC program were effective, NIC relative growth rates would be greater during the later period. This was not the case. In sum, our evidence indicates that the NICs did not grow any faster than cities of similar characteristics between 1965 and 1975.

Table 12 shows the growth of output of the NICs since their inception. Industrial shipments grew from about 23.9 billion yen to 122.5 billion yen between 1965 and 1974, 17.8 percent per year; the SAs growth rate was 18.0 percent. This represents a faster rate of growth than the average for Japan (15.8 percent per year) and therefore the share of the NICs and SAs development as a percentage of Japan increased from 14.1 percent to 16.9 percent.³⁹

Most of the industrial development in the New Industrial Cities and Special Areas was in the heavy and chemical industries as shown in Table 13. The percentage of all industrial production in those industries was 54.2 percent in 1960 increasing to 61.6 percent by 1974. During that same period the percentage of manufacturing in heavy and chemical industries for all of Japan remained relatively constant. Moreover, since this production took place in heavily capital-intensive industry, employment increased relatively little during the period re-

³⁸For detailed discussion of these cities, see Tanifuji and Nozu [1977].

³⁹However, there was a large (unexplained) jump in this share in the last year of the period, 1974, which accounts for a large share of this increase.

Table 11

Comparison between Population Growth Rates of
New Industrial Cities and other Cities of
Similar Characteristics, 1960-1975

	<u>1960-1965</u>	<u>1965-1970</u>	<u>1970-1975</u>
New Industrial City Grew Faster ^a	7	11	8
Non-New Industrial City Grew Faster ^a	6	4	8
Little Difference in Growth Rates ^b	6	4	3

^aThe city which grew at least 1 percent faster (over the five year period) was considered faster growing.

^bNeither city grew more than 1 percent faster than the other.

Source: Tarifuji and Nozu [1977].

Table 12

Share of Industrial Shipments of New Industrial Cities and Special Areas

in Relation to All Japan, 1965-1974

	Value of Industrial Shipment in Japan	New Industrial Cities		Special Areas		Percent Share of New Indus- trial Cities and Special Areas
		Value of Shipments	Percent Share	Value of Shipments	Percent Share	
1965	294,889	23,888	8.1	17,780	6.0	14.1
1966	342,019	28,227	8.2	20,459	6.0	14.2
1967	411,622	33,580	8.1	25,443	6.2	14.3
1968	482,785	39,146	8.1	29,680	6.2	14.3
1969	581,068	47,141	8.1	36,681	6.3	14.4
1970	690,348	57,304	8.3	45,332	6.6	14.9
1971	728,951	62,004	8.5	49,660	6.8	15.3
1972	809,619	68,829	8.5	54,630	6.7	15.2
1973	1,037,286	90,746	8.7	70,340	6.8	15.5
1974	1,275,746	122,499	9.6	93,107	7.3	16.9

Source: Japan National Land Agency, [1975b].

Table 13

Percent of Heavy and Chemical Industries
in All Manufacturing for New Industrial Cities,
Special Areas and All Japan, 1960-1974

Industry	1960	1965	1970	1974
NEW INDUSTRIAL CITIES				
Chemical and Allied	17.9%	16.4%	13.3%	12.8%
Petroleum and Coal	3.2%	5.1%	5.3%	10.2%
Iron and Steel	9.2%	7.5%	10.7%	11.3%
Non-Ferrous Metals	7.1%	5.7%	6.9%	6.2%
Machinery	13.2%	14.6%	17.8%	15.9%
Total	50.5%	49.2%	53.9%	56.4%
SPECIAL AREAS				
Chemical and Allied	12.2%	13.1%	13.7%	12.5%
Petroleum and Coal	7.4%	4.9%	2.6%	7.2%
Iron and Steel	15.9%	14.9%	19.2%	21.8%
Non-Ferrous Metals	2.7%	3.2%	3.4%	2.8%
Machinery	20.8%	23.9%	26.8%	23.9%
Total	59.0%	60.0%	65.8%	68.4%
NEW INDUSTRIAL CITIES AND SPECIAL AREAS				
Chemical and Allied	15.4%	15.0%	13.5%	12.7%
Petroleum and Coal	5.0%	5.0%	4.1%	8.9%
Iron and Steel	12.1%	10.7%	14.4%	15.8%
Non-Ferrous Metals	5.2%	4.6%	5.4%	4.7%
Machinery	16.5%	18.6%	21.8%	19.4%
Total	54.2%	53.8%	59.1%	61.6%
ALL JAPAN				
Chemical and Allied	N.A.	9.3%	9.2%	9.1%
Petroleum and Coal	N.A.	2.9%	3.0%	6.0%
Iron and Steel	N.A.	9.5%	10.8%	1.4%
Non-Ferrous Metals	N.A.	4.1%	4.9%	4.4%
Machinery	N.A.	27.5%	35.3%	33.1%
Total	N.A.	53.3%	63.2%	54.0%

