

INDUSTRIAL LOCATION & REGIONAL POLICY IN SOUTH INDIA

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ABSTRACT

Since 1971 the Government of India has had a policy of encouraging the dispersal of industry to designated rural backward areas. The thesis attempts a critical assessment of this industrial location policy. It questions the extent to which the industrial dispersal that has occurred during the 1970s is simply a result of the policy or whether it was primarily prompted by other factors such as the interests of Indian industrial capital.

The thesis starts with a review of industrial location theory and policy, from which it concludes that industrial dispersal and the developmental impact of industrial growth poles can usefully be analysed in terms of modes of production theory. It is argued that one of the most important features of such industrial growth poles in a Third World context, is that they represent the organised penetration of the capitalist mode of production into areas which previously are in general characterised by pre-capitalist modes.

The next two chapters of the thesis examine the genesis of Indian industrial location policy and the evolving relationship between the Indian state and industrial capital. They conclude that while in the past the Indian state has imposed restrictions on industrial capital, these have become less stringent since the mid 1960s. It is argued that the industrial dispersal policy with its package of financial incentives for industrialists is itself part of a new, much broader development planning ethos. An ethos which replaces the old emphasis on state led development with the view that development will result from the efforts of private enterprise helped by the state.

The third section, again comprising two chapters, takes the analysis down to the level of an individual State: Tamil Nadu. The distribution and development of industry in the State is discussed and the efforts of the State Industrial Promotion Corporation of Tamil Nadu in implementing the dispersal policy is analysed. This is followed through into the final section where the behaviour of firms locating in the two

Tamil Nadu growth poles of Ranipet and Hosur is examined on the basis of material from a questionnaire survey. The types of firms involved are described and the managers' reasons for choosing the sites are analysed. The survey results demonstrate the validity of the initial hypothesis, to the extent that a certain specific section of the survey firms chose their new dispersed locations for reasons other than government policy. In addition it is suggested that the incoming firms will have both a disruptive and developmental impact on the local economy of the Ranipet and Hosur areas. While their advent will be of benefit to some it will have a particularly harsh negative effect on the lives of the many local inhabitants with no access to the jobs and incomes generated by the new industry. These points are drawn together and summarised in the concluding chapter.

To
The Friends
I made while working on this thesis
in
India & Great Britain

They kept me going and
made it all worthwhile.

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CHAPTER 1

INTRODUCTION

INTRODUCTION

At the beginning of the 1970s the Union Government of India announced a policy of industrial dispersal to designated 'backward areas' in underdeveloped parts of the country. The policy measures included a variety of incentives in the form of concessional finance for industrialists locating factories in the designated backward areas; a list of these areas in each State in the country and instructions to State Governments to implement the policy by providing infrastructure in appropriate places, setting up industrial promotion agencies and if they so desired, arranging their own incentive schemes which would be backed up by national public financial institutions. The aim of the policy was to encourage the development of the backward areas concerned.

In its aim, scope and design the Indian industrial dispersal policy is very similar to location policies instituted in various countries throughout the world. Such policies are common in the industrialised nations of Western Europe, North American or Japan. They also exist, on paper at least, in many Third World countries. But there are few Third World countries which are as industrialised as India, and therefore have enough industry to make a dispersal policy worthwhile or even possible. There are even fewer Third World countries where the policy has been in existence long enough and has been met with sufficient positive response from industrialists for there now to be enough new industry located in backward areas to make a policy evaluation study worthwhile. Given the relatively advanced nature of the Indian experience in this respect it is hoped that the conclusions of this study will be of interest to regional planners not only in India but also in other Third World countries.

Even a cursory study of the Indian industrial dispersal programme reveals two major apparent contradictions. These are taken as the starting point of this enquiry. First, government industrial promotion agencies which administer the dispersal policy portray their work in terms of having to coerce reluctant industrialists to locate their new

factories in remote backward areas they do not wish to go to. On the other hand, industrialists in public statements, through their associations and chambers of commerce and in personal interviews claim to approve of and support the dispersal policy. While such contradictory claims may seem unremarkable in the world of realpolitik, the dichotomy does suggest that it is necessary to investigate more closely the relationship between the promoters of the policy and those most affected by it: that is between the state and industrial capital.

The second contradiction lies in the nature of the policy itself. The stated aim of the programme is to develop backward areas of the country. Yet already at the time the policy was adopted the developmental value of industrial growth poles in backward rural areas had frequently been called into question by regional planners throughout the world. The Indian government and its planners must have been aware of these criticisms and yet apparently they chose to ignore them. What then was their intention?

With these contradictions in mind the thesis attempts to tackle two essentially different types of questions. First there are the questions about why the industrial dispersal policy exists. What is the rationale behind it? What are the interests of the various parties to it? Why has the Indian state adopted it and why do certain industrialists at least fall in with it?

Answers to these questions already do much to clarify the two contradictions outlined above but they are not sufficient explanation by themselves and hence it is necessary to tackle a second set of questions about what the industrial dispersal policy is likely to achieve. What type of industry is going to backward area locations? How is it integrating with the local economy of these areas and what sort of effects, developmental or otherwise, can it be expected to have?

These questions are approached both at a general national level with a study of Indian industrialization, economic and planning policies and in more specific detail through a case study of the implementation of

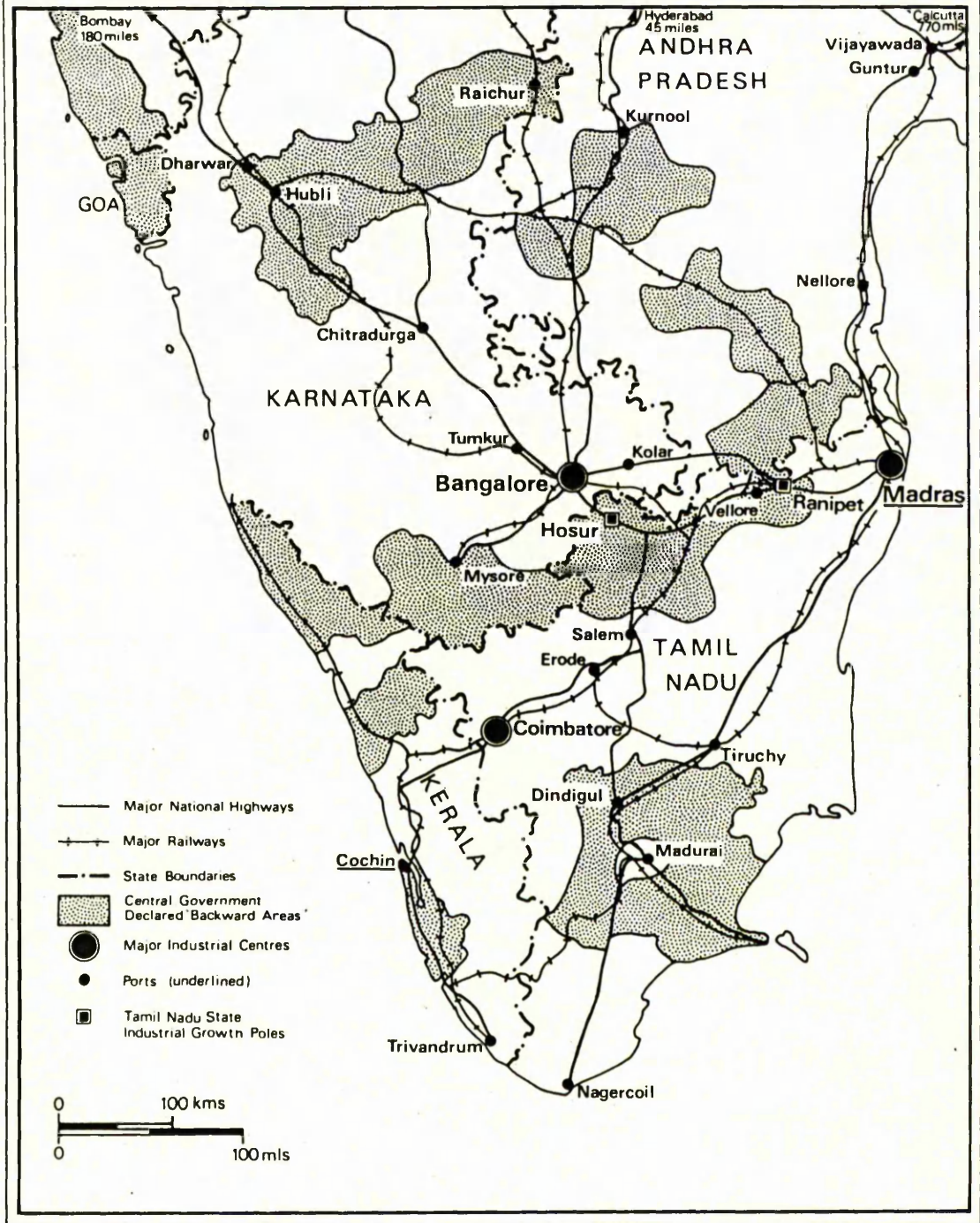
the dispersal policy in one part of South India. Preceding this there is also a theoretical chapter which reviews past approaches to the study of industrial location and discusses a number of criticisms that can be made of them, before outlining the approach adopted in this study.

The thesis argument has been arranged in a continuous flow from the general to the more specific, through four different levels of analysis. Thus Chapter 2 which deals with the theoretical arguments is the most general and indeed could refer to other Third World countries with similar levels of industrialization. The next section comprises two chapters, numbers 3 and 4, and takes the analysis down to the national level to deal with the origins of the state industrial dispersal policy in India, the extent of Indian industrial development and the relationship between the Indian state and industrial capital. In the third section, made up of Chapters 5 and 6, the analysis is conducted at a regional level with the one Federal State¹ of Tamil Nadu being chosen as the object for more detailed study. Tamil Nadu's level of industrial development and the spatial distribution of its industry is described in some detail. The State's backward areas are also examined and the work of the State Government agency charged with implementing the dispersal policy is carefully analysed. The final section which again comprises two chapters, numbers 7 and 8, is the most specific as it deals with a detailed case study of a group of firms locating new factories in backward areas of Tamil Nadu State(Figure 1). This is based on the results of a questionnaire survey of these firms, conducted by the author in the first half of 1980. As well as going into the type of firms choosing backward area locations, it discusses their reasons for doing so and their managers' opinions of the government industrial dispersal policy. The importance of environmental characteristics of the backward areas in which industrial dispersal is taking place is also examined. The last chapter, number 9, summarises the main conclusions of each section of the study and attempts to draw the various strands of the argument together into one cohesive thesis.

Footnote:

1. Throughout the thesis the word State spelt with a capital S refers to one of India's Federal States, whereas when spelt with a small s it is used as a collective term to cover government and its various agencies.

FIGURE 1: SOUTHERN INDIA



CHAPTER 2

THEORETICAL FRAMEWORK

THEORETICAL FRAMEWORK

1. Industrial Location Theory

Theoretical attempts to understand and explain the locational distribution patterns of industry have evolved slowly since the beginning of this century. Starting with models built on the generalized location decision concerns of firms, and moving through behavioural studies of individual firms, work on industrial location theory is now more concentrated in studies concerned with the regional distribution and structure of industry. Based as it is on the study of Western industrial location, this theory is largely concerned with modern capitalist industry and not with the 'informal sector' industry typical of most Third World countries, a point which will be elaborated at a later stage.

The classical approach to industrial location theory is usually associated with the name of Alfred Weber (1909) though the somewhat more recent work of Hoover (1948) did a lot to spread its influence to an English speaking readership¹. This approach was based on the argument that the main concern of any firm taking a location decision was to maximize profits by minimizing distances between the factory and the location of sources of materials and markets for products. This basic logic was then applied to all firms and built up into a general idealized model. Although it was accepted that physical and political boundaries to geographical space would have a certain recognizable influence many other factors were ignored. In particular this approach assumed free competition between firms and perfect knowledge of markets. Moreover it provided no framework within which to explain changes in industrial location, principally because it was based on the analysis of static snapshots of industrial distribution. These assumptions and omissions imposed strict limits on the usefulness of this approach as an analytical tool.

In reaction to this tendency to oversimplify influences on industrial location, later theoretical work switched to a more behavioural

approach, examining closely all the factors influencing the location decisions of individual firms. The essential difference between this approach and the classical approach is its view of the firm, not as a rational optimizing decision making unit but as a body characterized by irrational behaviour, conflicting goals due to a variety of not always standard influences, and limited levels of knowledge and control over its environment. Frequently such studies used a methodology derived from systems theory to accommodate these various influences, and started their analyses of location decision making from the organisational structure and particular characteristics of the firms in question (Hamilton, 1974, p.13 & Keeble 1976, p.2).

In their attempt to recognise the individuality of firms these behavioural studies by and large tended to go too far in the opposite direction from classical work. They amassed large quantities of data on the specific behaviour of particular firms from which it was subsequently very difficult to derive any generalizations or overall pattern which could be applied to more than a few firms, let alone advance a consistent and more widely applicable theory of industrial location (Massey in Peet, 1977; Keeble 1976, p.3).

More recent work on industrial location theory has approached the subject through the study of regional development and the distribution of industry in and between regions. In doing so it has drawn much of its inspiration from core-periphery ideas explored by Third World development theory. There is a very extensive body of literature in this field sometimes referred to as 'regionalism' or regional studies which there is no need to review in detail here, though it is important to identify the various implications it has for industrial location theory.

The most important contribution this work has made to the study of industrial location is the way it has emphasised the need to look at the role of broader structural economic trends and social and historical influences on the shaping of the spatial pattern of distribution of industry. Thus it is not just the presence or absence

of industry, nor only the factors influencing an individual firm's location which analyses must examine, but also the structure of the industry or industrial sector as a whole and the way its spatial distribution is affected by the characteristics of the socio-economic conjunction in which it exists.

In an extensive review of the different types of approaches adopted by regional study theorists, Massey (1978) identifies three basically different types of approach. The first of these consists of the various attempts to derive abstract formulations and general laws governing the spatial form of capitalist development. In particular various theorists tried to propose a necessary tendency of capitalism towards spatial centralisation. Massey suggests (1978 p.108) that this was partly intended to counter the equal distribution tendency put forward by neo-classical economic theory, but she points out that neither view is really correct as exceptions to both generalisations can easily be found with empirical case studies .

The second group focuses on concepts borrowed from Third World development theory. Her objections to these centre around the dangers inherent in transferring theoretical concepts formulated to explain international relations to intranational relations between regions. First there are empirical differences between these two types of interrelationships and between nation states and their internal regions (eg: monetary union, trade and customs policies, government policies, political struggles) which are liable to cause problems. Secondly such approaches tend to reduce the problems of regions to simply smaller scale versions of the problems of underdeveloped countries and in doing so they forget that 'nations' and 'regions' are social divisions of territory, with only limited standardised characteristics, which may not easily fit such abstract notions of spatial form and scale (Anderson, 1975 p.15). Thirdly underdevelopment theory takes nations as pre-defined objects of analysis, whereas, Massey argues, regions should be seen as an effect of spatially uneven capitalist development. One particular case of this is the internal colony model which has been advanced for studying regions within Western capitalist nations.

Probably the best known example of this is Hechter's 'Internal Colonialism: the Celtic Fringe in British National Development' (1975). But while such a model is certainly more applicable in this case than in most, because the Celtic fringe countries are in fact regions with an identifiable national character to the extent that it makes sense to talk for instance about the Scottish bourgeoisie and working class as distinct social groupings with specific characteristics, the same is not true of many of the regions to which this model is often applied. Yet, even with the British Celtic fringe example there are limits to how far the parallel with international imperialism can be taken. Thus the ease with which the Scottish bourgeoisie have penetrated the structure of English and British capitalism and their prominent position within it, is in no way comparable to the relationship between for instance the bourgeoisie of African nations and their colonisers (cf. Fanon, 1967).

Massey herself proposes an approach which starts from the process of accumulation of capital and analyses how this process produces spatially uneven development without using any pre-given regional framework. Her essential argument is that it is necessary to examine the ways in which capitalism organises production, rationalising it by dividing it up into its constituent elements or stages, each of which has different characteristics and requires specific conditions in which it can occur most efficiently. These characteristics of the elements of the production process may then have spatial dimensions to them, leading industrialists to try and locate production or stages of the production process in particular ideal locations. The overall result of all industrialists rationalising their production in this way will lead to what Massey terms a 'spatial division of labour'.

Massey visualises this process as a series of rounds of investment by industrial capitalists, each round modifying the pattern of distribution of development and setting the scene for the next round of investment decisions. Capital's response to spatial unevenness may vary but will always be the result of the interaction between the characteristics of the existing spatial environment and the current

requirements of the particular process of production (1978, p.114).

"This new distribution of economic activity, produced by the evolution of a new division of labour, will be overlaid on, and combined with, the pattern produced in previous periods by different forms of spatial division. The combination of successive layers will produce effects which themselves vary over space, contributing to a new form and geography of distribution of inequality in the conditions of production, as a basis for the next round of investment. A spatial division of labour is therefore not equivalent to a 'regionalisation'. It is suggested on the contrary, that the social and economic structure of any given local area will be a complex result of the combination of the area's succession of roles within the series of wider, national and international, spatial divisions of labour". (Massey, 1978, p.116)

There is a danger in accepting Massey's conceptualisation of 'rounds of investment' in too formalistic a fashion. She herself is at pains to emphasise that "the process of change is much more diversified and incremental, though certainly there may be periods of radical redirection" (p.115). Moreover, between rounds conditions will also change in ways not directly instigated by industrial capital. For instance developments in transport and communications may change the relative accessibility of different locations. Finally a new 'round of investment' will not affect all sectors of all industry at precisely the same moment. The most advanced sectors of production will be the first to show signs of new investment, other sectors following later and those in decline probably not at all. Providing one acknowledges these points Massey's formulation of 'rounds of investment' provides an easily understood model and description of the process of industrial location change, particularly useful because it stresses its non-continuous and cyclical nature.

While Massey does provide this useful descriptive model of how the process of industrial location change occurs, she does not spend much time discussing the factors which engender this process of change other than stating that they reside in the requirements of the process of

capital accumulation. For this aspect a paper by Dunford (1977) is more helpful. Dunford argues that the process of capital accumulation entails a continual restructuring of capital (that is: reorganisation, renewal & reinvestment) in order to ensure maximum levels of profit. While much of this restructuring will not involve locational changes, being largely a question of reorganising production inside factory walls, every so often it will become necessary to install completely new machinery or to go into a new and more profitable line of production. Such major changes frequently involve investment in new factories and therefore a location decision. Industrial investment location decisions are therefore prompted by the desire of capital to maximise profits resulting in periodic decisions to restructure capital on an important scale.

Finally it should be noted that Massey pays no attention to the relationship between the capitalist mode of production, about which she is talking, and other modes of production that may exist in the same social formation. This relationship may in fact provide important opportunities for capitalist industrialists to make higher levels of profit. This is particularly so in Third World economies which are frequently characterised by the co-existence of several important modes of production, but as various writers have pointed out this may also occur in Western economies heavily dominated by the capitalist mode of production. We shall return to this question of the interrelationship of different modes of production at a later stage when discussing Third World development theory.

From the foregoing theoretical discussion it is possible to suggest an approach to the study of industrial location patterns and change which starts from two separate angles. First it is necessary to identify and analyse the factors which may be causing a restructuring of capital to take place. What are the dominant economic trends and circumstances in the social formation under study? Are there any social and political forces that may be affecting them? And how are they responding to them with changes in the production process?

Secondly it is important to build up a picture of the characteristics of the built environment and particularly of the way industrialists perceive them. How do capitalists view the built environment in terms of where it is possible to locate factories? Have there been any changes to this environment which might make them alter their perception of it? Does it offer them any new opportunities?

Then if (a) there are new pressures on industrial capital to restructure or new solutions to old problems have to be found and (b) there are new opportunities to be found in different locations in the built environment, it is likely that a completely new trend in industrial location will occur.

2. Industrial Location Policy

The primary aim of industrial location theory has been to analyse and explain why industry located where it did in geographical space. But while the uneven distribution of industry certainly provided an interesting object of study in itself, the main material motivation was a desire to know how to encourage industrial development in areas where hitherto it had not occurred. Logically it seems a short step from industrial location theory to industrial location policy, but, as with many types of development planning, the derivation of policy from theory has proved extremely difficult.

An industrial location policy usually forms part of a broader regional development policy, the overall aim of which is frequently given as being to encourage 'balanced regional development'. While the egalitarian connotations of such a goal no doubt seem laudable, its loose name makes it something of a red-herring as (a) our earlier discussion (cf. pp.25-26) of the process through which the built environment develops suggested that regional development is **always** uneven, and (b) it gives little real indication of what the authors of regional development plans are seeking to achieve. Of course, not all regional development plans are as vague. Many do state explicitly that they want to raise the standard of living and the level of incomes of

the inhabitants of poorer regions to national averages. They also often suggest a series of measures through which they propose to achieve this: improved infrastructure, better services and crucially for this study, more employment opportunities. Although the term 'balanced regional development' could possibly be assumed to imply all such more detailed proposals, there is a real danger in using such an imprecise term which could provide a justification for virtually any type of development expenditure in an underdeveloped region.

Dealing more specifically with industrial location policy, there is also a certain imprecision about the real reason and value of encouraging an even distribution of industry. It is assumed that industrial activity means employment and that it will generate further industrial and economic growth in its immediate vicinity. Although both assumptions are strictly correct, the use of advanced technology means industrial investment does not always result in many jobs being created and the precise role of industry in encouraging economic growth and development is not that clear or necessarily direct. This latter point is extremely important in the Third World context being dealt with here and will therefore, be considered in some detail below.

The difficulty involved in deriving industrial location policy from industrial location theory is thus due to the fact that, while the theory does provide some explanation for why industry locates where it does, it does not deal with the basic process that the policy is trying to encourage, namely economic development through industrialisation. Indeed the latter process is really the concern of economic development theory not industrial location theory. The danger in trying to move directly from industrial location theory to policy without being aware of the importance of economic development theory, is that it encourages a tendency to see the problem of uneven regional development as purely a quantitative question of redistributing industry through space. On the other hand the danger in trying to derive an industrial location policy directly from economic development theory, is a tendency to ignore the actual reasons why industry locates where it does which can seriously undermine the effectiveness of the policy.

Interestingly enough, virtually the only industrial location theory which also incorporates elements of economic development theory, namely growth pole theory, has become the theoretical basis for probably the most widely used regional planning policy throughout the world.

Industry in the Third World is even more heavily concentrated in urban centres than it is in developed, industrialised nations, so traditionally the study of Third World industrialisation has been associated with the study of urbanisation. On the basis of traditional economic development theory this observed correspondence between industrialisation and urbanisation has been built up into an extremely vivid and popular dualistic image of Third World economies. The towns and particularly the old colonial cities and seaports of the Third World were seen as industrialised islands of development in a sea of underdeveloped agricultural countryside. Development, or rather economic growth as it was then understood, was equated directly with the level of industrialisation. Economic development theory suggested that development would diffuse from these urban industrial centres, 'trickling-down' to the surrounding rural areas (Myrdal, 1968). Industries in these centres would encourage the growth of others around them through the operation of multiplier effects (Hirschman, 1958). Gradually the dualistic character of these economies, represented by this urban-rural, modern-traditional, industrial-agricultural developed-undeveloped split, would disappear as the modernising influence of the urban-industrial economic system was felt in ever widening circles around each town and city.

Into such a schema growth pole theory seemed to fit extremely neatly, based as it was on the idea that industrial growth occurred in specific points in space and then radiated outwards from these poles to encourage further industrial growth in the vicinity. Francois Perroux (1955), the originator of growth pole theory, started from the rather obvious premise that all industrial activity has to be located at particular points in space and cannot be evenly distributed. His view of space, however, was really an economic one which used the spread of a firm's relations with its sources of materials, subcontractors and

markets to define its region of economic influence. But Perroux's most important contribution was to discuss the process of industrial growth and why it tended to occur in concentrated locations.

For this Perroux introduced the concepts of propulsive and key industries. A propulsive or motor industry was one whose growth encourages the growth of other industries, while a key industry is a propulsive industry that induces a total economic growth greater than its own. Growth poles are thus industrial complexes whose vitality depends on the presence and growth inductive effects of one or more propulsive industries. Perroux recognised the fact that propulsive industries can also decline and that when they do this results in drastic negative effects for the growth pole which can rapidly become a centre of economic stagnation.

Boudeville (1966) is usually credited with having being the first to translate Perroux's economic space conceptualisation into one using physical or geographic space. For him a growth pole is focused around a key industry located in an urban area; it has a zone of influence or 'polarized region' around it in which economic activity is organised in a hierarchy of satellite towns and throughout which the propulsive industries of the growth pole induce further industrial activity and development through multiplier effects. Boudeville in fact drew a fairly close link between industrial growth poles and urban centres, arguing that small towns would specialise in one or two products while larger towns would have a greater degree of industrial diversification. Thus the polarisation of industrial growth would be linked directly to the diversification of activities. The most diversified industrial economies developing in the urban area of the growth pole centred on the principal propulsive industry of the region.

Boudeville's work on growth poles has been seen as complementary to Central Place Theory and indeed he himself made several references to the German school of urban location theories (cf. Christaller, & Lösch). While Boudeville's conception of growth pole theory explained industrial production distribution, the German location theorists were

concerned with the distribution of service centres and related urbanisation.

As already mentioned growth pole theory lent itself particularly well to policy formulation. It provided an extremely pragmatic and convenient theoretical justification for government policies to encourage industrial development in regions where none had existed hitherto. All that was required was to locate a propulsive and preferably key industry in the centre of the underindustrialised area and with time it would induce the growth of a polarised industrial economy in the region. In particular it suggested that the return on the initial investment could be very high in economic development terms providing the right sort of key industry was chosen. Or in other words all the government industrial promotion or regional planning agency had to do was ensure the development of one industry in the right place, either through subsidising private industrial enterprise or by investing in a public sector plant. The ideal key industry was one that produced the basic materials for a whole gamut of other industries or lent itself particularly well to extensive subcontracting, common examples given are those of iron and steel mills or a car factory. The actual location chosen for the growth pole was directed by the need for it to affect as large an area as possible, physical centrality usually being chosen as the principal criterion. Its location could, however, also be integrated into a settlement distribution hierarchy such as the Central Place theory model grid based on an equilateral triangle (Christaller, 1933; Losch, 1954). Finally the projected size of the growth pole could be integrated into lognormal rank size urban distribution models (Berry 1961, Linsky 1969 and Mehta 1964) which suggested that developed industrialised nations all tended to have a definite lognormal hierarchy of towns and cities measured by population.

The application of some of these normative and idealised models to planning policy making has produced a selection of startlingly unrealistic and determinist regional plans in many countries throughout the world, but fortunately, for various reasons, few of these plans

have been implemented in full. Individual growth poles, however, have frequently been instigated and indeed growth pole policy has probably become the most widely used regional planning tool throughout the Third World and the developed world as well. Yet despite the popularity of the policy there are now many instances of growth poles which have not initiated the scale of industrial growth and regional development they were intended to. The continuing popularity of the concept despite its patent failures must in part be due to the absence of any alternative policy oriented theory, alluded to above, but it may also be attributable to the fact that the concept is so all-embracing that it can be used as a convenient theoretical justification for a policy measure which is in reality fairly inevitable. Thus when industry is being encouraged in an area where there has been none hitherto, it necessarily has to be located somewhere and it is then all too easy for regional planners to call that place a growth pole. While such a practice undoubtedly represents a misuse of the theory, it also points to the fact that the theory itself does little more than state the obvious.

Even though the idea of industrial induction through multiplier effects which lies behind the growth pole concept, is both logical and to a large extent self-evident, it is apparent that our theoretical understanding of this process is inadequate given the widespread failure of growth pole policies to work consistently. Various critiques (Thomas, 1972; Appalarju & Safier, 1976) suggest that this is a result of the still very poor understanding reached so far of how the processes referred to as 'multiplier' and 'trickle-down' effects operate.

Thus although it is necessary that multiplier effects must operate, as no industry exists in a vacuum, it is apparent that they cannot be depended on to operate where, when and even to the extent that planners might wish. Darwent (1969) and Moseley (1974) also point out that in moving from Perroux's original growth pole concept based on economic space to Boudeville's formulation based on geographic space, a fundamental mistake was made, in that although multiplier effects

certainly do occur in a firm's abstract economic space this cannot be translated straight into a prediction about where they will occur in geographic space. Thus an industry in a remote growth pole may well create multiplier effects in already well established industrial centres far from the growth pole rather than in its immediate vicinity. The whole spatially based regional development rationale of growth pole policy is thereby thrown into question.

In effect the concepts of multiplier and trickle-down effects are drawn straight from orthodox economic development theory and it would therefore seem logical that further theoretical advances and particularly critiques in the field of economic development theory might well throw some light on this problem. It is to a consideration of this theoretical work that we now turn. This is particularly important in a study of Third World industry as much of the debate on economic development theory revolves around the question of the role of industrialisation in Third World development.

3. Third World Development Theory & Industrialisation

Industrialisation is central to most theories of development, indeed we tend to equate 'developed' with 'industrialised', particularly in the West where our great improvements in standards of living were achieved at times when our rates of industrialisation were at their highest. As already mentioned above, this association between industrial growth and development was particularly strong in orthodox development theory, which visualised development as a process of modernisation radiating out from the urban industrial centres to their undeveloped rural hinterland. Industry in the main urban centres would induce further and more widespread industrialisation through multiplier effects and the benefits of this industrial growth would gradually trickle-down to the mass of the population.

A number of theorists have developed complex 'multiplier models' (Isard & Kuenne, 1953; Pred, 1965; cf. Chorley & Haggett, 1978 pp.413-4) which purport to demonstrate the regional impact in terms of employment and

production levels in secondary firms of the activities of one major industry. While such work can be useful in demonstrating the potential scale of impact one firm can have on others, their results are not easily transferable as they are usually based on individual cases of specific firms. Nor can they really be used as reliable bases for projections and forward planning, as the operation of multiplier effects, when and where they will occur, is entirely dependent on the decisions of individual industrialists. This particular aspect of multiplier effects: exactly how, where and when they can be expected to operate, is in effect the area which is most crucial to planning policy and yet remains the one which is most poorly understood and conceptualised.

The most important critique of the orthodox or modernisation theory of development was that made by the Latin American school of dependency theorists (inter alia: Frank, 1967; Dos Santos, 1969) based on Paul Baran's seminal work on the 'Political Economy of Growth' (1957). Dependency theory in effect turned the whole trickle-down, modernisation idea of development on its head, suggesting instead a chain of exploitation running upwards from the Third World peasant through villages, towns and cities and ultimately abroad to the industrialised metropolitan nations of the West.

Dependency theory originated from a critical analysis of the industrialisation problems of Latin American in the 1950s & 60s. The United Nations Economic Commission for Latin America (ECLA) headed by Raul Prebisch had advocated a policy of import substitution industrialisation in an attempt to distance Latin American economies from the capitalist economies of Western Europe and North America with all their exploitative effects. But the import substitution policy failed because the import of finished goods was merely replaced by the import of technology from the West on equally poor terms. Analysing this situation, the dependency theorists argued that Third World nations would never be able to liberate themselves from the domination of Western capitalism and develop independently. Instead they would be progressively 'underdeveloped'. Moreover Third World industry could

never be expected to become a dynamic, self-sufficient and developing force as it would always remain a link in the exploitative chain of Western capitalist control over Third World economies.

The dependency theorists also criticised the dualistic image of Third World economies presented by orthodox modernisation theories of development. They maintained instead that all sectors of these economies were intimately interlinked and they suggested that industrial capitalism in the Third World actually owed its position to and depended on the continuing exploitation of the non-capitalist 'informal' sector, not only in the cities but in the rural areas as well.

Although the dependency theory condemnation of Third World industrialisation was fairly absolute, it was not so much a condemnation of industry per se but resulted from the view that because of its close links with Western capitalism, Third World industry would always be used as an instrument of exploitation. Pointing out the existence of the links between Third World industry and Western capitalism and documenting their exploitative nature were extremely important contributions to the development debate, as indeed also was the way dependency theory situated the debate in a more serious historical and political economic context. But in many ways the dependency theory analysis suffered heavily from oversimplification and the sweeping nature of its condemnations. This is reflected in the way that later work on development theory has been very largely aimed at either trying to adjust the dependency analysis to particular case studies or rejecting it because of the issues it fails to confront.

One of the greatest critics of dependency theory's tendency for oversimplification has been Bill Warren (1973 & 1980). In particular he criticised the 'anti-capitalist romanticism' of dependency and underdevelopment theories which failed to recognise that capitalism in the Third World had played a substantial role in the development process. He maintained instead that the prospects for successful capitalist development in the Third World were good and that

substantial advances had already been made in certain countries, particularly in industrialisation. Finally he argued that much of this capitalism was indigenous to the Third World countries concerned and that as it developed it was decreasing their dependence on Western capitalism.

Warren's critique of dependency theory is important, not least because it is argued from a Marxist stand point, thereby challenging the dependency theorists on their own ground. From a theoretical angle Warren argued that Lenin's 'Imperialism: the Highest Stage of Capitalism' (1917), from which the dependency position and that of most of the widely popular Marxist theories of imperialism it gave rise to, were derived, was a pamphlet written for propaganda purposes and lacked the thoroughness and precise analysis of much of Lenin's other work. Indeed it largely reverses the position Lenin took on the progressive side effects of capitalism in his earlier work 'The Development of Capitalism in Russia' (1899) and it is on this text that Warren bases his own argument. In addition to his critique of dependency and underdevelopment theory and the arguing of his own view from classic Marxist texts, Warren supports his argument with empirical data and evidence from a selection of different Third World nations.

The value of Warren's argument lies in that it takes into account and does not simply attempt to explain away as dependency theory did, the existence of substantial industrialisation in certain Third World countries and the fact that this industrialisation has had certain developmental benefits for the population. It also recognises that capitalism as a mode of production is an extremely efficient mode in terms of increasing the absolute volume of production and its rate of turnover.

Not surprisingly these arguments have attracted a lot of criticism of their own. Broadly this suggests that Warren is advancing an apologist's argument in support of capitalism which differs little from the traditional growth oriented and 'trickle-down' ideas of orthodox development theory. The debate focuses perhaps most clearly around the

issue of the definition of efficiency. Warren's critics would argue that the efficiency of capitalism as a mode of production that he refers to, is founded on its exploitative effects and moreover is only efficient in so far as production itself is concerned but is extremely inefficient in the basic inequalities it introduces into distribution and consumption. While they would agree that in the Third World the advent of external capitalism under the influence of imperialism has certainly improved the standard of living of a few people, they would also maintain that this new prosperity is not widespread enough to constitute real development. Indeed certain studies even argue that capitalist relations of production are by no means necessarily more 'efficient' even in pure production terms than traditional modes of production.

The debate is obviously open to impressionistic comments on both sides, but aside from this, while Warren's critics are correct to condemn any indiscriminate and blanket approval of capitalism, this is not a true representation of Warren's position. In effect he is not arguing that capitalist development is necessarily the best or the only path to development, rather his position is that the capitalist mode of production is one of the most successful modes at reorganising production into an efficient system which is a necessary, but far from sufficient condition for development. In doing so it has also been remarkably successful at overriding and getting rid of other more traditional and less efficient modes of production which may have been impeding development. Warren also recognises the exploitative nature of capitalism and its tendency to concentrate rather than distribute equitably the fruits of development. At the same time he argues that it is totally unrealistic to pretend that capitalist development has had no positive developmental effects felt by a larger population than the few who benefit directly. Furthermore it is flying in the face of readily available evidence to suggest that imperialism and capitalism have completely blocked the development of the Third World or the possibility of self sufficient Third World industrialisation ever occurring. Finally, although Warren's vision of capitalism actually having some positive effect on Third World development may be

interpreted as teleological, nowhere does Warren actually maintain that going through a capitalist mode of production stage is necessary for Third World development.

For the purposes of a study such as this one which is concerned with a Third World country with a fairly high level of industrialisation, Warren's contribution is particularly valuable because it puts forward a much less intransigent view of Third World industry than underdevelopment theory allowed for. In particular it recognises that this industry may be indigenous, not necessarily dependent on external capitalism and even as it develops may decrease the nation's general dependence on external capitalism. Finally it accepts the possibility that capitalist industry may, in spite of its exploitative nature and tendency to centralise profits, also have certain progressive developmental side effects.

One other point that Warren did emphasise, was the effect that the growth of capitalism in the Third World had on pre-existing modes of production. Their destruction by the capitalist mode of production was, he felt, a progressive step, as such modes of production tended to hold back the growth of production which is one important ingredient of development. Although Warren did not go into this question of the relationship between the capitalist mode of production and other pre-capitalist modes in any great length, it is one about which there has been considerable debate in Marxist circles. As this issue relates directly to the subject in hand, namely the development of capitalist industry in areas where it has hitherto not existed and pre-capitalist modes of production may be found, it is necessary to consider this work in some detail.

Discussion of the concept of the articulation of modes of production is not new. In reality it goes right back to classical Marxist texts, but theoretical debate on the topic started really attracting attention in the 1960s (Wolpe 1980; pp.3-5). Authors writing on modes of production (cf. Wolpe, 1980; Hindess & Hirst, 1975 & 1977; Taylor, 1979) explain the nature of Third World economies in terms of the coexistence of

several different modes of production in the same social formation and of the ways they interrelate .

In a Third World social formation there are, it is argued, typically several modes of production coexisting in a particular articulation at any one time. Among them it is usual to find a possibly small but growing and frequently dominant capitalist mode of production and also one or more pre-capitalist modes (e.g. a feudal mode). Although the capitalist mode will usually be externally introduced by imperialism, it tends to become dominant because of its superior organisation and ability to accumulate in comparison with pre-capitalist modes. As the capitalist mode spreads through the social formation, it comes into contact with the pre-capitalist modes and in doing so can use certain of their characteristics to its advantage, even to the extent of producing surplus faster than it might otherwise do. Thus it will exploit such characteristics of the pre-capitalist modes as the cheaper labour, longer working hours, piece work, work carried out in homes and the absence of a properly formed proletarian class and trade unions to make higher levels of profits and accumulate surplus faster.

Ultimately, however, the organisation of the capitalist mode of production will create a proletarian class and encourage organised trade union activity. As capitalist relations of production become stronger they will tend to erode the other pre-capitalist forms of organisation and in due course the capitalist mode of production is likely to replace the pre-capitalist modes, though how this will occur, how long it will take and even if it will take place at all remains a function of particular conditions.

Despite the fact that this model would appear to provide a fairly straightforward and flexible model with which to analyse Third World social formations, it still contains areas which are poorly conceptualised and open to debate. In his editor's introduction to a book of essays on the subject, Wolpe (1980) points out that the actual definition of what constitutes a mode of production is one such area, while a second and related area is the conceptualisation of how the

different modes interrelate and come to replace each other. Wolpe (1980, p.7) suggests that there are two different types of definition for the concept of mode of production which are commonly used: a restricted and an extended definition. Authors who use the restricted definition feel that a mode of production is adequately defined by specifying the relations and the forces of production. While those adhering to the extended definition also feel the need to include the mechanisms by which the mode of production reproduces itself².

This is not the place to discuss the theoretical problems involved in defining the concept of mode of production in a restricted or extended form. It is sufficient for our purposes to note that some mechanism for the reproduction and transformation of modes must exist whether it is included theoretically in the concept or not. Of more importance to note here is that the existence of a mode of production in an area establishes certain norms in production organisation, for instance levels of wages, length of working hours, forms of ownership of tools and materials, which will not be entirely the same as another mode of production would use. Thus in an area with an established mode of production, a new incoming mode which is initially used by only a few entrepreneurs, may adapt itself, at least at first, to certain existing established norms. This may or may not work out to the advantage of these new entrepreneurs: for instance wages may be lower than they might be prepared to pay, but at the same time levels of skills or labour productivity might also be inadequate. Exploring this type of relationship is obviously crucial in a study concerned with the location of capitalist industry in new areas in Third World countries where various modes of production as well as the capitalist mode may be in existence. Naturally a more fully developed theoretical framework than exists at present in modes of production theory would be helpful, but its absence need not prevent us from carrying out the study using a basic modes of production framework and identifying various phenomena and relationships which further elaboration of the theory should attempt to cover.

In general terms the major advantage of modes of production theory in

comparison with both orthodox development theory and dependency and related underdevelopment theory is its flexibility and the way that it avoids the generalised statements and simplifications of both. Thus it does not suggest a dualist image of Third World economies where there is no relationship between the modern capitalist sector and a traditional 'informal' sector, but recognises explicitly that different sectors in the economy may exist (indeed there may be more than just two), that they interrelate and use each other in different ways and it defines these sectors more rigorously using the framework provided by the theoretical concept of mode of production. In doing so it also avoids the error made by some dependency theorists, notably Frank (1967; & cf. debate with Laclau, 1971), who argued that 'once capitalism reached a particular nation it would virtually immediately penetrate all production and exchange relations and no other mode of production could coexist alongside it. Finally modes of production theory avoids the other more general tendency of dependency theory to assume that the capitalist mode of production cannot develop in the Third World as it did in the West and permits the conceptualisation of the capitalist mode developing or not as the case may be and in doing so exploiting and possibly destroying the other modes of production it comes into contact with.

At this stage in the argument it is necessary to return to the central concern of industrial location policy and examine the various implications of the theoretical propositions just discussed for it in general, and growth pole theory and policy in particular.

4. The Critique of Development Theory & its Implications for Industrial Location Theory & Policy

At an earlier stage (cf. p.34) it was noted that the basic concepts of growth pole theory were rooted in orthodox development theory. Now, having looked at various other development theories critical of the orthodox position, it is necessary to reassess the value of growth pole theory and at the same time consider the implications this critique has for industrial location theory and policy in general.

As pointed out above (cf. p.35) dependency theory is very critical of Third World capitalist industry in general, though not, it should be stressed, of industry per se, because of its links with foreign capitalism. Relating such a position to growth poles in fact suggests a complete reversal of perceptions of the role of growth poles. While orthodox development theory saw growth poles as centres of development with which to initiate the development of backward regions, dependency theory would suggest a view of them as centres of exploitation, through which surplus from their rural hinterland would be creamed off for the ultimate benefit of external capitalism. They would thus compound the underdevelopment of the backward regions they were located in rather than encourage their development.

However, while such a view is an improvement on the orthodox view in that it suggests that an industrial growth pole could have a negative effect on the development of a backward region, it remains equally crude in its level of analysis. Modes of production theory, on the other hand, does appear to suggest a third and more sophisticated basis for analysing the role of growth poles in regional development.

Providing one makes the two fairly easy assumptions that the firms in a growth pole are likely to be capitalist industrial concerns and that in a Third World backward region one can expect to find various pre-capitalist modes of production (and possibly even a capitalist mode as well), then the establishment of growth poles in underdeveloped regions can be understood as the organised penetration of capitalism into an area in which it previously hardly existed. Such an understanding begs questions about the relationship between industrial capital and the state, as growth poles are by and large promoted by state regional planning agencies and not private capital. Moreover it suggests that the effects of a growth pole on wider regional development might benefit from an analysis of the various modes of production existing in the region around the growth pole and the way they interacted. Finally, in terms of general industrial location theory, it suggests that the advantages to be gained from the interaction with pre-capitalist modes of production may encourage

capitalist firms to choose locations in areas not dominated by the capitalist mode of production. At an earlier point (cf. p.27) it was observed that while Massey's work on industrial location theory was extremely useful this was one area she neglected. In a Third World context, where pre-capitalist modes of production are very likely to exist in underdeveloped regions, the relationship between them and the incoming capitalist mode of production should certainly be considered.

One of the major failings of orthodox development theory and growth pole theory was that, though they posited the existence of multiplier effects, they failed to advance an adequate analysis of their operation. Yet the critique of orthodox development theory neither disproves the existence of these multiplier effects nor does it provide a better understanding of them. All that the modes of production analysis does is suggest a more rigorous framework within which multiplier effects might operate in a Third World context, or in other words a certain rationale which may go some what further in explaining their operation, though it is not a full explanation.

5. The State & Regional Planning

One of the fundamental characteristics of industrial location policy is that it involves some form of relationship between the state formulating the policy and the industrial capital it is seeking to regulate with the policy. The importance of understanding the nature of this relationship properly was brought out in the preceding section, when it was suggested that a growth pole policy could usefully be visualised as a concerted state directed attempt to encourage the development of a capitalist mode of production in remote rural areas where it has hitherto hardly existed. It was also suggested that given particular circumstances, it might indeed benefit industrial capitalists to locate new factories in such areas. Such views would seem to imply that the state generally acts in the interests of industrial capital. Patently, however, the relationship must be more complex. In formulating its industrial policy, the state will also be responding to a number of other demands and among them probably those

for investment and employment opportunities of the inhabitants of the remote rural regions in question.

In a social formation dominated by a capitalist mode of production it would seem inevitable that the capitalist class, had most influence over the State's activities. However, there is considerable debate about just how closely the activities of the state match the requirements of capital. This debate has become somewhat polarised around two opposing positions (Holloway & Picciotto, 1978). These maintain on the one hand that the actions of the state flow directly from the requirements of capital, with political activity by other groups having little influence and on the other hand that the state is relatively autonomous from capital and directed purely by political considerations. Both interpretations are however, really oversimplifications of what in effect usually occurs and they would easily fall foul of empirical case studies. Holloway & Picciotto (1979 p.1-31) themselves, while agreeing that both economic and political factors influence the state, go further (ibid, p.3) by suggesting that political influences also have their roots in the nature and problems of capitalist accumulation. Thus the political can be motivated by the economic. Indeed the whole Marxist notion of class is based on the view that the most important factor behind the interests and political activity of different groups in society is their economic circumstances. The members of each class thus have a shared or common relationship with the process of production.

This carries the discussion to another major area of debate: the homogeneity of class and particularly the homogeneity of capital. While certain theorists would argue the existence of different fractions of capital, others and notably Clarke (1978), maintain that such a position denies the existence of class and class interests based on economic interests. That is a person or group's position with respect to the process of production determines their prime political interest. Accepting such a premise, does not, however, prevent one recognising that political activity is also conditioned by strategic and individual concerns. Thus in different economic, political and historic

circumstances the same class can be expected to adopt different political methods and practices. Equally, within a class, its members' perception of these circumstances will not always be identical and thus they may disagree over the political action to be taken and indeed adopt different approaches.