Source: Japan National Agency, [1975]

lative to output. This is one of the reasons that population did not grow very quickly during the period under study. The NICs and SAs did not produce new jobs commensurate with their output levels. The lack of buoyant employment growth was one reason for public complaints about these programs during recent years. Citizens felt that they had gained relatively little from the NIC- and SA-related factories in their communities. Problems of air and water pollution in connection with these factories were another reason for much public dissatisfaction.

3.4 Summary Evaluation of New Industrial Cities and Special Areas Programs

It should be clear from this analysis that little in the way of realization of public goals with regard to regional policy were met by these programs. The central government has not had a strong decentralization policy with respect to public investment in general and has not invested heavily in these particular city-regions either. Public investment did not reach planned levels in real terms and there was less invested on a per capita basis there than the average for all of Japan. Low public investment was accompanied by the failure to meet population goals. This was, in part, due to the low employment-intensity of investment. Although output in the NICs and SAs increased more rapidly than for the nation as a whole, it did not increase employment opportunities in regions away from the metropolitan centers sufficiently to induce very much migration.

Yet some of the NICs and SAs did grow significantly. What were the characteristics of successful growth poles? An example is given by Lo [1975] in his study of Okayama-Kennan whose major city is Mizushima. He shows that Mizushima had several characteristics which made for a favorable growth environment. First, there was considerable economic development activity prior to its designation as a NIC which was locally-determined and planned. Second, the prefectural government allowed significant

subsidies to new plants locating in Mizushima.⁴⁰ Third, there was the active cooperation of a few very large corporations who wanted to locate there anyway. Fourth, there was good transportation access to major markets. These ingredients were simply not present in many of the other NICs and SAs.

3.5 Regional Developing Policy and Changes in the Interregional Distribution of Population and Income

3.5.1 Introduction

We have reviewed Japanese regional development policy and seen several underlying themes, strategies and assumptions. In the mid-1950s many policy-makers concluded that big cities were too big and that a deconcentration policy was essential. Deconcentration was also beneficial with regard to reducing income differentials between rich and poor regions. Therefore the policies we reviewed in this section were put into effect: growth poles, decentralized public investment, regulations constraining new factories within Tokyo and other large cities. In the 1960s, population began to decentralize and income differences among regions decreased. A simplistic view of these phenomena would hold that regional policy "worked". In fact, this may not be true. Not only was the policy ineffective, but many of its underlying assumptions might have been wrong. We review the assumptions, the phenomena, and the policies below.

⁴⁰ The question of proper incentives to encourage location of plants is an important one here. According to an EPA [1975] survey, the major reasons for firms locating in NICs are as follows: availability of land (16.4 percent of those interviewed), availability of labor (11.5 percent) and closeness to markets (9.3 percent). For the SAs 20.9 percent considered land availability the most important factor, followed by proximity to related factories (either owned by the same company or a trading partner) and nearness to markets. Tax incentives, often noted as important inducements to firms locating in the NICs and SAs, were relatively unimportant according to the survey: this factor was rated the eleventh most important locating factor among NIC firms and sixteenth among SA companies. In the case of Mizushima, however, the subsidies were far more than for the average growth pole.

3.5.2 Some Assumptions Underlying Japanese Regional Development Policy

First, planners assumed that cities were too big and needed deconcentration. Although, the Tokyo region has grown to its present size of nearly 25 million (see Glickman [1977b] in what sense can it and other regions be said to be "too big"? For instance Kabaya [1971] argues for both theoretical and empirical reasons that Japanese cities may not have been "too" big from the standpoint of economic efficiency. Kabaya says that although the costs of per capita public services rise with city-size, production per worker increases faster. For 1965, Kabaya shows that mean per capita income rises smoothly and nearly doubles as one goes from the least dense to the most dense prefecture. At the same time, the curve showing per capita government expenditure is U-shaped, but shallow. Therefore, according to Kabaya [p. 29], the difference between income and expenditure increases "in a clearly progressive way with population density." Therefore the denser prefectures are in this sense more efficient./ Although these results are not completely conclusive, they certainly question the commonly-held view that Japanese cities are too big.

Of course there are important negative externalities in the large cities such as pollution and congestion and they are a source of concern for planners and the public. But the cities-are-too-big argument needs to be reconsidered on the grounds of possible greater efficiency of larger centers. Such a reconsideration might still lead analysts to say that Tokyo is too big, but further study of this issue should be undertaken. It seems not to have been seriously considered by the planners in the late 1950s and early 1960s when deconcentration policies were begun.⁴¹

A second assumption is that by developing underdeveloped regions, interregional and, therefore, interpersonal income

⁴¹ This issue has been hotly debated in academic circles. See for instance, the exchange between Mera [1973, 1975] and Borukhow [1975]. See also Alonso [1971], Hirsch [1968], Neutze [1967], Thompson [1968], and Wingo [1972].

differentials would be reduced. That is, Japanese planners assumed that "place" equity (i.e., the development of poor regions relative to rich regions) implied "people" equity (i.e., reductions of income differences among individuals).

This assumption is not necessarily true either. For if people from poor regions are able to migrate to richer regions and thereby better themselves, interpersonal equity could be attained without any change in interregional, i.e., place, equity. This too has occurred in postwar Japan as Kabaya has pointed out. The real question is whether the development of lagging regions will be more effective in helping its residents than encouraging outmigration to richer, more productive regions. The empirical evidence for Japan is not conclusive on this point. Kabaya [pp. 19-21] shows that during the early 1960s many lagging regions which had outmigration also had high growth rates of per capita income and that prefectures with net immigration had lower rates of income growth; he does not postulate a causal relationship between migration and regional income growth, however.

In the senses noted here, it is unclear that either of the major assumptions underlying regional planning efforts were well-founded. Even in the terms of the planners, which meant emphasis on the promotion of greater economy wide efficiency, encouraging outmigration to more productive, i.e., denser, regions might have made the economy more efficient. This, in turn, would have permitted the resulting extra income to be redistributed to poorer people producing greater interpersonal equity. Social costs--both the negative externalities in the big cities and those of the migrants--would remain but micro-economic policy could have been used to reduce the interpersonal effects. This was never done, nor is there evidence that it was ever seriously considered. The point here is that other approaches to policy could have been followed which were based on other assumptions about equity, efficiency and externalities.

3.5.3 The Evidence Concerning the Effects of Regional Policy on Population and Income Distribution

To what extent has regional policy been successful? The evidence that we have advanced in Sections 3.3 and 3.4 concluded that the growth pole policy of Japan in the 1960s --which stressed "place" prosperity over "people" prosperity-- failed in any meaningful way to help decentralize population and employment. Similarly, we have shown that regional investment policy in general did little to influence the spatial distribution of economic activity; see, for instance, Section 3.2.2. Until the late 1960s, there was relatively little public investment in lagging regions.

Yet some population deconcentration was taking place during that timeperiod. As we have shown in Glickman [1977b]⁴² there was a sharp decline in outmigration from lagging regions in the 1960s. In fact, the peak year of immigration to the three largest metropolitan areas was 1962. Mera [1976] shows that the number of rapidly depopulating prefectures fell from 36 in 1953 to 28 in 1965 to only 3 in 1974. It is important to understand that this trend to population deconcentration began prior to most of the central government's deconcentration efforts were put into effect. We have noted this in Glickman [1977b, Figure 2]. Therefore it is difficult to argue that it was government policy which produced this change in migration patterns.

A second phenomenon--one related to population deconcentration--has been declining interregional income inequality over time. Mera [1976] indicates that one index of income disparity (the difference between the highest and lowest indices of prefectural per capita income) fell by 30 percent between 1962 and 1972. This, he argues, has reduced the propensity for people in poor regions to migrate to richer ones. This, then, is another reason for relative deconcentration. Again, greater equity in cross-regional incomes predated most government policy.

⁴² See also Vining [1977], Vining and Kontuly [1976, 1977], Kuroda [1969, 1977], Unno [1975], and Mera [1976].