In effect then, one may define a position which accepts the principle that classes are constituted on the basis of economic interests, without denying that the state may be subjected to political pressures from the members of the same class which are not always entirely consistent with each other.

Returning to the actual position of the state, its role is to maintain and improve the conditions for production and the continued existence of the social formation that supports it. While the parameters of this task will be those put forward by the dominant and most influential or powerful class in the social formation, it must also seek to accommodate the interests of other classes so they do not disrupt production. The degree to which the state has to acknowledge and act upon different political demands will be a measure of the strength of the class making them. The way the state responds to these demands will, however, always be premised on the need to maintain the conditions of production and reproduction.

In his work on modes of production theory, Taylor (1979, p.216) has suggested that in Third World social formation characterised by the coexistence of several modes of production, the state may take on specific or special forms of organisation. This is especially true during transition periods in conjunction with the emergence of particular forms of class structure. These different forms of the state will be "governed both by the changing requirements of industrial capitalist production on a world scale, and by the continuing reproduction of elements of the non-capitalist mode of production".

In essence then, the form of the state will change so that it remains appropriate to the needs of the existing articulation of modes of

production. Although its principal role will remain the need to ensure the conditions of production and reproduction of the dominant mode, depending on the importance and strength of other modes in the social formation, it may also find itself obliged to cater for their requirements. Thus the activities of the state may easily appear, and indeed be, inconsistent and contradictory as it tries to cater for the requirements of different modes of production.

Finally, depending on the strength and the extent of the dominant mode in a social formation and the degree to which its requirements govern the activities of the state, it is possible that it uses the state to extend its domination over other modes. Indeed Munck (1979) goes as far as to suggest that in this regard there is a fundamental difference between state intervention in imperialist nations and in dependent social formations. While in the former state intervention grew in response to a crisis in capitalism, in the latter it arose as a precondition to the rise of monopoly capitalism. Though his conclusions are based on the Brazilian case they would appear to be fairly widely applicable.

In its role of ensuring the conditions for production and reproduction of a social formation, one of the important areas of state activity is the provision of an appropriate built environment. Urban and regional planning is an essential element of this role in that it involves the organisation and adaptation of the built environment in such a way as to increase the efficiency of economic activity. Defined in its broadest terms, this state function comprises first the judicial role of establishing and maintaining the right to private property; secondly the regulatory and coordinating role of establishing the guidelines of development and the limits within which private property holders may use and modify their land; and thirdly the technical role of providing infrastructure. The essential aim is to create the most appropriate and ideal built environment at any one time (this being defined in terms of the requirements of the social formation at that time), but as instantaneous change is impossible the process remains a constant and dynamic process of continuous adaption of an existing built environment

to suit new requirements. Thus it is never ideal and will always retain outdated features built to cater for needs that no longer exist.

6. Summary of Theoretical Approach

To conclude this chapter it is perhaps useful to summarise briefly the main elements of a theoretical approach to this study which have been derived from the material discussed in the preceding pages.

The most basic position adopted is the decision to conceptualise Third World social formations as consisting of an articulation of different modes of production. In addition it is expected that these modes will probably include a capitalist mode as well as one or more non-capitalist modes and that it is likely that the capitalist mode will be, either already the dominant mode, or in the process of becoming dominant. Spatially this is expected to take the form of the capitalist mode being more dominant in cities and urban centres and less dominant in rural areas, particularly when these are more remote. Thus it is envisaged that typically the capitalist mode of production will be spatially extending its area of dominance to include more and more of the rural territory of the social formation. It is not, however, intended to equate a capitalist mode of production with the existence of industrialisation, as capitalist farming can exist in rural areas just as much as non-capitalist modes can exist in industrial commodity production in urban areas. Nor is it taken for granted that the increasing domination of the capitalist mode of production will occur evenly, at the same speed everywhere nor indeed necessarily.

Regional planning has been defined as an element of the state role of providing the conditions for production and reproduction of the social formation in question. Industrial location policies should be viewed as one of the ways in which the state performs this function. As the activities of the state are governed by the requirements of the different modes of production and different classes within the social

formation, to varying degrees, depending on the extent of their relative domination and power, it is possible to conceptualise an industrial dispersal programme as a state directed attempt to encourage the increasing domination and further spread of the capitalist mode of production to areas where it has hitherto hardly existed.

The thrust of this theoretical argument thus leads to the identification of various areas requiring analysis in a study of a particular industrial location policy in a specific social formation. Broadly it suggests the need to understand the influences on industrial location patterns and the possible motivations for industry to disperse spatially, as well as the need to understand the relationship that exists between the state and industrial capital.

In more detail it is proposed first to build up a picture of the industrial investment climate that exists in India; the various problems of accumulation; the possibilities and opportunities that exist to overcome these problems and whether the search for new industrial locations offers any solutions to the problems of accumulation as well as other additional advantages. Secondly, an attempt will be made to describe the relationship that exists between the Indian State and Indian industrial capital. While it is accepted that a precise characterisation of this relationship is impossible given its complexity and dynamic nature, it is hoped that a reasonably representative description can nevertheless be constructed.

In addition it will be necessary to examine the way the Indian state has performed its regional planning role, the type of built environment it has created and the changing locational opportunities this environment has afforded industrial capital. Thus while it is suggested that the industrial dispersal policy may be a response to a new desire of industrialists to locate in rural areas, it is also accepted that one of the reasons that they have not done so in any great numbers so far is because of the lack of infrastructural provision.

One of the central hypotheses of this thesis is then that the Indian

industrial dispersal programme of the 1970s was instituted, in part at least, as a response and to serve the requirements of Indian industrial capital. This in itself suggests a change in the industrialists' perception of what factory locations are possible and desirable, as up to the 1970s the trend had been one of increasing industrial concentration. It is also suggested, however, that such a change in perception will only occur gradually with particular industrialists experiencing the need and being able to consider such a new location perception sooner than others. Thus although our hypothesis posits the emergence of a change in industrial location trends, it is understood that only the first signs of such a change may be identifiable at present and that many industrial capitalists may still not wish to conform to this new trend. Attitudes to the industrial dispersal policy will therefore not be the same among all industrialists, and isolating which industrialists have which attitudes should be particularly instructive.

Another major area of investigation of the study must be the effect that the Indian state's industrial dispersal policy can be expected to have. As the hypothesis presented in the preceding paragraph challenges the accepted rationale of the location policy, it is necessary to attempt some form of evaluation of the validity of the developmental claims made for the policy.

The theoretical review carried out in this chapter has suggested that while a policy of promoting growth poles is a rational and even perhaps inevitable approach to encouraging industrial dispersal, the promoters should not be under any illusions as to the type of effect it may have on the development of rural areas around the poles chosen. Thus multiplier effects can be expected to occur in some form, but they may not occur where or when planners would wish. It is also pointed out that modern capitalist industry located in these growth poles may have negative effects on the local rural development, and it was suggested that it was useful to conceptualise these positive and negative multiplier effects within the framework provided by modes of production theory. Thus in studying the possible developmental effects of the

industrial dispersal and growth pole policies an attempt will be made to characterise any links between the incoming industry and local economic activity in terms of modes of production theory.

Footnotes:

1. Hamilton (1978 p.6) refers to Launhardt (1882), Chisholm (1910 & 14) Palander (1935) as Weberians and as neo-Weberians: Hoover (1948), Greenhut (1952 & 56) and Isard (1956).

2. For a definition of the terms 'forces and relations of production' see Hindess & Hirst (1975 pp.9-11), but essentially the 'relations of production' refer to the way in which the means of production are socially distributed and the way in which surplus is appropriated and who by, while the 'forces of production' refer to the elements of the production process itself, i.e. materials, tools and labour, and the way they are organised in the production process.

CHAPTER 3

THE EVOLUTION OF INDIAN REGIONAL DEVELOPMENT & INDUSTRIAL LOCATION

POLICY

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POLICY

When the British left India in 1947 they left behind them no system of regional planning. The country was, however, very unevenly developed as well as underdeveloped. What little manufacturing industry did exist was largely located in the major cities and colonial ports. Infra-structural facilities such as the extensive railway network or certain major irrigation projects that the British had built were probably their most useful inheritance in terms of resources for regional development.

The Indian National Congress and in particular its leader Jawaharlal Nehru, had been committed to the idea of a national development programme, formulated and run by the central government, since well before Independence. In 1938 it had set up a National Planning Committee and within three years of Independence the new national government appointed the Planning Commission chaired by Nehru as Prime Minister. Nehru's ideas on planning were derived from the West and especially from the Russian experience of five year national plans and these models strongly influenced the programme of successive Five Year Plans that the Planning Commission was to formulate over the next 30 years.

Given the circumstances of the nation in 1947 and its tremendous economic development problems it is understandable that the Planning Commission, initially at least, saw their role as formulating sectoral economic development plans rather than more spatially oriented regional development plans. Moreover at that time even in the industrialised nations of the West regional planning was still in its infancy. In Britain for instance, a country which was a pioneer in urban and regional planning and which could be expected to influence Indian planners, regional development planning was still relatively new in the 1940s with its formal basis in the Barlow Report (1940) and the Distribution of Industry Act of 1945, although a number of regional plans had already been prepared in the inter-War years.

Once established the Planning Commission and the Five Year Plan programme became the primary planning system in the country covering, as it did, virtually all aspects of national development. It is thus not surprising to find that regional development and industrial location policies have evolved out of this system and that the early references to and formulations of regional planning have all been contained in the Five Year Plans and other Plan documents prepared by the Planning Commission.

1. Regional Planning in the Five Year Plans

Despite this general eclipsing of regional planning by economic development planning the need for some form of differential treatment for different geographical areas of the country was already recognised in the First Five Year Plan (1951-56). There it was stated that:

"...if industrial development of the country is to proceed rapidly and in a balanced manner, greater attention will have to be paid to the development of these States and regions which have so far remained backward." (quoted in Menon, 1979, p.63-4)

But the Plan went no further than recognising the desirability and potential of the development of backward areas and suggesting that they should be given increasing preference as choices for the location of new industry. At the same time it noted the isolation of many of these areas and the difficulties many firms would have in locating in them. On the other hand, most of the industrial development that the First Plan provided for, concerned not the creation of new industry which would have given some potential for choosing new locations in backward areas, but the expansion of existing industry in established locations. Moreover industrial development was not a priority of the First Plan and most of the planned investment in the sector was expected to come from private rather than public sources. Instead the Plan concentrated on first the development of agriculture, with nationwide policies not systematically adapted for the different problems of different regions and second, on the renovation and development of infrastructure,

particularly irrigation, rural electrification and railways. However, in connection with the latter the Government did establish the first of a long series of large scale, public sector, industrial plants: the Chittaranjan Locomotive Works outside Calcutta and the Integral Coach Factory near Madras. It is in the siting of these that the first signs of an Indian industrial location policy are to be found. Thus the first of these two factories is some 200 kilometres North West of Calcutta up the Damodar River thereby representing a real dispersal of industry, but the latter is in Padi on the outskirts of Madras and therefore merely started what has now become an industrial suburb of an already existing industrial centre.

The Second Five Year Plan (1956-61) is an extremely important policy document in terms of industrial development in India. Following closely the Russian Five Year Plan model, on which its planning philosophy was based, it placed a strong emphasis on large scale industrial expansion. In essence it aimed to provide India with a solid industrial base in heavy and basic industry, iron and steel, heavy mechanical and electrical engineering, cement, fertilisers as well as mining and hydroelectricity. A key element of this expansion was that this basic industrial structure should be established and controlled by the nation and it opened the way to a massive expansion of public sector industry. It was at this time for instance, that India's three major iron and steel plants at Rourkela, Bhilai and Durgapur were initiated.

However, even though these were public sector projects and their location was controlled directly by the Central Government, decisions on their siting were largely related to supplies of raw materials, particularly coal, rather than integrated into any coherent regional development policy. Admittedly it was argued more or less as an after-thought that these plants would act as growth points in the areas they were located in and they were, by and large, located in areas with hitherto little industry (though several of them were located together in the Damodar Valley), but in effect the Second Plan did little more than its predecessor for regional development and planning. It took note of the existing inequalities and commented that they should be

reduced so as not to endanger the general economic development progress of the nation, but it proposed no policies or measures to be taken (Godbole, 1978 p.64; Menon, 1979, pp.85-6). Moreover, with its stress on rapid industrialisation which effectively meant encouraging industry where it would grow fastest, the Second Plan increased rather than decreased the variation in levels of industrial development in different regions of the country.

The Industrial Policy Resolution of 1956 which forms an Annexure to the Second Plan spelt out the basic guidelines for Indian industrial development policy for the next two decades until another Resolution was passed by the Lok Sabha in 1977. This first Resolution (1956) also considered regional policy minimally. Referring in particular to small scale industries it did, however, state at one point (p.47) that:

"Some of the problems that unplanned urbanisation tends to create will be avoided by the establishment of small centres of industrial production all over the country".

This statement instigated the establishment of a whole series of 'Industrial Estates' for small scale industries (defined as firms with less than Rs.1 million fixed capital) in small towns and rural areas all over the country. However, as R.L. Sanghvi (1979) concludes from an extensive study of these Estates, they have by and large only been successful in encouraging industrial growth when located in or near existing towns. Thus these industrial Estates did not encourage any substantial dispersal of industry as (a) they were dealing only with small scale firms and (b) they were not getting them to operate in places where they would not normally have gone; moreover they were not part of any multisectoral and integrated regional planning programme.

The 1956 Resolution also suggested that disparities in regional development could be reduced by the public provision of infrastructure to improve access to underdeveloped areas so that "industrialisation may benefit the country as a whole". Finally the document forms the basis of the Central Government system of industrial licensing which

effectively provided the administrative means by which the location of large scale industry was later to be fairly strictly controlled. But it was not for another 15 years that the licensing system was to be used in this way, and initially the licences issued only gave the State for which they were valid and no more specific location. Nor was there any attempt made to get firms to locate in a different State from the one they had entered on their licence application. Instead the major aim of the licensing system at this stage was to control what sectors of industry produced which goods. It thereby introduced a public sector monopoly in certain lines of production, reserved a list of about 180 products for exclusive production by small scale industry and subjected the rest to government regulation.

The operation of the Second Plan had demonstrated that a slow rate of growth in agriculture dragged heavily on the overall progress of economic growth in spite of the important advances made in industrial development. The Third Five Year Plan (1961-66) therefore, saw a change of emphasis with agricultural development being given a higher priority. At the same time, however, the Planning Commission did not wish to neglect industry and therefore continued to invest in industrial development and particularly basic industries which they still maintained were "fundamental to rapid economic growth" (Third Five Year Plan, 1961 p.50).

At first sight it would seem that the Third Plan also represented an important advance for regional planning in that for the first time it contained a separate chapter (IX) on 'Balanced Regional Development'. This spelt out a new line in the Planning Commission's development philosophy and stressed that the balanced development of different parts of the country was one of its planning aims. However, although this represented a certain advance in the Commission's view of the subject of regional development, in that it now considered it as deserving of formal attention, it did not represent any new departure in policy terms. The Plan discussed the concept of a large scale industrial plants, especially a basic or heavy industry plant, acting as a "spearhead of intensive and broad based development" in remote

areas. While it went on to recognise that there was no direct correlation between the existence of such a plant and the raising of the standard of living of the population in the area, it still concluded that such projects generally do have some developmental effect anyway and that it was therefore worthwhile dispersing them to backward areas. But then the Plan pointed out that it is not always economically and technically feasible to take such a step and argued the crucial point that care must be taken so that overall economic growth did not suffer as a result of locating industries in backward areas. Thus while 'balanced regional development' was important it should not cost the nation anything.

Ultimately then the Third Plan suggested no new policies different from those contained in its predecessors. The position remained that the Central Government would continue to locate large scale public enterprises in backward areas if feasible and it would suggest that private firms did likewise. The Government would also continue to make backward areas more attractive for industrialists by improving the infrastructure, though not in any systematic or carefully planned way, and it would continue to offer the one or two minor incentives established under the Second Plan such as maintaining a uniform price for steel at all railheads throughout the country.

The general regional development planning philosophy of the Third Plan thus adhered closely to the emerging growth pole theory view. Balanced regional development could best be achieved by locating points of industrial development in underdeveloped areas. These would then cause ripples of development to radiate out around them, a process which would occur 'naturally' once the initial impetus was provided. It was easiest to provide this initial impetus with public sector plants as, although private industry would also be welcome in backward areas, there was a grave danger in forcing it to choose such a difficult location as any firm which did not survive would represent a set-back to overall industrial growth and the nation's economic development. Overall growth was still seen as more important than regionally distributed development and it was expected that the latter could be

achieved without any cost to the former. In other words although the goal of balanced regional development was seen as desirable, regional planning was deemed unnecessary. As Misra, Sundaram & Prakasa Rao (1974, p.108) comment there was no recognition that regional planning might itself be a tool to encourage national economic development and the whole approach to development planning was economic and normative. However, the political significance of interregional equity was beginning to be appreciated. Moreover, the first signs of a realisation that an integrated regional planning system, which catered for the differential needs of different regions within an overall framework, was necessary and could contribute to national development were there, even though they were not seriously acted upon.

Following the Third Plan there was a period of three years, often referred to as the 'Plan Holiday', when no Five Year Plans were in force. Instead they were replaced by a series of one year plans. After this break the pattern of Five Year Plans was resumed, in theory at least, with the Fourth Plan covering the period 1969-74, but both this Plan and its follower, the Fifth, were never systematically implemented and indeed both were cancelled half way through their course. In effect this 'Holiday' marks the beginning of a decline in the importance of the Five Year Plan system in the regulation of the economic development of the nation; a decline which some authors have argued is largely to be blamed for the lower growth rates that India has experienced since 1965 particularly in industrial production (Shetty, 1978).

The Fourth Plan does, however, take a more committed stance towards regional development than the Third, stating at one point: "Even from a narrow and immediate economic viewpoint, society stands to gain by dispersed development" (p.303, 1970) or again, and more particularly with regard to the role of the state: "It is through a continuing programme of economic development supported by measures to attract industries to backward regions that the present imbalance can be rectified over a period of time" (p.310). The Plan was in fact redrafted twice and between the second draft and the final version two governmental Working Groups which had been examining the issues

involved in backward area development published their final reports. Thus while the first draft of the Fourth Plan (1966) contains virtually no mention of regional development planning, the second (1969) refers to the work of the two Working Groups with the first real indications of an emerging regional development policy, and the final Plan endorses some of the Groups' recommendations:

"It has been decided that financial and credit institutions should provide certain general concessions for financing industries in all backward areas in the States and Union Territories. In addition, it has been decided that the Central Government would subsidise the establishment of industrial units in the backward areas to the extent of 1/10 of the total capital cost for projects up to Rs.50 lakhs (5 million) both in the private and public sectors. In the case of projects involving larger capital outlay, the grant of subsidy would be considered on merits." (1970, p.310)

The Plan also announced that the Planning Commission was in the process of identifying the backward areas in consultation with the State Governments and it stressed that the latter would have an important role to play in providing infrastructure for industry in these areas once designated (p.311).

The reports of two Working Groups, known as the 'Pande' and 'Wanchoo' commissions (respectively the Working Group for the Identification of Backward Areas and the Working Group to Recommend Fiscal & Financial Incentives for Starting Industries in Backward Areas), are crucial in that they provide the basis of current Indian regional planning and more specifically industrial location policies, even though their recommendations were not implemented in full. We shall return to consider them more fully after briefly completing our review of the Five Year Plans.

The Draft Fifth Plan (1974-79) maintained the same policies as had been introduced in the Fourth Plan. However, it also commented on the high marginal costs of providing industrial infrastructure in congested

cities and suggested that dispersing industries spatially would conserve both financial and physical resources. It stressed once again the need to provide adequate infrastructure and remove any obstacles to the development of backward areas. Moreover, it emphasised the need for a multi-sectoral approach to backward area development with agriculture as well as industry being encouraged. Finally it proposed to create the necessary machinery to carry out techno-economic surveys and feasibility studies of backward areas in order to identify appropriate industries for development and it recommended that the State industrial promotion agencies should provide an integrated package of facilities and infrastructure in selected growth centres in their backward areas.

With the Janata Government in power from 1977 to 1979 the Draft Sixth Plan, which came out in 1978, made a number of criticisms of the Fifth Plan approach to backward area development. It argued that hitherto the approach had been wide ranging and non selective and it suggested that large scale organised industry in backward areas was not having the desired developmental effect. It was too capital intensive, appeared to result in only limited spread effects and was creating a dualism in certain backward areas between confined modern industrial enclaves and rural backwardness surrounding them. At the same time it argued that industrial development did have a role to play in backward areas, but that it required a degree of selectivity and an approach more integrated with other aspects of development planning.

On paper the changed attitude to regional development planning that the Draft Fifth and Sixth Plans represent seems extremely promising. They would appear to demonstrate a much greater level of awareness about the complexities and value of a well integrated regional development planning programme. They even indicate that the planners involved in their preparation had doubts about the effect of locating large scale, capital intensive, modern industrial plants indiscriminately in backward areas, something which in effect had been the key element of the Government approach to industrial location prior to that. Moreover they recognised that regional planning was not merely industrial dispersal, but had to involve agricultural development, as well as

coordination between the two. However, with the decline in the importance of the Five Year Plan system in providing a central guiding force to the Indian development effort, which meant that the Fifth Plan was never more than a Draft Plan, and the Draft Sixth Plan was scrapped as soon as Mrs Gandhi returned to power in 1980, the Five Year Plans are no longer as important a statement of the policies actually being implemented by the Indian Government.

2. The Identification of Backward Areas

Apart from continued references to the need for 'balanced regional development' in successive Five Year Plans from the early 1950s on, the Indian Government took no concrete action to further this proposal until 1968 when it appointed two Working Groups to examine policy alternatives for backward area development. They both reported a year later in 1969 just as the Fourth Plan came out and thus though their proposals were not included in the first 2 drafts of the Fourth Plan they were referred to in the Final Plan document.

The first Working Group on the 'Identification of Backward Areas' (Pande Commission) had the job of analysing and proposing a possible set of criteria which could be used to select the areas throughout the country which deserved special attention and developmental action. From the start the terms of reference of the Working Group, specified that they were looking for criteria to identify **industrially** backward areas (Menon, 1979, p.43; Godbole, 1978, p.65). There is thus little doubt that the Indian Government still at this stage saw 'development' in terms of 'industrialisation'.

In the event the Pande Working Group recommended the following 6 criteria should be used throughout the country for identifying industrially backward States and Union Territories: (a) total per capita income; (b) per capita income from industry and mining; (c) number of workers in registered factories; (d) per capita annual consumption of electricity; (e) length of surfaced roads in relation to population and the area of the State; and (f) railway mileage in

relation to the population and the area of the State. The criteria chosen were thus a set of fairly crude indicators of the aggregate level of development of the States. No attention was paid to the level of agricultural development, other than through its contribution to the overall per capita income. Moreover no attention was paid to variations in levels of development inside the State or to variations in the levels of income of the State's inhabitants. Thus for instance there was no indicator showing the proportion of the State's inhabitants with a level of income below an 'acceptable' minimum which would have given a much better indication of levels of poverty instead of the average per capita income used¹.

On the basis of these criteria the Working Group selected nine States (Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, Nagaland, Orissa, Rajasthan & Uttar Pradesh) as well as all the Union Territories apart from three (Chandigarh, Delhi & Pondicherry) as industrially backward and therefore qualifying for special treatment to encourage industrialisation. Subsequently Meghalaya, Himachal Pradesh, Sikkim and Pondicherry were also included, after representation by their local government bodies. These recommendations were all accepted by the Union Government.

The Pande Commission went on, however, to recommend that a series of about 20 to 30 districts throughout India should be considered for special incentives during the Fourth Plan period. Their argument was that development efforts should initially be concentrated on a limited number of districts, so as to increase their impact. With time the availability of incentives could then be gradually increased to cover other backward districts.

These 20 to 30 backward districts were selected on the basis of rather different criteria from the States. First the Working Group recommended that the districts should be more than 50 miles from larger cities and large industrial projects. Secondly they wanted an indication of the level of poverty in the district and recommended that only districts with a per capita income of less than three quarters of the State's per

capita income level should be chosen. Finally they suggested a complex measure of the utilisation of productive resources and employment opportunities in relation to the density of population, which included levels of employment in secondary and tertiary sectors and in the factory sector (levels of less than three quarters of the State average levels were taken to indicate backwardness), levels of utilisation of natural resources in the area, and adequate levels of availability and provision of electricity, water, transport and communication facilities. a/

While the Union Government accepted the Pande Commission's recommendations in respect of the identification of backward States they did not accept either the principle of choosing 20 to 30 particularly backward districts and developing them first or the criteria by which they had been chosen. Instead the Planning Commission and the National Development Council evolved a set of criteria of their own and selected 246 districts spread throughout all the States, and not only in the most backward, as the backward districts where the special incentives would be available for industrial development. Their criteria included measurements of both agricultural and industrial output, employment in all different sectors in relation to total population, consumption of electricity and lengths of surfaced roads and railways. Thus while the Planning Commission retained a measure of the relative importance of both agriculture and industry in these new criteria, it did not use any indicator to measure poverty levels. Ultimately then the criteria used for both the selection of backward States and those for backward districts were primarily concerned with the existing levels of industrialisation in the areas being considered. Although this is justifiable in terms of the original remit given to the Pande Working Group, there is no justification on the part of the Planning Commission as to why industrialisation was their primary concern. Moreover, as ultimately they chose to include at least one indicator of agricultural development in the criteria they adopted, it is not in the least clear what type of development they were interested in promoting in the backward areas. This is all the more confused as they chose to ignore the Working Group's recommendation that an

indicator of poverty levels should be included.

It is also very unclear exactly how the backward districts selected were chosen as all the criteria the Planning Commission used are worded in relative terms and no indication of the precise break-off points below or above which areas were chosen or rejected, or of the weighting given to the different criteria, ever seemsto have been published. This clearly leaves scope for possible bargaining between the State Government and the Union Government in the National Development Council (or outside it) about the number and size of the areas to be designated as backward.

The fact that the Planning Commission chose so many districts obviously diluted the programme and this could be construed as a result of pressure from particular States which did not want to be left out from a possible source of finance. Such a view would be further supported by the fact that the Planning Commission chose to apply its criteria on a State by State rather than a national basis, thus ensuring from the start that all States got a certain share of the cake.

One final criticism can be made of the fact that the criteria included a measure of **adequate** levels of infrastructure. Even though it seems sensible to ensure that adequate infrastructure is available in an area before starting to encourage industrial development in it, this does suggest that the Planning Commission was more interested in identifying areas with **potential** for industrial development rather than in trying to develop the most disadvantaged areas. There is an obvious danger in this, of excluding really backward areas, particularly as no mention was ever made in connection with this programme of providing help for improving infrastructure in backward areas that lacked it. Obviously this criterion of **adequate** levels of infrastructure tended to benefit the more developed States in the country which could afford to, or had already improved the infrastructure of their more backward areas.

In his study of the backward area development programme Menon (1979) makes many of the criticisms of the identification procedure voiced above. He then goes on to analyse the effect of the procedure by

looking at the areas selected as backward. He notes in particular that some of the most backward States have a lower proportion of their districts designated as officially backward than some of the more developed States. In addition some have a lower proportion of their population benefiting from the incentives (by virtue of living in backward areas) than some of the more developed States (p.51). He cites the case of West Bengal, the most industrialised State in the country, according to the Pande Working Group criteria, which has the highest percentage of districts declared as backward, while Bihar, which ranks tenth on the Pande criteria, has the lowest percentage². Alternatively Tamil Nadu, the second most industrialised State, and Karnataka, the seventeenth, had a larger proportion of their population living in areas eligible for incentives than Orissa, Himachal Pradesh, Bihar, Assam, Rajasthan and Andhra Pradesh (p.55).

The conclusion that all these points quite clearly suggest is that the identification procedure adopted by the Planning Commission and the NDC, far from being designed to help the most backward areas in the country, is distorted in favour of the more developed and industrialised States. It will therefore not come as a surprise that now, after the scheme has been operating for about a decade, it has become evident that most of the incentives and finance made available to private industry under the scheme have gone to firms locating in backward areas in the most industrialised States and particularly Maharashtra, Gujarat, Tamil Nadu and West Bengal; a point discussed at greater length below (cf. Section 6).

3. Incentives for Backward Area Industry

For its part the Wanchoo Working Group on 'Fiscal and Financial Incentives for Starting Industries in Backward Areas' recommended the use of six different incentives: (a) a higher development rebate; (b) exemption from income tax and corporation tax for 5 years after the development rebate; (c) exemption from import duties on plant, machinery and components; (d) exemption from exise duty for 5 years; (e) exemption from sales tax on both raw materials and finished

products for five years and (f) a transport subsidy for finished products manufactured in backward areas of outlying States (Assam, Nagaland, Manipur, Tripura, NEFA and Andamans and 50% for goods from Jammu & Kashmir) transported over 400 miles to markets (mileage under 400 miles receives no subsidy).

In the event the Central Government only accepted two of these recommended incentives: the income tax concession and the transport subsidy. To these two it added several others of its own devising, of which the subsidy on fixed capital investment (known as the 'Central Subsidy') is the most important. In addition various schemes for concessional finance from development banks and public financial institutions were announced and the income tax concession and transport subsidy were somewhat reformulated. Confusingly while the concessional finance and the income tax concession applied to the notified backward districts discussed above and the transport subsidy applied to outlying States the Central Subsidy applied to a separate and fairly different list of backward districts and areas! The choice of areas where the Central Subsidy would be available was left up to the State Governments rather than the Central Government, but why this different procedure was adopted and why different lists of areas should be used is not made clear.

The Central Subsidy was originally announced as a 10% outright grant on fixed capital investment (land, buildings, plant and machinery) in a new factory or in expansion of an existing factory with a ceiling of Rs.5 lakhs (0.5 Million) and applicable from the 26th of August, 1971. The scheme was revised in March 1973 to involve a 15% grant with a ceiling of Rs.1.5 million. Initially each of the States declared as backward was asked to select two districts or areas to be covered by the scheme and all other States one district or area. Subsequently in 1972 this was increased to six and three district or areas respectively. The scheme is now applicable in 125 districts or areas throughout the country. Where the State Governments have not specified complete districts as eligible they made up 'areas' consisting of several blocks and or taluks (tehsils).

The Transport Subsidy Scheme which was notified on the 23rd July, 1971, consisted of a 50% subsidy on the transport of raw materials and finished products from factories in the selected areas to the nearest railhead or mainland port (Madras or Cochin as appropriate). Both new factories and existing factories involved in substantial expansion after the scheme was announced were eligible for the subsidy. The parts of the country it applied to were Jammu & Kashmir, Assam, Meghalaya, Manipur, Nagaland, Tripura, Arunachal Pradesh, Mizoram, Sikkim, Himachal Pradesh, the Himalayan foothill districts of North West Uttar Pradesh and the islands of Andaman, Lakshadweep and Nicobar, although not all these areas were included straight away. However, in comparison with the Wanchoo suggestion of a subsidy on any transport over 400 miles, this subsidy is considerably less substantial as most of the areas concerned are as much as 1,000 miles away from major urban markets for manufactured goods.

The Income Tax Rebate Scheme meant that 20% of the profits of industrial units and hotels which were located in backward areas and commenced operations after the 31st December, 1970, were exempt from income tax. The scheme came into operation in April 1974 and was applicable for the first 10 years of the firms' operations.

The concessional finance made available by the Central Government to new or substantial expansions of existing industrial units in the notified backward areas are disbursed through various development banks and public financial institutions. These institutions operate in conjunction in a sort of pyramidal hierarchical structure with the Central institutions, such as the Industrial Development Bank of India, the Industrial Finance Corporation of India and the Industrial Credit and Investment Corporation of India Ltd. (IDBI, IFCI, ICICI), at the apex, underwriting the risks and refinancing the State level development banks and lending institutions in addition to offering their own loans to industrialists. All the institutions provide very similar facilities though some specialise in financing particular types of projects (eg. industrial modernisation) and they all use a common application procedure. Depending on the size and nature of the project

to be financed several of them may club together to provide a particular package of finance but one of them will always be appointed to to oversee the package. Finance from these institutions is available to industrialists throughout India but the various loans and other services are all on considerably better terms when provided to a firm setting up a unit in a notified backward area. Thus rates of interest on loans are about 20% lower in backward areas (9.5% p.a. instead of 11% p.a. for instance), repayment periods can be twice as long (15-20 instead of 10-12 years) and the commission charged on their underwriting facility may be 50% lower (1.25% for shares, 0.75% for debentures instead of 2.5% and 1.5% respectively). In addition to lower interest rates, longer repayment periods and cheaper underwriting facilities, the banks offer an extended initial moratorium on the repayment of loans, participation in risk capital in certain cases, lower commitment charges, and lower rates for the industrialists contribution to project costs, as well as maintaining a fairly flexible attitude to other terms and conditions such as debt-equity ratios, margin requirements, etc.

While the main emphasis of the Wanchoo Working Group's recommendations has been on fiscal incentives for backward area industrial development, the package finally offered by the Central Government consisted mostly of financial incentives, including both a fairly considerable outright grant and various loans on advantageous terms, though admittedly one fiscal incentive, the income tax concession, was carried through. The primary effect of such a switch in emphasis is that the Government is placing much more stress on helping industrialists get started on a new project rather than on encouraging continuous production. This emphasis would seem to work to the advantage of industrialists who have trouble in raising capital for new projects rather than those worried about the long term, continuous costs of operating in a remote location. Admittedly such costs should go down as a firm becomes established and also it is important that new projects should be encouraged, but it is possible that such a structure of incentives will tend to attract projects which are economically unsound in the longer term. The only longer term production-related incentive in the package is the income

tax concession for 10 years.

It is also important to note at this juncture that nowhere in any of the conditions laid down about the eligibility of projects for the incentives, does the Government make any attempt to regulate the type of industry it is encouraging in backward areas. This implies an assumption that all industry will be equally beneficial in development terms for the backward areas concerned, or alternatively, it suggests that the primary interest of the Government remains the encouragement of the maximum absolute industrial growth possible.

4. State Government Industrial Promotion

The responsibility for the execution of the industrial dispersal and backward area development policies lies with the State Governments. Most of these have created industrial promotion agencies to execute the policy and administer the various incentives. In addition many of them have created industrial finance corporations to act as local coordinators of the All-India industrial finance institutions. As well as administering the programme of incentives formulated by the Central Government, most of the States provide additional incentives for backward area industrial development. These usually include facilities such as land and infrastructure, often at concessional rates, and financial incentives such as loans, capital participation and frequently the refund of sales tax paid by the firm either as an outright grant or as a low-interest loan (Indian Investment Centre, 1979).

Although there are differences in the incentives offered by the different States, they are broadly comparable and thus though there is a certain amount of competition between States to attract industry to their State in particular, this competition often turns on non-material considerations like the efficiency of the industrial promotion agencies rather than on the level of incentives they offer. Obviously, however, a rich State with a lot of experience of industry like Maharashtra can usually offer a higher level of incentives as well as having an

industrial promotion agency finely tuned to the needs of industry, while a poorer, more remote and underindustrialised State like Tripura, though it can offer the incentives provided by Central Government, can do little to supplement them. The package of incentives provided by the Central Government does nothing to correct such imbalances.

The incentive package offered by the State Governments typically contains financial incentives in the form of term loans and a sales tax loan or subsidy and infrastructural facilities such as developed land, factory buildings and services at cut rates. The conditions on term loans vary but they are usually available up to a maximum of Rs.3 million, repayable in about 10 years, though some States offer them up to 15 years, with a moratorium on repayments frequently set at 2 years and interest rates varying anywhere between about 7 and 15 % p.a. depending on the scale of the firm and whether the loan is being underwritten by the IDBI.

Exemption from sales tax was one of the original incentives suggested by the Wanchoo Working Group and which the Central Government decided not to offer. Many of the State Governments have however, taken up the suggestion though not usually in its original form. A smattering of States offer complete exemption from sales tax for a period of about 3 to 5 years, others only do so to certain sizes of firms. Most however, offer an 'interest free sales tax loan' by which they mean that for the first few years the firm is in production, it is annually offered an interest free loan equivalent to the amount of sales tax it paid during the preceding year. Those loans are then repayable over anything up to 20 years.

Just about all States offer a certain level of infrastructural facilities to industrialists in their backward areas. Typically this can include developed plots of land in industrial estates or complexes, factory buildings and sheds on hire purchase, long lease or outright sale terms at competitive and often subsidised rates. Water and electric power are also often provided at cheap rates for the first few years. The conditions for eligibility for such incentives vary

enormously, though they are usually more favourable for small scale industry than large scale. Some States make them particularly favourable for people with technical expertise who want to set up their own business.

There are also various States which offer less common incentives such as their own capital subsidy on top of the Central Government one, or participation in a firm's share capital, or grants and loans for technical feasibility studies, or technical assistance. Finally a good number of the State industrial promotion agencies try to sell themselves as efficient management consultancies. They undertake to provide a comprehensive back-up service to a firm from the initial proposal stages till it is finally in full production: providing it with a complete package of incentives, sorting out all licensing and other official details and negotiating a complete schedule of loans and grants from various public lending institutions. Given the complexity of the various licences and official sanctions required to set up a new factory, there is no doubt that such a comprehensive service is attractive, but equally there are few industrialists who would rely entirely on a single government agency to perform such a service properly and very few of the State industrial promotion agencies, if any, match up to their promises in this respect.

In view of the basic similarity of the incentive packages offered by just about all the States and also given the complexity of the variations in the terms and conditions each State places on their incentives, it would seem that there is little for the industrialist to choose between one State and the next. Indeed making such a choice on a strict cost-benefit basis would be an extremely intricate and involved exercise. This being the case it seems logical to presume that an industrialist faced with the situation of having to choose between States for a location for his new factory would be more influenced by the reputation for good incentives and an efficient promotion agency that the States have, than by the actual level of the incentives. Once again this would tend to act as a bias enabling those States which have already got the most industry, to attract the most new industry to

their backward areas.

5. National Impact of Backward Area Incentives Disbursed by Central Institutions

After a decade of operation of the Union Government's backward area industrial development scheme it is possible to arrive at some assessment of its impact at least in terms of the incentives being disbursed. Data are, however, only available for two of the incentive schemes: the Central Subsidy and the concessional finance offered by the IDBI and other industrial development banks. Unfortunately no data are available to the public on the operation of the income tax rebate scheme.

Table 1 gives the total funds disbursed by the IDBI to industry in each State annually from 1970. For each year both the total amount of assistance disbursed and the amount disbursed to firms in backward areas is given. The same data have been arranged differently in Table 2 and 3 to make them more easily readable. The data are derived from the IDBI's annual Operational Statistics. The percentages in Table 2 show for each year how much of the IDBI's assistance to industry in each State went to firms in backward areas of the State. The States have been grouped into the Advanced and Backward categories used by the Central Government (cf. p.64). In Table 3 the States have once again been arranged in this way; the figures for the annual distribution of assistance to firms in backward areas throughout the country are given, both in absolute amounts and in percentages of the total disbursed that year.

The first point that should be noted from Table 3 is the assistance disbursed to advanced States is always over half the total assistance disbursed nationally, except for the first year 1970-1. Moreover, and this is even more indicative of the overall way the policy is going, despite a few annual fluctuations the proportion of assistance disbursed to advanced States is actually increasing, with in 1977-78, 63.5% of total disbursed nationally going to encourage industry in the

TABLE 1 Assistance Disbursed by the IDBI

States/Union Territories	1970-71		1971-72		1972-73		1973-74		1974-75		1975-76		1976-77		1977-78		1978-79	
	Total	Backward	Total	Backward	Total	Backward	Total	Backward	Total	Backward	Total	Backward	Total	Backward	Total	Backward	Total	Backward
Andhra Pradesh	29.5	1.9	45.9	7.0	51.3	7.1	62.6	19.6	63.4	20.3	117.7	47.6	254.9	143.8	267.4	184.5	430.9	279.6
Assam	1.0		2.0	0.4	42.9	42.1	87.3	86.7	62.8	53.1	55.7	49.6	69.4	59.0	33.7	24.6	52.4	22.2
Bihar	7.8	0.2	15.8	2.2	50.5	4.5	65.1	5.3	39.9	4.3	72.3	20.2	135.4	35.7	111.3	44.3	137.5	84.3
Gujarat	78.8	12.7	104.9	20.3	162.4	46.8	228.1	98.6	229.9	44.0	310.8	84.7	373.8	84.8	888.6	568.1	1392.9	913.2
Haryana	25.3	2.0	36.7	6.8	39.9	4.5	24.0	5.5	54.4	15.3	60.7	9.9	100.4	6.8	159.8	65.4	185.0	66.2
Himachal Pradesh	1.6	0.3	3.4	1.5	4.3	2.0	4.7	2.6	15.3	9.6	21.3	12.0	17.9	12.4	24.4	17.5	31.9	29.0
Jammu & Kashmir	0.5		2.0	2.0	0.6	0.5	4.1	4.0	14.7	12.3	26.2	25.3	23.1	23.1	90.2	90.2	98.3	97.4
Karnataka	33.6	7.5	36.8	13.6	81.6	40.7	115.2	78.5	179.6	91.3	320.7	188.6	291.0	162.5	264.5	129.0	476.8	208.7
Kerala	8.5	1.5	20.0	5.4	29.4	6.5	47.5	13.3	50.9	14.6	153.0	77.1	154.3	87.2	164.7	66.9	220.9	98.9
Madhya Pradesh	12.1	2.5	12.7	1.7	22.5	5.1	12.0	4.5	37.8	26.1	51.1	18.3	95.7	55.7	84.4	46.8	178.3	105.5
Maharashtra	154.3	12.1	163.6	15.9	162.1	13.1	240.2	17.5	321.2	34.9	448.0	59.7	548.1	122.8	634.7	173.8	809.8	213.4
Manipur									0.1	0.1			0.6	0.6	2.1	2.1	0.3	0.3
Meghalaya							0.7	0.7	3.0	2.4	2.9	2.1	21.5	21.2	7.3	7.0	12.7	11.2
Nagaland							4.5	4.5	0.3	0.3	0.9	0.9	2.3	2.2	1.1	1.1	0.4	0.2
Orissa	9.7	7.4	18.6	17.1	9.9	3.7	20.7	7.1	39.6	10.3	50.4	9.8	62.5	12.5	77.2	6.6	114.1	37.5
Punjab	10.4		16.3	1.5	22.0	3.6	55.0	8.8	57.1	13.5	65.0	19.1	119.2	44.0	94.3	49.4	151.0	93.4
Rajasthan	17.3	2.8	24.6	2.6	26.4	7.7	37.2	15.7	51.1	24.4	93.0	60.5	147.6	87.9	153.4	79.9	260.2	165.3
Sikkim																		
Tamil Nadu	41.5	5.2	96.4	16.9	131.2	18.3	171.4	34.9	208.1	78.0	283.6	108.5	395.8	163.0	415.7	242.0	523.1	258.7
Tripura			0.9	0.9							0.2	0.2	1.4	1.4	0.7	0.7	12.2	12.2
Uttar Pradesh	31.3	1.2	67.9	2.1	42.6	5.6	97.3	12.7	130.1	20.3	94.1	23.6	308.3	103.4	433.4	194.7	527.1	169.7
West Bengal	25.1	0.8	23.3	2.7	58.1	6.1	94.6	33.3	192.2	113.8	139.8	67.2	206.6	90.1	200.2	104.6	290.3	162.7
Union Territories:																		
Andaman & Nicobar Is.									0.2	0.2	1.3	1.3					3.2	3.2
Arunchal Pradesh					0.8	0.8			1.5	1.5	0.7	0.7	0.1	0.1	1.6	1.6	0.1	0.1
Chandigarh	0.3				8.3		5.0		0.9		0.9		6.5		4.2		86.0	0.1
Delhi	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.8	0.8	0.8	0.8	3.2	3.2	5.5	5.5
Goa Daman & Diu	18.1		6.2		12.2		11.7		16.5		26.8		45.1		47.6		76.6	
Lakshadweep etc	35.0	35.0	28.6	28.6	12.9	12.9	39.6	39.6	94.3	94.3	96.6	96.6	121.4	121.4	84.4	84.3	92.4	92.2
Nizoram																		
Pondicherry	0.5	0.5	1.9	1.9	3.8	3.8	1.2	1.2	2.6	2.6	2.0	2.0	11.3	11.3	16.8	16.8	4.8	4.8
TOTALS	542.4	93.8	737.6	151.1	975.8	235.6	1429.9	494.4	1867.7	687.6	2496.5	987.4	3515.0	1453.6	4263.8	2202.6	6175.0	3135.8

Source: IDBI 'Operational Statistics'

TABLE 2 IDBI Disbursed Assistance to Backward Areas in each State as a % of Total Disbursed Assistance to State

	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	Average
	%	%	%	%	%	%	%	%	%	%
ADVANCED STATES										
Gujarat	16.1	19.4	28.8	43.2	19.1	27.3	22.7	63.9	65.6	34.1
Haryana	7.9	18.5	11.3	22.9	28.1	16.3	6.8	40.9	35.8	20.9
Karnataka	22.3	37.0	49.9	68.1	50.8	58.8	55.8	48.8	43.8	48.4
Kerala	17.6	27.0	22.1	28.0	28.7	50.4	56.5	40.6	44.8	35.1
Maharashtra	7.8	9.7	8.1	7.3	10.9	13.3	22.4	27.4	26.4	14.8
Punjab		9.2	16.4	16.0	23.6	29.4	36.9	52.4	61.8	30.7
Tamil Nadu	12.5	17.5	13.9	20.4	37.5	38.6	41.2	58.2	49.5	32.1
West Bengal	3.2	11.6	10.5	35.2	59.2	48.1	43.6	52.2	56.0	35.5
U.Ts: Chandigarh Delhi									0.1	0.1
BACKWARD STATES										
Andhra Pradesh	6.4	15.3	13.8	31.3	32.0	40.4	56.4	69.0	64.9	36.6
Assam		20.0	98.1	98.1	84.6	89.0	85.0	73.0	42.4	73.9
Bihar	2.6	13.9	8.9	8.1	10.8	27.9	26.4	39.8	61.3	22.2
Himachal Pradesh	18.7	44.1	46.5	55.3	62.7	56.3	69.3	71.7	90.9	57.3
Jammu & Kashmir		100.0	88.3	97.6	83.7	96.6	100.0	100.0	99.1	95.7
Madhya Pradesh	20.7	13.4	22.7	37.5	69.0	35.8	58.2	55.4	59.2	41.3
Meghalaya				100.0	80.0	72.4	98.6	95.9	88.2	89.2
Manipur				100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nagaland				100.0	100.0	100.0	95.6	100.0	50.0	90.9
Orissa	76.3	91.9	37.4	34.3	36.0	19.4	20.0	8.5	32.9	38.5
Rajasthan	16.2	10.6	29.2	42.2	47.7	65.1	59.6	52.1	63.5	42.9
Uttar Pradesh	3.8	3.1	13.1	13.1	15.6	25.1	33.5	44.9	32.2	20.5
Tripura		100.0				100.0	100.0	100.0	100.0	100.0
U.Ts: Arunachal Pradesh Arunachal Pradesh			100.0		100.0	100.0	100.0	100.0	100.0	100.0
Dadra & Nagar Haveli	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Goa Daman & Diu	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	100.0
Lakshadweep etc										
Mizoram										
Pondicherry	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sikkim									100.0	100.0
TOTAL	17.3	20.5	24.1	34.6	36.8	39.6	41.4	51.7	50.8	35.2