One interesting question involves the reason for this decline in income disparities across Japanese regions. Was it because of income redistribution programs of the government? Or, as some have argued, has it occurred because of the decentralization of industry? Sakashita [1976] helps us answer these questions. He calculates the coefficient of variation (the standard deviation divided by the mean) for three types of prefectural-based income data. First, there is prefectural income per capita, a measure which includes wages and salaries as well as the returns from capital and transfer income from the government; this is given by the term v_x in Table 14. His second measure is per capita personal income which excludes returns from capital investments (v_q in Table 14). Third, he measures production income per employee, the sum of value added divided by the number of workers. Sakashita notes that all three measures of income inequality have decreased through time, but that the personal income disparity, as measured by v_q , is decreasing the fastest. Most important for our analysis here, is that v_y , (production income) has decreased relatively little, from 0.28 to 0.26 from 1960 to 1971. Therefore, it is not through the decentralization of jobs (which would produce more income in outlying areas and reduce the size of v_y) that incomes differentials have decreased. As we can see from Table 14, before 1970 v_x was greater than v_y ; that is, the disparity of prefectural income was greater than the disparity in production income. But the opposite was true after 1970: there has been the unchanging relative productivity per worker interregionally, while there has been a rapid decrease in the disparity of individual incomes. The reduction in income differentials, which is shown by the large fall in v_x and v_q (23.7 and 30.9 percent respectively for 1960-1971) can better be explained by the tax redistribution policies of the central government in which poorer regions are aided. The government redistribution program can be seen in two steps according to Sakashita. First, there is the redistribution from rich to poor regions through subsidies and tax programs. Second, there is redistribution within regions by subsidies from prefectural to local government.

Table 14

Changing Interregional Income Disparities,
1956-1972

Coefficient of Variation

Year	Prefectural Income per Capita (V_x)	Personal Income per Capita (V_q)	Production Income per Employee (V_y)
1956	0.3276	0.2704	NA
1960	0.3440	0.2648	0.2832
1965	0.2815	0.2268	0.2580
1971	0.2542	0.1921	0.2654
1972	0.2499	0.1869	NA
Percent Decline 1960-1971	23.71	30.88	6.29

The importance of tax and subsidy programs in reducing interregional fiscal disparities is shown by us in Gencer and Glickman [1976] and Glickman [1977a]. There, detailed analyses of intergovernmental revenue flows are undertaken and the subsidization of relatively poor cities by the relatively rich is demonstrated. For instance, the Ministry of Home Affairs calculates "standard" financial needs and revenues for localities which favor the poorer cities in the distribution of funds. In general we found that poorer cities were favored by the central government with regard to the disbursement of non-earmarked revenues, treasury disbursements and prefectural disbursements. To the extent that relative advances in local government finance helped individuals (for instance, through a smaller local tax burden), then the goal interpersonal equity was advanced.

The Glickman [1977a] analysis also shows the effects of intergovernmental transfers on special development programs such as the NICs and SAs. For instance, a regression which explains the level of central government treasury disbursement to large cities in 1965-1970 includes a positive coefficient for a dummy variable for those cities which were either NICs or SAs. That is, cities so designated received relatively more treasury disbursements. The special district dummy variable is also an independent variable in explaining the level of bonds that a municipality may issue.

These results, coupled with those of Sakashita, indicate another method of reducing interregional income disparities: through the intergovernmental revenue system which tend to favor the poorer regions.

However, our analysis also indicates that the NICs were not overwhelming recipients of central government revenues within the intergovernmental transfers system. This is shown in Table 15 where we present share quotients for the NIC central cities. A share quotient gives the relative level of revenues for each category compared to the level for all cities in our sample; therefore, a share quotient of greater than unity indicates a greater-than-average share of a

Table 15

Share Quotients for Revenue Sources for New Industrial Cities, 1970

	<u>Local Taxes</u>	<u>Local Bonds</u>	<u>Treasury Disbursements</u>	<u>Prefectural Disbursement</u>	<u>Non-earmarked Revenues</u>
Sapporo	0.71	1.85	1.60	1.14	1.43
Sendai	1.12	1.82	1.08	0.62	0.91
Akita	1.13	0.49	0.89	0.86	2.06
Koriyama	0.68	2.22	0.79	0.89	3.34
Niigata	1.18	1.24	0.86	0.55	0.92
Toyama	1.08	1.47	0.70	1.08	0.56
Takaoka	1.22	0.77	0.90	1.28	1.23
Matsumoto	1.05	1.17	0.83	1.12	1.21
Yonago	0.81	0.62	0.19	1.34	2.37
Matsue	0.85	0.81	1.15	1.49	2.13
Okayama	1.10	1.17	1.22	0.69	1.21
Niihama	1.42	1.17	1.16	1.03	0.15
Kumamoto	0.85	0.56	1.68	0.55	1.86
Oita	0.98	0.89	1.66	0.95	1.32
Nobeoka	0.96	1.11	1.40	0.89	1.77

Source: Gencer and Glickman [1976; Appendix III; Table 5].