TABLE 3 IDBI Disbursed Assistance to Backward Areas in each State

Millions of Rupees (% of Total Annual disbursement)	1970-71		1971-72		1972-73		1973-74		1974-75		1975-76		1976-77		1977-78		1978-79	
	MRs	%	MRs	%	MRs	%	MRs	%	MRs	%	MRs	%	MRs	%	MRs	%	MRs	%
ADVANCED STATES																		
Gujarat	12.7	13.9	20.3	13.4	46.8	19.9	98.6	19.9	44.0	6.4	84.7	8.6	84.8	5.8	568.1	25.8	913.2	28.2
Haryana	2.0	2.1	6.8	4.5	4.5	1.9	5.5	1.1	15.3	2.2	9.9	1.0	6.8	0.5	65.4	3.0	66.2	2.0
Karnataka	7.5	8.0	13.6	9.0	40.7	17.3	78.5	15.9	91.3	13.3	188.6	19.1	162.5	11.2	129.0	5.8	208.7	6.4
Kerala	1.5	1.6	5.4	3.6	6.5	2.8	13.3	2.7	14.6	2.1	77.1	7.8	87.2	6.0	66.9	3.0	98.9	3.1
Maharashtra	12.1	12.9	15.9	10.5	13.1	5.6	17.5	3.5	34.9	5.1	59.7	6.0	122.8	8.4	173.8	7.9	213.4	6.6
Punjab			1.5	1.0	3.6	1.5	8.8	1.8	13.5	2.0	19.1	1.9	44.0	3.0	49.4	2.2	93.4	2.9
Tamil Nadu	5.2	5.5	16.9	11.2	18.3	7.8	34.9	7.1	78.0	11.3	109.5	11.1	163.0	11.2	242.0	11.0	258.7	8.0
West Bengal	0.8	0.9	2.7	1.8	6.1	2.6	33.3	6.7	113.8	16.6	67.2	6.8	90.1	6.2	104.6	4.7	162.7	5.0
U.Ts: Chandigarh																		
Delhi																		
SUBTOTAL	41.8	44.6	83.1	55.0	139.6	59.2	290.4	58.7	405.4	58.9	615.8	62.4	761.2	52.4	1399.2	63.5	2015.3	64.3
BACKWARD STATES																		
Andhra Pradesh	1.9	2.0	7.0	4.6	7.1	3.0	19.6	4.0	20.3	3.0	47.6	4.8	143.8	9.9	184.5	8.4	279.6	8.6
Assam	0.4	0.3	42.1	17.9	86.3	17.4	53.1	7.7	49.6	7.7	49.6	5.0	59.0	4.1	24.6	1.1	22.2	0.7
Bihar	0.2	0.2	2.2	1.5	4.5	1.9	5.3	1.1	4.3	0.6	20.2	2.0	35.7	2.5	44.3	2.0	84.3	2.6
Himachal Pradesh	0.3	0.3	1.5	1.0	2.0	0.8	2.6	0.5	9.6	1.4	12.0	1.2	12.4	0.9	17.5	0.8	29.0	0.9
Jammu & Kashmir	2.0	2.0	2.0	1.3	0.5	0.2	4.0	0.8	12.3	1.8	25.3	2.6	23.1	1.6	90.2	4.1	97.4	3.0
Madhya Pradesh	2.5	2.7	1.7	1.1	5.1	2.2	4.5	0.9	26.1	3.8	18.3	1.9	55.7	3.8	46.8	2.1	105.5	3.3
Meghalaya							0.7	0.1	2.4	0.3	2.1	0.2	21.2	1.5	7.0	0.3	11.2	0.3
Manipur								0.1	0.0				0.6	0.0	2.1	0.1	0.3	
Nagaland								4.5	0.9	0.3	0.0	0.9	0.1	2.2	0.2	1.1	0.0	0.2
Orissa	7.4	7.9	17.1	11.3	3.7	1.6	7.1	1.4	10.3	1.5	9.8	1.0	12.5	0.9	6.6	0.3	37.5	1.2
Rajasthan	2.8	3.0	2.6	1.7	7.7	3.3	15.7	3.2	24.4	3.5	60.5	6.1	87.9	6.0	79.9	3.6	165.3	5.1
Uttar Pradesh	1.2		2.1	1.4	5.6	2.4	12.7	2.6	20.3	3.0	23.6	2.4	103.4	7.1	194.7	8.8	169.7	5.2
Tripura			0.9	0.6							0.2	0.0	1.4	0.1	0.7	0.0	12.2	0.4
Sikkim																		
U.Ts: Andaman & Nicobar																		
Andhra Pradesh					0.8	0.3			0.2	0.0	1.3	0.1	0.1	0.0	1.6	0.1	0.1	0.1
Dadra & Nagar Haveli	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.1	0.0	0.8	0.1	0.8	0.1	3.2	0.1	5.5	0.2
Goa Daman & Diu	35.0	37.0	28.6	18.9	12.9	5.5	39.6	8.0	94.3	13.7	96.6	9.8	121.4	8.4	84.3	3.8	92.2	2.8
Lakshadweep etc																		
Mizoram																		
Pondicherry	0.5	0.5	1.9	1.3	3.8	1.6	1.2	0.2	2.6	0.4	2.0	0.2	11.3	0.8	16.8	0.8	4.8	0.1
SUBTOTAL	52.0	55.4	68.1	45.1	96.0	40.7	204.0	41.3	282.2	41.0	371.5	37.6	692.5	47.6	805.9	36.5	1120.5	35.7
TOTAL	93.8	100.0	151.1	100.0	235.6	100.0	494.4	100.0	687.6	100.0	987.3	100.0	1453.7	100.0	2205.1	100.0	3135.8	100.0

backward areas of these already more industrialised States!³ At a greater level of detail the four most industrialised States in the country, Maharashtra, West Bengal, Tamil Nadu and Gujarat are frequently among the recipients which do best. In 2 years (1977-79) Gujarat in fact got over 25% of funds disbursed to backward areas. Karnataka, another advanced State, also does well fairly consistently. Whereas among all the other States and particularly the more backward there is only one Union Territory which over a number of years has got a high proportion, that is the tiny Goa, Daman & Diu (which for its size gets some extremely high levels of assistance) and three other States that have done well in a couple of years: Assam, Orissa and Uttar Pradesh. At the other end of the scale, some of the most underindustrialised and poorest States such as Bihar, or some of the most remote such as Jammu & Kashmir or the north eastern States have received extremely low proportions of assistance.

Table 2 gives an indication of how the IDBIs overall assistance to all firms in each State is distributed within the States between backward and more advanced areas. As one would expect some of the most industrialised States such as Maharashtra have fairly low proportions of assistance received going to backward areas in the State, although Gujarat, Punjab, West Bengal and Tamil Nadu all have average proportions as high as 30%. Such low proportions are understandable as these States have more restricted areas designated as backward than the other backward States do, but it also means that in these advanced States the IDBI is putting a lot of money (albeit at less advantageous rates to the firms concerned) into developing industry in areas which are not backward. Among the backward States, Table 2 also points to a few, such as Uttar Pradesh and Bihar, where nearly 80% of the IDBI assistance is not going to backward areas and others like Assam and Meghalaya where most of it is, though the latter State in particular has received so little assistance (Table 1) in all that such a high proportion may result from only one or two projects. All those States or Union Territories which have 100% figures are of course States which are designated as entirely backward (at both levels of designation).

Finally it is worth noting from Table 2 that the total assistance disbursed by the IDBI to firms in backward areas as a proportion of its total disbursement to industry, rose steadily from 17.3% in 1970-71 to a peak of 51.7% in 1977-78 and dropped only slightly the following year to 50.8%.

The IDBI is by far the most important term-financing institution in India. Since its inception up to March 1979 it has disbursed Rs.19,724.6 million of assistance which constituted about 40% of the total assistance disbursed by all the term-financing institutions in India, both national and regional, up to the same date. In addition it disbursed a further Rs.6,059.7 million in refinance to back up the State level institutions (IDBI Annual Report, 1978-9, p.132). The two other national industrial financing institutions of any importance, the IFCI and the ICICI disbursed Rs.5,995.5 million and Rs.8,121.1 million respectively up to the same date. Their shares of the total disbursement of assistance are therefore 12% and 16% respectively.

While unfortunately no reliable data on the regional distribution of the assistance from the IFCI and the ICICI, nor on the relative proportion going to backward area industry each year, is readily available, the figures in the last paragraph indicate that such data are not as essential a consideration as the IDBI data already discussed in this section. At the same time, however, it is possible to complete this rather scanty picture of the IFCI and the ICICI's operations with the information that in 1978-79 the IFCI assisted 94 firms in backward areas (out of a total of 214 firms assisted) with sanctioned funds up to Rs.664 million representing 43% of their total sanctioned assistance that year. Similarly the ICICI sanctioned Rs.638.3 million in assistance to firms in backward areas, which represented 34% of their total sanctioned assistance that same year. Thus as well as providing considerably less finance for industrial development than the IDBI, the IFCI and ICICI allocated proportionately much less to projects in backward areas (43% and 34% respectively, relative to the IDBI's 50.8% for 1978-79) (IDBI Annual Report, 1978-79. pp.127-8).

Data on the granting of the Central Investment Subsidy is given in Table 4, and the number of firms which had received the Subsidy up to the 30th June 1978 in each district is shown on Figure 1 with the corresponding figures in Table 5. From these it was again evident that on average the more industrialised States are receiving higher levels of disbursement. Admittedly Bihar, a backward State, has the highest number of firms (1,525) which have received a Subsidy, but the amount disbursed to them is fairly small (Rs.13.2 million), while Gujarat with 1054 recipient firms received Rs.71.3 million and Tamil Nadu with 921 recipient firms received by far the highest level of disbursement at Rs.116.5 million.

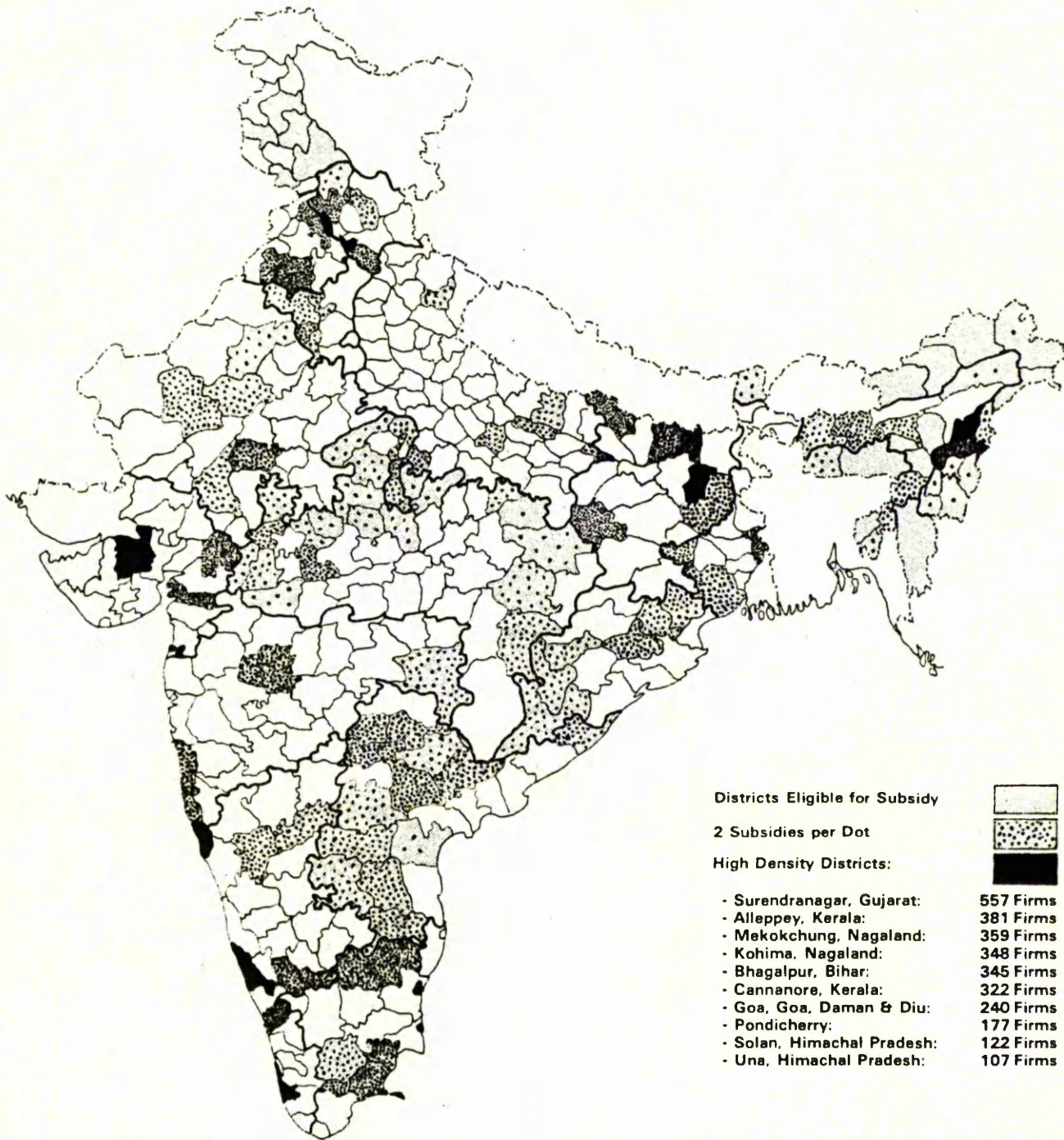
Figure 1 shows both the districts where the Central Investment Subsidy is available in grey (In some of these grey districts the Subsidy is not available for the entire area of the District, thus in Madurai Dt. the area of the city of Madurai is not eligible.) and the number of subsidies disbursed up to 30th June 1978. One dot represents two disbursed subsidies. The highest number of subsidies went to Surendranagar District in Gujarat (557), Kerala also has two districts with a very high number of subsidies disbursed but Bihar has the highest number spread over 6 districts. Nagaland has two districts which have received a very high number of subsidies. However, as the list in Table 5 indicates only a very small amount of money has actually been disbursed to the State as a whole and no figures for disbursements to district level were available. Given this lack of information and the remoteness of the area it seems likely that these figures are not entirely representative.

One further point that should be noted from Figure 1 is the extent of the eligible areas in each State. The grey areas on the map are not entirely correct as in some districts only part of the district is eligible for the subsidy (cf. note previous para.), but it is evident that the areas designated vary a lot in size and remoteness from State to State. Thus a State like Uttar Pradesh where districts are very small entities gets a much smaller eligible area than Andhra Pradesh for instance. Among the more industrialised States, Tamil Nadu appears

TABLE 4. Disbursement of Central Government Capital Subsidy for Backward Area Industrial Development in each State

Millions of Rupees/ (% of Total Annual disbursement)	1972-73		1973-74		1974-75		1975-76		1976-77		1977-78		1978-9		Total Amount of Central Subsidy grant up to 30.6.78		No of Units Receiving Central Subsidy up to 30.6.78	
	MRS	%	MRS	%	MRS	%	MRS	%	MRS	%	MRS	%	MRS	%	MRS	%	MRS	%
ADVANCED STATES																		
Gujarat			0.06	1.0	1.53	4.0	7.34	12.2	9.02	8.1	6.41	3.2	18.64	12.1	71.3	11.4	1054	9.7
Haryana					1.26	2.1	2.11	5.1	0.90	0.8	0.47	1.0	4.34	2.8	15.9	2.5	112	1.0
Karnataka	1.02	87.2			1.84	4.8	2.5	4.2	11.51	10.3	15.40	7.7	8.79	5.7	35.0	5.6	377	3.5
Kerala					2.98	7.7	2.83	4.7	1.93	1.7	12.93	6.5	7.10	4.6	27.8	4.4	883	8.2
Maharashtra					4.81	81.5	7.04	18.3	10.12	16.9	8.60	7.7	21.81	10.9	14.43	9.4	58.8	4.9
Punjab					0.06	1.0	1.11	2.9	2.20	3.7	4.45	4.0	6.54	3.3	4.55	2.9	19.1	3.1
Tamil Nadu					0.46	7.8	4.46	11.6	10.43	17.4	23.83	21.3	29.28	14.7	19.85	12.9	116.15	9.2
West Bengal					0.02	0.3	0.14	0.4	0.56	0.9	3.23	2.9	0.45	0.2	6.33	4.1	22.5	2.6
U.Ts: Chandigarh																		
Delhi																		
SUBTOTAL	1.02	87.2	5.41	91.7	19.10	49.5	37.24	62.1	63.47	56.8	102.29	51.2	84.03	54.5	366.7	58.7	4650	43.0
BACKWARD STATES																		
Andhra Pradesh					6.15	16.0	7.97	13.3	15.85	14.2	25.88	13.0	13.21	8.6	64.6	10.3	965	8.9
Assam			0.25	4.2	0.19	0.5	1.86	3.1	2.19	2.0	2.44	1.2	5.61	3.6	14.3	2.3	253	2.3
Bihar					1.27	3.3	0.20	0.3	1.99	1.8	4.59	2.3	3.70	2.4	13.2	2.1	1525	14.1
Himachal Pradesh					2.37	6.1	2.84	4.7	1.29	1.1	10.51	5.3	2.35	1.5	3.27	5.2	515	4.8
Jammu & Kashmir							0.26	0.4	4.70	4.2	2.72	1.4	6.93	4.5	Figures not supplied			
Madhya Pradesh					1.28	3.3	4.06	6.8	14.03	12.6	15.68	7.9	3.40	2.2	43.8	7.0	473	4.4
Meghalaya					0.60	1.6	0.37	0.6	0.46	0.4	0.51	0.3			2.6	0.4	73	0.7
Manipur			0.02	1.7							0.59	0.3					5	0.0
Nagaland					0.38	1.0					3.46	1.7			6.1	1.0	726	6.7
Orissa					0.82	2.1	0.17	0.3	1.22	1.1	1.12	0.6	2.89	1.9	10.9	1.7	335	3.1
Rajasthan					3.57	9.3	5.04	8.4	8.18	7.3	18.28	9.2	13.29	8.6	24.7	3.9	522	4.8
Uttar Pradesh					2.84	7.4	0.76	1.3	5.44	4.9	1.91	1.0	3.70	2.4	19.9	3.2	211	1.9
Tripura											0.28	0.1	1.41	0.9	1.7	0.3	89	0.8
Sikkim									0.13	0.1					0.1		11	
U.Ts: Arunachal Pradesh									0.04	0.0					0.44	0.3	0.04	10
U.Ts: Arunachal Pradesh											0.92	0.5			0.9	0.1	1	0.0
Dadra & Nagar Haveli											0.84	0.4	0.97	0.6	0.8	0.1	10	0.1
Goa Daman & Diu											6.63	3.3	9.52	6.2	15.6	2.5	257	2.4
Lakshadweep etc																		
Mizoram											0.55	0.3						
Pondicherry																		
			0.01	0.2			0.02	0.0	0.27	0.2					2.42	1.6	5.2	0.8
SUBTOTAL	0.15	12.8	0.49	8.3	19.47	50.5	23.70	39.5	57.83	51.8	96.91	48.6	69.84	45.3	256.9	41.2	6158	57.0
TOTAL	1.17	100.0	5.90	100.0	38.55	100.0	59.97	100.0	111.70	100.0	199.60	100.0	154.12	100.0	624.2	100.0	10808	100.0

FIGURE 1: No. OF 'CENTRAL SUBSIDIES' DISBURSED TO FIRMS IN EACH DISTRICT UP TO JUNE 1980



Scale 1:17,000,000

Source: Ministry of Industry, Government of India

TABLE 5 - No. of 'Central Investment Subsidies' Disbursed to Firms in
Each District up to 30th June, 1978 - Source: Ministry of
 Industry, GOI

	No.	Rs. M		No.	Rs. M
ANDHRA PRADESH			ASSAM		
1. Srikakulam	53	1.21	1. Goalpara	50	5.03
2. Prakasam	6	0.04	2. N.C. Hill	-	-
3. Chittoor	88	6.77	3. Kamrup	110	6.29
4. Cuddapah	92	6.18	4. Nowgong	44	0.47
5. Kurnool	85	5.69	5. Cachar	41	2.12
6. Anantapur	45	2.01	6. North Lakhimpur	3	0.01
7. Mehbubnagar	49	2.33	7. Karbi Anglong	5	0.36
8. Nizamabad	59	2.31			
9. Karimnagar	75	2.86	Total	253	14.28
10. Khammam	112	7.52			
11. Warangal	32	0.92	BIHAR		
12. Medak	111	22.49	1. Bhagalpur	345	2.62
13. Nalgonda	158	4.31	2. Darbhanga	165	2.52
Total	965	64.63	3. Champaran E.	115	1.58
			4. Champaran W.	121	1.42
GUJARAT			5. Palamau	309	0.92
1. Panchamals	294	19.22	6. Saharsa	170	1.23
2. Baroach	203	36.59	7. Santhal Parganas	156	1.57
3. Surendranagar	557	15.49	8. Madhabani	38	0.17
			9. Samastipur	106	1.13
Total	1,054	71.30	Total	1,525	13.17

	No.	Rs. M
HARYANA		
1. Hissar	57	7.98
2. Bhiwani	29	3.65
3. Mohindergargh	12	1.01
4. Jind	14	3.31
<hr/> Total	112	15.94

JAMMU & KASHMIR

1. Jammu		
2. Srinagar		
3. Anantnag		
4. Dodo		
5. Baramulla		
6. Poonch		

Total

- -

KERALA

1. Alleppey	381	14.07
2. Malapuram	180	5.69
3. Cannanore	322	8.05
<hr/> Total	883	27.81

MEGHALAYA

1. Khasi Hills	51	2.48
2. Garo Hills	14	0.06
3. Jantia Hills	8	0.03
<hr/> Total	73	2.57

HIMACHAL PRADESH

	No.	Rs. M
1. Kangra	114	1.5
2. Una	107	4.83
3. Harimpur	19	0.05
4. Solan	122	21.65
5. Sirmur	100	4.37
6. Chamba	13	0.07
7. Kulu	40	0.23

Total 515 32.71

KARNATAKA

1. Mysore	193	20.90
2. Raichur	68	6.04
3. Dharwar	116	8.12

Total 377 35.06

MADHYA PRADESH

1. Raipur	81	6.16
2. Bilaspur	36	5.14
3. Shivpuri	19	0.32
4. Datia	10	0.08
5. Bhind	19	0.17
6. Morena	19	2.28
7. Rewa	12	0.84
8. Sidhi	1	0.0006
9. Sarguja	17	0.16
10. Sagar	10	2.66
11. Tikamgarh	1	0.04
12. Vidisha	11	0.35
13. Chhatarpur	5	0.03
14. Dewas	85	16.21

	No.	Rs. M
NAGALAND		
1. Kohima	348	
2. Meokokchung	359	
3. Tuensang	19	
Total	726	6.13

PUNJAB		
1. Bhatinda	153	5.55
2. Sangrur	121	4.44
3. Hoshiapur	130	5.23
4. Faridokot	87	3.85
Total	491	19.06

UTTAR PRADESH		
1. Jhansi	81	4.53
2. Ballai	15	1.74
3. Rai-Barelli	39	6.81
4. Faizabad	31	2.97
5. Basti	29	1.26
6. Almora	16	2.58
Total	211	19.89

MANIPUR		
1. East District	1	0.22
2. West District	1	0.22
3. North District	1	0.22
4. South District	1	0.20
5. Tengudal	1	0.22
Total	5	1.08

	No.	Rs. M
MADHYA PRADESH (continued)		
15. Shajapur	10	0.23
16. Rajgarh	6	0.11
17. Guna	9	0.12
18. Jhabua	11	0.09
19. Dhar	26	0.39
20. West Nimar (Khargone)	11	1.80
21. Ratlam	53	6.51
22. Mandsaur	19	0.17
Total	473	43.86

TAMIL NADU		
1. North Arcot	270	48.80
2. Ramanathapuram	322	35.79
3. Madurai	68	13.85
4. Dharmapuri	175	15.68
5. Pudukottai	86	2.96
Total	921	116.55

MAHARASHTRA		
1. Aurangabad	276	33.08
2. Ratnagiri	174	13.83
3. Chandrapur	85	6.66
Total	535	53.57

	No.	Rs. M
RAJASTHAN		
1. Bhilwara	135	6.29
2. Alwar	78	8.86
3. Churu	22	0.16
4. Nagaur	66	1.00
5. Udaipur	70	4.60
6. Jodhpur	151	4.82

Total	522	24.74
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WEST BENGAL		
1. Purulia	73	3.82
2. Midnapur	100	9.22
3. Nadia	104	9.47

Total	277	22.51
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ANDAMAN & NICOBAR ISLANDS		
	10	0.04

DADRA & NAGAR HAVELI		
	10	0.84

LAKSHADWEEP	-	
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MIZORAM	-	
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PONDICHERRY	177	5.22
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	No.	Rs. M
ORISSA		
1. Kalanandi	44	0.45
2. Dhenkanal	98	4.91
3. Keonjhar	45	0.46
4. Koraput	66	3.08
5. Bolangir	31	0.35
6. Mayaurbhanj	51	1.71

Total	335	10.96
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TRIPURA		
1. North District	14	
2. West District	71	
3. South District	4	

Total	89	
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ARUNACHAL PRADESH		
1. Lohit	1	0.92

GOA, DAMAN & DIU		
1. Goa	240	14.84
2. Daman	12	0.44
3. Diu	5	0.29

Total	257	15.57
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N.B. The presence of a District's name on this list does not imply that the whole area of the District is eligible for the Central Subsidy.

to have done well with parts of five districts designated instead of the straight three districts allowed. The four States which have not kept to district boundaries to designate their areas for eligibility are: Tamil Nadu, Andhra Pradesh, Madhya Pradesh and Haryana. Also for Goa and Pondicherry the areas of the Municipalities of their capital towns are excluded.

One last table, Table 6, shows the distribution of Central Subsidies disbursed amongst firms of different sizes. First it is interesting to note that over 90% of the Subsidies go to small scale firms with fixed capital investments under Rs.1 million. This proportion is slightly lower among the more industrialised States and higher among the backward States. At the same time these SSI firms only get about 20% of the funds disbursed while the 1.4 percent of large scale industry recipients get 30% of the funds. This is understandable given that the Subsidy is calculated as a percentage of the fixed capital investment of each firm, but it does indicate just how much the larger firms are costing the scheme relative to the number of small scale projects that are set up.

A second point of interest is that there are relatively few firms in the Rs.1 to 1.5 million bracket, while there are a good deal more in the brackets on either side. Thus when the Union Government changed the definition of what constitutes a small scale firm in late 1980, moving the maximum fixed capital limit from 1 up to Rs.1.5 million it would apparently only be including a fairly small extra number of firms. But the fact that there are more firms in the categories on either side of this one could lead to the hypothesis that small firms were deliberately keeping their fixed capital down below the 1 million mark to benefit from all the extra incentives given to SSIs⁴. Taking this idea further one might suggest that this has led to some undercapitalisation in the small scale sector which may in itself be partly to blame for the high incidence of financial problems experienced by firms in this sector. It is doubtful whether this problem, if it really exists as a result of the SSI limit, would be solved by moving the limit up as this would only encourage a different

TABLE 6 Central Subsidies Disbursed to Firms Categorized by Scale of Fixed Capital Investment up to 30.6.78

Millions of Rupees/ (% of Total)	Size of Firms												Total Fixed Capital Investment Encouraged MRs												
	Up to 1 M.Rs			1 - 1.5 M.Rs			1.5 - 5 M.Rs			5 - 10 M.Rs				Above 10 M. Rs											
	No of Firms	Total Subsidy Granted MRs %	No of Firms	Total Subsidy Granted MRs %	No of Firms	Total Subsidy Granted MRs %	No of Firms	Total Subsidy Granted MRs %	No of Firms	Total Subsidy Granted MRs %	No of Firms	Total Subsidy Granted MRs %		No of Firms (100%)	Total Subsidy Granted (100%)										
ADVANCED STATES																									
Gujarat	973	92.3	19.4	27.2	30	2.8	5.4	7.4	27	2.6	10.6	14.9	18	1.7	25.9	36.3	6	0.6	9.0	12.6	1054	71.3	573-955		
Kerala	92	82.1	2.8	17.6	3	2.7	0.6	3.8	9	8.0	3.1	19.5	5	4.5	5.0	31.4	3	2.7	4.5	28.3	112	15.9	125-680		
Karnataka	331	87.8	7.4	21.1	12	3.2	2.0	5.7	17	4.5	6.3	18.0	6	1.6	3.8	10.9	11	2.9	15.5	44.3	377	35.0	369-578		
Kerala	849	96.1	10.0	36.0	10	1.1	1.7	6.1	17	1.9	8.3	29.9	2	0.2	2.2	7.9	5	0.6	5.5	19.8	883	27.8	315-586		
Maharashtra	447	83.6	9.2	17.2	15	2.8	2.0	3.7	35	6.5	11.7	21.8	17	3.2	9.8	18.3	21	3.9	25.8	48.1	535	53.6	882-788		
Punjab	768	83.4	16.3	14.0	23	2.5	5.0	4.3	68	7.4	30.2	25.9	38	4.1	35.5	30.5	19	2.1	29.0	24.9	921	116.5	1157-883		
Tamil Nadu	253	91.3	2.8	12.4	7	2.5	1.3	5.8	3	1.1	1.4	6.2	10	3.6	11.0	48.9	4	1.4	6.0	26.7	277	22.5	188-787		
West Bengal																									
U.Ts: Chandigarh																									
U.Ts: Delhi																									
SUBTOTAL	3713	89.4	67.9	19.6	100	2.4	18.0	5.2	176	4.2	71.6	20.7	96	2.3	93.2	26.9	69	1.7	95.3	27.5	4650	366.7	3614.257		
BACKWARD STATES																									
Andhra Pradesh	883	91.5	16.4	25.4	14	1.5	2.0	3.1	27	2.8	8.3	12.8	15	1.6	10.3	15.9	26	2.7	27.6	42.7	965	64.6	1505-379		
Assam	236	93.3	3.2	22.4	4	1.6	0.6	4.2	7	2.7	2.6	18.2	2	0.8	1.8	12.6	4	1.6	6.0	42.0	253	14.3	183-855		
Bihar	1505	98.7	7.1	53.8	13	0.9	2.2	16.7	4	0.3	1.9	14.4	6	1.2	6.7	20.5	6	1.2	8.5	26.0	515	32.7	158-700		
Himachal Pradesh	474	92.0	8.9	27.2	12	2.3	2.1	6.4	17	3.3	6.5	19.9	6	1.2	6.7	20.5	6	1.2	8.5	26.0	515	32.7	248-225		
Jammu & Kashmir																									
Madhya Pradesh	424	89.4	7.5	17.1	8	1.7	3.2	7.3	18	3.8	7.6	17.3	15	3.2	14.1	32.2	8	1.7	11.4	26.0	473	43.8	403-675		
Manipur	5	100.0																							
Meghalaya	69	94.5	0.5	19.2					2	2.7	0.5	19.2	2	2.7	1.6	61.5					5			1-080	
Nagaland	723	99.6							2	0.3											73			21-333	
Orissa	320	95.5	3.0	27.5	4	1.2	0.7	6.4	6	1.8	2.8	25.7	3	0.9	2.1	19.3	2	0.6	2.2	20.2	335	10.9	91-876		
Rajasthan	504	96.6	6.7	27.1	1	0.2	0.2	0.8	4	0.8	0.9	3.6	4	0.8	3.6	14.6	9	1.7	13.3	53.8	522	24.7	134-778		
Sikkim	11	100.0	0.1	100.0																	11			216-297	
Tripura	88	98.9	1.7	100.0																	89			1-1	
Uttar Pradesh	185	87.7	5.1	25.6	12	5.7	3.1	15.6	6	2.8	2.2	11.0									8			9.5	
U.Ts: Arunachal Pradesh	10	100.0	0.04	100.0																	10			0.04	
U.Ts: Dadra & Nagar Haveli	8	80.0	0.4	50.0	1	10.0	0.2	25.0	1	10.0	0.2	25.0									1			0.9	
U.Ts: Goa Danan & Diu	242	94.2	6.3	40.4	2	0.8	0.3	1.9	6	2.3	2.1	13.5	4	1.6	4.3	27.6	3	1.2	2.5	16.0	257	15.6	5-944		
U.Ts: Lakshadweep etc																									
U.Ts: Mizoram																									
U.Ts: Pondicherry	173	97.7	1.9	36.8	1	0.6	0.2	3.8													1			50.792	
SUBTOTAL	5860	95.2	69.8	27.0	72	1.2	14.8	5.7	100	1.6	35.6	13.8	52	0.8	44.6	17.3	74	1.2	86.8	33.6	6158	238.1	34447.427		
TOTAL	9573	92.8	136.7	22.8	172	1.7	32.8	5.4	276	2.7	107.2	17.7	148	1.4	137.8	22.8	143	1.4	182.1	30.1	10808	624.8	7061.684		

Source: Ministry of Industry, Govt of India.

bracket of firms to keep their fixed capital expenses down.

Third, in the more industrialised States there does seem to be a sizeably higher proportion of medium scale firms (particularly the two categories from Rs.1.5 to 10 million) than in the backward States, although the proportion of large scale firms is fairly consistent throughout. Maharashtra, Tamil Nadu and Gujarat (three of the four most industrialised States) have relatively large numbers of medium scale units and the two former also have many large scale units. In this they are joined by one backward State: Andhra Pradesh. It is interesting that the other important industrial State, West Bengal, has relatively few larger firms and a high proportion of SSIs (Maharashtra & Tamil Nadu have the overall lowest percentages of SSIs) while Gujarat, though it has many MSIs, tends to have fewer the larger they get and culminates with a well below average percentage of LSIs (0.6%).

Apart from the Central Subsidy and the term finance disbursed to firms in backward areas there is little other publicly available information on the national results of the industrial dispersal programme. No information on the operation of the Income Tax Rebate scheme is available for instance. The only other scheme for which operational details have been released is the Transport Subsidy scheme, and even on this there is very little.

Godbole (1978, p.70) states that from the commencement of the Transport Subsidy scheme in 1971 till 1975 the Union Government only received two very small claims from Tripura. More recent figures from the GOI Ministry of Industry indicate a slightly higher level of uptake:

TABLE 7: Disbursement of Transport Subsidy

	1976-77	1977-78	1978-79
	Rs.	Rs.	Rs.
1. Assam	181,589	176,969	14,399
2. Himachal Pradesh	-	-	46,029
3. Jammu & Kashmir	-	-	155,463
4. Manipur	-	30,081	-
5. Tripura	-	199,567	-
Totals:	<u>181,589</u>	<u>406,607</u>	<u>215,891</u>
Grand Total:	Rs.804,087		

Even though there does appear to be more use being made of the Scheme the level remains very low considering the number of units (judged on the basis of Central Subsidies disbursed to the eligible areas), which are eligible to make claims. Surprisingly the figures in the above table make no reference to sums disbursed under the scheme before 1976 so it is impossible to check Godbole's mention of two earlier claims particularly as he himself gives no reference for his information. Finally, no mention is made of claims from firms in island territories (Andamans etc.). The data in Table 7 are however, derived straight from Central Government Ministry of Industry internal circulars (mimeo; date 20.10.78; D.O. No.4/1/78-RD), as are all the figures in Tables 4, 5 & 6 on the Central Subsidy.

6. Assessment of Impact of National Backward Area Incentive Schemes

Overall it would appear from the operational details of the various backward area incentives schemes outlined in the previous section, that their impact has not been as great as might have been hoped. First over a period of nine years assistance has gone to about 10,000 firms in

backward areas (Central Subsidy figure). Not all of these will have been new firms, and about 9,000 of them are small scale units with fixed capital levels of below Rs.1 million. At a rough average of 50 jobs per firm that means only about half a million were created, or an increase of 8% in the total number of industrial jobs in the country. In terms of the Central Subsidy a total disbursement of Rs.625 million encouraged a total capital investment outlay of some Rs.7 billion, when the year before (1976-77) the total fixed capital invested in the factory sector in India stood at about Rs.162 billion (Tata Services, 1980 p.68). This Rs.7 billion was therefore only about 4% of the total and that same year the rate of fixed capital investment was 15% (Tata Services, *ibid*). Even these fairly crude and highly aggregated figures show the amount of industry being encouraged to locate in backward areas was still a small proportion of total industrial growth in the country, and assuming that most other industrial growth would still be occurring in established centres actual spatial dispersal can only have been minimal.

At the same time it is clear that, while the public financial institutions like the IDBI have increasingly been funding firms locating in backward areas, it is still the case that nearly half of the IDBI's loans go to firms which are not in backward areas. Thus the government's effective commitment to backward area industrialisation and general industrial dispersal is not as high as it could be. This impression is further reinforced by the evidence that even within the backward area incentives schemes, it is the most industrialised States which fairly consistently seem to be getting the most out of them in terms of the levels of funds allocated to their firms. The backward States on the other hand appear to be benefitting most in terms of the total numbers of firms receiving incentives but then again there are a higher proportion of small scale units amongst these than in the advanced States. Arguably with the tendency to a higher level of financial insecurity and failure among smaller units, their developmental value to these states is not as high as their numbers might indicate.

In sum the entire backward area incentive scheme does not appear to be encouraging as much backward area industrialisation as might be expected. Furthermore, the advanced States are benefitting more than the backward States both in terms of the funds allocated to them and possibly even in the quality of industry being encouraged in them (quality in terms of both viability of projects and their developmental effect: jobs created, possibilities for subcontracting, etc. though no real judgement could be made on this without more extensive evidence).

7. Recent Changes to the Government's Industrial Policy

The two years of Janata Government rule in the late seventies (1977-79) produced some changes to the prevalent industrialisation policy. For the most part these changes were contained in the 1977 Industrial Policy Resolution which superseded the earlier Resolution of 1956. The main emphasis of this new document was to encourage further the growth of small scale industry which the Janata Government believed had a primary role to play in the development process. Thus the list of 180 items which had been reserved for exclusive production by small scale industry in the 1956 Resolution was increased to include over 800 products. Large scale industry was expected to concentrate on basic industries, capital goods industries, high technology industries and a number of other important areas not covered by the SSI reserved list such as machine tools and chemicals. Apart from this shift in emphasis in favour of small scale industry, the 1977 Resolution introduced no other major changes but reiterated existing industrial policy commitments.

For industrial location policy the two years of Janata Government also marks a threshold as in 1977 the first prohibitive industrial location policy measure was introduced. This consisted of a ban on the location of new industrial undertakings and on the substantial expansion of existing units in major cities. The ban covered the metropolitan areas of all cities with more than 1 million inhabitants and the municipal or corporation area of all cities with half a million inhabitants or more (as defined in the 1971 Census). Providing the ban is strictly

implemented it represents the single strongest measure in the whole Indian industrial location policy package.

Although the ban has now been in operation for several years a precise assessment of just how effective it has been is hard to make. Impressionistic evidence would suggest that contrary to many government rules in India it is being applied fairly strictly. There are, certainly cases of industrial expansion in or near cities which do appear to have escaped the ban but it would seem that they are few and far between. Moreover, industrialists as well as government planners talk about the ban as if it is a real one. The ban is applied through the industrial licensing system already in existence. All industrial licences issued since 1977 specify a fairly precise location for the licensed factory. The location is usually specified in terms of a district but can also be as precise as to state a particular taluk (tehsil) within a district. The ban also applies to industries which do not require a licence although here the authorities are not in such a good position to impose the ban though they will deny assistance to any firm contravening it.

8. Conclusion

Although it is apparent from the Five Year Plans that there has long been a certain awareness in Central Government planning circles in India of the problem constituted by the tremendous regional disparities on levels of development in the country, the above policy review shows that it took over 20 years of development planning before concrete steps were taken to try and solve this problem. Even now, while there undoubtedly exists a coherent and reasonably effective industrial location policy, this policy package is not part of a broader and well integrated regional development planning mechanism. Certainly individual State Governments pay lip service to regional planning and prepare documents detailing the problems and resources of the different regions within their State boundaries. But these exercises remain within the confines of individual States and the development proposals they suggest are not part of an integrated development strategy, but

rather lists of things that might be done to encourage the development of the area in question, nor are they backed by any serious commitment and financial power from either the State Governments or the Union.

In the absence of any more serious regional development planning effort the industrial location policy package assumes a role of primary importance among the efforts being made to reduce regional disparities of development. Yet this policy package is not entirely suited for this role and moreover, it suffers from problems of its own. First, and perhaps partly because of this role that has been foisted on it, the industrial location policy suffers from a lack of clarity about its aims. Is it intended simply to encourage the maximum industrial growth possible in areas where there has hitherto been little industry? Or is this industrial growth supposed to achieve a specific purpose, namely to encourage the broader development of the area in question? If so, is not some industrial development more appropriate than other sorts and anyway isn't there more to development than just industrial growth? Essentially the policy seems to have been formulated with merely the first aim in mind, but then the second has been tacked on as an added theoretical justification though, unfortunately, the further questions it raises have not been properly considered.

The second area of problems is in the formulation of the policy package itself. Various elements of the policy do not seem to be working quite the way they were expected to. Thus while the package may be achieving a certain amount of dispersal of industry within individual States, it is also assisting more industrial development in industrialised States than in underindustrialised States. Again, however, the assessment of this failure depends on what the basic aim of the policy is. If encouraging maximum industrial growth in new places is the main objective then providing assistance for expansion in industrialised States is very likely to be more rewarding than providing it only in the most backward States. The confusion surrounding the Planning Commission's intentions in drawing up the industrial location policy package as they did is fairly deep because there is no explanation provided as to why the recommendations of the Pande and Wanchoo Working

Groups were changed the way they were. The only argument that seems to be consistent with their behaviour is that they did not want to disadvantage any particular State Government with the policy, or any particular section of the industrial community, as their political support was essential to the stability of the Union Government.

Footnotes:

1. Though often attempted, defining a 'poverty line' is an extremely difficult exercise as there is no absolute measure of poverty or even of 'adequate' nutrition standards, but nevertheless some indicator of poverty levels would have been an extremely valuable addition to defining backward areas.
2. Though West Bengal is the most industrialised State in India by many criteria, it also has a very concentrated spatial distribution of industry. Thus most of the districts outside Calcutta could be described as industrially backward. Nevertheless Menon's criticism remains valid as a policy which aims to disperse industry should not just encourage its movement outwards in concentric rings from existing industrial centres, but should also involve States with little or no industry.
- 3 In 1978-9 this proportion was slightly lower (62.2%) than the previous year, but as this is the only small drop in the four years 1975-9 it is no indication of a real downward trend.
- 4 To a certain extent the uneven distribution will also be a result of firms declaring lower fixed capital investment levels than they really had so as to benefit from the special facilities given to SSIs.

CHAPTER 4

INDUSTRIALISATION AND THE INDIAN STATE

INDUSTRIALISATION AND THE INDIAN STATE

This Chapter has two principal aims. First it is intended to provide the background to explain how Indian industry has reached the state of development it has and the problems it faces as a result. This is in order to be able to suggest what motivates industrialists to take particular location decisions. Secondly it provides an account of the relationship between industrial capital and the Indian State, as a basis for judging what influence the former may exert on policy formulation by the latter.

To do this an essentially historical framework has been adopted which traces the roots of Indian economic development planning back to the early years after Independence and forwards to the present time. The account becomes more detailed for the late 1960s and the 1970s, the period during which industrial location policy was properly formulated and implemented.

1. The Early Years After Independence & the First Five Year Plan

Given its importance for Indian industrialisation the Second Plan might appear to be a more obvious starting point for this account. However, it is in the early years after Independence that the Planning Commission was established and rapidly became the most important economic development policy making body in the country. It was also in these years that it was ascribed the authority which made the ambitious size and scope of the Second Plan possible. As was indicated in the previous chapter (Ch.3 p.53) the power of the Planning Commission was in large measure due to its close association with Jawarharlal Nehru. Nehru believed strongly in the importance of a central state planning system, and he lent the Commission the authority of his personal political stature.

Planning did however, have its critics. Even though the Indian Congress Party as a whole was committed to the principle of centralised planning of economic development, conservative interests within the Party were

more doubtful about it. These interests were represented in the Cabinet in the person of Sardar Vallabhbhai Patel, who was deputy prime minister and exercised considerable power over government policy. Sardar Patel died in 1950 but in the three years before his death a series of economic policy measures were introduced which created a favourable environment for private investment (a good account of this period is provided by Frankel, 1978, pp.74-77, cf. also Desmukh, 1957, pp.43-63). These included the lifting of wartime price controls on certain essential foods commodities and a reduction of direct taxes on personal and corporate incomes (1949-50 Budget).