particular revenue item. The major items which were used to redistribute revenues to poorer cities were treasury disbursements and non-earmarked revenues. For the NICs in Table 15, the picture for treasury disbursements is mixed. Seven of the fifteen cities had share quotients of less than one, indicating less-than-average levels of that revenue category. NICs got relatively more non-earmarked revenues in eleven cases, on the other hand; however, there are some very low quotients for Toyama and Niihama. Additionally, eight of fifteen cities were forced to collect more-than-average amounts of taxes from local sources. This too shows the relative lack of the underwriting of the NICs development.⁴³

Tentative conclusions to be drawn from this discussions are: (1) There was some effect of government tax and subsidy programs on poorer regions in general; and (2) these programs were not well-focused on the NICs. The effect on personal income inequality was probably small but tending towards greater equity.

Another way in which income disparities have been narrowed was a relative increase in the demand for labor in industrialized regions which has pulled workers out of poorer regions into richer ones, that is, through the migration process. There was a significant increase in labor demand⁴⁴ which has drawn workers away from poor regions to those areas with abundant jobs. The migration option is one which increasing numbers of Japanese have taken in recent years. Outmigration from poor regions has two principal advantages with respect to interregional equity. It reduces the level of unemployment in poor regions and, tends to increase the level of wages if labor demand is assumed constant. Outmigration will increase the capital/output ratio and, therefore, the marginal productivity

⁴³Note that these conclusions are for the NICs' main cities and may not hold for the smaller ones. However, since the large ones dominate the NIC regions, their impact is probably the most important compared to other municipalities.

⁴⁴There has also been a relative increase in the demand for labor for those remaining in agriculture through governmental subsidies in rice production.

of labor. In Japan, the decline of income inequality was directly associated with outmigration. As Kabaya shows, every prefecture for which population decreased during the 1960s had a higher-than-average growth rate of personal per capita income during that period.

With respect to our analysis here, there is very little evidence that government policy had any direct effect on migration behavior. Therefore, to the extent that deconcentration occurred, little can be attributed to government policy with respect to migration. Migration occurred principally because of greater job opportunity in industrialized regions and because of reduced income differentials between rich and poor regions. As the income differentials decreased, migration (known as the "U-turn phenomenon") took place.

What has caused the phenomenon we have observed? The arguments about government policy are not very persuasive. Population deconcentration and reductions in interregional income disparities preceded government policy. Since government policy followed these events, it did not and could not have been a principal cause. The "concentration-then-deconcentration" phenomenon apparent in Japan and, even more strongly in countries such as the United States, may have been the product of other forces, some not well understood. As Vining [1977] argues and as we stated in Glickman [1977b] there may have been some structural change which effected Japanese and other industrialized societies in the late 1960s and 1970s. These may be having important effects on the spatial distribution of population. Some have argued that the major contributing factor to decentralization has been the slower growth which has occurred since 1973; see, for instance Mera [1976] for this argument. However, the slow-down of immigration from rural areas began long before 1973 as we have noted above. Other reasons, such as environmental conditions and changing cultural values, may have had some influence on living patterns in Japan but these cannot supply us with complete explanations of the phenomena which we have observed.

We return now to one fundamental issue in understanding Japanese regional policy: efficiency of the economy. Throughout most of the period under study, it was the major goal of planners at the national level to increase output and exports at the national level and, to do this, investment was concentrated in the Tokaido megalopolis. Interregional equity was not a very important goal when compared to that of economy-wide efficiency. The resulting concentrated public investment patterns, outlined in Section 3.3.1, were the product of this policy. The deconcentration of public investment in the late 1960s "followed rather than preceded the change in the trend [towards deconcentration] of population concentration" according to Mera [p. 1976; 17]. This year is essentially correct as we have noted above. People and employers for various reasons began to find large metropolitan regions less attractive and began to look for other locations for homes and jobs. Public investment was made later in smaller and poorer regions. It was, as in the case of planning at the national level, a situation in which private decisions and efficiency dominated public decisions and equity. Deconcentration has taken place, but this phenomenon is much more a product of private decision-making and, possibly, of structural change, than of public planning. It appears that the decentralization sought by the planners would have occurred largely without planning. Planning and the intergovernmental tax system certainly contributed to this process but other element appeared to have been at least as important.

4. REGIONAL DEVELOPMENT POLICIES IN OTHER DEVELOPED COUNTRIES⁴⁵

4.1 Goals and Problems in Regional Development Efforts

What regional problems are perceived and what are the goals of regional planning and policy in other developed, liberal capitalist countries, particularly in Europe? How may problems and goals there be compared to the situation in Japan? In this section we review some of these issues.