This was also the time when the first Industrial Policy Resolution (1948) was issued by the government. This Resolution was probably the most lenient towards private industry of the three (others in 1956 and 1977) issued since Independence. It did provide for a state monopoly to cover new enterprises in certain fairly restricted industrial sectors (coal, iron and steel, minerals, shipbuilding, aircraft, telephones and telegraph equipment) but it also indicated that there would be no nationalizations of existing enterprises, and that foreign firms could continue to operate in the country on the same terms as indigenous firms. (Frankel, 1978, p.77)

As Frankel explains (1978, pp.75-6 & 84-86) Nehru tried at several points to establish the Planning Commission during these years, but the idea was resisted by Sardar Patel and senior government officials. However, in 1949 with no improvement to the continuing economic crisis and increased backing from certain sections of the Congress he was more successful. Even so Sardar Patel's restrictive influence affected the terms of reference of the Commission and relegated it to an advisory status. The Draft Outline of the First Plan was thus fairly conservative and warned against the dangers of hasty implementation of drastic measures to reduce inequalities in society. Also the limited extent of the taxation measures that it proposed meant that there were insufficient funds to finance any large scale industrial development programme. Industrial development was to be left in the hands of private enterprise. Instead the Draft Outline emphasised agricultural

and infrastructural development including in particular irrigation and electrical power.

The final version of the First Five Year Plan retained this emphasis on agriculture and infrastructure, with industrial development being left to private initiative and resources (GoI, First Five Year Plan, 1952, p.71). There was however a slight change in emphasis which Frankel ascribes directly to Sardar Patel's death and the increased authority of Nehru (Frankel, 1978, p.94). The percentage of the total outlay of public funds in the Plan which was allocated to industrial development increased from 6.1% in the Draft Outline to 8.4% in the final Plan (GoI, First Five Year Plan, 1952, p.70). Most of this was to be spent on the development of basic industries including among other things a new iron and steel plant. In addition, as Frankel (1978, p.94) puts it:

"The broad outlines of an indirect attack on the prerogatives and position of private enterprise were, moreover, beginning to emerge. First, the planners announced their intention to increase central supervision and control over the private sector. Private enterprise would subsequently have to operate within the framework of the new Industries (Development and Regulation) Act, 1951, which provided that no new industrial unit or substantial expansions to existing plants could be made without a license from the central government. ...Second, there was a new emphasis on overtaking the private sector as the preeminent agency of industrial development. The planners gave notice of a much larger role for the public sector in basic industries in future plans."

This then was the first indication of the anti-private sector/pro-public sector reputation that the Indian Government was to earn among industrialists in later years.

To a large extent this approach to economic development and planning can be associated with Nehru, particularly in so far as its practical implementation is concerned, but the ideological and philosophical commitment behind it lie deeper in the roots of the Indian National

Congress itself. This is not the place to explore these roots in detail. Suffice it to say that they derive from the socialist political orientation of many of the Indian intelligentsia that joined the Congress in its early days. They are also to be found in the Gandhian roots of the Party. While Mahatma Gandhi stressed that heavy industry should be subservient to agricultural and rural craft development, he did accept the need for some heavy industry in development and he fully agreed with the socialist element of the Party that this industry should be kept firmly in public hands (Frankel, 1978, p.16). It was this synthesis of Gandhian and socialist ideas that was to be the primary influence on Congress economic and planning policy during the Nehru years (Frankel, 1978, p.15). But as the Sardar Patel hiatus from 1947 to 1950 shows there were other interest groups within the Congress as well.

The Congress also received considerable support from the business community and increasingly after Independence from rural propertied classes as well (Chaudhuri, 1978, p.214). Frankel, describes at length (1978, Chapter 2, pp.28ff.) how the Congress went about mobilising support. Thus although the leadership of the Party in pre-Independence and immediate post Independence days was largely in the hands of upper caste Hindus with a Western style education and usually a training in the professions (p.29) which can be described as the 'Indian intelligentsia' (cf. also Kochanek, 1974, p.265), the lower levels of the Party organisation tended to be controlled by business classes in urban areas and landowning castes in the countryside (p.30). Merchants and important industrialists such as J.R.D. Tata also provided a good deal of the Party's funds (p.34).

Inevitably perhaps, for a party whose original *raison d'être* was to wage a nationalist struggle, the Congress grouped within it a whole variety of interest groups whose diverse interests started to conflict once Independence had been achieved and the unifying ideology of nationalism lost its primary importance. As the Congress party has remained in power in India in one form or another for virtually the entire 35 years since Independence this conflict of interests amongst

the party's broad membership continues to be the main source of contradictions in the policies it pursues. (This, of course, is the main theme of Frankel's book on 'India's Political Economy', 1978; but it is also noted by other writers, for instance Patnaik, 1975, pp.57-8).

2. The Heyday of Planning: the Second & Third Five Year Plans

The First Plan had not been too ambitious in its targets and in certain areas these were indeed surpassed. This meant that the Second Plan was formulated in an atmosphere which was both more optimistic about the rates of economic development the nation was capable of achieving and better disposed to the contribution that planning might make to growth (Datt & Sundharam, 1979, p.172; Bettelheim, 1968 p.160). Equally, however, the position of the Planning Commission had been strengthened. The Lok Sabha passed resolutions (Dec. 1954) declaring that the objective of economic policy should be a 'socialistic pattern of society' and calling for the stepping up of the rates of economic and particularly industrial growth. The reference to a 'socialistic pattern of society' which has remained a catch phrase in Indian economic planning, implied that the aim of development should be social gain rather than private profit and private interests should not be allowed to gain control of the direction of development (Bhattacharya, 1973 p.165). In addition Nehru was able to use his now preeminent position in the government and the Congress Party to ensure that the Planning Commission had an authoritative, instead of a purely advisory, role in economic policy formulation and implementation. (Frankel, 1978, p.113).

The Second Five Year Plan was thus more ambitious in what it set out to achieve and more self-assured in the strategy it adopted, than its predecessor. Its two main planks were: first a major effort at rapid industrialisation emphasising in particular the need to develop the nation's basic industrial capacity with a whole range of heavy and capital goods industries; and second a strong commitment to keeping much of this new industry in the public sector so that the state would have a direct control over the 'commanding heights of the economy' and

thereby the ability to regulate the direction of economic development.

Understandably this much more assertive Plan aroused considerable debate. Bettelheim (1968, p.159) suggests that to a certain extent India's big industrialists were in favour of the state investing in the more high cost, high risk and slow return sectors of basic capital goods industry, because they were reluctant to do so themselves. While this may have been true of a number of industrialists the dominant view would seem to be more correctly represented by Frankel (1978, pp.128-9) who maintains that from 1955 the Plan 'was the target of a steady barrage of criticism from the business community'. She quotes the Federation of Indian Chambers of Commerce and Industry (FICCI) who were in effect arguing for a complete reversal of roles between the public and private sectors, with the state concentrating on the improvement of social and overhead capital.

Despite these criticisms the Second Plan was not substantially altered and the government further consolidated its position with the 1956 Industrial Policy Resolution. In comparison with the 1948 Resolution this one greatly expanded the list of industrial sectors where the state would have a monopoly with additions to the list including several capital goods industries such as heavy plant and machinery required for iron and steel production, mining or machine tool manufacturing and heavy electrical plant (GoI, Industrial Policy Resolution 1956, Schedule A). There was also a new list (Schedule B) of industries which were to become progressively state-owned but where private capital was expected to supplement the state effort. Schedule B included remaining minerals, non-ferrous metal industries, machine tooling, many chemical and pharmaceutical industries and fertilisers. All remaining industries were left open to private enterprise subject to state control. This set the stage for a much broader scale and scope to state involvement in industry and ascribed it a primary role in the establishment of new industries. In doing so it openly rejected the FICCI view of the state's role in economic development.

The Second Plan strategy was also criticised outside India. Most of the

Western aid-givers, including the World Bank, were alarmed by the increasingly radical rhetoric used by the Indian planners; but it was the United States in particular which was most opposed to the development strategy placing such an emphasis on industrialisation (Frankel, 1978, p.179; Patnaik, 1975, p.59). Indeed West Germany and Britain were sufficiently in favour of the principle of Indian industrialisation to collaborate directly in the building of major iron and steel mills at Rourkela and Durgapur. The American criticism which favoured a major emphasis on agriculture rather than on industry and the use of modern inputs to increase production levels rather than a reliance on the reorganisation of farming, was one of the factors which contributed to a change in the Planning Commission's approach in the Third Plan. It was, however, by no means the only factor.

During the course of the Second Plan period it became apparent that levels of agricultural production were not increasing sufficiently fast. Indeed it was recognised that this failure was becoming a major limiting factor in the nation's economic development which ultimately could be expected to hold back industrial development as well (Datt & Sundharam, 1979, p.175). This realisation prompted the planners to change their strategy somewhat for the Third Plan. While they did not decrease the proportion of public funds to be channelled into industry in the Third Plan they did increase substantially the funds going into agricultural development. Given the large scale and capital intensive nature of many of the industrial projects started during the Second Plan and the time required to get them into production a retreat from these commitments was difficult. In effect this therefore ruled out any major changes in the level of finance allocated to industry. One interesting point to note, however, is that while the Commission had originally intended the ratio of public to private investment in industry to be somewhat higher in the Third Plan than in the Second, the final Plan used the same target ratio of 60:40% (instead of the intended 67:33%) as had been adopted in the Second Plan. (Frankel, 1978 p.181). This represented a slight retreat from the planners' aim of achieving an ever higher proportion of industry under public control. More radical policy changes, however, were to take place before the

Third Plan had completed its term (1961-66).

3. Industrialization under the First Three Five Year Plans

By 1966 India had gone through nineteen years of Independence and fifteen years of Central Government economic planning. These years had also seen some of the most dramatic industrialization the country had and still has ever experienced. The following table, taken from Chaudhuri's book on the Indian economy, gives some indication of the scale of change:

Table 1: Indexes of Industrial Production - 1951, 1955 and 1965
(Base 1960:100)

Industry	Weight	1951	1955	1960	1965
Mining	9.72	66.6	74.6	100.0	131.7
Manufacturing	84.91	54.6	73.8	"	153.8
Food Processing	12.09	66.9	75.9	"	122.2
Textiles	27.06	79.7	94.1	"	114.8
Chemicals	7.26	42.4	60.1	"	153.9
Petroleum	1.34	11.0	56.1	"	158.7
Basic Metals	7.38	46.5	53.3	"	180.1
Machinery	3.38	22.2	35.5	"	316.0
Transport Equipment	7.77	19.6	99.2	"	206.3

Source: Chaudhuri, 1978, p.66; Reserve Bank of India, Report on Currency & Finance

It highlights the particularly dramatic increases in production that took place during the periods of the Second and Third Five Year Plans in such basic and capital goods industries as Basic Metals, Transport Equipment and especially Machinery. Consumer goods industries such as Food Processing or Textiles, on the other hand, showed much smaller

increases, a pattern which reflects the priorities of the various Plans. Basic and capital goods industries in fact showed annual growth rates of 12 and 13% during the Second Plan period and 10 and 19% respectively during the Third Plan period (Shetty, 1978, p.9), while the overall growth rate in industrial production rose from 5.7% per annum under the First Plan, 7.2% under the Second Plan to 9.0% under the Third Plan (Shetty, 1978, p.9) which represents very impressive industrial development rates.

By way of comparison agricultural growth rates were much more modest during these years. Between 1952 and 1965, total agricultural production grew at a fairly steady linear rate of 3.42% per annum, made up of a annual 2.75% growth rate in non-foodgrain production and a 4.79% rate in foodgrain production. At the end of the period, in 1966, agricultural production levels experienced a marked drop, largely as a result of the long drought of 1965 to '67. To put these rates into perspective it is worth noting that throughout this period the population of India was growing by over 2% per annum. Agricultural production growth was therefore only just managing to keep ahead (Chaudhuri, 1978 pp.57-9).

Employment in the organised industrial sector, that is in factories covered by the 1948 Factories Act, rose by an average of just over 3% per annum between 1950 and 1965. But this overall average obscures a faster rate of growth in later years, thus from 1950 to 1955 the average annual employment growth rate was 1%, from 1956 to 1960 3.5% and from 1961 to 1965 4.3% (Shetty, 1978 p.28). By 1966 there were some 4.5 million workers employed in organised manufacturing industry or 3.8 million in private industry and 0.7 million in public sector industry (Shetty, 1978 p.29).

The proportion of public to private sector investment in industry is difficult to gauge, as comparable data are not available, but some idea of the growth and extent of the public sector can be had from the following figures. In 1951 there were 5 Central Government undertakings involving a total investment of Rs.290 million. By the end of the 1st

Plan this had risen to 21 units with Rs.810 million investment; by the end of the Second Plan: 41 units and Rs.9,560 million and by the end of the Third Plan there were 74 units involving Rs.24,150 million in investment (Tata Services, 1980, p.80).

The final consideration in this brief review of the state of Indian industrialisation at the end of the Third Five Year Plan must be an indication of Indian industry's position vis à vis foreign capital and the extent of the economy's dependence on foreign assistance. During the entire fifteen years the value of imports was higher than that of exports. The gap between the two widened appreciably between 1955 and 1957, that is at the commencement of the Second Plan industrialisation programme which depended to a significant extent on foreign inputs. The Government reacted to this rise in imports and the resulting balance of payments crisis in 1957 with a regime of strict import controls. However, even after these measures the value of imports continued to rise, though not unduly relative to the level of exports. This continued until 1964 when there was another more dramatic widening of the balance of payments deficit (Chaudhuri, 1978 pp.71-2).

The level of external assistance was much higher under the Second and Third Plans than under the 1st. During the Third Plan the level of total net aid rose to just under Rs.30,000 million (30 billion) which was nearly fifty percent higher than the level during the Second Plan and ten times as high as under the First Plan (Total net aid over the five years of each Plan) (Shetty, 1978, p.40). Finally as a small indication of foreign capital involvement in India the level of remittances abroad by foreign companies operating in India stood at Rs.683 million (0.51% of GNP) in 1960-61, five years later in 1965-66 this had risen to Rs.1,383 million (0.67% of GNP) and the year after it increased substantially again to Rs.2,186 million (0.92% of GNP) (1966-67) (Tata Services, 1980 p.125 & Chaudhuri, 1978 p.51).

Thus by the end of the first three Five Year Plans India had made some major steps forward in its economic development but at the time it was faced with some important problems. It had expanded its industrial

capacity and particularly its basic and capital goods industry capacity quite substantially. Industrial production levels had risen dramatically but they had not been matched by similar rises in agricultural production and the 1965-67 drought showed that the economy was still extremely vulnerable in this crucial area. It was evident that agricultural production would have to increase if the economy and industrial development were not to suffer. Elsewhere the rises in industrial employment, while not dramatic, did look hopeful. The other major problem area was the balance of payments situation and the high level of external assistance. The imposition of strict import controls had not narrowed the gap between exports and imports. Foreign companies were removing remittances from the country at a rate equivalent to about one fifth of the total net aid coming in, and the level of these remittances was growing at an alarming rate towards the end of the period. Finally the level of external assistance itself was extremely high, to the extent that it financed a third of the actual outlay of public funds in the Third Plan (Tata Services, 1980, p.185).

The rise in industrial production capacity had been impressive but its price was a highly increased dependence on foreign capital, and continued industrialisation seemed to be threatened by inadequate growth in agriculture.

4. Shifts in Economic and Planning Policy (1964-1969)

Criticisms of the policy orientation of the Five Year Plans continued, and indeed such events as the 1962 Indo-China War were used by the Plans' opponents to suggest the need for a reorientation of government spending away from public sector industry. Nehru, however, on the whole succeeded in defending the Plans even though in doing so he effectively increased the level of criticism. Thus by refusing to rechannel public funds earmarked for industrial development into defence spending he created the need for higher levels of taxation in the 1963/4 budget which infuriated the business community (Frankel, 1978, pp.215-219). Nehru was being criticised on other matters as well and his personal political authority and power was beginning to suffer, but he died in

May 1964 before he was forced to make any major concessions on planning policy. His death left the control of the Congress Party and the government in more conservative hands. With this new political environment and with the evident failure of the Second and Third Plans in certain areas, such as in raising agricultural production, the Planning Commission was unable to perpetuate the planning tradition of the Nehru years.

There followed a period of more liberal economic and planning policies which reflected the political orientation of those in power but also resulted from the political instability and changes in government that characterised the late 1960s. From 1964 to 1966 Lal Bahadur Shastri was Prime Minister and then Mrs Gandhi succeeded him. Mrs Gandhi's premiership did not immediately result in major policy changes, however, as it was not until 1969 that she had enough political standing of her own to implement more radical measures, such as the bank nationalisation, which marked the start of a renewal period of stronger state intervention in the nation's economic affairs.

It is worth examining the political and economic policy changes that took place in this period in some detail as it is during these years that the foundation stones for the industrial location policy of the 1970s were laid. The IDBI and the other industrial finance lending institutions started disbursing funds from 1965 onwards. The Pande and Wanchoo Working Groups were set up to make studies of backward area identification and incentive policies in 1968 and they both reported in 1969. Another crucial feature of this period is that it marked the onset of a prolonged economic recession and much slower industrial growth rates. All these changes (the liberalisation of economic policy including the decline of planning; the emergence of industrial location policy and the fall in industrial growth rates) took place during the same years. It is important, therefore, to try and establish what connections exist between them. The single most useful source for such an inquiry is Frankel's book on 'India's Political Economy 1947-77' (1978) upon which much of the following discussion is based.

When Nehru died in 1964 there was no obvious successor in the Congress Party. Political manoeuvring within the Party resulted in the appointment of Lal Bahadur Shastri as the new Prime Minister. Although not one of the most senior party members, Shastri had been in the Cabinet as home minister for a number of years in the early sixties. Politically he belonged to the more conservative side of the Congress and was generally critical of public sector industry and unsympathetic to what he saw as the Planning Commission's hostile attitude towards private business. Although he was not a particularly powerful politician, nor his period in office that long, his ideas did have an important impact on economic and planning policy. Indeed, Frankel sees this period as crucial:

"During the brief twenty months of Shastri's tenure, a series of undramatic initiatives in economic policy that went virtually unnoticed at the time cumulatively altered the entire approach to India's development strategy. Among the results of decisions taken during this period were the eclipse of the Planning Commission as a policy making body; a shift from controls to incentives as major instruments of development planning; a reorientation of public investment from basic industries to agriculture; a new agricultural strategy to concentrate modern inputs in irrigated areas of the country; and an enlarged role for private domestic and foreign investment in the development of the industrial sector. In sum, in less than two years, the key pillars of Nehru's strategy of self reliant growth and social transformation through expansion of basic and heavy industries in the public sector, and land reforms and cooperative reorganization in agriculture, were virtually overturned." (Frankel, 1978, p.246-7)

Shastri took a number of steps to downgrade the authority of the Planning Commission and shift the focus of power on questions of economic policy to the ministries. In particular he distanced himself from the Commission by separating its secretariat from that of the prime minister's office and at meetings of the National Development Council he invited the Chief Ministers to criticise the Commission's proposals (Frankel, 1978, pp.251, 255-6). As a result the business

community became able to disregard the Commission and built up alternative access routes to the prime minister through his own secretariat and the Congress party (Frankel, 1978, p.267). Shastri himself created two new bodies which gave industrialists additional access to the Commission and its work; the National Planning Council which consisted of 17 non-official expert members from industry, trade unions and farmers was intended to support the Commission in their work, while the Business Advisory Council made up of a dozen representatives from Indian and foreign business were expected to act as a panel of consultants (Frankel, 1978, p.268).

In addition to the effect that Shastri was having on the Planning Commission were the criticisms of the World Bank which hitherto had been somewhat disregarded. The Bank disapproved of both the public sector involvement in industry and the industrial, as opposed to agricultural emphases of the Second and Third Plans. The 1965 report of the Bank's Economic Mission to India recommended a package of reforms which included a relaxation of licensing controls on industry, a programme to liberalise imports and the devaluation of the Rupee to improve India's poor balance of payments position. This report was on the whole well received in the Ministry of Finance and the Prime Minister's Secretariat (1978 pp.271-2). The Ministry of Food and Agriculture was also keen on the Bank's proposals regarding a new agricultural policy involving modern inputs and direct incentives to farmers (Frankel, 1978 pp.274-5 & ff.).

Given the importance of external assistance to India by the end of the Third Plan, the aid givers' views were telling and at the September 1967 meeting of the National Development Council Shastri directed the Commission to formulate an Annual Plan for 1966-67, in advance of the delayed Fourth Plan, in which they were to 'emphasize quick-yielding schemes in agriculture and better utilization of industrial capacities already created' (Frankel, 1978 p.285).

Shastri died suddenly in January 1966. The full implementation of the World Bank's recommendations was thus left to the next government under

Mrs Gandhi, who became the prime minister again as a result of political manoeuvring within the Congress. The conservative elements within the Party were doubtful about her left-leaning views but there was little choice and they were persuaded by Kamaraj, one of their leading members. (Frankel, 1978 pp.288-92). However, with no real power base of her own Mrs Gandhi was not in a position to make major changes to the policies already embarked upon by Shastri's government.

It was Mrs Gandhi who had to take the unpopular decision to devalue the Rupee in June 1966 in the face of continuing reluctance of foreign aid-givers, principally the United States, to continue their assistance. The ensuing public criticism slightly strengthened the hand of the Planning Commission which made one last attempt to return to Nehru's planning philosophy with the Draft Outline of the Fourth Plan published in August 1966. In this they reasserted the prime importance of industrialisation and argued that previous plan failures had been a result of poor implementation rather than poor policy (Frankel, 1978, pp.298-301).

The Draft Outline met with strong opposition particularly from the business community but also from the Chief Ministers of the States who wanted a more devolved planning system with a more equitable distribution of resources between States. Mrs Gandhi attempted to defend the Plan but in the end had to give way to pressure, particularly as the Lok Sabha itself was extremely critical. In the months leading up to the February 1967 General Elections leading industrialists such as J.R.D. Tata and G.D. Birla mounted a concerted attack on the Draft Outline and suggested that it would cause the Congress to lose much of their support in the elections. Whether or not that was prime reason the Congress and Mrs Gandhi did poorly and were returned with a substantially reduced majority in the Lok Sabha. Their position also deteriorated drastically at the State level.

The 1967 Elections result had a number of effects on Mrs Gandhi and the policies she was able to promote. First it strengthened the position of Chief Ministers relative to the Central Government. Second to improve

the government's political stability Mrs Gandhi was forced to accept, Morarji Desai, one of the most senior conservative Congress MPs, into her Cabinet as Finance Minister and Deputy Prime Minister. Thirdly, it was the parties on the right which gained most from the Congress losses: the Swatantra and the Jan Sangh. This was encouraging for the business community, the Swatantra in particular having long advocated a free enterprise approach to industrialisation with the government restricting itself to infrastructure development. Finally, Mrs Gandhi, unsure of herself in the face of widespread criticism and facing the electorate for the first time, indicated she was going to reconstitute the Planning Commission even before the election and afterwards was in no position to oppose such a move (Frankel, 1978 pp.306-8, 351).

Morarji Desai thus emerged as the person with the main influence over economic and planning policy and this was immediately apparent in the composition of the new Planning Commission appointed later that year. The new deputy chairman was D.R. Gadgil, an economist who saw the body as a purely advisory body of experts and who disapproved of the 'unnatural prestige and importance' which had been attached to its decisions in the past. Gadgil made a good many changes to the Commission amongst which a new formula for a new system of direct untied block grants and loans to each State effectively meant that the States became free to formulate their own Plans, while the national level of planning was essentially reduced to spending on central sector projects. Thus, Frankel concludes:

"On the eve of the Fourth Plan, the Planning Commission's role was so reduced in scope as to virtually satisfy the demands of the business community, reiterated since the mid-1950s, that the proper sphere of activity for the public sector was to promote social overheads and incentives supportive of private investment. In most other aspects as well, the economic programs endorsed by the planners carried the impression of a reversion to policies predating the Second Plan in an almost total obliteration of Nehru's approach." (Frankel, 1978 p.313)

The new Commission decided to completely rewrite the Draft of the

Fourth Plan and in the interim prepared a third Annual Plan, thereby delaying the start of the Fourth Plan period to 1969. The Annual Plan, reflecting the new approach to planning, only provided funds to already existing industrial projects, delicensed various industries and allowed existing industrial units to produce up to 25% above their licensed capacity without obtaining a new licence (Frankel, 1978, pp.310-315).

It was in the context of these changes and this new approach to economic and planning policy that the Pande and Wanchoo Working Groups were appointed in 1968 to look into proposals for backward area development and financial incentives for industrial development. While it was a logical step for the Congress government of Mrs Gandhi and Morarji Desai to appoint a Working Group to look into the question of financial incentives for industry, given the orientation of their economic and planning policy, the reason for their concern with backward area development seems less obvious. Backward area development had of course been discussed in the earlier Five Year Plans and notably the Third Plan (cf. Chapter 3) and it is possible that this policy was retained because it was one element of the previous planning philosophy that could easily be associated with financial incentives for industry. Indeed, in a combined policy package, forcing industry to disperse to backward areas could make the increased levels of financial assistance from the state to private industry appear more acceptable to a wider political audience. Interestingly the first draft of the Fourth Plan (1966) contains no reference to the need for a backward area policy while the second draft (1969), prepared by the new Gadgil Commission contains numerous references to it. It would thus seem that industrial dispersal to backward areas was an idea favoured by Gadgil and not by the previous Commission. It is however, strange that the earlier Commission did devote a whole Chapter of their previous Plan, the Third, to balanced regional development and then omitted this subject entirely in their next piece of work, the first draft of the Fourth Plan.

The new Draft Fourth Plan when it appeared in 1969 put forward an economic development strategy which explicitly included as one of its

major planks the use of incentives to private investment. The target for private investment in industry and minerals was more than twice that proposed in the Third Plan, while the actual total public sector outlay of the Plan was only 60% higher. Indeed the level of public sector outlay was lower than that proposed in the earlier Draft Outline, the justification provided being that it was necessary to limit inflationary financing and the dependence on foreign aid (Frankel, 1978 pp.326-9).

By 1969 there were, however, also a number of signs of an impending crisis, both on an economic front where there was no indication of a recovery from the stagnation that had set in in 1966 and on a political front where there was increasing instability in the higher echelons of the Congress Party¹. It was clear that the more liberal economic policies of the Shastri years had not resulted in any upturn in economic development and the emasculated licensing system which was supposed to encourage the freer flow of market investments into industries where it was needed had failed to prevent the growth of capacity in less essential sectors. Equally there were indications of increasing economic concentration with a disproportionate share of new licensed capacity belonging to the larger business houses, such as Tata, Birla and Shri Ram. At the same time the Gadgil Commission made no recognition in the new Draft Fourth Plan that these problems were associated with the new entrepreneurial approach to economic development planning (Frankel, 1978 pp.323, 334 & 388).

The years from 1966 to 1969 were therefore marked by increasing liberalisation of economic and planning policies but in the last months of 1969 the tide turned. Because of the nature of the power struggle within the Congress and the fact that Mrs Gandhi's victory over the party leadership had been based on the support of the younger more radical Forum members, her rhetoric and the government's actions towards the end of 1969 became distinctly more radical. How much this new found radicalism was really part of Mrs Gandhi's personal political convictions is less sure. While she was known to support many of her father's ideas on economic policy it would also seem that she was less

ideologically committed to socialism than Nehru. With the benefit of hindsight it is evident that her most radical years in government were not to last long and to move away from them she was able to use the newfound political base of widespread and enthusiastic personal popular support which she first acquired in the Congress power struggle of late 1969.

5. Renewed Radicalism and Contradictions of the 1970s

By the end of 1969 Mrs Gandhi was in much stronger command of the Congress Party and the Government than she had ever been before, but to achieve this position she had had to align herself with the young socialist members of the CFSA within the Party and to acquire their support she had had to radicalise her political rhetoric and the economic measures she was prepared to implement. Already she had nationalised 14 of the major commercial banks in the country, achieved the election of a left-wing oriented president and passed the Monopolies and Restrictive Trade Practices Act (MRTP Act).

At the same time she was starting to build up her own political power base in a broad popular movement of support for her leadership. But this popular support was to a very large extent a result of such dramatic actions as the bank nationalisation which could be linked to Mrs Gandhi personally, and to retain and build on this support her actions would have to continue to appeal to the masses. On both accounts therefore, 'Mrs Gandhi was pushed into the continuing use of populist appeals that promised radical social changes' (Frankel, 1978 p.435). But in doing this there was also the risk of raising popular hopes beyond a point where she was able or willing to go.

Differences between Mrs Gandhi's new party leadership and the socialists in the Forum appeared fairly soon after the Party split. One of the main bones of contention was the issue of the role of private enterprise. While the Forum advocated the nationalisation of many of the larger business concerns in the country, the Government was reluctant to go so far. Though its actions in this respect were

certainly radical in comparison with the policies of the Shastri years, they fell far short of the Forum's programme.

The Monopolies and Restrictive Trade Practices Act, 1969, required all companies with total assets over Rs.20 crores (200 million) to register with the Government and apply for permission for any proposed expansion in their operation. Legislation was passed to abolish the old managing agency system, limit the number of managing directorships an individual could hold at the same time to one and to restrict the level of salaries that could be paid to company directors and managers. But the most radical new policies were derived from the recommendations of the 1969 report of the Industrial Licensing Policy Enquiry Committee. In February 1970 the Government announced a new licensing policy which 'entirely reversed the trend towards decontrol started in the mid-1960s and endorsed by the Planning Commission in the Draft Outline of the Fourth Plan' (Frankel, 1978, p.437). All the exemptions to licensing which had been made during those years were withdrawn and new restrictions on the activities of large industrial houses (conglomerates), those in a dominant position with regard to particular products and foreign companies and their subsidiaries were announced. Finally the concept of 'joint sector' undertakings involving both public and private equity capital was accepted in principle and public financial institutions were directed to 'insert conversion clauses into loan agreements, allowing them to exercise an option of converting loans and debentures either wholly or partly into equity within a specified period of time' (Frankel, 1978 p.438). The new administration set up to handle all these applications and impose these restrictions was formidable, particularly as most of the licences had to be scrutinised and approved by several different ministries, including in particularly important cases the Cabinet itself. 'A procedure that in the last analysis required the larger business houses to get personal approval of the prime minister and her closest advisers for new ventures' (Frankel, 1978 p.438 & 436-438).

Inevitably such measures met with considerable criticism. Understandably the business community were opposed, seeing in them the

first steps of a government takeover. But equally so were radicals in the Congress critical, as the measures fell far short of the nationalisations they would like to have seen. Indeed the nearest the government got to nationalisation was in its decision to make it possible to convert public loans to private companies into equity. Moreover, by endorsing the principle of the 'joint sector' for large scale heavy investment projects the government seemed to be saying that only the larger business houses had enough capital to invest in major projects (Frankel, 1978 pp.438-9).

As Frankel herself says there is little evidence to indicate just how radical an interpretation to read into the intentions of the Congress Party leadership behind these changes (1978, pp.434 & 439). She concludes that despite their radical rhetoric and the legislation to control the private sector they never had any serious intention to substantially curtail its activities (cf. also Shetty 1978, pp.41 & 70-1). In support of this view she cites not only the way the changes introduced fell far short of the more radical demands of the Forum members but also points to the policies of the final version of the Fourth Plan. Published in July 1970 the Plan proposed a public sector outlay which, though above the level indicated in the second 1969 draft of the Plan, was still below the original level suggested in the first draft prepared by the old Planning Commission. The estimate for the level of private investment in organised industry and mining remained twice that in the Third Plan, even though it had been slightly reduced from the 1969 draft level. 'The revised figures, in fact, did little more than accomplish the public relations goal of demonstrating an apparent gain in the public sector's share of new industrial investment now accounting for about sixty percent...' (1978, p.439).

Thus although the legislative measures and other changes instituted in 1969/70 represented a renewed high degree of control over private sector industry they did not herald the start of a second period of industrialisation based primarily on public sector projects. The emphasis still remained on private capital pulling the nation out of the industrial slump that had set in since the mid-60s. The

contribution of the state was to be that of providing extensive financial incentives to encourage growth in private investment and equally to control and regulate this growth through the elaborate new licensing system. The licensing system itself was a direct product of Mrs Gandhi's political power base which had to be shown that radical measures were being taken to encourage economic development with increased equity.

It is against this background of economic policy measures that the backward area industrial location policy was first introduced (cf. Chapter 3). The industrial location policy conforms well to the overall pattern of these wider economic policy measures. It brought in a package of incentives to encourage private industrial investment and at the same time it imposed conditions which were redistributive in intent and appearance. It specified that to benefit from the incentives industrialists would have to go to the more underdeveloped parts of the country, a stipulation which could be presented as direct evidence of the government's intention to encourage greater social equity and to bring the benefits of development to the rural poor. The degree to which the policy was politically motivated rather than seriously expected to achieve these aims can already be partially judged from the conclusion reached in the previous chapter.

The 1971 General Election further strengthened Mrs Gandhi's position within the Congress. The Party was returned with a clear two thirds majority of the seats in the Lok Sabha. Their success was in very large measure due to her efforts and the strenuous personal campaign programme she undertook, speaking to literally hundreds of crowds all over India. Her message was simple and had a direct populist appeal, evident in the main slogan she used: 'garibi hatao' or remove poverty.

Immediately after the election the entire Planning Commission including D.R. Gadgil, resigned because of Mrs Gandhi's reversal of the liberal economic policies they had earlier instituted. Mrs Gandhi reconstituted the Commission under the deputy chairmanship of C. Subramanian, who as her Minister for Agriculture in 1966 had instituted the new

entrepreneurial approach to agriculture development. The next two plan documents this Commission produced, the 1972 'Towards Self-Reliance Approach to the Fifth Five Year Plan' and the 1973 'Draft Fifth Five Year Plan', were in some ways very similar to the earlier plans of the Nehru years. This was all the more evident in the latter of the two documents which was prepared under the deputy chairmanship of D.P. Dhar who replaced C. Subramanian in August 1972. (Datt & Sundharam, 1979 p.504). The documents contained proposals for widespread social transformation (including again: land reform) reminiscent of the Second and Third Plans. But their basic approach was more oriented towards a minimum needs programme stressing in particular increased production of mass consumer goods and widespread employment creation (GoI, Draft Fifth Five Year Plan, 1973, p.7). This was carried through into the industrial policy with several references to the need to promote industrial development in rural and backward areas (GoI, Draft Fifth Plan, 1973 pp.20, 21, 134, 282).

Dhar's belief in the need for high levels of public investment in heavy industry showed through in an increase of the share of the public funds outlay going to industry and mining. In the Draft Plan this rose to 26%, considerably higher than the 18% of the Fourth Plan and in fact higher than it had ever been before (Datt & Sundharam 1979, p.185 & 179; GoI, Economic Survey 1979-80, 1980 p.106). The Draft however, suggested no major changes with respect to the role of the private and public sectors in industry. It stated that the public sector would continue to make a major contribution to essential consumer industries and the private sector was invited to invest in core industries and export oriented industries. Foreign collaboration had to be of benefit to the country and not involve the import of technology already in India. Concessional finance would continue to be available in backward areas (GoI, Draft Fifth Plan 1973, pp.134-5).

Although the Draft Fifth Plan did represent some return to the planning ideas of the 1950s and early 1960s, it did not reestablish the public sector in its earlier role of the prime mover of industrial development and it did not get rid of the entrepreneurial incentives to private

industry approach of the intervening years. Moreover, as Frankel stresses (1978, p.506), although the documents did recommend major social transformations there was no indication that the government would be in any better position to carry them out than before. Finally it was evident that the Fifth Plan was going to run into major problems with funding and resource mobilisation (Frankel, 1978 pp.504-8).

The next major piece of economic legislation that Mrs Gandhi introduced was the Foreign Exchange Regulation Act, 1973 (FERA). This restricted the proportion of equity in any company operating in India that could be owned by foreign interests. While it certainly did result in some reduction of foreign capital involvement in Indian industry, other foreign companies chose to dilute their equity participation by selling off shares to small shareholders thereby only nominally decreasing their control on the firms operations (Chaudhuri S., 1979). The most important effect for Indian capital, however, was to improve their relative position to that of outside capital and possibly increase their chances of entering into collaboration agreements for foreign technology.

1973 also marks the start of a more reconciliatory note in Mrs Gandhi's attitude and policy towards big business. Her Industrial Policy Statement of that year introduced a major departure from the 1956 Industrial Policy Resolution (Siddharthan, 1979) as it followed the lead given by the Draft Fifth Plan, deemphasized the public sector's primary role in core sector industries and openly invited large industrial concern (with assets of not less than Rs.200 million²) to participate in the development of a whole list of basic industries. This included, metallurgy, heavy machinery, electrical equipment, machine tools, agricultural machinery, chemicals, drugs, and cement. Equally it announced the liberalisation of the licensing policy which was widely welcomed by the business community (Datt & Sundharam, 1979, p.136).

Equally by this time, the end of Fourth Plan period (1969-74), it was becoming increasingly evident that the government's ability to

implement a planned development programme and particularly to achieve its dual aims of growth and greater distribution of wealth was declining. Growth rates in both industry and agriculture were still well below the rates achieved during the Second and Third Plans and it was clear that very little real distribution of wealth was occurring. Indeed, Frankel goes as far as to conclude:

"... the clear outlines of an enclave pattern was emerging that threatened to harden into a permanent separation between a small high-productivity sector, both in industry and agriculture, and a vast agricultural hinterland in which the majority of the work force struggled with primitive techniques to meet their subsistence requirements." (1978, p.510)

At the same time there was an increase in the level of social protest. In industry, 1974 saw a record number of strikes and lockouts with over 40 million mandays lost during the year (Tata Services, 1980 p.133) as workers protested at the fall in the real level of their wages due to inflation (Frankel, 1978 p.510). Widespread discontent was also becoming more evident in rural areas where several years of poor harvests had reduced food availability (Shetty, 1978 pp.11 & 27). Moreover, agricultural development policies, though successful in some areas, did not result in any pronounced improvement in food production and by and large had failed to improve the lot of smaller farmers and agricultural labourers.

The credibility of Mrs Gandhi's government was also declining with the failure of her economic policies and increasing evidence of corruption. The combination of these factors coupled with the growing dissent in organised politics finally led Mrs Gandhi to react with the declaration of Emergency on 25th June, 1975.

On the whole the two years of Emergency represented a fairly good time for Indian industrial capital. There was a dramatic drop in the number of strikes, though significantly not of lockouts, to levels about one tenth of those in 1974 (Tata Services, 1980 p.133). Equally production

levels in industry and particularly in certain public sector industries rose dramatically so that the industrial production growth rate for 1975-76 topped 8%. However, the improvements were not evident everywhere and most consumer goods industries, and especially textiles remained stagnant (Frankel, 1978 pp.556-7).

On the economic policy side a further round of liberalisation in the licensing regulations was introduced in October 1975 and one month later the procedure for getting unauthorised excess production capacity regularised was eased. The number of licences issued increased rapidly: already in 1974 after the first liberalisation 1,099 licences were issued as against 597 the previous year, and in 1975 this was repeated with 1,027 issued (Datt & Sundharam, 1979, p.137).

The Emergency was, however, relatively short and in 1977 the Janata coalition succeeded in displacing Mrs Gandhi in a resounding election victory. In December of the same year the Janata Government announced its New Industrial Policy. Its most important feature is the emphasis it placed on the development of small scale industry. In what it claimed to be a return to the Gandhian philosophy (Singh, 1978) of industrial development it downgraded the importance to be given to large scale industry, stating:

"The government will not favour large scale industry merely for demonstration of sophisticated skills or as monuments of irrelevant foreign technology. The role of large scale industry will be related to the programme for meeting the basic minimum needs of the population through wider dispersal of small scale and village industries and strengthening of the agricultural sector." (quoted in Datt & Sundharam, 1979, p.139)

Large scale industry was to be restricted to certain fairly specific sectors where small scale production was impossible or unrealistic; the growth of large business houses was to be reversed; licensing, particularly for expansions in capacity, was to be severely restricted and public financial assistance for industry was to be channelled

primarily into small scale projects. The public sector was to produce important and strategic goods, maintain essential supplies and to try and promote as much as possible the decentralisation of production by encouraging subcontracting to a wide range of ancillary units and by making its expertise and technology available to small scale and cottage industry.

Instead a whole series of measures were taken to encourage small scale and even 'tiny' sector industry. Most importantly the list of industrial production sectors reserved for small scale units was greatly increased. During Mrs Gandhi's government it had included 180 items but under Janata it was increased to at first 500 and then in 1978 to over 800 items. On top of this moreover, a series of special incentives for SSIs were instituted and special government small scale industry promotion agencies offering a wide range of financial, technical, material and marketing assistance were established (Datt & Sundharam, 1979 pp.137-40).

The restrictions on large scale industry certainly had some effect as is evident in the dramatic fall in the number of industrial licences issued³. From the peak of over 1,000 licences issued in 1974 and 1975 the number fell to 662 in 1976, 518 in 1977 and as low as 348 in 1978 (Tata Services, 1980 p.118).

The other restrictive measure of the December 1977 New Industrial Policy is the final element of the industrial location policy. This was the ban on large scale industrial development or expansion in major urban areas. To a large extent the ban was the idea of George Fernandes the Janata Minister for Industry. It formed part of his economic philosophy which saw decentralisation of industry as a means of improving the living conditions of workers in industrial cities. But as well as the improvements to the congestion and growing pollution in urban areas, that it could be expected to encourage, the ban was a means to ensure that a higher proportion of investment, both public and private, was spent in rural areas on creating jobs, infrastructure, services and other developmental improvements. (Personal interview

with erstwhile personal assistant to George Fernandes). Indeed, it seems that Fernandes was personally more interested in a New Towns policy, but this was too expensive for the government and had to be replaced with a simple decentralisation policy.

The ban imposed in 1977 was slightly liberalised in 1978 to allow for certain types of expansion on existing industrial premises in urban areas, but it still remained a fairly strict and easily applied policy measure. The main exemption to it was, of course, for small scale industries which would have anyway been much more difficult to impose but also fitted in with the Janata's government's overall policy to favour small scale rather than large scale industry.

The Janata Government anti-large scale industry stance and the renewed inefficiency that crept back into many public sector undertakings during its period in office meant that it was on the whole not popular with the Indian business community. Its industrial policy was also seen as unrealistic and idealist. Thus Mrs Gandhi's return to power in January 1980 was by and large greeted with enthusiasm by the industrialists who felt that she could be expected to provide a decisive, strong government better disposed towards large scale industry (personal interviews with industrialists in 1980; Paranjape, 1980 & News Items, EPW 12 & 26 Jan 1980).

In sum the 1970s saw more major fluctuations in the relationship between the Indian state and industrial capital. The key figure throughout the decade is of course Mrs Gandhi. Her rise to the preeminent position in the Congress government in 1969 with the backing of the more radical elements in the Party and a certain amount of personal popular support set the scene for the economic policy of the first part of the decade. A number of potentially strict measures were introduced including the MRTP Act, 1969 and the complex licensing procedures of 1970. But in the following years these measures were gradually liberalised, either formally or simply through the degree of strictness with which they were applied. Throughout, however, they gave the continued appearance of strong government control over private

enterprise which was essential to maintaining Mrs Gandhi's political image as a champion of the poor. But by 1974-75 the situation was getting out of hand. The economy was still stagnant, both industrial and agricultural growth rates had failed to pick up and inflation was eroding the standard of living of industrial workers, agricultural labourers and the poor. As a result social protest and political criticism increased and in June 1975 Mrs Gandhi felt obliged to declare the Emergency.

The Emergency brought limited benefits to industrialists in the form of greater efficiency in public sector industry and therefore more reliable supplies of certain key materials to the private sector. Equally a sharp decline in industrial disputes improved production. The situation was reversed in 1977 with the end of the Emergency and the coming to power of the Janata Government. The latter with its pronounced anti-large scale industry attitude was not so popular amongst the nation's big industrial capitalists. Moreover, a renewed incidence of inefficiency in public sector undertakings made life more difficult for private industrialists. Thus the return of Mrs Gandhi in 1980 was welcomed in the expectance that she would be better disposed towards big industrialists and would restore some sense of purpose and direction into the nation's economic development.

Despite these fluctuations in the political arena and the changes in economic policy they induced, there are some more consistent lines which run right through the decade. Chief amongst these is the fact that the main emphasis in industrial policy was no longer on the public sector as it had been during the Second and Third Plans. Rather the approach became entrepreneurial. Industrial development was to be the product of private initiatives encouraged by public incentives, both financial and material. In to this the industrial dispersal policy fitted well. It provided a framework for the disbursement of incentives to industrialists and by stating that dispersal was a condition for the incentives it presented the incentives programme in a light that made it possible for the government to retain its populist appeal so essential to Mrs Gandhi's political survival.

6. Economic Growth since the Mid-Sixties

Earlier in this Chapter (pp.103-106) the growth of India's economy under the first three Five Year Plans was discussed. It was noted that while growth throughout the period had been dramatic, by the end of it a number of major problems had come to light. Chief amongst these was the way low agricultural production growth was holding back growth in other sectors and the poor balance of payments situation.

This second period is characterised by more disturbing features. In particular while overall growth rates had been steady and fairly high up to about 1965, after that year they fell dramatically and have remained a good deal lower ever since. The few years which have seen a fairly high growth rate have been those when there occurred particularly good crops (Shetty, 1978 p.7; Chaudhuri, 1978 p.50-1). The decline in growth rates then has been most noticeable in industry. While industrial output had grown under the first three Plans, reaching an average of 9% growth per annum under the Third Plan (cf. above p.8), between 1966 and 1976 it dwindled to an average of 4.1% per annum and this is including a high point of 10.6% per annum in 1976 (Shetty, 1978 p.8). As Shetty demonstrates the decline in rates of growth of output was accompanied by low levels of investment, heavily underutilised production capacity and meagre employment growth (cf. also Frankel, 1978 p.510). Equally there were a number of shifts in the characteristics of output. Thus while capital goods industries had done well under the Second and Third Plans, since then they have performed much more poorly. Instead there has been a marked rise in the output of consumer durables (Chaudhuri, 1978 p.68-9; Shetty, 1978 p.14). In addition production of mass consumption goods, something which had been deferred under the Second and Third Plans but which was seen as important during this latter period with the Fourth Plan, failed to register any major increase (Shetty, 1978 p.14). A final disturbing feature in industry has been the tendency towards investment in more capital intensive production methods since 1965 (Shetty, 1978 p.65).