One interesting aspect of our brief, comparative analysis is the relative uniformity of reasons that countries have undertaken regional development policies. These reasons are similar to those given by Japanese planners. First, there is the problem of "distressed" areas, especially those which have had large proportions of their working populations employed in the primary sector. This goal has important political support from legislators of these areas. Thus "place" prosperity has been one of the major purposes for undertaking regional development. A second, and related, issue involves the attempt to reduce interregional income disparities. Large differences in income among regions have been examined and deemed intolerable. Third, there is the goal of making the economy efficient with respect to production and exports. By reducing unemployment in backward areas, it is hoped that the economy will be more efficient and will have increased levels and growth rates of Gross National Product. As Cameron ([1970] as quoted by Hansen [1974a; p. 16]) points out: "although political pressures give regional policy its main justification and its even-changing vitality, efficiency arguments are never far below the surface." Cameron perceives efficiency in two senses. First, in terms of increasing the growth rate of national income and, second, in relation to the

⁴⁵There are numerous studies of regional economic policy and planning in European and other Western developed countries which provide far more detail than can be presented here. The interested reader may consult Allen and MacLennan [1970], Beika [1975], Brown [1972], Cameron [1970, 1974, 1977], Cao-Pinna [1974], Chapman [1976], Clawson and Hall [1973], Emanuel [1973], Grémion and Worms [1975], Hansen [1968, 1974a, 1974b], Kalk [1971], Liggins [1975], OECD [1969, 1974, 1976b], and Sundquist [1975].

effective use of public funds for regional development purposes.

Related to the questions of distressed regions, interregional income inequality, and efficiency, are two additional issues which have been discussed by policy-makers. One is the question of city size. The arguments are similar to those given by Japanese planners, that is, that the major cities are too large; this is particularly true of the experience of French regional planning where great efforts have been made to reduce the growth rate of Paris, but this has been true in other countries as well. The problem of controlling the size of large cities has been seen as complimentary to that of developing the rural, backward regions.

The various countries also see the ramifications of regional imbalance similarly. The major problems involve the selectivity in migration choice (the younger, better-educated workers tend to leave poor regions), downward multiplier effects on local gross regional product as marginal firms and those oriented towards the market close down, and the loss of efficiency in the delivery of public services in the face of population loss and a declining tax base.

The phenomena are also similar. The British worried about the "drift to the South" resulting in outmigration from the English North East, South Wales and Scotland and the heavy concentration around London. The French concerned themselves with the decline of the West, parts of the North and the Midi (South) simultaneously with the build-up of the Paris basin. In Italy, the long-term problems of the Mezzogiorno (the South) were under attack by regional planners. Declining agriculture and mining, outmigration from poor regions, and the alleged over-development of main centers are common to many European countries. As our review of the Japanese in Section 3 indicated, similar problems have been seen there.

4.2 Strategies of Regional Development

The strategies undertaken by Western countries with regard to regional development are, as in Japan, dominated by considerations of place prosperity. One can see that in the attempts to develop

the Mezzogiorno or the eight French métropoles d'équilibre. The use of growth centers as a regional development strategy is also important, as in the case of the French métropoles. The purpose, as with other growth center efforts, has been to generate further economic expansion of regions which had growth potential, and to divert economic activity and population away from largest cities. As we have noted in Glickman [1977c; Section 5.2.2.], Paris dominates France to a greater degree than the largest metropolis dominates any other city system in a developed country; see also, Prud'homme [1974], Sundquist [pp. 91-141], and Gravier [1947]. The use of growth centers was seen by the French as a way of lessening the domination of Paris with regard to the rest of the city system. In the case of France, the situation was different from that of Japan. Where Japan tried to develop relatively small cities in remote regions, the French métropoles (Lyon, Marseille, Lille, Bordeaux, Toulouse, Nantes, Metz-Nancy, and Strasbourg) form a ring around Paris, are larger on average than the New Industrial Cities, and are much less geographically remote.

Regional planners have also discussed the advantages of decentralizing public investment and thus to build up public infrastructure in lagging regions, in line with regional development policy. In some cases, this has not occurred, however. Prud'homme [p. 48] concludes that, for France, "the spatial distribution of public investments do not follow regional policy prescriptions." In general, we find that, as in Japan, regional planners control relatively small budgets for the effectuation of regional policy⁴⁶. Most of the central government spending which has a direct or indirect effect on regional matters, remains in the control of traditional agencies which are often not concerned with regional problems.