Agricultural production growth has done slightly better than industry.

Growth in output has continued at a relatively slow, but at least steady rate of around 2% per annum (1964 to 1972) (Chaudhuri, 1978 p.58). The effect of the introduction of Green Revolution techniques has helped but the results have been patchy and there has been no significant reduction in regional inequalities in production (Chaudhuri, 1978 p.65). Thus the problem of increasing levels of agricultural output still remains an important one for the Indian economy.

The balance of payments situation has on the other hand improved. Exports have done much better since the devaluation of the rupee in 1966 and equally there has been a dramatic decline in imports since then (Chaudhuri, 1978 pp.71-4). However, Chaudhuri concludes it is unlikely that the devaluation was the major reason for this improvement, instead he ascribes it to the overall low level of economic activity during the period and also to the continuous net decline in foreign aid. Equally there has been a significant degree of import substitution in India's industrialisation during the period. Since 1973, on the other hand, the rise of oil prices has placed a new burden on the balance of payments so the problem has not been completely eliminated and hence the continued government emphasis on producing goods for export (Chaudhuri, 1978 p.74). Indeed this policy emphasis has had some effect and the composition of exports has considerably changed. While the proportion of traditional exports such as tea and jute have steadily declined, manufactured goods have taken their place, with steel products, engineering goods and minerals particularly prominent. The composition of imports has been more stable with very little consumer goods apart from food grains and high proportions of intermediate and capital goods, representing the nation's continued dependence of foreign technology in more advanced fields (Chaudhuri, 1978 p.74-5).

The much slower growth in industrial employment is perhaps one of the most disappointing features of the period. Shetty sees this as part of a whole picture of widening inter class disparities, declining percapita availability of consumer goods and chronic inflation since

1966 (Shetty, 1978 pp.26, 34, 36 & 39), indicating how the economic recession and the failure of industrial growth have translated into reality for the Indian population.

Finally Shetty studies in some detail the pattern that investment in the private industrial sector has taken. His conclusions are worth quoting at some length:

"First, a preponderant part of private industrial investment in recent years has been financed by loans from public sector financial institutions. The contributions from share capital and internal savings of the companies have been meagre. The promoter's contributions to the project costs have been allowed as a policy, to be kept at unusually low levels. Secondly, the colossal amounts of loans granted by the term-financing institutions have been palpably disproportionate to the meagre impact seen in industrial investment and output growth in real terms and particularly in employment. Thirdly, the easy availability of investible funds at relatively cheap cost, accompanied by the low personal stake of the promoters, seems to have induced higher capital intensity, siphoning off of funds, and general lack of cost consciousness. Lastly, this phenomenon of capital wastage and diversion accompanied by distortions in the patterns of investment and production has been encouraged by an atmosphere of laxity in governmental discipline and regulations for the private sector." (1978 p.67)

The Janata Government failed to make any impression on these problems and while, since the return of Mrs Gandhi the confidence of industrialists seems to have been restored (Lalbai, 1982) and, industrial growth rates do appear to be increasing once more, there is however little indication that the structural problems identified by Shetty and other economists will be corrected.

7. Conclusions

The main point that this chapter has made apparent is that the relationship between the Indian state and industrial capital is a

complex and fluctuating one. The state has been heavily involved in the nation's industrialisation since the mid 1950s, both directly through public sector industry and indirectly through planning, the licensing system and the incentives it provides to private sector industry. Thus the relationship has also been an intimate one.

Certainly it is impossible to portray this relationship in simple black and white terms. The Indian state has never been simply pro or anti industry. Its actions have combined measures that industrial capitalists have welcomed with many that they have resoundingly criticised. Indeed it has also often favoured some industrialists at the expense of others and frequently what have appeared to be its most restrictive policies have been toned down by not being applied as strictly as they might. This complexity makes it extremely difficult to decide just how much one particular state measure such as the industrial dispersal policy of the 1970s should be seen as a measure restrictive of industry.

It is also hard to associate the genesis of the industrial dispersal policy with any particular government or ideological position among the national leadership. This is because it appeared at one of the points of Indian post Independence history when political alignments amongst the leadership were changing constantly. This in turn was causing major changes in economic planning and policy formulation. Just as there was no smooth transition on the political side, the precise ramifications and overall direction of the economic policy changes are difficult to unravel even now with the benefit of ten years hindsight.

As was described in the previous chapter the subject of industrial dispersal was first discussed seriously in the Third Five Year Plan. At this point however, no mention was made of incentives to encourage dispersal, but the problem of uneven development was recognised and it was recommended that wherever possible both public and private industry should try and locate in backward areas. This Plan was of course prepared at the height of the Nehru planning era but while, the Planning Commission considered the issue at some length, they did not

propose any serious measures to implement the dispersal they proposed. Interestingly the first draft of the Fourth Plan (1966) which was prepared by the same Commission ignores the subject completely.

Whether this change was a result of the ideas of the new government after Nehru's death in 1964 is unclear, but certainly other economic policies changed, becoming much more liberal in their attitude towards private industrial capital throughout the two years of Shastri's government. The liberalisation trend started by Shastri was carried on by Mrs Gandhi. Initially her personal political position was not strong and economic and planning policy was primarily influenced by the views of Morarji Desai the finance minister and deputy prime minister. It was during these years that the Planning Commission was reshuffled and D.R. Gadgil brought in as its chairman, thereby removing the last vestige of Nehru's approach to planning from the higher echelons of government. The two crucial Working Groups under Pande and Wanchoo which laid the groundwork for the industrial dispersal policy were also commissioned at this time and it is therefore reasonable to assume that, initially at least, they were strongly affected by the economic planning views of Gadgil and Desai. Indeed this would conform with the fact that the Gadgil Planning Commission's redraft of the Fourth Plan (1969) was the first official document to outline the entrepreneurial approach of industrial growth and dispersal encouraged by financial incentives from the public purse, that the industrial dispersal policy was to adopt. This second draft of the Fourth Plan was published a few months before the Pande and Wanchoo reports appeared and further elaborated this same approach.

However, at this point the course of events was interrupted by the split in the Congress Party which put Mrs Gandhi and Morarji Desai in opposing camps. Mrs Gandhi remained in Government and consolidated her position with the important electoral victory of 1971. Shortly afterwards the Gadgil Commission resigned. The two intervening years (1969-71) are however, extremely important as this is the time when some of Mrs Gandhi's most radical economic policy measures were enforced in the face of much criticism from the business community.

Amongst them the industrial dispersal policy was also put into force and throughout the period Gadgil, though increasingly critical of Mrs Gandhi's actions, remained deputy chairman of the Planning Commission.

As a result of this complex history of events the industrial policy emerged as a combination of a whole string of different influences. The original idea and the principle of dispersal as a means to fight underdevelopment was derived from Nehru's Planning Commission. This was blended with a method of implementation based on the entrepreneurial approach to economic policy formulated by the more conservative and pro private enterprise elements of Congress represented by Shastri, Morarji Desai and Gadgil. Finally on top of this it received a radical image as a policy involving strict state control of industrial capital through direct association with the other radical measures Mrs Gandhi was pushing through at the time it was implemented. A few years later in December 1977 the industrial dispersal policy package received its final element, the ban on industrial development in major cities. This measure, which in many ways is the strictest element of the package, seems to have been a direct result of the Janata Government's fairly clear anti-large scale industry stance and its Gandhian view that large scale industry should serve village development combined with a concern for living conditions of the poor and of workers in congested industrial cities.

Before ending this chapter we must also consider its other concern and that is the problems faced by industrialists which might encourage them to choose new dispersed locations for their new factories. Again this is a vast and complex subject and this chapter had been able to do no more than touch on the main problems of Indian industry in the various stages of its post Independence development. Unfortunately also, while there exist a good number of economic analyses of these problems there is very little material on how the industrialists themselves viewed their problems throughout 1970s, the period we are most interested in.

The first major point that emerged from the preceding study is that for the entire period from 1966 to the start of the 1980s, industrial

growth in India has been limited, with very restricted levels of industrial investment. Moreover, what investment has occurred has tended to favour capital intensive technology and has been increasingly in the sectors of consumer durables and production for export. Production of mass consumption goods has been neglected, however. Because of low production rates and poorly regulated investment there also emerged considerable unused capacity in many industrial sectors.

These trends imply first that there can only have been a strictly limited amount of new industrial plant which could be located in backward areas during the period. Secondly, the tendency towards the use of more capital intensive technology suggests a certain degree of deskilling and the possible desire on the part of industrialists to employ unskilled or even new labour which they could train themselves to the required levels. Thirdly, the fact that there was an increasing tendency to produce consumer durables and articles for export, both goods for which the Indian market is restricted and highly competitive, suggests that productivity and keeping production costs down would be an important consideration for industrialists throughout the period. Both these latter points suggest that industrialists would be coming into confrontation with the industrial trade union movement, and certainly there was a good deal of industrial unrest in India during the 1970s though this was also related to inflation and falling real wage levels.

A study of the 1970s issues of Indian economic and business journals such as Commerce and the Economic and Political Weekly which report statements made by prominent industrialists and chambers of commerce and industry suggests that there are five problem areas about which industrialists complained more frequently than others. Three of these involve the government directly: uncertainty about the government's intentions for private enterprise (particularly strong after a number of nationalisations in the early 1970s), delays in obtaining licences and other permits (particularly after the establishment of the Monopolies Commission in 1969 and the strengthening of industrial licensing in 1970) and shortages of materials from the public sector,

particularly steel and electricity but also railway wagons. The fourth major problem was labour unrest manifesting itself in increasing numbers of strikes and lockouts. There is little doubt that industrialist see this as one of the most important problems they face, as is evident from one of the FICCI's statements shortly after Mrs Gandhi's return to power in January 1980: "labour indiscipline has been the root cause of economic malaise." (quoted in EPW 16.1.80) The final problem referred to at various points was the lack of credit or finance which is more difficult to understand given the increasing levels of financial assistance to industry provided by the public lending institutions.

Out of all these problems faced by industrialists the only one that can have any direct impact on industrial location decisions is labour unrest as India's trade unions are not surprisingly heavily concentrated in the major urban industrial centres. But it is also important to note that industrialists ascribed a lot of their problems to state actions and that they were also heavily dependent on finance from the state at a time when otherwise finance was felt to be restricted. These intimate links with the state meant that it was crucial for industrialists to keep on the good side of the various government departments they had to deal with. In sum it would seem that there were both practical economic reasons related to productivity and profits, and a certain degree of political expediency or diplomacy which prompted industrialists to fall in with the industrial dispersal policy of the Indian state.

Similarly, on the side of the state while there was a certain political mileage to be gained from pushing a policy which appeared to increase state regulation of private enterprise. Moreover, this policy also made it possible for the state to finance private enterprise on an important scale without appearing to be giving something for nothing or seeming to favour unduly one already fairly privileged group in Indian society. To a large extent then the interests of the Indian state and Indian industrial capital could both be accommodated in a policy of industrial dispersal to backward areas.

Just how important the various factors outlined above were in encouraging industrialists to locate new factories in backward areas will now be studied in more detail in the context of a single Indian State and one of the nation's more industrialised States: Tamil Nadu.

Footnotes:

1 The power struggle in the Congress was essentially a feud between the older conservative group of senior Congressmen who had put Mrs Gandhi in power and a group of younger socialist radicals in the Congress Forum for Socialist Action (CFSA). As it became apparent that the conservative group wanted to replace Mrs Gandhi as the party leader, she in turn was offered support by the Forum which she gradually accepted and came to depend on. Ultimately the conflict led to a split in the Party in November 1969. Mrs Gandhi and her followers from the Forum were labelled the Congress (R) (Requisition) while the more conservative members, among them Morarji Desai, were referred to as the Congress (O) (Organisation).

As Mrs Gandhi depended for her support during this conflict on the members of the socialist Forum her statements and actions became noticeably more radical during the latter half of 1969 leading up to the split. A good indication of her thinking on economic issues is offered by an Economic Note she presented to a Congress Parliamentary Party Meeting in Bangalore in July 1969. This Note included proposals to appoint a monopolies commission; to ban the entry of big business into consumer goods industries; to restrict foreign capital investment to sectors in which technology was not available in the country; to build up a professional management cadre for public sector industries; to nationalise banks; and crucially, to reorient the credit policies of financial institutions to favour new entrepreneurs in less developed regions of the country. While Mrs Gandhi's Note conflicted with many of the ideas of the conservative Party leaders and drew on another Note that members of the Forum had drawn up, it nevertheless was based on the least radical proposals of the latter. Mrs Gandhi's Note was accepted at the Bangalore meeting

but then the conservative wing of the Congress managed to put forward their candidate as the Party candidate for the forthcoming presidential election, displacing the person Mrs Gandhi favoured. Mrs Gandhi responded quickly, sacked Morarji Desai as Finance Minister (he then resigned as Deputy Prime Minister) and before the end of July announced the nationalisation of 14 commercial banks by presidential ordinance. Nor was that all. With the help of her supporters she removed party whips from the presidential election and managed by a narrow margin to get another candidate of more left wing sympathies elected: V.V.Giri. Both the bank nationalisation and the election of V.V. Giri were seen by the public to be largely Mrs Gandhi's personal doing and they sparked off widespread demonstrations of public support which for the first time gave Mrs Gandhi an evident popular political base of her own. (Frankel, 1978 pp.417-429)

2 This was in effect the same group of firms as were covered by the MRTP Act, thereby somewhat negating the point of the Act.

3 It is, however, widely accepted by both industrialists and government officials that many large firms got round these restrictions by setting up or sponsoring small scale firms to produce the items they would previously have applied for a licence to produce themselves (based on personal interviews).

CHAPTER 5

TAMIL NADU AS AN INDUSTRIAL REGION

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Tamil Nadu is the third most industrialised State in India, ranking after Maharashtra and West Bengal in terms of industrial employment and value added, coming third equal with Gujarat in terms of gross output and fifth in terms of invested capital (after Bihar as well as 3 other States just mentioned) (cf. Tata Services 1980, p.72). The roots of this third place in Indian industry go right back to the beginnings of modern industry in the subcontinent. Both Bombay and Calcutta had a head start of 20 to 25 years over Madras where the first cotton mills only opened in 1875 (Saunders 1975, p.5).

Cotton spinning and weaving have remained Tamil Nadu's most important industry, though in the years since Independence a wide selection of other industries have developed, giving the State a diversified industrial economy known as much as for its engineering and chemicals as for its cotton. The State's industrial products make an important contribution to national production levels. To quote an official State government publication:

"The place of Tamil Nadu in the industrial map of India can be judged from the fact that today it accounts for 31.2% of hides and skins - chrome tanned; 28.1% of the power driven pumps; 23.1% of flour milling and grinding products; 21.1% of caustic soda; 20.9% of bicycles; 18.8% of asbestos cement products; 16.7% of cement; 16.6% of yarn; 16.0% of superphosphate; 14.3% of power transformers and 13.1% of tea manufactured in India."

(GoTN, Tamil Nadu an Economic Appraisal 1971, p.22)

This list indicates the variety of the State's industry and while there is no need to give a detailed account of all its different sectors here, a few notes on some of the more important ones are necessary to put the later discussion on industrial location into an economic context.

1. Major Industries of Tamil Nadu

To start again with cotton, this textile industry is now mostly located in the cotton growing country of western Tamil Nadu around Coimbatore and stretching southwards to Madurai and Ramanathapuram. This is particularly true since the recent closure (1980) of the last big old mills in Madras, the Buckingham & Carnatic Mills. Of the 1,000 odd cotton textile factories in the State, over half are in the taluks around Coimbatore and eastwards from there to Tiruchengode and Salem (cf. Maps 17-8, Mackie, 1981). The mills vary considerably in size, the largest employing up to two or three thousand workers. As an industry, one of the problems it is facing, and the one to which the B. & C. Mills fell prey, is the lack of modernisation of outdated machinery in the older mills. Modern and fully automated looms are readily available however, and indeed are manufactured in Coimbatore itself. These are being installed in most newer mills. While handloom cotton weaving is also important in the State in the cottage or household industry sector, competition between the modern and traditional sectors is not too intense as each have their own fairly distinct market for their produce. There is however, an inadequate supply of raw cotton to meet the demand from the installed capacity in mills. Thus a number of producers are switching to use a proportion of non-cotton fibre such as viscose and polyester. The Indian Government is encouraging them to do so with duty-free import of viscose and better credit facilities to meet higher costs. (GoTN, Economic Appraisal 1978, p.37-8) As a result of this trend new machinery being installed in mills is usually designed to cope with both cotton and non-cotton fibres.

The other major agro-based industry in the State is sugar refining. There are about 20 large sugar mills in the State, of which about half are privately owned. The other half are cooperatives, with a few public sector mills holding the balance. Although the industry already existed in the State before Independence it only expanded rapidly since the 1950s with a few annual setbacks from bad droughts or particularly severe cyclones. The Tamil Nadu Government encourages the growth of the cooperative sector and several new mills have been opened recently or

are expected to open shortly. Most mills are located in villages and small towns in the middle of their sugarcane production area. Regionally they are dispersed throughout central, northern and eastern Tamil Nadu. (GoTN, Policy Note on Industrial Development, 1978)

Tamil Nadu and particularly the northern part of the State, Madras and North Arcot to the west of it, is probably the most important tanning centre of the whole of India. Traditionally tanning was carried out as a cottage industry and the tanned or semi-tanned hides were exported to London in bulk from where they were distributed to leather goods manufacturers throughout Europe. Since Independence the industry has, however, gone through some major changes. First of all production has expanded so much that skins and hides now have to be brought from all over India for finishing and tanning, local supplies having become inadequate. The scale of production has also led to larger units being organised and more modern methods being used. Finally the nature of the export trade, which has remained important, is currently changing with more finished or partially finished leather goods being exported and fewer hides. Curiously while this is an important industry in the State, it is one that receives scant attention in government reports on industrial development. This may be partly due to the fact that the industry is virtually entirely controlled, originally for religious reasons, by the small and closely knit Moslem community in northern Tamil Nadu. The fact that the industry is still expanding would seem to indicate, however, that the community is reasonably self-sufficient with enough economic muscle of its own to finance expansion.

The chemical industry in the State includes the production of a variety of inorganic industrial chemicals and petrochemicals as well as having branches in pharmaceuticals and fertilisers. Again this is an industry with pre-Independence roots (in North and South Arcot) which has expanded a lot in the 1960s and latterly, in the 1970s, with a number of joint sector plants. The industry is mostly concentrated around Madras with the Central Government Madras Refineries (petrochemicals) and Madras Fertilisers dominating the sector in the city. The other major concentration is in the Tuticorin-Tirunelveli area in the south,

where recent joint sector petrochemical and fertiliser projects have been located near local sources of raw materials (salts). Smaller chemical and pharmaceutical units are located throughout the State in or near the more important towns. (TIDCO Annual Report 1979; Maps 21-4, Mackie, 1981). Two other important Central Government factories in the sector are located in the Nilgiris hills: Hindustan Photo Films and a cordite factory. These are major employers in this otherwise underindustrialised area. Finally the traditional matchmaking industry in the Sattur-Sriviliputtur taluks in the south is a major employer; within Sattur alone, some 200 units employing up to 40,000 workers registered on the Inspector of Factories List (Mackie, 1981). Many of these units, however, only operate seasonally, without power and with little machinery.

Cement production, which used to be largely a North Indian industry, is now carried on in the State in half a dozen private plants and in two major Public Sector plants at Alangulam, Ramanathapuram Dt. and Ariyalur, Tiruchirapalli District. Both these plants were only built in the 1970s and the latter one is not yet in operation. The location of cement plants is largely related to deposits of raw materials in different parts of southern and central Tamil Nadu. Cement is a basic material which is still very much in short supply in India and even though both Madras and Tuticorin ports handle imports of cement, supplies of cement in the State are inadequate (GoTN, Economic Appraisal 1978; TANCEM Annual Report, 1978).

Tamil Nadu is also well known for its metal based engineering industries. These consist primarily of transport equipment manufacturing and industrial machinery manufacturing with related ancillary industries and in particular a well developed foundry industry. The first engineering firms appeared in Madras before the First World War (Saunders, 1975, p.6) while the autoindustry started in the inter War years (Dupuis, 1960, p.250). With large firms such as Ashok Leyland producing commercial vehicles, the Enfield India Co. producing motorcycles and numerous smaller firms producing related ancillaries, the autoindustry is now one of the most important in the

city. The Public sector Integral Coach Factory set up on the outskirts of Madras in the mid-1950s and the Tube Investments bicycle factory also make the city an important centre in other transport equipment industries. With a few important exceptions the transport equipment industry has dispersed very little from Madras to other parts of the State, though motor repair workshops exist in all major cities and most towns. The exceptions consist primarily of major railway workshops in Arkonam due West of Madras and in Tiruchirapalli further south. In the 1970s Enfield India also started a new plant for motorcycle manufacturing in Tirupattur taluk in Ramanathapuram. Finally again in the 1970s a joint sector shipbuilding yard was started at Mandapam in Ramanathapuram taluk (Mackie, 1981 Maps 25-8) (TIDCO Annual Report 1979).

While transport equipment manufacturing has remained very concentrated in and around Madras, general engineering industries have dispersed more widely as well as retaining their base in the State capital. Of particular importance is Coimbatore which has become one of the foremost foundry and industrial machinery manufacturing centres in India. The initial impetus was provided by the location of cotton textile mills in the city in the late 19th Century. These required repair and maintenance work which gradually developed into a fully fledged cotton textile machinery manufacturing industry. Parallel to the textile machinery manufacturing, the production of agricultural pumpsets became extremely important in the city, and when the demand for these began to decline in the 1970s the industry broadened its scope to cater for all kinds of foundry work. There are now a wide range of foundries in the city that attract orders from all over India and even abroad (The Economists Group, 1980, p.16). Apart from Coimbatore and a number of small engineering firms scattered around the major towns, Madras still retains some of the more major structural engineering firms of the State such as Best & Crompton, Shardlows or TVS. TVS also maintains major workshop facilities in a number of other cities such as Coimbatore, Madurai or Tiruchirapalli.

Electrical engineering is another established industry in the State.

Again while largely concentrated in Madras it is also important in Coimbatore, where the manufacture of electric motors originated as part of the pumpset manufacturing industry. Finally Tiruchirapalli is a centre of major importance due to the location there of the public sector Bharat Heavy Electricals (BHEL) heavy boiler plant. The BHEL plant which employs about 11,000 workers itself has also encouraged the development of up to 60 smaller ancillary firms around it. Though the electrical engineering industry may be fairly well developed in the State, there has been very little movement into electronics. The one major exception to this is the public sector Hindustan Teleprinters plant in Madras and a smattering of small firms producing individual electronic components. This is in sharp contrast to the neighbouring State of Karnataka, where Bangalore, traditionally a centre for defense-related and strategic industries such as aeronautics and telecommunications, is fast becoming the most important electronics centre in India. Many of the small electronic components units that are beginning to appear in Tamil Nadu are orienting their products towards the Bangalore market.

Tamil Nadu has very little basic industry or mining. Mention should be made, however, of the government Neyveli Lignite Corporation which is one of the State's most important thermal power stations based on a lignite mine. Neyveli is in South Arcot District 50 kilometres South west of Pondicherry. The Mettur Aluminium plant at the Mettur Dam North west of Salem is also important as it is one of the few aluminium plants in India. Finally the new government Salem Steel Plant should shortly be providing the only local source of cold rolled stainless steel sheets and strips. Apart from these sources all mineral and metallic raw materials have to be imported from other parts of India.

2. Materials for Industry

Inadequate supplies of electric power are possibly one of the biggest obstacles to faster industrial growth in Tamil Nadu. The State has half a dozen major hydroelectric power stations (GoTN, Economic Appraisal 1978 p.50) as well as a number of smaller ones, and hydroelectricity

accounts for about two thirds of the power generated in the State. In addition there are thermal power stations at Neyveli (cf. above), Ennore near Madras and Tuticorin in the south. The Neyveli Power Station, however, is a Central Government project and the State Electricity Board has to buy the power it uses from the station. As well as this the Board imports electricity from Kerala to meet the shortfall of generation in relation to consumption, and for the last few years consumption has exceeded generation by about 25% (since 1976-7; cf. Table from pp.52-4, GoTN Economic Appraisal 1978).

Industry uses nearly 50% of the electricity consumed in the State and with severe power cuts being imposed on industry for various periods since 1976, latent demand, though virtually impossible to estimate precisely, must be a good deal higher still. It is hoped that the expansion of the Neyveli lignite mine and the commissioning of the Kalpakkam Nuclear Power Station in the next few years will enable the Board to meet this excess demand.

Tamil Nadu is not particularly rich in mineral raw materials for industry. It has to import most of its requirements in basic metals as well as coal and petroleum for fuel. There are, however, a few exceptions and on the whole these are taken full advantage of: most of them forming the basis for industrial production in the State as well as the initial extraction industry.

The Neyveli lignite mine and power station, the Mettur aluminium plant next to bauxite reserves, the graphite deposits in the Sattur match production area, the various cement factories near limestone deposits and the alkali chemical industry next to salt pans in Southern Tamil Nadu are all examples of industrial growth based directly on mineral deposits in the State. By and large these industries are some of the newer and relatively less important industries in the State, but they do illustrate the increasing emphasis being placed on the availability of local materials guiding industrial expansion and the location of new factories. To a large extent this is a definite and conscious policy, evident from the fact that many of these industries are implemented or

at least actively encouraged by government industrial promotion agencies.

3. Employment in Industry

Employment data in India are always somewhat imprecise and selective but data on employment in organised industry are better than most. The State Directorate for Employment and Training figures for 1978 list 442,400 people as employed in manufacturing industry in the State, 351,500 in the private sector and 90,900 in the public sector. The Inspector of Factories List for the 1st of January 1979, however, suggests the level is about 788,000 (Mackie, 1981). Two factors probably account for most of the difference, besides of course the fact that the Inspector of Factories List is not a precise account of the number of employed but an indication of the maximum number of people employed in each factory throughout the year. First the Inspector's List also includes workers in Electricity, Gas and Water Supply, which in the Directorate's List would set the comparable figure at 524,300. The rest of the difference must be largely due to the fact that the Inspectors List includes all factories with 10 or more workers (20 or more without power) while the Directorate of Employment only covers those with 25 or more (GoTN Economic Appraisal 1978 p.56).

Given that the Inspector's List therefore covers a larger proportion of smaller units the figure of 788,000 can be taken as a more helpful indication of the level of industrial employment in the State, despite the fact that it is not collected for this purpose and may slightly exaggerate employment levels in each factory. With a total population of approximately 50 million in 1979, Tamil Nadu State therefore had about 1.5% of its population employed in organised industry which is somewhat higher than the national average of 1%. As with the All-India case industrial employment in Tamil Nadu grew throughout the 1970s at an average rate of 2%, or slightly more slowly than the overall population was growing (GoTN, Economic Appraisal 1978).

4. Small Scale Industry

The biggest problem facing analysts of small scale industry is data. There is no one source of existing data that is comprehensive in its coverage. The Annual Survey of Industries (ASI) covers only registered factories that employ 50 or more workers with the aid of power and 100 without power. The Directorate of Employment starts its register with firms of 25 or more workers, while the Inspector of Factories List starts from factories with 10 or more which makes it, given the limitations just discussed in the previous section, the most comprehensive of the three. In addition the Directorate of Industries & Commerce, a department of the State Government, maintains a register of small scale units but, unlike the other three sources just mentioned, registration on this is not compulsory unless the firm is requesting some form of government assistance. Thus even this source is far from comprehensive and would tend to have an overrepresentation of firms which are either just starting up or are running into trouble, and fewer well established and financially sound units.

Kurien & James (1979) in their discussion of small scale industry in Tamil Nadu in the 1960s (pp.122-126) point out that while the ASI for 1960 lists 225,000 workers employed in large scale industry on its register for Tamil Nadu, the 1961 Census included 848,000 persons employed in 'manufacturing industry' in the State. As they suggest the difference between the two figures gives some indication of the importance of the small scale industrial sector, both unorganised and organised (registered). Above all it indicates that anything up to three quarters of the industrial labour force in Tamil Nadu is employed in small scale industrial units. However, considerable doubt is thrown on this estimate by the figures from the Inspector of Factories List for 1979, unfortunately nearly twenty years later but no earlier year was available (Mackie 1981); nevertheless the change is so dramatic as to be of relevance. The Factories List for 1979 indicates 788,000 people as employed in industry in the State; of this 170,000 are in factories of between 10 and 50 workers with power and 20 and 100 without, and therefore below the limit of the ASI. This means that in

1979, 618,000 workers would have been covered by the ASI, a nearly three-fold increase in 19 years but quite possible since in 1970 the ASI figure was 483,000 (Kurien & James, 1979 p.108). What is more surprising is that of the 623,000 (848,000 minus 225,000) workers in manufacturing industry in 1960-1 which fell below the ASI limit only a very few can have been employed in units of between 10 and 50 workers (or 20 and 100 without power) as by 1979 this section only employed 170,000 workers, and from all other indications it would seem that small scale industry grew fairly steadily in the intervening years (Kurien & James, 1979 p.124-5). In the absence of the ASI figures for 1979 and until the 1981 Census data become available, it is impossible to check these figures more effectively, but as they stand they would seem to indicate that a very high proportion of people listed as employed in 'manufacturing industry' in the Census are employed in small scale units with less than 10 workers.

In effect this latter conclusion is entirely possible as the national Census of Small Scale Units taken in 1972 indicated that Tamil Nadu had the largest number of small scale units of all States in the Union, 16,000 units employing 215,200 workers, figures which themselves are already a good deal higher than the Inspector of Factories figures of 5,500 units (below 50 workers) employing 170,000 workers in 1979. Allowing for increases in the intervening seven years there are obviously still many units falling below the remit of the Inspector of Factories.

One final data problem that Kurien & James themselves raise is that there is a change in the definitions used for 'worker' between the 1961 and 1971 Censi (1979, pp.123 & 65). The effect of this they argue, is to exclude a higher proportion of workers in unorganised industry from the 1971 Census than from the 1961 Census. Subject to these various definitional problems they do propose some tentative suggestions about trends in the small scale sector during the 1960s; to these it is possible to add a few equally tentative suggestions about trends during the 1970s.

First, Kurien & James (1979, p.123) point to a striking decline in the absolute size of the small scale sector in Madras during the 1960s, with employment plummeting from 90,000 to 19,000. They suggest therefore that there has been a major shift from employment in the small scale sector to the large scale sector during the decade. Interestingly, the comparable figure from the Inspector of Factories List for 1979 (i.e. firms with 10-50 workers and power, and 20-100 without) is 23,000 which suggests a 21% increase in employment in the small scale sector during the 1970s in Madras City. At 2.1% per annum, this growth rate compares favourably with the overall industrial employment growth rate for the State of 2% quoted above (cf. p.143).

Secondly, Kurien & James (1979, p.124) suggest the reverse happened during the 1960s in Coimbatore District with employment in the sector increasing from 72,000 to 143,000 while the large scale sector registered a decline. Here the comparability of their figures with the Inspector of Factories List data seems to break down entirely, the comparable figure for 1979 given by the List being 25,000 workers. The only apparent explanation for such a major difference would seem to be that Coimbatore Dt. has a very high proportion of factories outside the Factories Act (i.e. not included in the Inspector's List). Certainly it has been established elsewhere (The Economists Group, 1980, p.22) that there is a high incidence of units deliberately employing less than 10 people in the foundry industry in Coimbatore. The sample survey of this particular study set the proportion as high as 53% (ibid, p.22) of units, and there are at least 350 foundry units in Coimbatore (ibid, p.5). It also indicated that there were teams of specialist foundry workers moving on contract from one unit to another to handle specific tasks that required more labour. According to the definition of 'factory' in the 1948 Factories Act (Mackie 1981 p.11) such behaviour should include these units in the Inspector's List, but since they operate like this precisely in order to avoid inclusion in the List they must apparently be succeeding. However, even if we accept that there may be as many as 175 to 200 foundry units in Coimbatore which have escaped inclusion in the List, they can only be employing under 2,000 workers between them plus some more in the mobile specialist

teams. In no way can these few thousand explain the 118,000 difference between the figures we have for 1970 and 1979. The only other way this might be explained is if employment in cotton mills in the District, which is very high (about 119,000 in 1979 according to the Inspector's List) but which is mostly concentrated in large units of one thousand or more workers, is somehow listed differently in the ASI and the Census upon which Kurien and James base their figures. No other industry in the District employs enough people to make up the difference.

The Inspector of Factories List in fact suggests that Madras has more factories with few workers, while Coimbatore has more large scale employers (Mackie, 1981, p.8) though nearly all of these are cotton textile mills. Otherwise the List suggests that the Coimbatore to Salem industrial belt in Tamilnadu is made up mostly of small scale employers and that the same is true in the Tirunelveli-Tuticorin area and around Madurai, while Tiruchy has a more even distribution of large and small scale employers.

The major point to emerge from this section on small scale industry is the confusion that exists about its nature and size. It is obvious that small scale employers are important in the State economy as at the highest estimate they employ up to three quarters of the industrial workforce. It is also apparent that small scale units exist not only in rural areas but make up a large proportion of the urban industry in the State. Finally it would appear that in employment terms the sector is providing new jobs at a very similar rate to the average rate for all industry.

5. The Spatial Distribution of Industry in Tamil Nadu

According to Kurien & James (1979, p.112) the most striking feature of industrialisation in Tamil Nadu during the 1960s is the way in which the spatial concentration of industry increased dramatically during the decade, thereby leaving much of the State totally unaffected. Madras was the focus for most of this industrialisation:

"Hence, it can be stated that the city of Madras and two of its neighbouring taluks together came to have by the beginning of the seventies close to two thirds of the productive capital employed in large scale industry in the State, over half of the value added, a little less than half of the workers and almost a third of the number of factories" (ibid, p.112).

Again without any directly comparable data it is impossible to draw any strict conclusion about possible spatial changes during the 1970s. However, the Inspector of Factories' List for 1979 does give a more recent and detailed picture of the distribution of factories in the State and indeed seems to indicate that there may have been some changes in the spatial trends since the sixties.

Table 1: Concentration of Industry in and around Madras

<u>Number of Factories</u>	<u>With 50 or more workers</u>			<u>With 10 or more</u>
	1960	1970	1979	1979
Madras City	165	247	222	998
Saidapet)	30	230	(210	795
Sriperumbudur)			(14	38
Total Madras region	165	477	446	1,831
idem as % of State	20.8	29.6	16.3	22.1
Total for State	793	1,612	2,728	8,286
 <u>Number of Workers</u>				
Madras City	38,758	160,116	72,261	94,671
Saidapet)	10,000	60,000	(62,838	80,268
Sriperumbudur)			(12,726	13,436
Total Madras region	48,758	220,116	147,825	188,375
idem as % of State	21.7	45.6	23.9	23.9
Total for State	225,000	483,000	618,022	788,127

Sources: Kurien & James, 1979, pp.108-110 (columns 1 & 2); Mackie, 1981 pp.12-14 (columns 3 & 4)

Table 1 documents the concentration of factories and workers in Madras that Kurien & James refer to in the above quotation. Evidently they are correct to point to the increasing spatial concentration of industry in the city during the 1960s, however, on the basis of the Inspector of Factories data this concentration appears to have been reversed during the 1970s. As the Table shows the concentration of large factories in and around Madras dropped from 29.6% of the State total to 16.3% by 1979, though the drop is not so remarkable if the smaller factories on the Inspectors List are included as well (Column 4: 22.1%). This drop is in relative terms only, the absolute number of factories remains similar, indicating that industrial growth during the 1970s occurred mostly outside Madras. The proportion of workers in large factories in the City has also nearly halved from 45.6% to 24% by 1979. These latter figures for the number of workers will of course be affected by the apparent difference in coverage between the ASI and the Inspector's List referred to earlier (cf. p.146) in connection with Coimbatore, as a high proportion of the big employers on the list are located in Coimbatore. Even so, the absolute number of workers in large factories in Madras has also dropped suggesting that large factories are employing fewer workers, possibly as a result of rationalisation or increased mechanisation.

However, even allowing for a fairly wide margin of error to take account of the differences in data bases used for 1970 and 1979, it would seem possible to conclude that there has been some deconcentration of industry in the State away from Madras during the 1970s and thus a reversal of the trend noted by Kurien & James in the 1960s. In passing it is also worth noting from Table 1 and the differences between columns 3 and 4 in the Table, the way the presence of smaller firms (employing less than 50 workers) pushes up the level of industrial concentration in the city. This indicates, as already referred to above (cf. p.145), how small industry is more heavily concentrated in the city than large scale industry.

There are two principal advantages in using the Inspector of Factories List as a source of data on the spatial distribution of industry in

Tamil Nadu. The first, which has already been alluded to several times, is the fact that it includes a larger proportion of small scale firms than most other sources. Secondly, however, it also lists a precise location for each factory and the data can therefore be conveniently used at taluk level instead of district level thereby giving a more accurate picture of the actual spatial distribution of industry. Referring to taluk maps of Tamil Nadu (Mackie, 1981) prepared on this basis it is immediately apparent that despite the deconcentration trend discussed above, Madras and Saidapet taluk around it still have much the heaviest concentration of factories in the State (Map 3, Mackie 1981). Coimbatore also stands out but it is a good deal further behind. Looking at the lower end of the scale where most of the taluks are found (Maps 3 & 4, Mackie 1981) several pockets of more industrialised taluks emerge. The Madras pocket is very localised indeed, whereas in the western parts of the State two fairly large pockets emerge: first the Coimbatore - Salem belt in which about a dozen taluks can be included; secondly a triangle based on Sattur - Tirunelveli - Tuticorin in the south which contains half a dozen taluks. These three pockets include most of the taluks in the upper deciles of the distribution of taluks by number of factories, the remaining taluks in these deciles all being connected with major towns: Madurai, Tiruchy, Thanjavur, Dindigul and Vellore.

Breaking up the data into three groups by factory employment levels (10 to 49 workers; 50 to 249; and 250 and over) (Maps 7 to 12, Mackie 1981) a few more details about these industrial pockets can be deduced. Looking at Madras first it is evident that most of the large employers are as one might expect on the outskirts of the City in Saidapet taluk. In the Coimbatore - Salem belt, the larger employers are, the more they tend to be located near or in Coimbatore itself whereas the smaller employers are more evenly distributed throughout the belt. In the southern industrial triangle, Sattur taluk stands out as being the only one with large employers (match making industry). Of the individual industrial urban centres only Tiruchy and to a lesser extent Madurai stand out as having many moderate sized employers and neither have really large employers, the one exception being BHEL (Bharat Heavy

Electricals Ltd) in Tiruchy which employs 11,000 workers.

On the whole then the overall factory distribution map of Tamil Nadu is fairly similar to the map based purely on the distribution of small scale employers with the addition of peaks in a few taluks with a significant number of large employers. This is not too surprising as out of the 8,286 factories included in the 1979 List, 5,269 employ less than 50 workers, and a further 289 employ between 10 and 100 workers but without power (i.e. they therefore are also excluded from the ASI data coverage). Of course the picture changes slightly when the distribution of factory workers is considered (Maps 5 & 6, Mackie 1981). However, it is still possible to pick out the three main pockets of industry referred to above, although now within these pockets the taluks comprising urban centres stand out more clearly. Understandably enough the map of the distribution of factory workers in the State looks much more similar to a map showing the distribution of urban population. This is not to say that there is little or no industry in rural areas of the State, as Map 4 indicates most rural taluks do have a few factories, indeed only three taluks have no factories listed at all (Mackie, 1981, pp.12-14), 10% have up to three factories, 10% between 3 and 8, 10% between 8 and 13, 10% between 18 and 24 and another 10% between 24 and 38 factories, while most of the taluks in the higher deciles include sizeable urban settlements. (Map 4, Mackie 1981).

6. Tamil Nadu Government Industrial Policy

6.1 General Policy

As the Tamil Nadu Government 1978 'Policy Note on Industrial Development' states in its introductory comments: "The Industrial Policy of the State Government is by and large in agreement with that of the Government of India", (p.1) and it also suggests that the increased emphasis placed on small scale industry in the 1977 Industrial Policy Resolution of the Union Government is in part at least, due to recommendations made by the Government of Tamil Nadu. The

essential point to note, however, is that the State Governments have little scope to deviate from the industrial policy formulated by the Union Government, though, as here with small scale industries, individual State Governments may wish to increase their emphasis on certain elements of the overall policy. Thus the Tamil Nadu Government puts a good deal of effort into encouraging small scale industry with finance, advice, technical assistance, marketing, facilities and feasibility studies to identify new sectors or opportunities which small scale units might tackle. It also pursues this type of industrial promotion work with regard to medium and large scale industry, though at this level it provides more financial backing and infrastructural facilities and less expertise and advice. In effect then the promotion of absolute industrial growth, including virtually any kind of industrial growth that will occur, is the essence of the Tamil Nadu Government's industrial policy. There is no attempt to encourage industrial growth in particular sectors rather than others and no attempt to assess whether particular types of industrial growth might be more useful for the State's development than others. Efforts are made to encourage the further growth of specific industries already in the State (e.g. the efforts made to encourage the growth of the cotton or the sugar industries) and new industries to take advantage of local deposits of mineral raw materials have been encouraged, but in both cases the rationale has been one of encouraging maximum industrial growth rather than the development of particular sectors which the State was lacking. As the 1978 'Policy Note' puts it succinctly:

"The major task of the Government in the Industries sector is promotion, development, provision of finance and development of infrastructure." (p.2)

6.2 Industrial Promotion

The State Government's industrial promotion activities are largely carried out by promotion agencies organised as public limited corporations. The four principal ones are the Tamil Nadu Industrial Investment Corporation (TIIC), providing finance for small and medium

scale projects; the State Industries Promotion Corporation of Tamil Nadu Ltd. (SIPCOT) which provides all types of assistance to medium and large scale industry; the Tamil Nadu Small Industries Development Corporation Ltd. (SIDCO) which assists small scale industry and the Tamil Nadu Industrial Development Corporation Ltd. (TIDCO) which manages State level public sector projects and joint sector projects with private capital (GoTN, Industrial Policy Note 1978 & IIC 1979a).

The Tamil Nadu Industrial Investment Corporation has the distinction of being the oldest State level industrial finance institution in India, having been set up soon after Independence in 1949 (GoTN, Industrial Policy Note 1978, pp.57-61). It is a purely financial institution and as such is integrated into the national system of public industrial development banks and lending institutions headed by the IDBI and discussed in the previous Chapter. It provides a range of loans and guarantees similar to those provided by the other institutions in the system on very similar terms. The maximum amount available on loan is Rs.3 million for companies with limited liability, and Rs.1.5 million for others. Guarantees for up to Rs.3 million and underwriting of stock up to Rs.2 million are also available within an overall limit of Rs.6 million per case. The period of repayment of loans is 10 years with a 2 year moratorium. The TIIC also has various special schemes for assisting small scale industry, technocrats wishing to start their own firms, foreign currency loans and loans for the purchase of electricity generators, which usually involve lower interest rates and longer repayment periods.

The State Industries Promotion Corporation of Tamil Nadu is the second industrial finance institution in the State approved by the IDBI and therefore able to offer the full range of financial services provided by the national industrial finance system. SIPCOT deals with medium and large scale industries and does not provide finance or other assistance to small scale units. Thus although its role overlaps somewhat with that of the TIIC it is not the same. Moreover, in addition to financial assistance, SIPCOT provides a range of infrastructural facilities and advice services. As well as industrial promotion work SIPCOT has a

specific remit to encourage industrial dispersal to underdeveloped parts of the State (GoTN, Industrial Policy Note 1978, p.51).

The key element of SIPCOT's package of financial incentives is the Central Government Investment Subsidy of 15% on fixed capital assets which it administers. On top of this Central incentive SIPCOT offers a State Government interest free Sales Tax Loan available to both existing and new industries in backward areas (For existing units: equal to Sales Tax paid over last 3 years, repayable after 12 years in 3 annual instalments; for new units: equal to Sales Tax paid each year for first 6 years of operation, repayable after 18 years in 3 annual instalments). Of less significance are concessional water and power tariffs which are available to new industries in backward areas. In addition to all these incentives SIPCOT, being affiliated to the IDBI, can arrange the full range of concessional finance and loans already discussed in detail above.

Although SIPCOT offers these incentives to firms starting new factories in any part of the designated backward areas in Tamil Nadu, it has also started two specific growth centres at Ranipet in North Arcot District near Vellore and at Hosur in the north western part of Dharmapuri District. At these two centres it has bought land, laid out equipped plots with road access, electricity, water and in some cases sewerage. It is at these two places, where it is able to provide infrastructural facilities as well as financial incentives, that SIPCOT is having the most success at encouraging industrial growth.

The third industrial promotion agency in Tamil Nadu, SIDCO, is at its name suggests entirely devoted to the promotion of small scale industry. As such it offers to its clients the widest range of services of all the industrial promotion agencies in the State. For financial assistance it cooperates with the TIIC, but it also administers the 15% Central Investment Subsidy and the State interest free Sales Tax Loan to SSIs. On the infrastructural side it is in charge of 33 industrial estates scattered throughout Tamil Nadu, in which there are approximately 800 purpose built sheds which it rents out to small scale

firms. SIDCO was only set up in 1974, but some of these industrial estates have been going much longer, the oldest at Guindy near Madras having been started in 1957. While initially the SIDCO sheds were mostly rented out to entrepreneurs, the agency now prefers to allocate them on a hire-purchase agreement.

SIDCO also helps small scale firms with the bulk buying and distribution of certain key raw materials, special loans for the purchase of machinery, technical consultancy and feasibility studies and marketing and export assistance. Finally it budgets a certain proportion of its funds (1% in 1980-81 budget) specifically for 'nursing sick units'. Overall then it provides a range of services which attempts to cater for most of the problems small scale firms may encounter (SIDCO Annual Report 1979 & GoTN Industrial Policy Note 1978 pp.25-29).