Governments have used several other tools for regional planning purposes. The OECD [1974] has catalogued them for member countries

⁴⁶For instance, DATAR, the French agency which is in charge of regional development policy spent only \$60 million in 1971, down from \$70 million the previous year; see Sundquist [p. 120]. OECD [1976; p. 21] says that total French regional development spending varied between 200 million and 500 million franc in the 1960s and early 1970s. For further discussion of French planning see, DATAR [1976b].

and we show OECD's tally in Table 16. These other procedures principally involve tax and subsidy schemes to encourage capital to move to lagging regions: investment grants, public funds for building plants, loan programs, fiscal concessions, among them. We can see from Table 16 that Japan provided relatively few of such grants; the United Kingdom seemed to provide the most variety of grants and subsidies.⁴⁷ Also, technical assistance to relocating firms is available. Usually, these grants and subsidies are differentiated according to the severity of the regional problem.

Less often used, but to some observers (such as Andersson [1974]) possibly effective, are grants to employers to subsidize the hiring of workers. The British subsidized wages (to the amount of \$5.25 per week in distressed areas in 1967) with some success, for instance.

Both the British and the French have also employed various measures to prohibit factory construction in the London and Paris regions. For instance, construction of manufacturing plants in the Paris region with net floor area of more than 1500 square meters and office space of more than 1000 square meters is subject to a tax which varies according to location; see Sundquist [pp. 130-131]. Japan has tried similar controls for Tokyo and other large cities.

4.3 Problems with Regional Development Planning

Despite the multiplicity of efforts by the different governments in Europe and elsewhere, many observers argue that regional economic planning has not done very much to alter the spatial distribution of economic activity. There appear to be several reasons for this. First, the goals are often contradictory and confused. Second, plans lack enforcement power and financial backing from the central governments has not been forthcoming to the extent necessary to make structural change take place in backward regions or to prohibit growth in highly populated ones.

⁴⁷ Sundquist [pp. 37-90] discusses some of these schemes available in the United Kingdom. DATAR [1975, 1976a, 1976c] provides additional information on subsidies and grants available in France.

Table 16

Regional Development Incentives to Industry for OECD Countries

INCENTIVE	AUSTRIA	BELGIUM	CANADA	DENMARK	FINLAND	FRANCE	GERMANY (F.R.G.)	GREECE	IRELAND	ITALY	JAPAN	NETHERLANDS	NORWAY	PORTUGAL	SPAIN	SWEDEN	SWITZERLAND	TURKEY	UNITED KINGDOM
I. Investment grants																			
- on industrial building		A ^{b)}	A	A		A	A	A	A	A			A		A	A			A
- on plant and machinery			A	A		A	A	A	A	A			A		A	A ⁽¹⁾			A
II. Provision of factory buildings and sites at low cost				A	A			A	A	B	A		A						A
III. Loans																			
- at market rates					A		A ^{d)}									A			A
- at subsidized rates	A	A		A	A	A	A	A	A	A	A	B	A			A		A	A
- guaranteed	A	A	A	A	C		A		A			A	A			A			
IV. Fiscal concessions																			
- on investment	A ^{d)}	A			A	A	A ^{d)}	A	A	A	A	A	A	A	A	A			
- on profits					A	A		A	A	A	A								
- on revenue from State aid					A	A		A	A	A									
- on State charges, local taxes, licence fees, etc.		A	A		A	A		A	A	A	A								A
V. Grants towards labour costs						A					A								
VI. Assistance for working costs				A ^{e)}				A ^{d)}		AB ^{d)}						A			A
VII. Labour training aids	A	A	C	A	A	A	A	C	A	C	C	C	A	A	C	A	C ^{d)}	C	A
VIII. Assistance for settling-in costs											B								A
IX. Grants for moving costs				A		A							A			A			A
X. Financial aids to worker mobility away from designated areas		C			C						B								A
XI. Financial aids to worker mobility into designated areas	A	C		A	C											D			A
XII. Shareholding		A			A	A			A			A				B			A
XIII. Transport and other public service concessions	A						A ^{d)}			B						A	A		
XIV. Preferential treatment in the award of Government contracts																			A

Symbols: A - Available.
B - Available but not particularly important.
C - Available throughout the country.

NOTES:

- a) Terminated at the end of 1973.
b) Interest subsidies are the normal forms of aid, but a capital bonus equivalent is available for some as an alternative.
c) Available to firms facing exceptional difficulty.
d) Funds may not be for this form of aid, but in such cases the amount of interest subsidy is deducted from the grant.

Source: OECD [1974]

- e) In the Eastern border areas only.
f) Exemption from employer's social security contributions.
g) Reduction of employer's social security contributions.
h) Various fiscal concessions are applied by the various Governments.
i) Applied by Government authorities.
j) Available in exceptional circumstances.

That, after more than thirty years of effort in the Mezzogiorno, Scotland and the Massif Central, these regions are not much better off relative to other regions in those countries is testimony to the lack of success of planning relative to need. One of the problems has been the fact that development funds have been spread too thinly. We have seen this in Japan; it is also true in France where help to the eight métropoles has been superceded by aid to a larger number of small-and medium-sized cities. There simply has not been enough money to make much difference to regions in serious need of development funds.

A major problem is the lack of governmental power with respect to the power of the market. If firms are able to locate where profit is highest, as they are in the countries which we are discussing here, then spatial policy faces the dilemma that we have outlined in this essay. This is particularly true with respect to the internationalization of capital over the postwar period. Controls on foreign capital with regard to location are more difficult to enforce than controls on domestic capital. Although, this has not been a major problem in Japan where there is relatively little foreign capital, it is a significant factor in countries such as France where foreign capital's penetration in the national and regional economies is important.

An additional problem in several countries has been the lack of control of the location of the service sector. This comes in part from the heavy emphasis on controlling location of manufacturing. Controls on office building in Paris and London have not been very effective in stemming speculative building which has occurred there. As a result, the centralization of the service sector in the post-industrial age has gone untouched by most regional planning efforts; on this, see Sundquist [pp. 111-115].

There are many other problems involved in regional planning, but space does not permit a fuller explication of them. Our conclusion is that, in most instances, the goals and strategies of planners have not overcome the power of profit-maximizing entrepreneurs. Therefore, most of the regional problems which faced planners in the 1950s and 1960s continue to some degree. As the OECD [1974; p. 138] concludes: "We cannot point to any country that has been able, despite determined and considerable effort

over long periods, to achieve the objectives it has set for itself."

Yet, some changes in the regional economies have begun to occur. We have previously alluded to them in Section 3 and in Glickman [1977b, Section 4]. There have been signs of deconcentration in many countries. The London region lost population absolutely during the 1961-1971 period Paris, while still growing faster than most other regions in France, is not growing as fast as it was previously. The more peripheral regions in some countries are not losing population as quickly as formerly; some are now experiencing net immigration for the first time in many years. We have argued in Section 3 that these phenomenon are not the result of planning, at least in the Japanese context. Here we argue, somewhat less forcibly because of our more limited review, that planning was probably not responsible for much of this change in migration patterns. This is true since not much emphasis has been placed on migration incentives (or human capital approaches to planning, in general) in these countries and because outmigration from urban regions has been occurring in countries which have little or no planning at all. The United States is a case in point; there, declines in the Northeast and North Central states and increased immigration to the South and Southwest have occurred since the end of the 1960s. No one would argue that planning had anything to do with these trends in the U.S.

5. CONCLUDING REMARKS

In this essay, we have attempted to catalogue the development of Japanese regional planning and to evaluate its effects. We first discussed national economic growth and planning and indicated that the rapid national economic development which occurred in the 1950s and 1960s was probably not the result of national planning; we contended that more traditional Keynesian tools were at least as effective. Then, we analyzed the regional components of national plans and strictly regional plans as well. In particular, we reviewed the experience of the New Industrial Cities and Special Areas. There we concluded that these programs did little to alter the spatial pattern of development. Furthermore, we argued that

the place prosperity programs may have been based upon wrong premises: that migration policies might have accomplished the goals of interpersonal income equity more easily. Of course, place programs have great political appeal (not only in Japan but in other countries), especially to legislators from the lagging regions. Thus these programs have been pushed vigorously by various Japanese governments. We also found that interregional income redistribution was taking place through the tax and subsidy system of the various ministries, especially the Ministry of Home Affairs; we discuss this element of Japanese political economy in much more detail in Glickman [1977a]. Finally, we compared the Japanese experience to that of other countries and found that many of the same problems were perceived, similar goals set and tools employed to counter the twin problems of depopulation of lagging regions and overcrowding of prosperous ones. We argued there that planning had little to do with spatial change in France, Britain, and other countries. There has been a trend towards disurbanization (see Berry [1976]) in many Western developed countries. The reasons for this phenomenon are not well understood but it is our contention that planning as currently practiced has not been responsible for it. More likely, factors like slower economic growth, cultural and other factors have caused these changes in living patterns in much of the developed world.

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