The fourth major industrial promotion agency in Tamil Nadu is TIDCO, the Tamil Nadu Industrial Development Corporation which deals purely with industries that the government have a financial interest in, either public sector firms or joint sector firms, though it does not deal with small scale industries. It was originally set up in 1965 to implement State level public sector projects: the Alangulam cement project (Tamil Nadu Cements Corporation Ltd: TANCEM) and a continuous steel casting plant at Arakonam, North Arcot Dt. (Tamil Nadu Steels). Since then, the Tamil Nadu Government, in a fairly major policy change, has decided to stop promoting public sector industry virtually entirely and has instead introduced the concept of joint sector industry. The joint sector concept is based on the principle that the State Government, in the form of its agency TIDCO, would provide 26% of the equity capital for any given project, another 25% would come from one or several private industrialists and the remaining 49% would be raised in shares sold to the general public. TIDCO thus retains control of the firm and appoints the Chairman of the Board of Directors. As a result of this new policy TIDCO has set up only one other public sector plant, the Ariyalur cement works (also part of TANCEM), and has instead concentrated on starting some 20 joint sector plants (cf. Figure 1). By

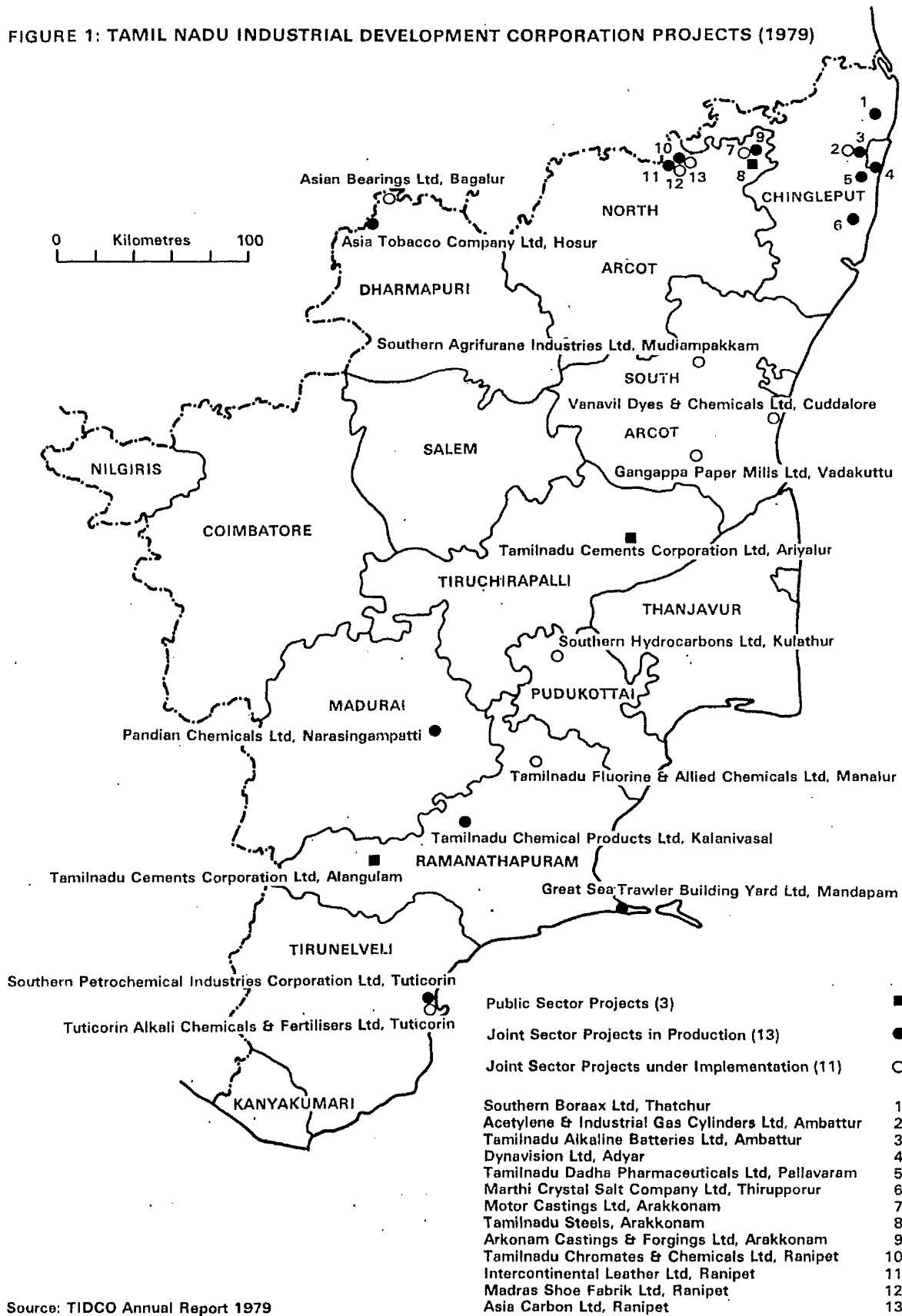
1979, 13 of these were already in production and a further 11 were in various stage of implementation (TIDCO Annual Report 1979) (cf. also GoTN Policy Note, 1978 pp.43-9). As noted earlier in this Chapter (p.138) the government has done a lot to encourage the growth of the chemical industry in the State and 13 of these joint sector plants are producing chemicals and related products (e.g. drugs and batteries). All the TIDCO firms are of some importance as the Corporation's guidelines stipulate that it should only involve itself in projects with a capital outlay above Rs.10 million.

6.3 Backward Areas in Tamil Nadu

Two different sets of areas are classified as backward in Tamil Nadu. There is first a set of backward areas where new and expanding industries are eligible for the Central Government 15% Investment Subsidy, these comprise a list of 28 taluks in the Districts of North Arcot, Dharmapuri, Madurai, Ramanathapuram and Pudukottai. Then all the other industrial incentives offered by the State promotion agencies are available in the following backward districts: Dharmapuri, North Arcot, South Arcot, Thanjavur, Tiruchirapalli, Madurai, Ramanathapuram, Pudukottai and Kanyakumari. This second list therefore entirely includes the first and covers an area considerably larger. In effect it consists of the entire State apart from the Districts of Madras, Chingleput, Salem, Coimbatore, Nilgiris and Tirunelveli (cf. Figure 2).

Table 2 gives an indication of the relative levels of industrialisation of the districts for 1960, 1970 and 1979. The first two years' data is taken from Kurien & James (1979, p.111) and is therefore derived from the Annual Survey of Industries, while the data for 1979 is based on the Inspector of Factories' List (Mackie, 1981, pp.12-14). The difference of coverage of these two sources has been discussed in detail above (cf. p.143-147), but in the preparation of Table 2 it was felt to be more useful to include the entire data for 1979 and not just the factories that would appear on the ASI, as the purpose of this Table is to demonstrate relative levels of industrialisation and not absolute changes over time.

FIGURE 1: TAMIL NADU INDUSTRIAL DEVELOPMENT CORPORATION PROJECTS (1979)



Source: TIDCO Annual Report 1979

Examining the second list of nine districts designated for concessional finance and other incentives and their relative rankings in Table 2, it is evident that by and large the list does consist of the least industrialised districts. Nilgiris stands out as an exception, however, as it one of Tamil Nadu's least industrialised districts and yet has not been designated as backward. This is probably due to its being entirely hill country with a low level of infrastructure and was therefore excluded on the grounds that it lacked potential or was deemed unsuitable for industry. It is also possible to question the rationale of designating the districts of Ramanathapuram and Madurai (and possibly even North Arcot and Tiruchirapalli by 1979) as backward on the basis of their percentage share of the total number of factories and workers in the State. Indeed a comparison of the percentage shares with Tirunelveli, the least industrialised district of those not designated, shows a remarkable similarity and in some cases, Tirunelveli even seems less industrialised than these other two. Why then have Madurai and Ramanathapuram been designated as backward and Tirunelveli not?

The answer would seem to be that the industry in the two former districts is more heavily concentrated in towns than it is in Tirunelveli Dt. and therefore apart from the towns the rest of the Districts are industrially backward. In effect designating the entire District as backward excludes the large towns like Madurai which are over the half million limit imposed by the ban on industrialisation in urban areas. This is certainly the case for Madurai Dt., where nearly 50% of the factories in the District were concentrated in the city of Madurai in 1979 (Mackie, 1981, 13-14), while Tirunelveli taluk has only about 18% of the firms in Tirunelveli District, and the other factories in the district are fairly well spread out.

In the case of Ramanathapuram, the only major concentration of industry is in Sattur taluk, and by 1971 Sattur town had well below half a million inhabitants and therefore is not excluded by the ban. However, Sattur has over 50% of the factories in Ramanathapuram Dt. and the rest of the district can therefore be taken to be very poorly industrialised.

FIGURE 2: DESIGNATED BACKWARD AREAS IN TAMIL NADU STATE

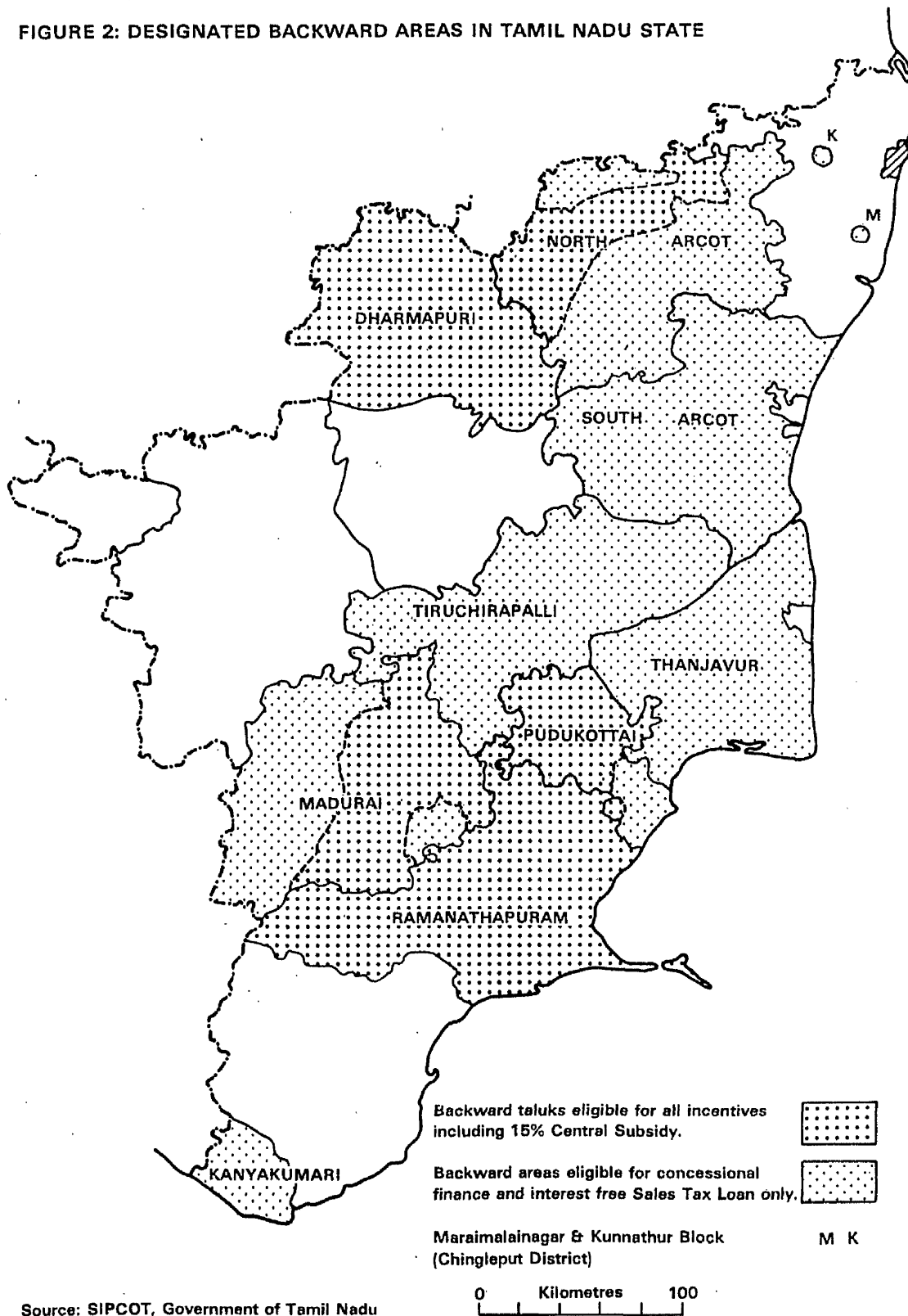


TABLE 2: Relative Industrialisation of Districts by Percentage Share of Factories & Workers, 1960-1979

District:	FACTORIES						Districts designated as industrially backward	WORKERS							
	1960		1970		1979			1960		1970		1979			
	% of Factories	Rank	% of Factories	Rank	% of Factories	Rank		% of Workers	Rank	% of Workers	Rank	% of Workers	Rank		
Madras	17.0	2	15.3	3	998	12.0	3	2	17.3	2	33.1	1	94,671	12.0	3
Chingleput	6.6	5	16.7	2	929	11.2	4	4	7.7	5	14.1	3	99,949	12.7	2
South Arcot	2.1	12	2.0	13	141	1.7	13	13	2.0	10	3.2	9	13,900	1.8	13
North Arcot	2.5	10	4.3	8	439	5.3	8	8	2.2	9	2.6	11	24,056	3.1	10
Salem	4.3	8	7.4	4	1022	12.3	2	3	4.6	8	4.1	6	48,149	6.1	7
Dharmapuri					47	0.6	14						50,247	6.4	7
Coimbatore	32.3	1	22.1	1	1,864	22.5	1	1	33.2	1	17.0	2	2,098	0.3	15
Tiruchirappalli	4.7	7	4.0	9	437incl 396excl	5.3	8	9	5.4	6	6.0	5	234,370	29.7	1
Thanjavur	2.5	10	2.1	12	307incl 307excl	3.7	10	10	1.5	11	1.1	12	61,115incl 56,179excl	7.8	5
Pudukottai					47	0.6	14						23,915incl 23,519excl	3.0	11
Madurai	8.6	4	6.4	6	613	7.4	6	6	10.8	3	7.5	4	5,345	0.7	14
Ramanathapuram	9.1	3	7.3	5	605	7.3	7	7	4.8	7	3.8	7	51,883	6.6	6
Tirunelveli	6.6	5	6.3	7	664	8.0	5	5	4.8	7	3.4	8	77,352	9.8	4
Kanyakumari	0.6	13	3.3	10	178	2.1	11	11	9.2	4	3.1	10	36,244	4.6	8
Nilgiris	3.2	9	2.9	11	148	1.8	12	12	0.4	13	1.1	12	30,675	3.9	9
TAMIL NADU STATE	100.0%		100.0%		8,286	100.0%			100.0%		100.0%		16,750	2.1	12
													788,127	100.0%	

Notes

- 'excl' & 'incl' refer to the exclusion & inclusion of the taluks making up the new Pudukottai Dt. in the figures for Tiruchirappalli & Thanjavur Dts.
- the Inspector of Factories List data for 1979 has not been adjusted to make it strictly comparable in coverage to the ASI data for 1960 & 1970. It was deemed unnecessary to do so because the purpose of this table is to demonstrate relative levels of industrialisation.

Sources: - 1960 & 1970 data: Kurien & James, 1979 p.111
 (based on Annual Survey of Industry)
 - 1979 data: Mackie, 1981 pp.12-14
 (based on Inspector of Factories' List)

Thus with the exception of the Nilgiris, the districts designated as backward are indeed the districts where industrialisation is either lowest, or if not so low, is very poorly distributed through the district. Furthermore it is apparent that in 1979 these designated districts included all the districts with less than 8% of the factories in the State, again with the exception of the Nilgiris. Unfortunately the picture is not nearly as clear cut if relative industrialisation is measured in terms of number of industrial workers, for though the designated list contains all the districts with less than 12% of industrial workers in the State, Tirunelveli is also included with a lower percentage share of workers than Madurai, Ramanathapuram, or Tiruchirapalli (again excluding Nilgiris).

The other list of backward areas, that is those qualifying for the Central Subsidy, is composed of three 'areas', each made up of a number of taluks. These taluks are all in the five districts of North Arcot, Dharmapuri, Madurai, Ramanathapuram and Pudukottai and are therefore all included in the list of backward districts just discussed. Only the Districts of Dharmapuri and Ramanathapuram, however, qualify in full. In North Arcot, of the four taluks included (Tirupattur, Vaniyambadi, Vellore and Walajahpet) three are among the most industrialised taluks in the District while some of the least industrialised taluks (e.g. Chengam, Cheyyar, Polur and Wandiwash) have been left out. The same thing is true with Pudukottai where the one taluk left out, Arantangi, has only 6 factories while one of the three included has 30 (Alangudi). In Madurai District, admittedly the two Madurai city taluks have been omitted, but Dindigul, the next most industrialised taluk in the district, has been included as backward while at the other end of the scale the taluk of Nilakottai with only 13 factories has been excluded.

At a broader level it is apparent from comparing Maps 2 and 4 in Mackie (1981) that the Central Subsidy backward areas (shown in Map 2) do not include some of the taluks with the lowest number of factories (e.g. below 3 or below 8 factories in the bottom two deciles shown on Map 4) in the Districts of South Arcot, Tiruchirapalli and Thanjavur as well as the ones just mentioned in the previous paragraph.

To conclude this section it would seem that the districts designated as backward in the State are consistently the districts with the least or the most poorly distributed industry, but the list of areas designated as backward for the granting of the Central Subsidy, though a good deal more selective and smaller, is not nearly as good a selection of the taluks with the least industry. One final criticism that may be made which was also a criticism made about the selection of backward areas at a national level, (cf. Chapter 3 p.65) is that the designated areas are too large: arguably the incentives would be more effective in encouraging the industrialisation of particular areas if the effort was more concentrated.

7. Trends in Industrial Location in Tamil Nadu

In the preceding pages the main features of industrialisation in Tamil Nadu and the State Government's measures to promote it have been outlined. On the basis of this exposition it is now possible to summarise the principle industrial location trends taking place in the State.

Kurien & James concluded from their statistical analysis of ASI data, that one of the major characteristics of industrialisation in the State during the 1960s was its increasing concentration in the Madras area. Data for the 1970s discussed above (cf. p.149) indicates a reversal of this trend during the latter decade, although without the same data base as Kurien & James it is difficult to evaluate the true extent of this reversal. However, the data for 1979 show that even given the reversal of the concentration trend, the Madras region still dominates the distribution of industry in Tamil Nadu. There are also two other areas of industrial importance. The first of these is a belt stretching from the second industrial city of the State, Coimbatore to Salem passing through Tiruppur and Erode as well as including a northern spur to Mettur. This belt is also of considerable importance in the spatial configuration of the Tamil Nadu industrial economy. The third pocket of importance is the triangle formed by Sattur - Tuticorin - Tirunelveli

in the southern part of the State. This triangle combines the traditional matches and fireworks industry of the Sattur area with the newer chemical industry of Tuticorin.

Apart from these three major pockets any other concentrations of industry in the State are all, as could be expected, based directly on towns and one should mention Madurai, Tiruchirapalli, Thanjavur, Dindigul and Vellore in this context, though not all these centres are equally important.

It was also noted (Table 1) that two thirds of the factories in the State are small scale units employing less than 50 workers and that, apart from a few taluks with a significant number of large scale employers, the distribution of industry parallels closely the distribution of small scale industry. Large scale employers can principally be found in Coimbatore and Sattur and to a lesser extent in Madras (mostly on the outskirts of the city), the taluks immediately adjacent to Coimbatore and Sattur, Vilavancode near Kanyakumari, Tiruchirapalli, Madurai and Dindigul.

By and large this pattern of spatial distribution of industry resembles fairly close to the pattern that existed earlier in the 1960s. Where then has the new industrial growth which has resulted in the deconcentration of the 1970s occurred?

It is difficult to answer this question with reference to small scale industry without better data, so one has to assume that growth in this sector has been fairly prevalent throughout the areas in which it is found. For medium and large scale industry, however, it is easier to build up a reasonably detailed picture as the number of projects in question is limited and they are well known. To start with there are the projects promoted by TIDCO (cf. Figure 1) and while many of these are still in the Madras region there are also small pockets in Ranipet, Arkonam and further afield in Tuticorin. Then there are the two TANCEM cement plants at Alangulam and Ariyalur as well as several other projects in outlying locations. But what is more interesting perhaps is

the way the dispersal trend among the TIDCO projects alone is increasing with the majority of projects under implementation being well dispersed, and most of them going to districts designated as backward. Indeed although TIDCO in the past may have promoted projects in the Madras area, it has never done so in the Coimbatore - Salem area and only projects based on raw material deposits in the Sattur - Tuticorin - Tirunelveli triangle.

This last point brings us to the fact that a fair number of major projects which have dispersed to non-traditional industrial locations in Tamil Nadu in the last 10 to 15 years have done so on the basis of raw material deposits. The TANCEM cement plants are a case in point, as are the new TIDCO alkali chemical plant in Tuticorin, the Neyveli power station and the Mettur aluminium plant. A similar trend is evident in the location of new sugar mills in sugar cane production areas rather than in towns.

Both the cases of Neyveli and Mettur have resulted in some secondary industrial growth. At Neyveli this is strictly limited to public sector units related to the mine and the power station, so this should not be seen as a growth pole type of effect. On the other hand at the Mettur hydroelectric power station, half a dozen large units have appeared in a variety in industrial sectors (Chemicals, Engineering and Cotton Textiles) as well as about 20 smaller units. Only a few of these are government promoted or directly related to the operation of the power station.

Two other noteworthy growth pole type effects have occurred in the State in the last decade. First the BHEL plant at Tiruchirapalli has actively and successfully encouraged the emergence of a whole string of small engineering subcontracting units and second the new Enfield India motorcycle plant in Tirupattur taluk in Ramanathapuram has occasioned the development of a much smaller group of a dozen or so subcontractors. Although the BHEL case is more important in terms of absolute numbers and scale, the Enfield case is more important in dispersal terms as it is in a remote rural location rather than on the

outskirts of a major town.

As for the industrial promotion efforts of SIPCOT, by the end of the 1979-80 financial year it had disbursed funds to 267 firms under the 15% Central Subsidy scheme, 83 firms under the Sales Tax Loan and another 87 under the term loan or concessional finance schemes. By definition all these firms have to be located in the appropriate backward areas and while not all are new projects but also include expansions and diversifications, these figures do represent a fairly comprehensive account of industrialisation in backward areas. In relation to total industrial growth, the Inspector of Factories' List included 6,341 factories in 1973 and 8,286 in 1979, that is a growth of 1,945 units in the same six year period as covered by the operation of SIPCOT's Central Subsidy disbursements. It would thus seem that only about 10% of new factories coming up in the State during the 1970s have been located in backward areas, provided one accepts that the Central Subsidy is disbursed fairly comprehensively to most new factories eligible to receive it. Seen in this light, despite the decreasing concentration of industry in the Madras region and despite the industrial dispersal efforts of the government agencies, much of the new industrial growth in the State is not occurring in backward areas but in established industrial areas like the Coimbatore - Salem belt and the Tuticorin area in the south.

It should however, also be stressed that SIPCOT's promotion work is increasing and that by January 1st 1979 when the last Inspector of Factories List was compiled (the last available that is) only a few of the firms it was encouraging to locate in Hosur were listed although most of the Ranipet ones were. With the rapid growth of Hosur it is reasonable to expect that an increasing proportion of new industry in the State will be located in backward areas.

CHAPTER 6

THE STATE INDUSTRIES PROMOTION CORPORATION OF TAMIL NADU

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The State Industries Promotion Corporation of Tamil Nadu (SIPCOT) was set up in 1971 as Tamil Nadu's prime government industrial promotion agency for large and medium scale industry. Legally it is incorporated as a Public Limited Company wholly owned by the Government of Tamil Nadu. Originally its authorised share capital was set at Rs. 50 million but subsequently (1979) this limit was raised to Rs. 60 million. Paid up capital stood at Rs. 46.5 million in 1979 (SIPCOT, Annual Report 1979).

As well as being in charge of the Tamil Nadu Government's efforts to promote large and medium scale industry, SIPCOT's remit includes a specific reference to a duty to 'hasten the industrial dispersal to underdeveloped areas of the State' (GoTN Industrial Policy Note, 1978 p.51). SIPCOT also acts as the local executive agent for the Central Government's industrial promotion and dispersal policies: it administers the Central Government 15% Subsidy and it is recognised by the IDBI as a state financial institution eligible for refinance from the Bank on its loans to industry in Tamil Nadu. In both these roles SIPCOT only deals with large and medium scale industry; small scale industry is provided for by other institutions in the State (i.e. TIIC, & SIDCO). Although set up in 1971, SIPCOT only commenced operations in January 1972.

1. SIPCOT's Package of Incentives

The main features of the incentive package have already been mentioned above (Chapter 5) so it is only necessary to give some additional details here on the precise modalities of each scheme and outline those schemes of minor importance that have not already been referred to.

To deal first with the national schemes, the Central Government Subsidy operates in the same way as elsewhere in the country. The amount which each firm is eligible to receive is calculated as 15% of the firm's fixed capital assets subject to a maximum of Rs. 1.5 million. The

Subsidy is available to industrial units of any corporate nature and any industrial sector located in one of the list of 32 designated taluks in Tamil Nadu (cf. Figure 2 in Chapter 5). New units, units moving into one of the backward taluks from a major city and units already established in these areas but which are undertaking substantial expansion are all eligible. Substantial expansion is defined as an 'increase in the value of Fixed Capital Investment by not less than 10% for the purpose of expansion of capacity' (SIPCOT, All about SIPCOT, p.10). The Fixed Capital Investment includes land, buildings, plant and machinery. All applications for the Subsidy are considered and sanctioned by a special State Level Committee which is independent of SIPCOT. Once sanctioned they are then disbursed in instalments of up to 85% before commencement of production and the balance afterwards. Initial disbursements are made as bridge loans which carry an interest rate of 12½%. This is until reimbursement by the Union Government is made, at which point no more interest is charged. Once the firm has started receiving the Subsidy it is not allowed to change the location of whole or part of the industrial unit involved, or reduce or dispose of a substantial part of its total 'Fixed Capital Investment', within a period of five years from the date of going into production and without prior permission of the State Level Committee. Also if the unit goes out of production within these five years the Subsidy has to be refunded. Finally for the first five years of production the firm has to submit annual progress reports to SIPCOT and allow for the inspection and verification of its accounts.

These conditions of acceptance of the Subsidy are intended to provide the disbursing agency with a degree of control over industrial units and in particular to prevent firms from setting up units in backward areas, obtaining the Subsidy and subsequently moving out again. However, the period of five years of production over which these controls extend is not long in relation to the time it takes for an industrial concern to set up local subcontracting and supply links, and it may well be that a longer period of say ten years might force firms to establish themselves more thoroughly in the economy of the backward area.

With regard to the IBDI's Refinance Scheme, medium scale firms are provided with loans through both TIIC and SIPCOT, while large firms deal exclusively with SIPCOT, but the conditions of the loans remain the same in both cases. The rate of interest on loans is $9\frac{1}{2}\%$ in the nine designated backward districts (cf. Figure 2 in Chapter 5) and $12\frac{1}{2}\%$ in other areas. There is a moratorium on repayment of up to 4 years and an amortization period of up to 12 years.

The minimum level of a promoter's contribution to a project is set at 20%, though in backward areas this goes down to $17\frac{1}{2}\%$ and for projects sponsored by technician entrepreneurs down as low as 15%. Applicants seeking a loan, pay an investigation fee of 0.5% of the amount applied for, subject to a minimum and maximum level of Rs. 2500/- and Rs. 10,000/-. A commitment charge of 1% (0.5% in backward areas) of the loan is made if it is not taken up within 3 months of sanctioning.

SIPCOT also handles the IDBI Seed Capital Scheme for new entrepreneurs. This is intended to provide finance to professionally qualified or experienced people who want to start a firm but have only limited funds. The promoter's contribution is of the same order (20%, $17\frac{1}{2}\%$ & 15%) as under the general loan refinance scheme, but where the seed capital is given as a loan it comes interest free and with a repayment moratorium of 5 years. The capital can also be given in the form of preference shares or equity. Under this scheme the total project cost must not exceed Rs. 10 million and the amount given will not be more than 10% of the project cost.

With the underwriting of capital issues, SIPCOT will also underwrite up to 10% of the issued share capital of a company setting up a unit in one of the nine designated backward areas. This service carries a charge of $2\frac{1}{2}\%$ of the amount underwritten. In a similar vein SIPCOT acts as the agent of the Government of Tamil Nadu in guaranteeing the loans medium and large scale industries may wish to obtain from commercial banks. Such loans must have been obtained, however, for fixed capital investment and are not to be used as working capital. The final loan

scheme that SIPCOT operates in conjunction with other financial institutions is the Loan for Employing Repatriates, formulated in association with the Repatriates Cooperative Finance and Development Bank Ltd. It is available for firms already assisted by SIPCOT and located in SIPCOT's Complexes at Ranipet, Hosur and Maraimalainagar for the employment of Sri Lanka repatriates. Loans of Rs. 10,000/- per repatriate with an interest rate of 11% and a 5 year repayment period, including one year's moratorium, are available under this scheme.

As well as acting as an agent for national incentive schemes SIPCOT also has its own direct package of incentives. This includes first of all a scheme to assist entrepreneurs with feasibility studies. SIPCOT will commission feasibility studies from consultants at the request of entrepreneurs and will help with their finance. The promoter pays an initial 25% of the cost of the study. SIPCOT also pays 25% if the study is accepted and implemented, the promoter paying the balance in this case, or if the study proves the project to be unfeasible SIPCOT pays 50% of the cost and the promoter the remaining 25%.

The second and most substantial element of the SIPCOT 'house' package is the Interest Free Sales Tax Loan. This is available to firms locating anywhere in the nine backward districts and at Maraimalainagar near Madras. For new units the Loan is equivalent to the amount of Sales Tax paid by the unit in the first 6 years of production, subject to a maximum of 8% of the gross fixed assets of the unit. The Loan is disbursed quarterly against a certificate of payment from the government Commercial Taxes Department. The Sales Tax Loan is also available in a slightly different form to existing units undertaking expansion or diversification provided they are located in the same specified areas. In their case the value of the loan is equivalent to the sales tax paid in the 3 years prior to the application and subject to a maximum of 25% of the fixed asset investment of the expansion or diversification programme. Repayment of the loan is made in 3 equal annual instalments after 18 years for new units and after 12 years for expanding and

diversifying units. The provisions for firms undertaking expansion and diversification also apply to existing firms located anywhere in Tamil Nadu setting up new units in the designated backward districts. For expanding and diversifying firms the loans should only be used for the creation of fixed assets, whereas for new firms they can be used for either the implementation or the running of the project. A commitment charge of 1.5% per annum is levied on undrawn amounts after 6 months from the date of final sanction of the Loan.

There are also a number of minor incentive schemes offered by the Government of Tamil Nadu. New industries set up anywhere in the State are charged a concessionary power tariff for the first few years of operation. For the first three years this stands at 66.6% of the normal HT power rate, then it is 80% for the fourth year and finally 90% for the fifth year. Similarly for water royalties new industries set up in the nine backward districts are allowed indefinite water supplies for the first 6 years of operation upon payment of a flat Rs. 200/- per annum royalty.

Finally through its Industrial Escorts Service the Government of Tamil Nadu will help industrialists obtain the necessary Industrial Licence from the Union Government and any other clearances required from government agencies.

2. Growth Pole Policy

From the early days of its existence SIPCOT decided on a policy of promoting a few well chosen growth poles as one of the most effective means to encourage industrial dispersal to backward areas. It was argued that if the agency was "to achieve measurable results with the available limited resources, it would be better to concentrate (our) attention on a few selected Growth Centres in the Backward Districts" (SIPCOT, All About SIPCOT, p.12). Sites for the Growth Centres¹ were to be chosen in places which were deemed to have the potential for development. These were then to be equipped with full infrastructural facilities and SIPCOT would encourage firms to locate their new units

in them rather than elsewhere in the backward districts. In effect this policy meant that SIPCOT would provide infrastructural facilities only in a few selected locations in backward areas, so that firms choosing alternative locations of their own would, in the main, have to organise their own infrastructure.

2.1 Ranipet Industrial Complex

The first site chosen for a growth pole was at Ranipet near Vellore in North Arcot District. In 1972-73 SIPCOT acquired 712 acres of fairly poor quality agricultural land adjoining the Madras - Bangalore National Highway a couple of kilometres to the west of Ranipet. This was divided up into about 80 plots of varying sizes which were then all provided with tarred road access. The Electricity Board built an electricity sub-station in the complex and provision was made to bring water from the nearby Palar River through infiltration wells, reservoirs and a mains network pumping system.

In addition SIPCOT built an amenities block to house their own site office, a branch of the Indian Overseas Bank, a first aid centre, a canteen, a shop and a Post Office. Telephone facilities were provided and arrangements were initiated to provide Telex connection facilities at a later date. In addition a few small blocks of flats were built for firms to rent for their key workers and some land was set aside for house construction.

The site was in fact bordered by the main Madras - Bangalore railway line for a short stretch along its north-western edge, but the nearest railway station was at Katpadi Junction about 17 kilometres further west. Ranipet town has a railway siding and station of its own which had originally been built, probably over 50 years previously, for the EID Parry fertilisers and ceramics factory. However, although SIPCOT's plan for the Ranipet Complex included an extension of this siding right into the Complex, this has not yet been built and seems unlikely to be. As services to Ranipet station are extremely restricted the nearest useful railway station to the Complex is Katpadi Junction which is

fairly well served by both express and local trains.

The advantages of the Ranipet site lie chiefly in its location. The presence of the National Highway, which places it 130 kms west of Madras and 200 kms east of Bangalore, is particularly important. The railway, if it were made better use of, is also potentially advantageous. But in addition the site is near the junction of the Ponnai and the Palar Rivers which guarantee it a year round water supply and make it a particularly suitable location for industries like chemical firms which are dependent on adequate water availability. Finally there is already a certain limited amount of industry in the area (Eg: EID Parrys and the North Arcot leather industry) implying the existence of a certain level of skilled industrial labour.

2.2 Hosur Industrial Complex

The second industrial growth pole to be designated by SIPCOT was located near the small town of Hosur in Dharmapuri District. The site is to the north-west of the town, sandwiched between it and the State boundary, on the main National Highway from western and Central Tamil Nadu to Bangalore. In effect the site is within 40 kilometres of Bangalore: as near as one can get to the city without leaving Tamil Nadu.

The development of the Hosur Complex was initiated in 1974. It is somewhat larger than the Ranipet site, consisting as it does of about 1200 acres with 131 industrial plots. The facilities provided are comparable to those at Ranipet though a somewhat higher allocation of land for housing has been made. One major difference between the two sites is the availability of water and Hosur is much more poorly situated in this respect. The site is some 7 kilometres from the upper reaches of the Ponnaiyar River, the nearest perennial watercourse. While there is a proposal to dam this river and pump water from the reservoir to Hosur, the immediate water needs of the Complex are being catered for with wells and overhead tanks. Due to this restriction SIPCOT has had to discourage chemical firms from locating on the site;

instead it directs them to Ranipet.

While the higher altitude of the area around Hosur and its dry climate do present problems for water supplies to the site, they are also an advantage for certain industrial processes which require a drier, more dust-free atmosphere than is available in Ranipet. The altitude of around 950 metres above sea level also means a cooler climate, similar to that of Bangalore, an added attraction to many industrialists.

From the point of view of communications, the 40 kilometres to Bangalore along the National Highway is the main attraction of the site chosen. In the other direction the National Highway goes to Krishnagiri some 50 kilometres away. From there it is 260 kilometres to Madras, 270 to Coimbatore and about 300 to Madurai. Thus although Hosur is tucked away in a north-western corner of Tamil Nadu it does have reasonably good access to most of the State's major cities as well as being very close to Bangalore. There is also a small and infrequently served railway line running through Hosur from Salem to Bangalore. Although the station is in the town of Hosur, some three kilometres from the Industrial Complex, services are very infrequent and it is a metre gauge line which goes no further than Bangalore and is thus of little use for the shipment of goods to and from the Complex. Finally, on the telecommunication side, a new automatic telephone exchange is being built in Hosur which will provide STD telephone services to the whole of India and to a limited extent abroad as well.

2.3 Maraimalainagar New Town

The third industrial growth centre which SIPCOT promotes is the New Town of Maraimalainagar. In this, however, SIPCOT is not the sole promoter, as M.M.Nagar was planned and is being developed by the Madras Metropolitan Development Agency (MMDA) and SIPCOT only acts as the joint promoter for industrial growth in the town. M.M.Nagar is also different from SIPCOT's other two growth poles at Ranipet and Hosur in that it is not located in a designated backward area. This means that firms choosing the town are not eligible for the 15% Central Subsidy.

The Government of Tamil Nadu, however, did extend the provisions of its backward district designation to cover M.M.Nagar, even though the district of Chingleput in which it is sited is not designated as backward (cf. Figure 2 Chapter 5). In effect then, even though Maraimalainagar is not in a backward area, all the various incentives for backward area industrial development are available with the exception of the Central Subsidy.

The location of Maraimalainagar is 43 kilometres down the National Highway from Madras to southern Tamil Nadu. Twelve kilometres further south is the small district headquarters town of Chingleput. The site is also next to the main metre gauge railway line from Madras to Madurai which runs parallel to the National Highway at this point. At present there is a small railway halt not too far from the site, but only slow local trains stop at this halt. A water supply system has been installed with a large capacity overhead tank and a pumped supply from the Palar River some 12 kilometres away.

The development of Maraimalanagar was first proposed in the Madras Metropolitan Plan 1971 - 1991 (Rural Development & Local Administration Dept, GoTN, 1971) where it was suggested that the urban growth of Madras should be concentrated along the three main radial transport routes out of the city. A number of existing small settlements along these corridors would be expanded as 'Urban Nodes' and at a greater distance from the city (35-40 kms) three 'Satellite Towns' would be built, one on each corridor. It was hoped that these Satellite Towns would act as countermagnets to Madras and help to reduce its growth by attracting migrant population to them instead of to the city. The commitment to this Satellite Town policy was carried through into the next Madras planning policy document, the 'Madras Urban Development Project' which was published by the MMDA in 1974 and which listed the preparation of New Town Development Plans for the Satellite Towns as one of the five main tasks requiring immediate implementation. This task was subsequently embarked upon with the preparation of the Maraimalainagar New Town Master Plan as the first of the three. The actual implementation of the M.M.Nagar project has been extremely slow,

to the extent that by 1980, five years after the plans for the New Town had been prepared, only a few of the basic services had been installed, some land had been acquired, a few of the minor roads laid and only a very little housing construction work had been started.

In terms of industrial development, by 1980 the MMDA had compiled a list of some 40 industrialists interested in locating in the New Town. These were allocated plots of land and some had already made the initial downpayment for the purchase of their plot. However, few firms had begun their construction work and the first firm to go into operation only started trial production in January 1980. Compared to SIPCOT's two industrial growth poles at Ranipet and Hosur, Maraimalainagar showed much less encouraging signs of development.

3. SIPCOT's Allocation of Subsidies and Incentives

The overall extent of SIPCOT's financial assistance to firms during the first seven years of its existence and the proportions in which this was allocated under the three main schemes is shown in Figure 1. Aggregate figures for the amounts sanctioned and disbursed by financial year up to 1979 are given in Tables 1 to 4. More detailed data have been drawn directly from the SIPCOT registers relating to the sanctioning of the Central Subsidy, the Sales Tax Loan and the Term Loans. In these, data are available on a firm-wise basis and have been aggregated by location and are presented here in Tables 5 to 7.

From all these tables and the histogram it is immediately apparent that the amount of industrial assistance allocated by SIPCOT, although it has certainly increased over the years, has not done so steadily nor quite as dramatically as the levels of assistance disbursed by the All-India financial institutions such as the IDBI. Thus there was a very low level of assistance sanctioned and disbursed in 1975-76, fairly steady levels of about twice as much in the years on either side and a big increase in 1977-78 to new higher levels which were again duplicated in 1978-79. The reason for this dramatic fall in the level of assistance in 1975-76 is unclear, but it may be related to

disruptions in the dispersal procedures in the months leading up to and following the declaration of the State of Emergency in June 1975. Equally the subsequent major rise in 1977-78 is possibly a result of the Janata Government's level of commitment to the industrial dispersal programme and the institution of the ban on industrial development in large cities in December 1977. However, as these variations are not apparent in the national IDBI incentives or the overall Central Subsidy allocation figures, one would have to argue that events of national importance had more dramatic repercussions in Tamil Nadu than in the nation as a whole. This could possibly be the case, as Tamil Nadu experienced direct Central Government Presidential Rule during the Emergency making the disruption to the State administration even greater than in most States.

TABLE 1: SIPCOT: Details of Sanctions and Disbursements of Term Loans

Year	Sanctions	Cancellations	Net effective sanctions	Disbursements
Thousands of Rupees				
1972-73	10,850	-	10,850	2,611
1973-74	19,789	755	19,034	3,390
1974-75	19,128	799	18,329	11,761
1975-76	2,708	725	1,983	16,287
1976-77	14,075	4,725	9,350	8,215
1977-78	34,055	6,948	27,107	12,382
1978-79	<u>23,396</u>	<u>1,000</u>	<u>22,396</u>	<u>14,185</u>
	<u>124,001</u>	<u>14,952</u>	<u>109,049</u>	<u>68,831</u>

Source for Tables 1-4: SIPCOT Annual Report 1978-79

TABLE 2: SIPCOT: Details of Underwriting Sanctions, Public Issues Made and Shares Taken Up

Year	Sanctions	Cancellations	Public issues made/request for direct subscription	Shares taken up
Thousands of Rupees				
1972-73	2,320			
1973-74	2,430		3,320	
1974-75	500		250	55
1975-76	1,650		300	129
1976-77	1,100	1,850	200	200
1977-78	1,600	1,330	150	113
1978-79	<u>500</u>	<u> </u>	<u>500</u>	<u>37</u>
	<u>10,100</u>	<u>3,180</u>	<u>4,720</u>	<u>534</u>

TABLE 3: SIPCOT: Details of Sanctions and Disbursements of Sales Tax Loans

Year	Sanctions	Reductions/Cancellations	Disbursements
Thousands of Rupees			
1972-73	7,919	-	1,219
1973-74	5,772	-	3,156
1974-75	7,363	-	9,148
1975-76	282	-	5,760
1976-77	7,944	59	7,858
1977-78	11,330	182	9,123
1978-79	<u>15,329</u>	<u>10</u>	<u>15,304</u>
	<u>55,939</u>	<u>251</u>	<u>51,568</u>

TABLE 4: SIPCOT: Details of Sanctions and Disbursements of Seed Capital Assistance

Year	Sanctions	Disbursements
	Thousands of Rupees	
1977-78	400	-
1978-79	<u>915</u>	<u>400</u>
	<u>1,315</u>	<u>400</u>

Looking at the extent of SIPCOT's assistance to industry in more detail, Table 5 gives data for the distribution of Central Subsidies sanctioned from 1972-73 to 1979-80. The first thing to note from this table is that two districts of the five which include eligible areas, are each receiving over one third of the grants made: North Arcot and Ramanathapuram. When one remembers that only about a third of the area of North Arcot is eligible for the Subsidy this seems to be a quite remarkable concentration. However, this should be offset against the fact that this area includes the first SIPCOT growth pole at Ranipet. When one deducts the Subsidies going to the firms starting operations in the Ranipet Complex, the North Arcot totals are nearly halved. The remaining subsidies in North Arcot are going mostly to tanning and leather industry firms in a belt from Walajaphet to Vaniyambadi.

In Ramanathapuram District, industrial growth appears to be doing well especially as there is no SIPCOT growth pole in this area. While the Central Subsidy is available to firms throughout the district a close examination of the register shows that a large part of the Subsidies are going to the western taluks of Sattur, Srivilliputtur and Aruppukottai and many of them to printing firms in the Sattur area.

FIGURE 1: EXTENT & MODE OF FINANCIAL ASSISTANCE 1972-1979



Source: SIPCOT Annual Report 1978-79, p.2

TABLE 5: Sanctioning of Central Subsidy

	No of Firms Receiving Subsidy												Total No of Firms	No of Jobs Created	Rs '000s Sanctd	No of Firms	% of Jobs	% of Rs '000 Sanctd				
	1972-73		1973-74		1974-75		1975-76		1976-77		1977-78								1978-79		1979-80	
	No	%	No	%	No	%	No	%	No	%	No	%							No	%	No	%
North Arcot	LSI Expansion	2	1	4	3	6	1	2	19	7.2	1,842	5.9	13,123	8.5								
	New	3	3	2	3	5	3	19	7.2	4,827	15.4	21,825	14.2									
	MSI Expansion	1	9	2	5	6	7	4	25	9.5	2,006	6.4	8,718	5.7								
Dharmapuri	LSI Expansion	3	6	4	9	5	6	2	35	13.3	2,478	7.9	14,273	9.3	36.9	35.1						
	New								4	1.5	1,349	4.3	3,756	2.4								
	MSI Expansion			1	3	2	2	6	14	5.3	3,204	10.2	17,657	11.5								
Madurai	LSI Expansion	1	1	1	4	3	2	5	14	5.3	1,143	3.6	7,049	4.6	12.5	18.5						
	New								7	2.7	1,406	4.5	7,700	5.0								
	MSI Expansion	2	1	1	2	1	1	1	5	1.9	831	2.7	5,127	3.3								
Ramanathapuram	LSI Expansion	1	1	1	4	1	2	3	19	7.2	2,590	8.3	15,091	9.8								
	New	1	2	2	5	3	3	2	9	3.4	2,111	6.7	10,356	6.7								
	MSI Expansion	5	3	1	3	10	15	15	52	19.8	4,269	13.6	13,483	8.8								
Puduchotai	LSI Expansion	2	1	2	1	4	2	3	21	8.0	1,418	4.5	6,483	4.2	38.4	33.1						
	New								3	1.1	513	1.6	2,217	1.4								
	MSI Expansion	1							2	0.8	154	0.5	2,000	1.3								
Totals	LSI Expansion	5	4	9	11	11	4	8	52	19.8	7,700	24.6	41,887	27.2								
	New	4	6	3	11	8	5	10	49	18.6	11,127	35.5	56,965	37.0								
	MSI Expansion	8	3	3	8	17	23	22	84	31.9	6,905	22.0	23,562	15.3								
Overall Total of which	LSI Expansion	2	5	9	5	18	12	16	78	29.6	5,594	17.8	31,320	20.4								
	New	4	22	20	48	48	43	56	263	100.0	31,326	100.0	153,794	100.0								
	MSI Expansion	3	3	3	1	4			2	0.8	385	1.2	2,448	1.6								
Hosur	LSI Expansion	3	6	3	7	2	2	1	24	9.1	1,738	5.5	10,294	6.7	14.5	12.6						
	New								9	3.4	3,030	9.7	11,407	7.4								
	MSI Expansion								11	4.2	1,855	5.9	12,458	8.1								
Hosur Area	LSI Expansion								6	2.3	355	1.1	2,987	1.9	5.9	10.9						
	New			1	1	1		1	3	1.1	1,297	4.1	2,369	1.5								
	MSI Expansion								2	0.8	319	1.0	4,750	3.1								
Subtotals	LSI Expansion	3	3	1	3	1	3	1	3	1.1	207	0.7	1,229	0.8	3.7	5.8						
	New								5	1.9	1,682	5.4	4,817	3.1								
	MSI Expansion	3	3	1	4	6	2	5	24	9.1	5,204	16.7	28,615	18.6								
Overall Total	LSI Expansion	3	6	3	11	4	3	3	33	12.5	2,300	7.3	14,510	9.4								
	New								2	0.8	41	0.1	140	0.1								
	MSI Expansion								3	1.1	2,300	7.3	14,510	9.4								

SOURCE: SIFROT Register D.6.80

After Ramanathapuram with 101 Subsidies, North Arcot with 98, Dharmapuri comes third with 33, leaving 22 and 9 to Madurai and Pudukottai respectively. The Dharmapuri recipients are nearly all in or near the SIPCOT growth pole at Hosur, which is also apparent from the way sanctions to the district only really started in 1976-77 at the time the Hosur Complex was designated. Madurai has a fairly steady trickle of a few sanctions each year since 1973-74, while sanctions to firms in Pudukottai only really start as late as 1979-80.

Overall there is a fairly regular pattern of slightly more Subsidies going to expansions of existing firms than to entirely new projects. This is replicated in all the districts apart from the two in which the SIPCOT growth poles are located (North Arcot and Dharmapuri), where there are more new firms than expansions. Indeed, if the firms in Ranipet and Hosur are removed from the data for their respective districts, the two districts conform much more closely to the general pattern. As to the distribution between large and medium scale industry, there are generally a few more large firms than medium firms in each district with the two exceptions once again of North Arcot and especially Ramanathapuram. Ramanathapuram's high score is largely built on the 52 Subsidies going to the expansion of existing medium scale units. This latter point has the effect of making the actual amount of subsidy sanctioned to Ramanathapuram firms slightly below one third of the total sanctioned, even though the number of firms receiving it is well above one third of the total number of recipient firms. Apart from this point the actual rupee amount of subsidy sanctioned to firms in each district relates fairly closely to the number of firms, though firms in Madurai and Dharmapuri get a slightly higher average level of Subsidy per firm because of the somewhat higher proportion of large to medium scale firms locating in these two districts.

As for the level of jobs being created in the recipient firms in each district, this matches very closely the levels of Subsidy being received, except again in Ramanathapuram where the large number of existing medium scale recipient firms means that the district's firms are creating 33.1% of the jobs while only getting 29.5% of the cash

being sanctioned. This is probably exaggerated by the fact that for expansion of existing units the register does not specify whether the firms are declaring the number of existing jobs or the number of new jobs being created and some no doubt do the former. Because of this the data for jobs created should be treated with some caution. As a very rough estimate of the number of jobs being created in new firms as a result of the Central Subsidy, it would seem that for every Rs. 1,000 in Subsidy, large scale firms create on average 5.1 jobs, while medium scale firms create 5.6 jobs.

Turning next to the sanctioning of assistance under the Sales Tax Loan scheme, Table 6 gives the full details again aggregated by eligible district. Compared to the 263 Central Subsidies sanctioned by SIPCOT between 1972 and 1980, the total number of 81 Sales Tax Loans sanctioned is very small. Some part of this difference may lie in the fact that the Sales Tax is only disbursed after a firm has gone into production but this can hardly account for such a large difference. It would therefore seem that, assuming that knowledge of the Sales Tax Loan scheme is widespread amongst industrialists and there is no reason to suspect that it is less well known than the Central Subsidy scheme, SIPCOT may be impeding or dragging their feet over the scheme.

Table 6 does confirm, however, the pattern noted in Table 5 of the two districts of North Arcot and Ramanathapuram receiving the largest number of sanctions. In this case they do not have quite such a remarkable lead over the other districts and they are followed fairly closely by Dharmapuri with 15 sanctions compared to Ramanathapuram's 18 and North Arcot's 27. Madurai, Tiruchirapalli and South Arcot all get half a dozen to 8 while Thanjavur and Pudukottai only get a couple each. Of the 27 sanctioned for North Arcot, nearly half (12) went to the Ranipet growth pole firms while in Dharmapuri 11 out of the 15 went to firms operating in the area around Hosur but not in the SIPCOT growth pole itself. Again there is a general tendency for more Loans to go to existing firms undertaking an expansion, rather than to new firms. This is however, reversed in the case of Ranipet though not, interestingly enough, in the case of firms establishing themselves in

TABLE 6: Sanctioning of Sales Tax Loan

	1972	1973	1974	1975	1976	1977	1978	1979	1980	Total	% of Total
	No of Firms	No of Firms	No of Firms	No of Firms	No of Firms	No of Firms	No of Firms	No of Firms	No of Firms	Rs '000s Sanctioned	No of Firms
North Arcot											
Expansion											
New		2	3	1	1	3	1	1	2	10,286	14
					1	8	1	3		(38,138)	13
Expansion											
New				1	1	1		4	1	8,593	8
						2		2		(20,012)	7
Expansion											
New			2			2		2		8,804	6
Tiruchirapalli											
Expansion											
New			1			2	1	1		5,027	5
Expansion											
New						1				1,115	1
Expansion											
New						1		1		(1,872)	2
Expansion											
New			1			1				3,000	3
Expansion											
New						4	1			10,410	5
Expansion											
New							1			1,102	1
Ramanathapuram											
Expansion											
New	1	2	1	1	1	2	2	2	1	11,654	13
Expansion											
New						1	3			7,452	5
Kurjakuman											
Expansion											
New											
Totals											
Expansion	1	4	8	3	3	11	6	10	4	48,466	50
New				1	2	16	8	6		(78,999)	31
Overall Total											
of which to:											
Ranipet											
Expansion											
New			2							2,561	2
Expansion											
New					1	6	1	2		(30,320)	10
Hosur											
Expansion											
New										16,204	1
Hosur Area											
Expansion											
New				1	1	1	1	3	1	7,093	7
Expansion											
New						2	1	1		3,796	4
Total											
Expansion											
New		1	2	1	1	1		3	1	9,654	9
						8	3	3		(50,320)	15

N.B. Rupee amounts in brackets occur in places where the amount sanctioned to one firm in the row was not given. In the Totals the rupee amount in brackets therefore corresponds to 28 and not 31 firms.

SOURCE: SIFCOT Register 30.6.80.

the Hosur area. This latter point, which would seem to be in conflict with the undoubted newness of the plants in question, is explained by the fact that these firms are by and large subsidiaries of already existing firms from urban centres such as Madras and are therefore classified as expansions under the Sales Tax Loan scheme. It should be noted that new projects are getting over twice as much in cash terms per unit under the scheme as expansions of existing firms do. The major increase in sanctions in 1977 is readily apparent in Table 6.

The third SIPCOT incentive on which detailed records are available is the Term Loans scheme. Data drawn from these are summarised in Table 7. In total 86 term loans were sanctioned in the years from 1972 to 1979 and once again a large proportion of these went to firms in North Arcot (37) and Ramanathapuram (14) and of the former group 24 were to firms in the Ranipet Complex. Madurai and Dharmapuri were the other two backward districts to receive several loans (8 & 7 respectively) while the others received no more than a couple each and South Arcot and Kanyakumari none. The Term Loan scheme is also open to firms in the more advanced districts, though on less favourable terms (cf. above). Table 7 also shows these districts, demonstrating how all of them, including Madras City, have received one or two each. Chingleput alone stands out with 7 Term Loans granted, emphasising the concentration of industry around but outside Madras.

To conclude this section on the allocation of SIPCOT's incentives, it should first be emphasised that overall the incentives have only reached some 260 firms. In a programme covering seven years and in a State with some 8,000 factories listed by the Inspector of Factories this is a fairly insignificant number. Unless SIPCOT is able to increase the extent of its programme dramatically it will be many years before it manages to substantially alter the spatial distribution of industry in Tamil Nadu. Moreover, the extent to which it is doing this even among the firms it has been assisting is open to question as more detailed analysis of the data on these firms shows.

TABLE 7. Sanctioning of Term Loans by SIPOOT

	1972		1973		1974		1975		1976		1977		1978		1979		TOTAL			
	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	No of Rs'000s Firms Sanctd	No of Rs'000s Sanctd	% of Total Amount Sanctd		
BACKWARD DISTRICTS:																				
North Arcot	1	1500	6	8160	9	8360	5	2550	4	5300	7	13650	3	4325	1	1400	37	43.0	45245	35.8
Dharmapuri																				
South Arcot	1	2500			1	1500														
Tiruchirappalli			2	2250																
Thanjavur					3	4250														
Madurai	1	1800																		
Pudukottai	2	1000	3	2300	4	4699	1	825												
Ramanathapuram																				
Kanjakumari																				
Total	5	6800	11	12710	17	18809	6	3375	4	5300	10	21050	12	22775	5	10200	70	81.4	101019	79.9
ADVANCED DISTRICTS:																				
Madras	1	64.5	2	2150	1	400	2	1500			1	500			1	1300	3	3.4	2445	1.9
Chingleput					1	400					3	5200					7	8.1	8850	7.0
Salem																	1	1.2	400	0.3
Coimbatore																	2	2.3	3400	2.7
Nilgiris																	1	1.2	1000	0.8
Tirunelveli																	2	2.3	7300	5.8
Total	1	64.5	2	2150	1	400	2	1500	7	12600	3	8100	12	22775	8	18300	16	18.6	25395	20.1
GRAND TOTAL	6	7445	13	14860	18	19209	8	4875	4	5300	17	33650	12	22775	8	18300	86	100	126414	100.0
of which																				
Ranipet	1	1500	6	8160	6	4010	4	2325			5	10200	2	1125			24	27.9	27320	21.6
Hosur											1	1900					1	1.2	1900	1.5
Hsaur area											1	2500					1	1.2	2500	2.0
Total	1	1500	6	8160	6	4010	4	2325	7	14600	7	14600	2	1125			26	30.2	31720	25.1

Thus over half, and with some schemes two thirds, of the recipient firms are located in just two districts: North Arcot and Ramanathapuram. Indeed closer analysis shows that they are located in fairly specific parts of these two districts: the Walajahpet - Vaniyambadi belt in North Arcot and the western taluks of Ramanathapuram. Admittedly many of the firms in the North Arcot case are firms locating in the SIPCOT growth pole at Ranipet, but otherwise, as is also true in Ramanathapuram, SIPCOT appears to be funding already existing industry in these areas or new units in established industrial sectors in these areas. If one remembers (cf. Chapter 5 p.161) that these two areas are the most industrialised parts of the designated backward areas in the State, it is apparent that the actual dispersal effect of the incentives is minimal. It is also arguable on this basis that the choice of the Ranipet location for the first SIPCOT growth pole is not contributing significantly to the actual dispersal of industry.

Apart from these two areas incentives have gone to firms dotted around the designated backward areas, but their number is strictly limited and the only other concentration of some significance is in the Hosur area of Dharmapuri District where the second growth pole is located. The Hosur firms do represent a real dispersal of industry in Tamil Nadu terms (though whether they do in inter-State terms given the proximity of Bangalore is more doubtful). There was no industry in the Hosur area before the dispersal programme started, indeed there was virtually no industry in the whole of the district, so to the extent that SIPCOT is assisting industrial growth in this area it is really fulfilling the 'encouragement of industrial dispersal' clause of its remit.

Thus overall it would seem that SIPCOT has only managed to encourage a minimal amount of industrial dispersal during the first seven years of its existence. Instead much of its assistance has been going to helping existing industry in backward areas, which though not a bad thing in itself, is not a particularly encouraging trend for the industrialisation of really underindustrialised backward areas. Moreover, the absolute number of firms the agency has been able to

assist is disappointing. If this is the sum total of large and medium scale industrial growth in the backward areas of Tamil Nadu during the 1970s and there is little reason to suspect that other firms are coming up which haven't made use of SIPCOT's services, real industrial dispersal in the State is a long way from been achieved.

4. SIPCOT Relative to other State Industrial Promotion Agencies

To put SIPCOT's achievements more sharply into focus it is perhaps simplest to compare its programme with that of other similar agencies in other Indian States. Of particular interest in this context are the agencies in the other more industrialised States: the State Industrial and Investment Corporation of Maharashtra Ltd (SICOM), the Gujarat Industrial Development Corporation (GIDC), the West Bengal Industrial Development Corporation Ltd. (WBIDC), and finally, the promotion agency in one of Tamil Nadu's somewhat less industrialised neighbours the Karnataka Industrial Areas Development Board (KIADB). It is also important to have some understanding of the nature and scale of operations of these particular agencies because, to the extent that firms are persuaded to cross State boundaries in search of a new location, they represent in effect SIPCOT's main competitors in industrial promotion in India. While inter-State industrial movement is not that common a phenomenon, it does exist and certainly for Madras based firms, locating in Karnataka State near Bangalore is a real temptation (IIC 1979a,b & c).

4.1 SICOM: the State Industrial & Investment Corporation of Maharashtra

SICOM was founded in 1966 with the dual remit of industrial promotion and of acting as the industrial investment bank for Maharashtra State. Unlike SIPCOT, SICOM does not handle infrastructural work but leaves this to the MIDC (Maharashtra Industrial Development Corporation), with which it works in close cooperation. From 1966 to mid-1979 SICOM assisted 2,045 industrial units to go into production, and at the end of the period had a further 900 units on its books which were in various stages of going into production (proposals and under

construction). Over the last five years of this period SICOM was adding on average 200 units per year to its books (Figure 2). The cumulative amount of financial assistance disbursed to firms in developing areas stood at Rs. 836 million on the 30th June 1979, while financial assistance sanctioned was as high as Rs. 1,477 million (Figure 3) (SICOM, Annual Report 1979).

Thus SICOM started its industrial promotion work some time before the national industrial dispersal and backward area policy was properly formulated. The effect of this is perhaps most evident in the choice of sites chosen for growth poles. These are all based on existing towns and over the years have been chosen progressively further away from Bombay. Some of the earlier ones are therefore not even inside designated backward districts or in the three districts eligible for the Central Subsidy (Ratnagiri, Aurangabad & Chandrapur; cf. Figure 4). The first growth pole to be chosen by SICOM was Nasik in 1967, then each year in succession after that: Roha, Nagpur and Aurangabad. Tarapur and Ahmednagar followed a few years later (1973 & 75) and at the end of the seventies Chandrapur and Jalgaon were taken up. While SICOM deals with the promotion of these centres and arranges the incentives and finance for the firms it persuades to go to them, MIDC handles the infrastructural side of their development. In addition MIDC provides infrastructure in a number of smaller industrial estates throughout Maharashtra (Figure 4). Depending which district these are located in firms choosing them are eligible for various incentives.

Bombay is one of the large cities in India with the worst congestion problem, because of its restricted geographic location on a small peninsula. The problem is not a new one and already in the early sixties Bombay industry had started to disperse to locations on the fringe of the city to the north where the peninsula connects with the mainland at Thane. The next step was to move up the steep mountain slope of the Western Ghats to the Deccan city of Pune. These trends had already started by the time SICOM and MIDC were established in the mid-sixties. With this in mind and considering the pattern in which the SICOM growth poles have been chosen, that is: progressively further and

FIGURE 3: SICOM: INVESTMENT CATALYSIED IN DEVELOPING AREAS

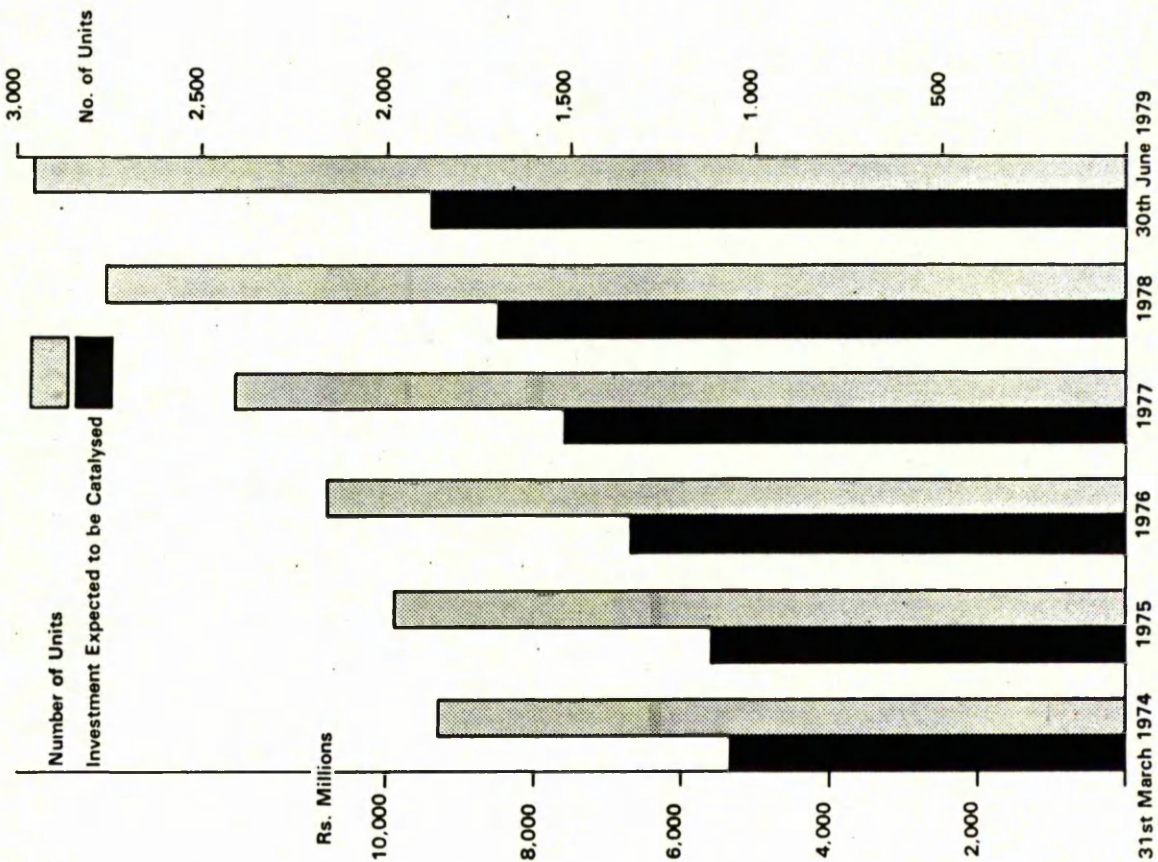
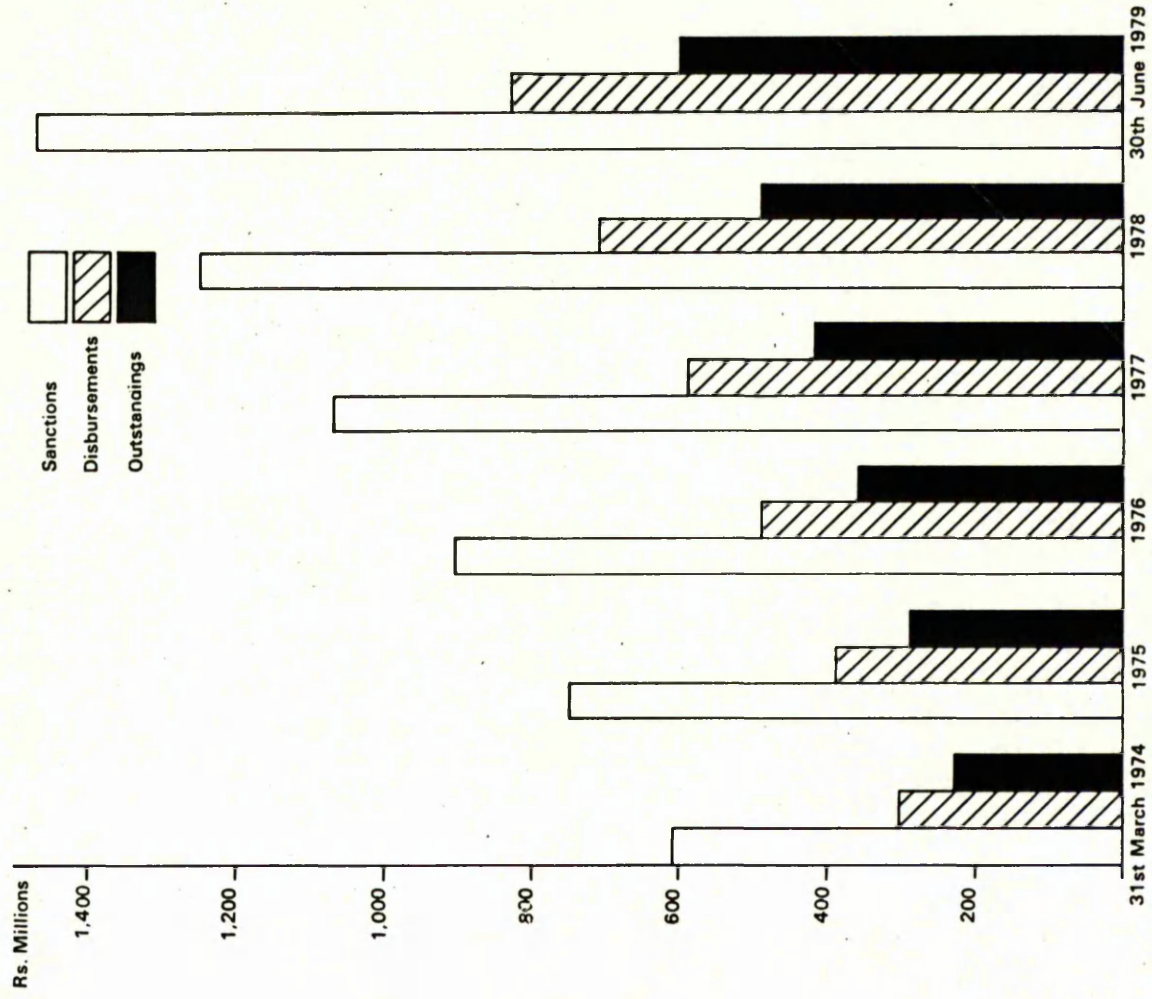
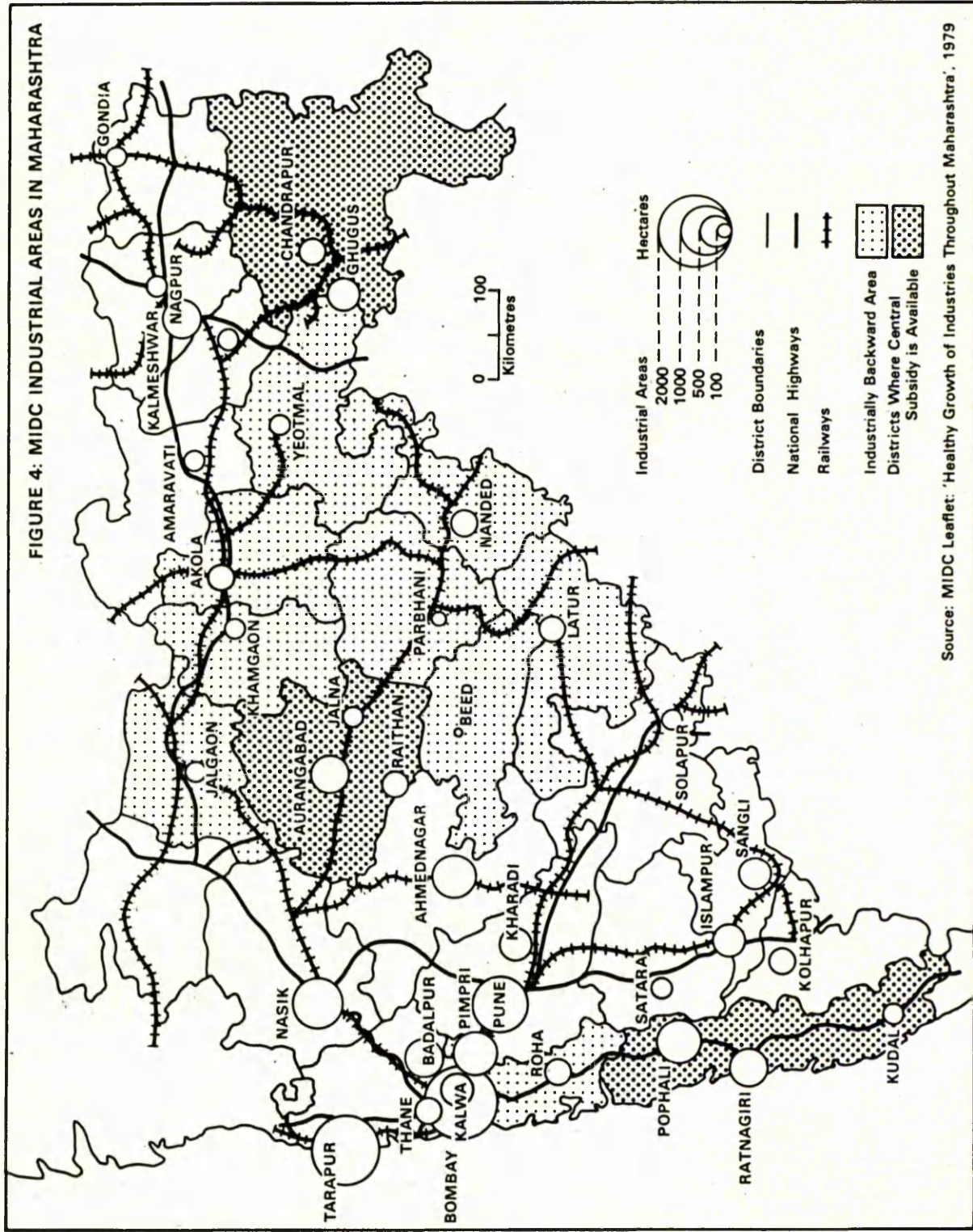


FIGURE 2: SICOM: FINANCIAL ASSISTANCE IN DEVELOPING AREAS



Source: SICOM Annual Report 1978-79

FIGURE 4: MIDC INDUSTRIAL AREAS IN MAHARASHTRA



Source: MIDC Leaflet: 'Healthy Growth of Industries Throughout Maharashtra', 1979

further away from Bombay, always near major towns, and only lately in really backward areas, it would seem that SICOM has done little more than encourage an already established dispersal trend in concentric rings progressively further from Bombay. Some of SICOM's strongest critics go as far as to suggest that this is the main reason for the agency's phenomenal success along with the real dynamism of Bombay's industrial economy (based on personal interviews).

Amongst Indian industrialists SICOM has the reputation of being one of the most dynamic and efficient industrial promotion agencies in the country. Certainly it prides itself on providing a complete and personalised service, helping industrialists at every stage of the lengthy process of setting up a new factory. SICOM's head office in Bombay also houses a department known as Udyog Mitra or 'Industry's Friend' which consists of one representative from each of the State's industrial promotion agencies, including SICOM and MIDC. Udyog Mitra staff make a point of handling all business in person or over the telephone and they will fly to sites all over the State to visit locations with industrialists, or go themselves to Delhi to sort out licences and other administrative details with the Central Government Ministries. All their travel costs are met by the Maharashtra State Government. This type of personalised and business-like service would seem to pay off with industrialists who apparently value it highly (based on personal interviews).

With the success of the SICOM programme a number of their older industrial estates are now full. Even before these estates were absolutely full MIDC started to raise the price of plots of land within them. Thus in 1979 the cost of land in the estates ranged from a maximum of about Rs. 250/- per m² near Bombay to Rs. 2.50 in remote backward area estates. Likewise, SICOM discontinued their promotion of the more popular estates, instead pushing the newer more remote ones. At a certain point promotion work is completely discontinued for particular estates and incentives are no longer available at them though industrialists may still locate in or near these towns on their own terms. By the end of 1979 SICOM had stopped promoting Nasik and

Aurangabad and were instead concentrating their efforts on their two new growth poles at Chandrapur and Jalgaon. The ban on industrial development imposed in 1979 applies to the metropolitan areas of both Bombay and Pune and has been applied strictly through the granting of a 'No Objections Certificates' by SICOM to all industrial units which register with the State Industries Department. As well as encouraging industries to go to growth poles they are currently promoting most heavily, SICOM tries to direct particular types of industry to particular estates. Thus Nasik specialised in electronics, Roha in chemicals, Nagpur and Tarapur in engineering and Ahmednagar in pharmaceuticals, although each one has a variety of different types of industry as well.

4.2 GIDC: the Gujarat Industrial Development Corporation

The GIDC is also one of the oldest State industrial promotion agencies in India. Set up in 1962 it unites in one agency both the functions of industrial promotion and of the provision of industrial infrastructure, it does not however handle the sanctioning and disbursement of incentives. It is thus organised differently from both SIPCOT in Tamil Nadu which handles all three functions together and SICOM in Maharashtra which handles both promotion and incentives but not infrastructure. In Gujarat financial incentives are dealt with by the Gujarat Industrial Investment Corporation Ltd (Menon, 1979, p.210).

GIDC's main work therefore consists of setting up industrial centres at different locations in the State. For each of these it carries out feasibility studies, purchases the land, provides the infrastructure (roads, power, water and in some estates street lighting and drainage), constructs a limited number of houses for key workers (on some estates only) and constructs a variety of different types and sizes of sheds for smaller industrial units. At first these estates were chosen around the main cities of Ahmedabad, Baroda, Surat and to some extent Rajkot. The choice of locations was largely dictated by the availability of raw materials. Saurashtra, the western part of the State, was more neglected because of water supply problems and because of its general

remoteness from the main areas of industrial activity. It was only at a later stage that the GIDC started dispersing its industrial estates more. It is fair to say that industrial dispersal and the industrialisation of backward areas has never been one of GIDC's main aims; instead it has concentrated on encouraging as much absolute industrial growth as possible. During the 1970s the agency has of course been influenced by the national industrial dispersal policy and it has certainly started industrial estates in designated backward districts eligible for the Central Subsidy (Panchamals, Baroach and Surendranagar) but it has not put any particularly concentrated effort into promoting these estates at the expense of others (GIDC Annual Report 1978 & GIDC, All About GIDC, 1980).

The main emphasis of the GIDC's industrial promotion efforts has been based on altogether different premises. Foremost amongst these is the attitude that GIDC is essentially in competition with Maharashtra State. Industrial promotion has been primarily directed at getting Gujarati industrialists to leave Bombay, as they are being pushed to do anyway, and to locate their factories in Gujarat rather than elsewhere in Maharashtra. This is a result of the fact that Gujarat and Maharashtra used to be one State and before that were the main constituent elements of the Bombay Presidency. It was only in 1956 that Gujarat was made into a separate State. Up till then many of the more enterprising Gujaratis, traditionally a very enterprising race, moved to Bombay to go into business. Now it is a question of luring them back and given the congestion in Bombay, the ban on industrial development there and the strong ties most Gujaratis have retained with their family and background in Gujarat, this is not too difficult. The problem is not one of finding new entrepreneurs, but one of encouraging existing entrepreneurial talent in the State and of bringing back home the talent that has left.

There are other advantages to locating in Gujarat as well. The trade unions in the State are known for their belief in negotiation rather than confrontation (e.g. The Gujarat Majoor Mahan, textile union, has only had one or two strikes in its 50 year history) and Gujarati

businessmen working in the State rather than in Maharashtra have better connections in their home State and are therefore more powerful in State level politics².

These considerations are reflected in the locational distribution of GIDC's industrial estates. Of the 82 estates existing in 1975 (Menon, 1979 p.152) only 38 were located in the 10 designated backward districts (19 districts in whole State). The estates with the most successful firms are all located either near Ahmedabad or in South Gujarat, and the most successful estate of all, Vapi, is virtually on the border of the State with Maharashtra. One of the three Central Government declared backward districts for the Central Subsidy is the district of Baroach again in South Gujarat on the road between Bombay and Ahmedabad. The other two, Panchamals and Surendranagar, are slightly more out of the way in the east of the State and just west of Ahmedabad but the really remote parts of the State to the north and west are not eligible for the Central Subsidy. A glance back at Map 1 in Chapter 3 shows the very highly concentrated way the Central Subsidies have been disbursed with firms in Surendranagar receiving over 500 Subsidies, the highest number going to any one district in the whole of the country. Against this, however, should be set the fact that the GIDC estates have by and large catered more for small scale units. Thus by the end of 1978, 3474 small scale units were operating in the estates against only 128 large and medium scale units. Similarly total investment figures were Rs. 9,604 million and Rs. 523 million respectively and employment 51,331 workers and 1,097 workers respectively.

To sum up, industrial promotion efforts in Gujarat have concentrated mostly on encouraging the highest possible absolute growth of industry. This has involved mostly small scale units and a lot of the effort has gone into encouraging Gujarati industrialists to return from Bombay. Location policy has taken second place in the State's priorities and much of the industrial growth has been concentrated around Ahmedabad or around the towns on the main communication routes south to Bombay. Industrial estates have been started in more remote northern and

western districts, but fewer of them, fewer firms have chosen them and the rate of industrial 'sickness' and closures is much higher in these estates than elsewhere. Thus although Gujarat is certainly one of the most industrially dynamic states in India the nature of the industrial development occurring there is restricted and the State agencies have a tendency to sacrifice policy commitments such as locational considerations to their main priority of encouraging the maximum absolute industrial growth possible. (This is also true in terms of the level of services provided in the estates: e.g. little consideration is given to pollution).

4.3 WBIDC: the West Bengal Industrial Development Corporation

The organisation of industrial promotion agencies in West Bengal parallels fairly closely that in Maharashtra. The WBIDC, set up in 1967, handles both promotion work and financial assistance and incentives for medium and large scale firms. The provision of infrastructure is left to the WBIIDC, the West Bengal Industrial Infrastructure Development Corporation, which was established somewhat later in 1973. Here however the similarities end as the WBIDC does not promote dispersed growth centres as SICOM does nor does it provide quite the same range of incentives (WBIDC, Assistance to Entrepreneurs).

The WBIDC has been disbursing financial assistance in the usual forms of shares and loans with a certain amount of refinancing by the IDBI since its establishment; the annual amount disbursed under these schemes, however, remained fairly low until 1974 when there was a dramatic increase in both sanctions and disbursements (Table 8).

The incentive scheme was, however, only started somewhat later in 1971 and it was revised in 1978. Disbursements under the incentive scheme took off seriously a few years after the announcement of the scheme in 1975.

TABLE 8: HIGHLIGHTS OF ACTIVITIES OF WBIDC

Thousands of Rupees

	Assistance Sanctioned		Assistance Disbursed				Fund Received for Disbursement of Incentive	INCENTIVE DISBURSED	NET WORTH	Equity Base
	Money Borrowed	Rupee Loan	Share Participation	Rupee Loan	Share Participation	Share Participation				
1978-79	22,300	*79,530	22,808	54,166	19,104	37,200	34,085	46,913	39,840	
1977-78	22,000	48,035	10,360	32,535	10,020	15,784	17,724	41,493	34,340	
1976-77	22,000	45,850	18,212	45,090	9,025	13,764	16,341	38,928	34,340	
1975-76	22,000	13,446	35,532	5,746	8,267	14,491	15,008	37,061	34,340	
1974-75	22,000	35,869	5,954	36,078	3,944	7,088	1,560	27,188	25,740	
1973-74	22,000		1,204	291	2,583	1,900	2,122	20,311	20,740	
1972-73	22,000	597	1,245	387		2,000	85	15,675	15,640	
1971-72	500	775	40	774	40			9,986	9,640	
1970-71	2	1,305		1,594				9,330	9,140	
1969-70	2,300	498		780	225			9,189	9,138	
1968-69	3,000	2,012	1,189	2,057	1,464			6,785	6,838	
1967-68	3,838	1,463	540	318				3,703	3,838	

*Includes guarantee of Rs.4,500,000.

Source: WBIDC Annual Report 1978-79 p.3

The incentive scheme is of some interest as it is organised differently than in other states. Firstly it applies to the whole State, though in varying forms depending which part of the State. Thus developed areas (Group A), which consists of the Calcutta Metropolitan Development Authority Area excluding the parts in Nadia District, get some of the incentives (though not the 15% capital investment subsidy, the power subsidy, rent subsidy and 15% development loans) while the rest of the State, classified as backward areas (Group B) is eligible for all the incentives. It would appear that the ban on industrial development in large cities is not applied strictly to the whole of the CMDA area. Effectively however, there is very little land left available for industrial development in this area. Secondly the incentive scheme is interesting because it has a number of unique subsidies. First amongst these is a subsidy related to employment under which firms with a fixed capital investment ratio of less than Rs. 70,000 per worker are eligible for three years for a 15% annual wage subsidy for all new workers employed (Rs. 0.1 million in backward areas), provided the recruitment of workers is made through government employment exchanges. The other note-worthy feature is that the WBIDC will provide a 15% capital investment subsidy equivalent to the 15% Central Subsidy in all backward areas (Group B areas) which are not covered by the Central Government scheme. This means that a 15% Subsidy is available in all the districts of the State and not only in the three districts of Nadia, Purulia and Midnapore covered by the Central Government, excluding of course the CMDA area. Finally because of West Bengal's acute power shortage the WBIDC has a special 15% subsidy on the cost of installation of captive diesel driven power generation equipment for firms willing to install their own dynamos.

Although the WBIDC does not have a distinct policy to encourage firms to locate in particular places it does cooperate with the WBIIDC which has a limited growth pole policy. Since its establishment in 1973 the WBIIDC has already started work on three growth poles at Kalyani (Nadia Dt), Haldia and Kharagpur (both Midnapore Dt) and has plans for a further six at Siliguri (Jalpaiguri Dt), Bajbas (24 Parganas Dt), Farakka (Mushidabad Dt), Kolaghat (Midnapore Dt), Durgapur and Asansol

(both Burdhan Dt). However the last two are in some doubt because of the shortage of suitable land near Durgapur and Asansol. All these growth poles are however fairly small with an area of about 300 acres each and they are all located near major towns so are really more in the nature of industrial estates than industrial growth poles. Their size and location does not show any sign of a real attempt to disperse a substantial amount of industry from existing centres, but rather seems to indicate an attempt to encourage what little indigenous industrial growth might be expected to occur in each of the towns chosen.

The scale of the WBIDC's whole programme can be judged from Table 8 but it is worth indicating as well that only 85 firms registered for help under the 1971 Incentive Scheme; 65 of these were in backward areas. Under the new 1978 scheme a further 52 firms registered in the first 18 months of its operation (up to May 1980). In addition 56 firms received financial assistance (share capital & loans) from the inception of the scheme until the end of March 1979. These figures are not high when compared with the extent of industrial promotion programmes in some of the other States examined above.

Thus the scale of the industrial promotion programme for large and medium scale industry is not large in comparison with the work of SICOM in Maharashtra, nor has it included as many firms as the SIPCOT programmes in Tamil Nadu, but it is comparable with the 128 large and medium scale firms assisted by the GIDC in Gujarat. Out of the four agencies the WBIDC seems to be the one making least effort to encourage industrial dispersal and it is the only one not promoting an important growth pole strategy plan. In one way the WBIDC does stand out as being more progressive or at least thoughtful in their approach to industrial promotion and that is in their use of an incentive related to employment creation. With this incentive they are explicitly recognising that the aim of their work is not simply to encourage maximum absolute industrial growth but is also a question of encouraging wider development through raising popular standards of living with increased employment opportunities.

4.4 KSIIDC: the Karnataka State Industrial Investment & Development Corporation

The two industrial promotion agencies in Karnataka have a similar distribution of responsibilities to the agencies in Maharashtra and West Bengal. The KSIIDC is responsible for industrial promotion and finance; it is eligible for refinance from the IDBI and has been in existence since 1964. The KIADB (Karnataka Industrial Areas Development Board) provides infrastructure in selected industrial areas spread around the State and it has existed since 1966 (KIADB, Annual Report 1978 & KSIIDC, A Development Catalyst & Annual Report 1978).

The State has three districts where firms are eligible for the 15% Central Subsidy (Mysore, Raichur and Dharwar). In addition it provides a similar 10% Subsidy in a further eight districts. Firms in all eleven districts thus designated as backward are eligible for financial assistance from the KSIIDC and the All-India financial institutions.

The State's industrial location policy includes first of all the ban on industrial development in large cities which covers Bangalore. No more industrial development is thus allowed in the taluks of North and South Bangalore except in the already laid out industrial areas which are now nearly full. The promotion agencies are therefore encouraging industrial development to locate in the Mysore area (Various industrial areas around the town and out along the Mysore Bangalore Highway), at Hubli-Dharwar, Raichur, Mangalore, (the State's main port), and Belgaum. In addition there are a number of small industrial areas set up by KIADB in other places. The overall allocation of land to firms in the industrial areas of each district is given in Table 9. It is expected that with the completion of the conversion of the Mangalore-Mysore railway line from metre to broad gauge, Mysore will develop even more rapidly as an important industrial centre.

Table 9: Number of firms allocated land in industrial areas in each district up to March 1978.

Source: KIADB Annual Report 1976-78 pp.39-40

In backward districts eligible for 15% Central Subsidy:	Mysore	57	firms
	Raichur	22	"
	Dharwar	11	"
In backward districts eligible for all other incentives:	Belgaum	18	"
	Bidar	-	
	Bijapur	-	
	Gulbarga	1	
	Hasan	-	
	North Kanara	2	"
	South Kanara	70	" (incl. Mangalore)
	Tumkur	-	
Advanced districts (no incentives):	Bangalore	449	"
	Bellary	1	"
	Chickmagalur	-	
	Chitradurga	1	"
	Kolar	1	"
	Mandya	7	"
	Shimoga	-	
Total:		639	firms

Although the KSIIDC and KIADB have an industrial dispersal policy they have made an exception to it in the face of the establishment of the Hosur SIPCOT Complex in Tamil Nadu. They have started a new industrial area at Bommasundra, half way between Bangalore and Hosur, where all the State industrial promotion incentives are available (including the State 10% Subsidy) even though this site is not in a backward area but in Bangalore District. The justification advanced for this exception is that the proximity of the Hosur Complex to Bangalore (40 kms) make it the nearest industrial location to the city where attractive incentives are offered and the Karnataka promotion agencies argue they are losing industry to Tamil Nadu State. With the establishment of Bommasundra they hope to prevent or at least reduce this drift. The demand for sites at Bommasundra is apparently very high even though the industrial area is only just ready.

Unfortunately no data are readily available to show the number of firms which have received the KSIIDC's various incentives and so the success of their industrial promotion programme must be judged on the data in Table 9. From this it appears that the number of firms locating in KIADB industrial areas in backward districts (181 in all) is similar to the levels of success achieved by the agencies in Gujarat and West Bengal with regard to large and medium scale industry. The Karnataka data presented here, however, includes some small scale industry as well as large and medium and unfortunately the precise proportions of each is not known, so these data are not strictly comparable and the KSIIDC's promotion work must be seen as less extensive than the GIDC's and the WBIDC's with regard to large and medium scale industry.

5. Conclusions

Although the SIPCOT industrial promotion programme started later than those in some of the other more industrialised States in India it compares reasonably well with them. This is true with regard to both the overall extent of the programme and to the degree of industrial dispersal achieved, even though on both these counts SIPCOT's

performance does not look so good when examined from a purely internal State point of view.

Thus although the SIPCOT incentive package has only benefited some 260 large and medium scale firms in Tamil Nadu, this is higher than in all other States. Even in Maharashtra where in 13 years SICOM assisted over 2,000 firms many of these are small scale firms. Moreover, as was apparent from Table 6 in Chapter 3, at least with the Central Subsidy, 153 large and medium scale had been assisted in Tamil Nadu up to June 1978 while only 88 had received it in Maharashtra and 81 in Gujarat. Thus as SIPCOT only deals with large and medium scale industry the extent of its promotion work is fairly impressive relative to the promotion agencies in all other States in India.

SIPCOT also compares relatively favourably with the other agencies with regard to its industrial dispersal efforts. Here again at the State level it is true that the incentive programme has had most effect in fairly restricted parts of the designated backward areas. The Walajahpet to Vaniyambadi strip in North Arcot and the three western taluks of Ramanathapuram are the two areas which have seen the most assisted industrial development, but there is also the pocket in Dharmapuri Dt. centred around the Hosur growth pole. As is usually the case with area based development policies it is the most developed parts of the designated underdeveloped areas which benefit most from the designation and the related subsidies. This is what has happened with North Arcot and Ramanathapuram but SIPCOT would seem to be successfully counterbalancing such a trend by concentrating its efforts on another different location: Hosur. With Hosur SIPCOT is effectively creating a dynamic **new** industrial centre in Tamil Nadu. Admittedly with respect to Bangalore, Hosur does not represent so much of a dispersal and it is possible that SIPCOT might have created as successful a growth pole and achieved a greater degree of industrial dispersal had it chosen a site further south than Hosur on the road to Krishnagiri. s/

In Maharashtra, SICOM has indeed also achieved some industrial dispersal but it has done so slowly in a way which has not attempted to

go against what might be called a 'normal' pattern of dispersal in concentric rings outwards from Bombay. Thus the most remote and backward parts of Maharashtra have as yet experienced little industrialisation. Similarly in Gujarat GIDC has done little more than encourage industrial expansion in the areas of the State where it could be most expected to develop. GIDC's most successful growth pole, Vapi, like Hosur is located on the very edge of the State as near as possible to Bombay. The WBIDC in West Bengal has even less of an industrial dispersal policy; while the KSIIDC in Karnataka is following a similar policy to SICOM, encouraging industry on the outskirts of the secondary cities of the State.

All the State industrial promotion agencies in fact have a location policy which to a greater or lesser degree falls in line with what industrialists might be expected to do if they decided to disperse on their own. While such pragmatism is undoubtedly essential if their location strategies are not to be completely ignored, it is also important that the agencies do not entirely compromise their policies in doing so.

Footnotes:

- 1 Although SIPCOT uses the term 'growth centre' for its Industrial Complexes, their design concept conforms closely to the industrial growth poles of the original growth pole theory. Thus the more specific designation of 'growth pole' has been used to refer to them in this thesis.
- 2 In a personal interview, Dr. Atul Sarma of the Sardar Patel Institute, Ahmedabad, suggested that while the industrial lobby in India is strong at the Central Government Level, it is weak at the State level. It is therefore important for the industrialist to make the most of what connections he has at the State level.

CHAPTER 7

INDUSTRIAL GROWTH POLES: RANIPET AND HOSUR

INDUSTRIAL GROWTH POLES: RANIPET AND HOSUR

This chapter is the first of two in the fourth section of the thesis. Together with the next chapter it takes the analysis one step further down to a level of even more detailed examination. The thesis began with a theoretical discussion about industrial location and then embarked on a progressively more detailed analysis of the Indian case. First the policy, its genesis, implementation and the place it occupied in the relationship of the Indian state to industrial capital was discussed at a national level. Then the actual spatial distribution and extent of industrialisation in one State and the measures the State government was taking to implement the dispersal policy were reviewed. Now it is necessary to conduct a more thorough examination of exactly what industrial dispersal is taking place. Thus this chapter describes the nature of the industry moving to the two SIPCOT industrial growth poles of Ranipet and Hosur and the characteristics of the physical, social and economic environment in which they are locating and indicates what type of impact it can be expected to have, while the next one tries to explain the reasons for the dispersal occurring. Most of the material for this discussion is derived from a survey of the firms moving to Ranipet and Hosur conducted in the first half of 1980 (cf. Appendix for survey methodology).

The two industrial growth poles of Ranipet and Hosur have already been introduced in the previous chapter on SIPCOT's industrial dispersal programme. There it was noted that a number of firms had in fact opted to set up factories on the two sites and a number were locating in the area surrounding the Hosur site. It was also indicated that these factories constitute the most significant result of the SIPCOT programme and indeed a very high proportion of the industrial dispersal that has occurred in Tamil Nadu State since the national dispersal policy was properly instituted at the beginning of the 1970s. As a result the behaviour of these firms represents the most important industrial location trend in Tamil Nadu's recent history and an extremely important object of study. Moreover, as all these firms have dealt with the one agency, SIPCOT, they make up an easily identifiable

and approachable survey population.

The survey was also prompted by the need to obtain some up to date and detailed information on firms responding to the government dispersal policy, as there is very little such information readily available in India. In addition, what data are available on the results of the policy are compiled by the government industrial promotion agencies themselves and published to demonstrate the effectiveness of their work. It was thus important to obtain independent information direct from the firms concerned. Among other things this could include details of what the industrialists themselves thought of the government policy and their reasons for choosing the dispersed location for their factories.

Essentially the aims of the survey centred around two basic hypotheses. First, that firms would not be locating in remote backward areas unless they saw some material advantage in it for themselves or because for some reason they had no other alternative. In saying this it was accepted that the government incentives might not necessarily constitute a sufficient material advantage to induce firms to choose a dispersed location. The second hypothesis was that the industrial dispersal policy might not have the simple positive developmental effect on the backward areas that the Indian planners seemed to expect, a view prompted by the less than satisfactory performances of other industrial dispersal policies elsewhere in the world. It was hoped that clues to the developmental effect that the firms might have, could be derived from detailed information about the types of firms involved in the dispersal programme.

The survey was therefore intended to provide answers to the following questions: What type of firms were responding to the dispersal policy? Given their characteristics what sort of developmental effect could they be expected to have? Why were the managers choosing the new backward area locations for their factories? To what extent had the government policy and incentives programme prompted and helped them to do so? What was their general opinion of the government policy and industrial promotion programme? How effective did they expect it to be?

The sample of firms chosen for the survey consisted mostly of firms from Ranipet and Hosur, as already explained, but to this were added firms locating factories in the area of Dharmapuri District around Hosur and a few from the joint SIPCOT-MMDA satellite town of Maraimalainagar (M.M.Nagar) just outside Madras. Finally, a number of major firms setting up new factories in other backward areas of Tamil Nadu were approached, but there were few of these and even fewer responded. In all, 114 firms were approached and information was collected on 82.

Precise details of the numbers of firms approached and responding are given in the methodological appendix at the end of the thesis, but it is worth noting here that of the 82 respondent firms 28 were locating in the Ranipet Complex, a further 33 in the Hosur Complex, 12 in the area of Dharmapuri around Hosur, another 8 in M.M.Nagar, while the last one was building a factory near Sholingur in a designated backward area of North Arcot District. This represents about 75% of the firms in Ranipet, 50% of those in Hosur, 85% of those in the area of Dharmapuri surveyed and 21% of the firms on the SIPCOT list for M.M.Nagar at the time of the survey.

The methodological appendix also includes a copy of the survey questionnaire and details about its design and its administration. It is therefore sufficient to indicate here that at least the opinion section of the questionnaire and frequently the complete form was completed in personal interviews with the managing director of each firm or other senior executive party to the location decision,

1. Basic Characteristics of the Firms Surveyed

The factual information collected on each firm permits the classification of the sample population in a number of different ways. The results of these classifications are reviewed here as an introduction to the survey firms. In each case the variable concerned is crosstabulated against location as this is the variable of most

basic concern to the thesis.

Just over 50% of the sample firms were medium scale industries according to the Indian government definition at the time (1980) which defined MSIs as involving between 1 million and 10 million rupees fixed capital. Approximately 30% were large scale industries (LSIs) and a further 10% small scale industries (SSIs). These proportions were reproduced fairly evenly in each of the locations except in Dharmapuri District (outside the Hosur Complex) where there were 60% LSIs and only 40% MSIs (Table 1).

Table 1 : Scale of Firms Surveyed

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Sholingur</u>	<u>Total</u>
Small Scale (SSI)	2	3		2		7
Medium Scale (MSI)	17	21	5	5		48
Large Scale (LSI)	9	8	7	1	1	26
No Reply	—	<u>1</u>	—	—	—	<u>1</u>
	28	33	12	8	1	82

Classifying firms according to the Indian National Industrial Classification (NIC) to two digits resulted in 16 different manufacturing classes being represented, most of them by just a few firms (Table 2). However, five classes were more heavily represented ranging from Chemicals & Products with 17 firms to Metal Products with 8, through Machinery (13), Base Metal & Alloy Products (11) and Transport Equipment (9). Table 2 shows that the distribution of these in the different locations is very uneven, but it would seem that Ranipet specialises strongly in chemical industries, while Hosur is well represented among a variety of metal based and engineering industries; this is particularly true if the Dharmapuri firms around Hosur are taken into account. Ranipet's specialisation reflects the fact that it

Table 2 : Firms by National Industrial Classification¹

	NIC					Total
	Code	Ranipet	Hosur	Dharmapuri	M.M.Nagar	
Fruit & Veg. Products	20	-	1	1	-	2
Food Products	21	1	-	-	1	2
Drinks & Tobacco Prods.	22	-	1	-	-	1
Cotton Textiles	23	-	2	1	-	3
Wood & Prods.	27	-	-	-	1	1
Paper, Printg. & Publshg.	28	1	-	-	-	1
Leather & Products	29	2	-	-	-	2
Rubber, Plastic & Petrochm.	30	2	2	-	-	4
Chemicals & Products	31	12	4	-	1	17
Ametal & Mineral Prods.	32	1	1	-	-	2
Base Metal & Alloy Pds.	33	2	4	2	2	11
Metal Products	34	2	6	-	-	8
Machinery	35	5	5	3	-	13
Electrical Machinery	36	-	4	1	-	5
Transport Equipment	37	-	2	4	3	9
Other Manufacturing	38	-	1	-	-	1
		—	—	—	—	—
		28	33	12	8	82

has a good water supply and is generally recommended by SIPCOT as the most appropriate location for chemical firms. Overall the sample firms reflect the existing specialisation of Madras in particular industrial categories which suggests strong ties between the sample firms and the current structure of Madras and Tamil Nadu industry.

The attempt to classify firms according to their corporate structure met with some difficulties in view of the varying legal status of firms and a survey question which in the event proved to have been inadequately worded. However, it was possible to check the responses with other sources such as the Madras Stock Exchange Yearbook (1980)

and it did prove possible to establish that a high proportion (60%) of the sample firms have close connections with already established industrial companies. Another 8.5% of firms had whole or partial government backing. Thus only slightly more than a quarter (28%) were independent new companies (Table 3). These proportions vary slightly between the different locations with the greatest variation occurring among the Dharmapuri firms where the percentage of independent new companies drops to 17% and the proportion of direct subsidiaries or branches rises in relation to that of members of company groups. Thus Dharmapuri firms seem to be even more closely controlled by firms external to the area than those in other locations. Finally, it is worth noting that there are no new industrial units 'indigenous' to the backward areas; all have connections with promoters if not firms from towns outside the area.

Table 3: Corporate Status of Firms

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
Expansion Existing Firm	1	2	-	1	4
Subsidiary or Branch	6	3	6	-	16
Member Company Group	9	16	3	4	32
Independent New Firm	8	11	2	2	23
Joint Sector Firm	3	1	1	-	5
Public Sector Firm	1	-	-	1	2
	<u>28</u>	<u>33</u>	<u>12</u>	<u>8</u>	<u>82</u>

The question on the date or expected date of commencement of production resulted in a distribution of firms over dates from 1974 to 1984 with a heavy concentration in the year or so immediately following the survey: 1980-81. Table 4 demonstrates how Ranipet started as an industrial growth pole a few years before Hosur, and how M.M.Nagar is only just taking off. Several firms in Dharmapuri started up even before the Hosur Complex was designated, suggesting that SIPCOT may in fact have chosen the location of Hosur precisely because firms were already

locating there themselves, thereby suggesting it would make a popular location for a growth pole. It is also interesting to note that there has been a slow decline in the number of firms choosing Ranipet since the announcement of the Hosur Complex, suggesting that the latter is a more appealing location.

Table 4: Year of Starting Production (Actual or Expected)

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
1974	3	-	1	-	4
1975	3	1	1	-	5
1976	4	-	1	-	5
1977	4	2	3	-	9
1978	4	1	1	-	6
1979	2	4	-	-	6
<u>Total up to 1980</u>	<u>20</u>	<u>8</u>	<u>7</u>	<u>-</u>	<u>35</u>
Survey point: 1980	6	14	4	4	28
1981	1	8	1	1	12
1982	1	1	-	2	4
1983	-	-	-	-	-
1984	-	1	-	-	1
Unsure	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>
	28	33	12	8	82

Taken in conjunction with the last question information on whether firms were already in production or not shows that only 10% of the firms which gave 1980 as their year of commencement of production had actually gone into production at the time of the survey. Another 20% would be made up of those in trial production. Table 5 also shows that while overall about 50% of the sample firms are in production, in Ranipet this rises to 75% and in Dharmapuri to 66%, which is offset by only 27% in Hosur and none in M.M.Nagar. Moreover, it brings out that two of the firms in the survey had cancelled their projects. This is symptomatic of a much larger number of cancellations at all stages of production and project preparation, though it was impossible to

discover exactly how many, as both managers and government officials were understandably reluctant to discuss them.

Table 5: Stage of Project

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
In production	21	9	8	-	38
Trial production	-	2	2	1	5
Not in production	7	21	2	6	37
Cancelled	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>
	28	33	12	8	82

Table 6: Labour Employed (Unskilled and Skilled Workers)

No. Unskilled Workers Employed:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
1 - 49	18	20	5	5	48
50 - 99	5	4	5	2	17
100 - 149	1	4	-	1	6
150 - 199	-	1	-	-	1
200 - 249	-	1	1	-	2
250 plus	4	2	-	-	6
No Reply	-	1	1	-	2
 No. Skilled Workers:					
1 - 49	20	22	10	6	58
50 - 99	3	4	1	1	10
100 - 149	2	2	-	-	4
150 - 199	1	1	-	-	2
200 - 249	-	1	-	1	2
250 plus	2	3	1	-	6

Apart from the scale classification (LSI/MSI/SSI) discussed above (cf. Table 1), various other measures of the size of firms are available, one of these being labour employed. From Table 6 it is evident that the majority of firms employed less than 50 unskilled or skilled workers: indeed 58% of them employ less than 50 unskilled workers and 70% less than 50 skilled workers. At the other end of the scale there are a smattering of firms which employed anything up to 900 unskilled and 900 skilled workers. The table also shows that the distribution of small and large employers is fairly similar in Ranipet and Hosur but in Dharmapuri and M.M.Nagar there are very few large employers.

Another measure of the size of firms is the amount of capital involved. The large, medium, small scale classification gives some idea of how the sample firms were grouped by fixed capital investment. This can be supplemented with the information that fixed capital investment ranged from Rs. 0.3 million to Rs. 141 million, while working capital invested ranged from Rs.80,000 to Rs. 45 million for working capital, showing a concentration of firms in the lower end of the Medium Scale bracket.

Finally, it is interesting to look at the number of firms receiving the major government incentives. This information was collected independently of the survey, direct from the SIPCOT registers. Table 7 gives the number of firms at each location (no M.M.Nagar firms had received any financial incentives from SIPCOT by June 1980) which had received sanction for the three major financial incentives available: the Sales Tax Loan (STL) the Central Government 15 Subsidy (CS) and the Term Loans (TL). It shows that only 46 out of the total 82 firms surveyed had actually had a Central Investment Subsidy approved, only 23 were getting Sales Tax Loans and 17 Term Loans by the end of June 1980. However, this should be set against the figure mentioned earlier of only 38 firms actually being in production at the time of the survey. This means that some of the firms not yet in production had already been sanctioned or even given a Central Subsidy and two thirds of the firms in production were receiving a Sales Tax Loan. The Term Loan figures are a good deal lower, but then this incentive is usually reserved for helping firms at a later stage when hidden items of

expenditure emerge.

Table 7: Number of Firms Receiving Major Financial Incentives

STL: Sales Tax Loan

CS: Central Government 15% Subsidy

TL: Term Loans

Year	Ranipet			Hosur			Dharmapuri			Total		
	STL	CS	TL	STL	CS	TL	STL	CS	TL	STL	CS	TL
1972			1									1
1973	1	4	4							1	4	4
1974	1	4	3							1	4	3
1975		2	2				1			1	2	2
1976	1	6			3		1	4		2	13	
1977	6	1	4		2	1	3	2		9	5	5
1978	2	3	1		2	1	1			4	7	2
1979		2		1	4		1	2		3	7	
(1st ½)1980							2			2	4	
	11	22	15	2	15	2	9	8		23	46	17

Source: SIPCOT Registers as on 30th June 1980

1.1 Summary Description of Sample Population

It is apparent first of all that the sample is predominantly Medium Scale Industry and some Large Scale Industry. These industries are distributed differentially over the four locations covered, with a tendency for LSIs to choose more remote locations in Dharmapuri, while the MSIs appear to prefer growth pole locations, suggesting perhaps that remoter locations are perceived as a riskier proposition only suitable for firms with adequate financial backing. The NIC distribution indicated a strong resemblance between the industrial structure of these new industrial centres and the existing structure of established Madras and Tamil Nadu industry with chemicals and metal

based engineering industries, among them transport equipment manufacturing, particularly well represented. This would suggest that while the government industrial location policy seems to have had some success in dispersing established industry, it has not yet been particularly successful in encouraging new lines of industrial production, let alone the emergence of new firms indigenous to the backward areas.

These strong links with established industry are further borne out by evidence on the corporate structure of the sample firms which demonstrates that nearly two thirds of the firms have connections with already established companies and a further 8.5% have government backing, leaving only a quarter as independent new firms. Again these proportions vary from location to location and tend to confirm our earlier hypothesis that remote locations are usually chosen by firms with sound financial backing: the Dharmapuri firms are nearly all direct subsidiaries or branches of existing companies.

A more careful look at levels of capital investment shows that the majority of the sample firms are concentrated at the bottom of the MSI bracket with an overall average fixed capital investment of Rs.12.3 million. The other indicator of project size that was examined was employment levels, which revealed that a majority of firms employed less than 50 unskilled and 50 skilled workers. Even more interestingly it is apparent that some of the firms classified as Large Scale with respect to capital investment were in fact quite small employers. This was particularly obvious among the Dharmapuri firms where there are very few large employers though levels of capital investment are high. Thus it would seem that there may also be a tendency for the more capital intensive firms to choose remote locations.

Looking at the sample firms over time it was noted that Ranipet has its first firms going into production as far back as 1974. One or two firms also started in Dharmapuri about the same time. Hosur on the other hand only really started taking off in 1977, while M.M.Nagar only had its first firm going into trial production at the time of the survey in

1980. Looking at the number of firms expecting to go into production in the next few years the development of Hosur looks particularly promising, while Ranipet may even be experiencing a decline, possibly brought about by the competition from Hosur. The fact that firms had already started operating in Dharmapuri in the area around Hosur even before the Hosur Complex was started gives credence to the suggestion that SIPCOT chose the site because it realised the area was popular with industry rather than, therefore, because it felt the area needed developing.

Finally while it seems that most firms are awarded a Central Subsidy before they even go into production, both the Sales Tax Loan and the Term Loan seem to be awarded a lot less freely. Admittedly the Dharmapuri firms in production all seem to be receiving a Sales Tax Loan, but in both Ranipet and Hosur less than half of them are.

This introduction to the survey firms has outlined their main characteristics and has also indicated that there exist a number of differences in the overall character of the firms locating in the different places surveyed. In 1980 the development of Hosur was moving faster than that of the Ranipet growth pole and the firms in Dharmapuri, that is those that have chosen to locate **outside** the SIPCOT growth pole seem to have a number of special characteristics not found so frequently in the other locations. Finally, M.M.Nagar is apparently a lot less attractive to industry despite its proximity to the traditional industrial city of Madras. Given these location-related differences our next concern with the survey firms must be to analyse these differences in greater depth, but before we embark on that task it is appropriate to consider more carefully the environmental characteristics of these different locations. At a later stage (Section 3) we can then return to the consideration of the survey returns with a sounder basis for understanding the firms' locational behaviour.

2. The Nature of a Backward Area Environment

The next five sections of this chapter describe the physical, social

and economic environment which the backward areas of Northern Tamil Nadu present to industrialists. As well as identifying the advantages and disadvantages of the area as a location for industry it is also intended to provide the basis for considering the type of impact the incoming firms are likely to have on the area.

What then are the features of these backward areas which might be expected to affect the location decisions of firms? First there are infrastructural considerations: the availability of adequate communications and transport facilities, other industrial services such as power and water supplies and also social services for the firm's employees: housing, schools, medical facilities and shops. Secondly firms are likely to consider the accessibility of the markets for their products and the sources of the raw materials: if these are not local, how easily can they be reached and what will transport cost? Finally there is a set of more diverse inputs which are all related to existing economic activity in the area and how the incoming firms will integrate with it. These include the availability and cost of labour and the opportunities for getting repair and maintenance or even minor subcontracting jobs done locally.

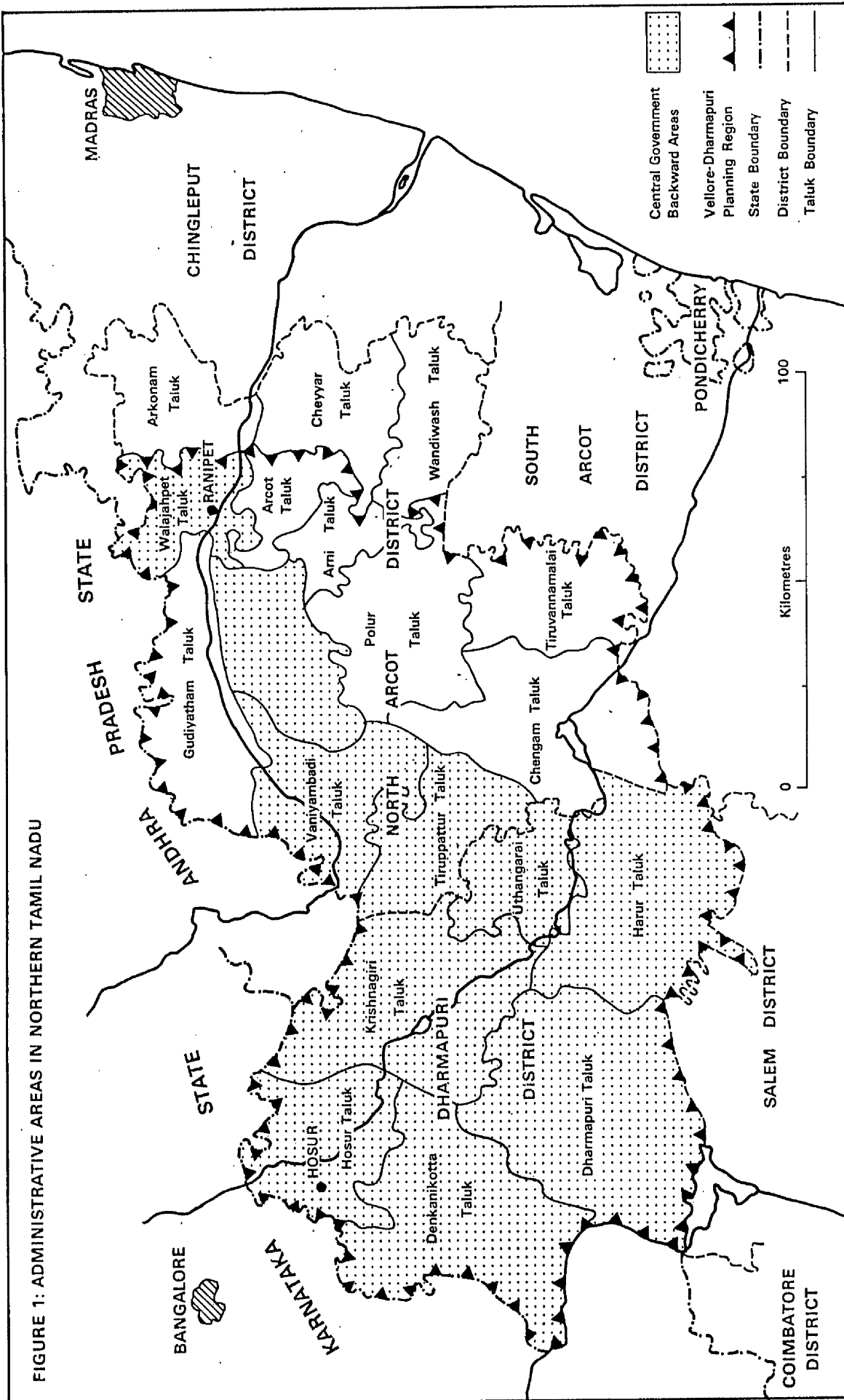
Most of these considerations have been identified by the industrial location theories reviewed in Chapter 2. The classical or cost minimisation approach to the study of industrial location, for instance, put most stress on the distance to markets and raw material sources. While the relevance of these issues was not dismissed it was suggested that it was also necessary to look at how incoming firms would relate to the local economy of their new environment. Chapter 2 concluded that the crucial feature to examine was the articulation of modes of production in the area concerned, as it was in the interaction between this articulation and the capitalist mode of production of the incoming firms that clues as to both why the firms had chosen the location and what sort of impact they would be likely to have, might be found. Unfortunately, only a limited amount of material on the modes of production in Northern Tamil Nadu exists, as little research has been done on the subject and it was too major a task to be undertaken as

part of this thesis. However, some indications from published information on the area do exist and a general impression of the articulation of modes of production in these backward areas can be formed.

It should be noted at this stage in the discussion that there has been a long standing debate in the Indian journal 'Economic & Political Weekly', on the nature of the mode or modes of production currently in existence in India. Essentially it is a discussion on the emergence of capitalist relations of production in Indian agriculture, though participants have also developed various ways of conceptualising what type of other relations of production they felt existed². Unfortunately, none of the empirical case studies conducted as part of this debate relate to the two districts of Northern Tamil Nadu discussed here.

The analysis will cover the backward areas around the Ranipet and Hosur growth poles as this is where the large majority of the sample firms are located. The area designed as backward for the purposes of the Central Government 15% Subsidy comprises the whole of Dharmapuri District and four taluks of North Arcot (Tiruppatur, Vaniyambadi, Vellore and Walajahpet). However, much of the published information on the area covers the whole of both Districts, and this will be reflected in the coverage of this analysis. (It should be remembered that for the purposes of the Tamil Nadu State incentives, the entire area of both Districts is considered as backward). In addition a good deal of the information given below is derived from the Vellore-Dharmapuri Planning Region Draft Plan (1973-4, Directorate of Town Planning, GoTN), which again includes all of Dharmapuri District but not quite all of North Arcot, the three easternmost taluks being excluded (Cheyyar, Arkonam and Wandiwash). To avoid confusion the extent of these different areas are all represented on Figure 1.

The analysis does not consider the environment of the M.M.Nagar growth pole, as it is of only minor importance in the survey, and because it is so near to Madras and not in a designated backward area it would



require extensive special treatment. However, in any later consideration of the M.M.Nagar firms it should be remembered that the satellite town can be expected to be very heavily dominated by the economy of Madras, to the extent that many of the workers that may eventually work in its industries can be expected to commute from the southern suburbs of the city.

2.1 Physical Geography and Topography of North Tamil Nadu

Figure 2 gives an indication of the physical features of the country around Ranipet and Hosur in Northern Tamil Nadu. From this map it is clear that Ranipet is located in the valley of the Palar River a few miles downstream from the point where this valley emerges from the Javadi Hills and broadens out into the Coromandel Coastal Plain. The altitude at this point is about 200 metres above sea level. Hosur on the other hand is located much further inland on the head-waters of the Ponnaiyar River in the South Deccan Plateau. The altitude of this area is around 800 to 900 metres above sea level. The general slope of the whole region is from west to east with drainage into the Bay of Bengal through the Cauvery River system as well as through the systems of the Palar and Ponnaiyar already mentioned. The Cauvery and its Stanley Reservoir behind the Mettur Dam forms the south-western frontier of Dharmapuri District. The only other reservoir of importance in the region is the Krishnagiri Reservoir on the Ponnaiyar some 40 km south-east of Hosur.

A large variety of minerals are to be found in the area but to date only granite, limestone and iron ore deposits have been considered sufficiently important to attract commercial exploitation. The Draft Regional Plan (pp.7-9) however, suggests that it may be possible to exploit other minerals commercially in the future.

Given the hilly topography of the region, much of the land is uncultivated. Only 41% of the area is used for farming compared to 46% at the Tamil Nadu State level. On the other hand 31% of the region is classified as forests against 15% of the State as a whole (Table 8).

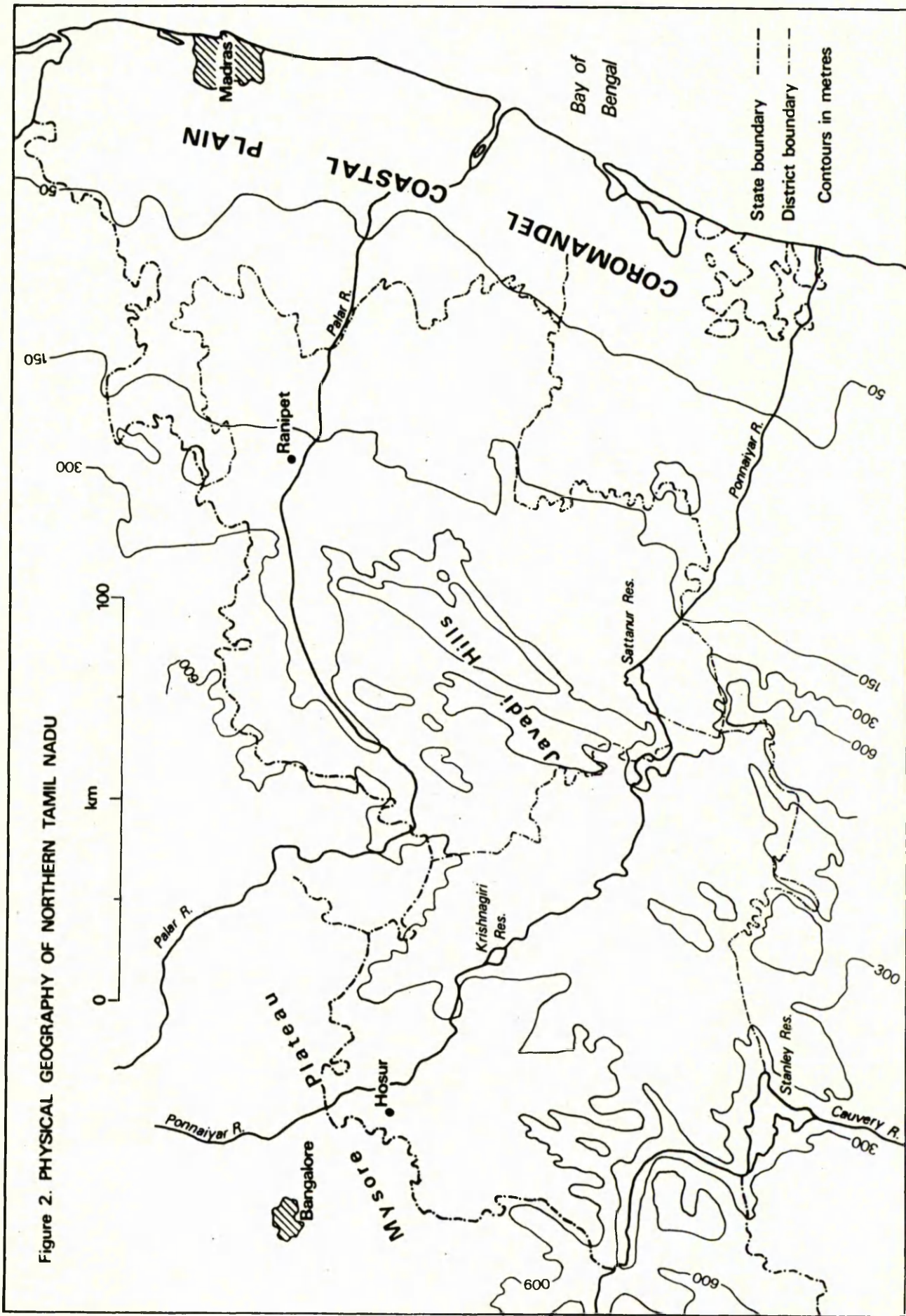


Figure 2. PHYSICAL GEOGRAPHY OF NORTHERN TAMIL NADU

Table 8: Regional Land Use in 1970 for the Area of the Vellore-Dharmapuri Planning Region and the State of Tamil Nadu

Source: Draft Regional Plan for the Vellore-Dharmapuri Planning Region 1973-4, Govt. of Tamil Nadu, Directorate of Town Planning page 10, Table 2.2

Land Use	Region		Tamil Nadu	
	Area in '000 ha	% to tot. area	Area in '000 ha	% to tot. area
Geographical area as per village papers	1,949	100.0	13,011	100.0
Forests	615	31.5	2,000	15.4
Barren & uncultivable land	132	6.8	842	6.5
Land put to non-agricultural use	160	8.2	1,448	11.1
Cultivable waste	58	3.0	553	4.3
Permanent pastures & other grazing lands	23	1.2	278	2.1
Land under garden & tree crops	13	0.7	250	1.9
Current fallow land	66	3.4	969	7.5
Other fallow lands	68	3.5	602	4.6
Net Area Sown	814	41.7	6,069	46.6

The climate of the whole region is dominated by the monsoons which usually start in early June. At the same time, however, the western part of the region with its higher altitude is generally cooler and experiences less variation in temperature than the eastern taluks of Vellore, Arni and Walajahpet. Temperatures vary between a maximum of 42°C in May down to about 18°C in December. The mean average rainfall in Dharmapuri is 850mm while in North Arcot it is higher at 970mm.

2.2 The Population

Table 9 gives the levels and variations of population for the whole region in census years since 1901, as well as the levels and variations for the two districts and the State of Tamil Nadu as a whole for comparison. While broadly the pattern of growth in the region matches that in the State, with faster rates of increase in the last thirty to forty years than before, population growth in the region seems to have started a decade sooner than in the State. This is particularly marked in Dharmapuri District, where after a declining population between 1911 and 1921 subsequent growth was very fast indeed (16.73% in the 1920s as compared with 8.52% in the State). Since that date the population growth rate in Dharmapuri has been consistently higher than in the State or even in North Arcot, apart from during the 1940s when there was another slump in the District growth rate.

As well as different population growth rates through the Vellore-Dharmapuri Planning Region there are some major variations in population density. Of the 1971 total population of 4,652,526 only a little over one third lives in Dharmapuri (1,677,775) while the ten taluks of North Arcot with a similar surface area accommodate a population of 2,974,751 inhabitants. The highest population densities in the region are found in the taluks of Vellore with 447 persons per square kilometre, and Walajahpet with 420; thus in the immediate vicinity of the Ranipet growth pole. In Dharmapuri on the other hand densities fall as low as 100 persons per km² and don't go above the 214 persons registered in Uthangarai. In Hosur taluk itself the density is 170 persons per km². The main concentrations of population are thus spread out along the valley of the Palar River, with densities rising lower down the valley as it broadens out into the coastal plain.

Not surprisingly the Palar River Valley is also the area where most of the towns of the region are located. In terms of Tamil Nadu as a whole, both Districts have low levels of urbanisation. Indeed Dharmapuri has the lowest level of urbanisation in the whole State. There are however a number of important towns. Vellore is the largest, and with 139,082

TABLE 9 : Population and Decadale Variation in Census Years (1901-1971) for North Arcot, Dharmapuri, Vellore-Dharmapuri Planning Region and Tamil Nadu State

Census Year	North Arcot		Dharmapuri		Vellore-Dharmapuri Planning Region		Tamil Nadu	
	Population	%	Population	%	Population	%	Population	%
1901	1,722,132	-	718,642	-	2,016,759	-	19,252,630	-
1911	1,932,958	12.24	752,086	4.65	2,180,654	8.01	20,902,616	8.57
1921	2,030,642	5.05	718,600	-4.45	2,214,536	1.55	21,628,518	3.47
1931	2,298,855	13.21	838,830	16.73	2,551,352	15.21	23,472,099	8.52
1941	2,613,526	13.69	970,076	15.65	2,947,827	15.53	26,267,507	11.91
1951	2,899,592	10.95	1,091,591	10.53	3,313,406	12.40	30,119,047	14.66
1961	3,146,326	8.51	1,332,251	22.05	3,793,700	14.50	33,686,953	11.85
1971	3,755,797	19.37	1,677,775	25.94	4,652,526	22.63	41,199,168	22.30

TABLE 10 : Urbanization: Growth of Major Towns in North Arcot and Dharmapuri Districts, Census Years 1901 to 1971

Year	North Arcot			Dharmapuri District		
	Vellore	G'yatham	V'badi	Vellore	Ranipet	Walajah
1901	43,537	21,335	12,005	10,734	7,607	10,067
1911	49,746	23,390	20,406	11,475	7,807	9,962
1921	50,210	22,803	20,090	11,450	8,307	10,013
1931	57,265	24,688	22,940	14,232	11,583	11,102
1941	71,502	32,671	31,281	16,583	14,207	11,048
1951	106,024	45,667	38,712	21,124	18,945	12,601
1961	113,742	50,384	42,048	25,029	22,974	13,179
1971	139,082	63,007	51,810	30,230	29,281	16,400

Year	Dharmapuri District		
	D'puri	K'nagiri	Hosur
1901	8,102	10,446	6,695
1911	6,458	10,887	5,913
1921	14,393	6,947	5,513
1931	14,815	12,850	6,071
1941	19,105	15,311	6,457
1951	24,094	19,774	8,712
1961	28,031	23,827	11,683
1971	40,086	35,383	16,591

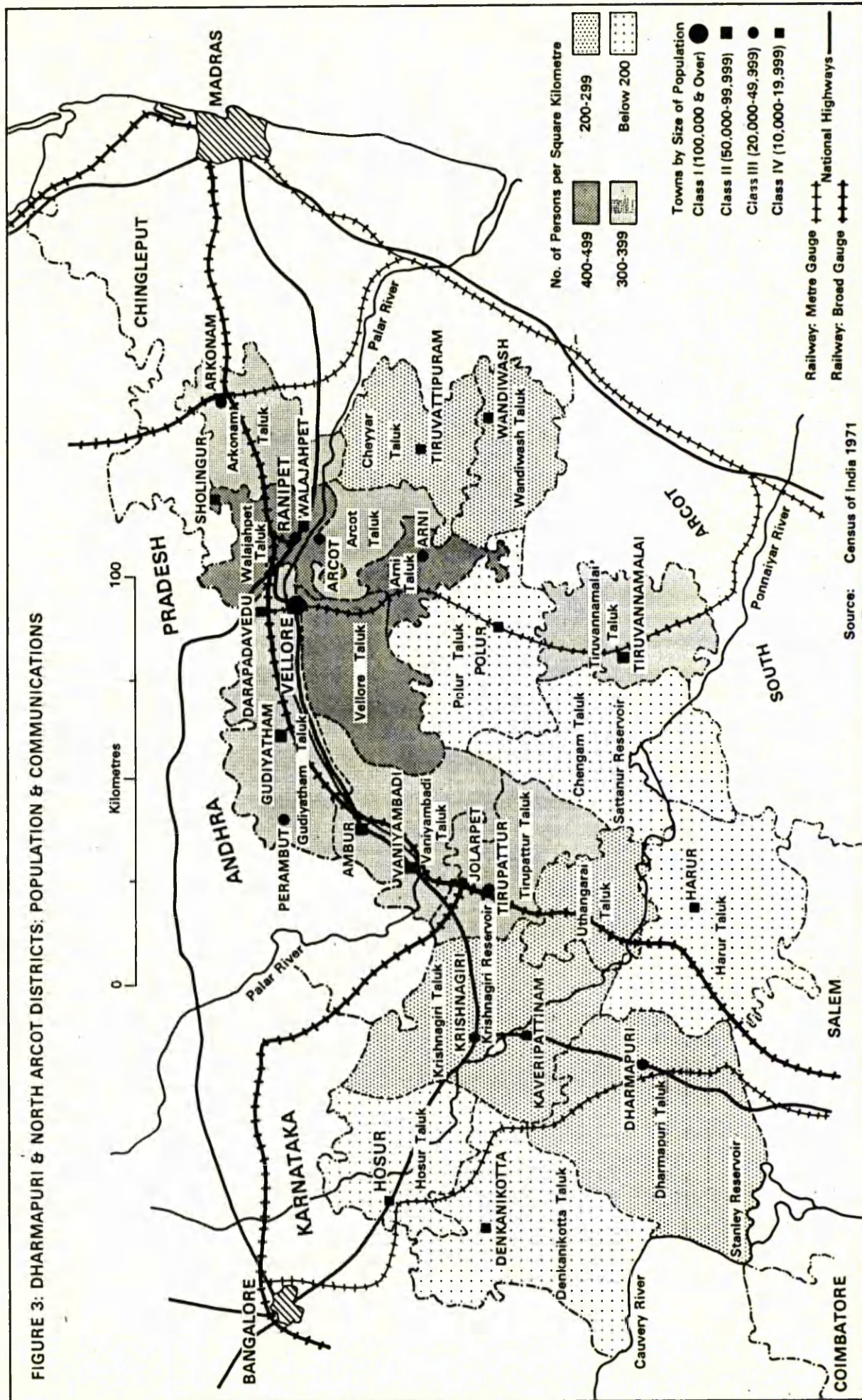
inhabitants it is the only Class 1 (as per Census classification of towns) in the region. Gudiyatham, Ambur, Vaniyambadi and Tiruvannamalai are all Class II towns (50,000-99,999). The largest towns in Dharmapuri District are Dharmapuri itself with 40,086 inhabitants and Krishnagiri (34,359), both therefore qualify as Class III towns along with about half a dozen towns in North Arcot. Ranipet is a Class III town with 29,281 inhabitants, while Hosur ranks as a Class IV with 16,591 inhabitants. The difference in the population levels around the two growth pole sites is further emphasised by the taluk levels: while Walajapet taluk around Ranipet has 253,329 inhabitants, the Hosur taluk has only 163,826. Their respective population densities excluding urban population are 310 and 155 per km² (420 and 170 total population density, i.e. rural and urban), and while Walajahpet has three towns over 10,000 inhabitants Hosur taluk has only one (Figure 3).

Table 10 gives the number of inhabitants in a selection of the major towns in the two districts for the census years since 1901, and Figure 4 gives the same information in graph form. Both figures do not however include all the major towns in North Arcot (e.g. the two Class II towns of Ambur and Tiruvannamalai and Class III towns have been omitted); those chosen are either the most important in terms of size or are the nearest to Ranipet. From these two figures it is apparent that while there are fewer and smaller towns in Dharmapuri District, these are the fastest growing towns in the region, as during the 1960s Dharmapuri (town), Krishnagiri and Hosur all had decadal growth rates of well over 40%. In North Arcot most of the towns had decadal growth rates of between 20 and 28%. Interestingly it would appear that the fastest growing town in North Arcot during the 1960s is Ranipet, and this is before the arrival of the SIPCOT Complex.

2.3 Ranipet and Hosur Towns

Table 11 lists the various facilities and civic amenities existing in Ranipet and Hosur at the time of the 1971 Census or shortly before. While this gives a fairly good idea of the type of towns Ranipet and Hosur are, there are also a good number of changes and improvements to

FIGURE 3: DHARMAPURI & NORTH ARCOT DISTRICTS: POPULATION & COMMUNICATIONS



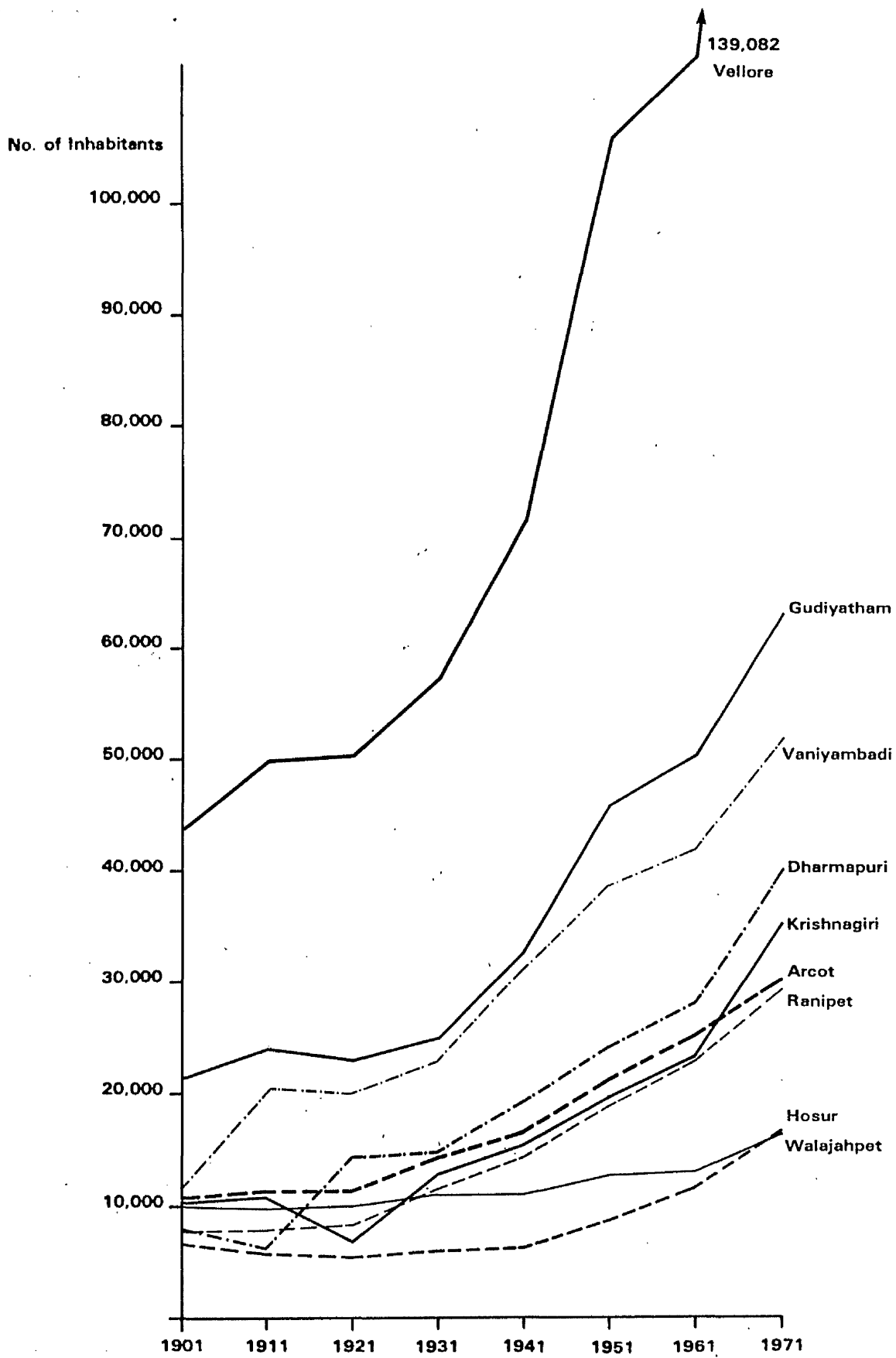


FIGURE 4: GROWTH OF MAJOR TOWNS IN DHARMAPURI & NORTH ARCOT (1901-1971)

Source: Censi of India (1901-1971)

the facilities they offer which have taken place since 1971. Until the District Handbooks for the 1981 Census are published it is difficult to update the information contained in Table 11 comprehensively, but a good number of important improvements can be listed here based on other sources such as the Draft Regional Plan and personal observation.

To deal first with the medical facilities the two towns offer, the general point to remember is that while both towns have only limited medical facilities they are both within fairly easy reach of major urban hospitals with highly sophisticated facilities. In the case of Ranipet, the Christian Medical College hospital in Vellore is one of the most advanced teaching hospitals in the whole of India, while for Hosur good hospitals are available in Bangalore. Though the number of beds and the level of care available in the Ranipet and Hosur hospitals may have improved since 1971, there have been no major improvements to these facilities in the towns themselves.

On the educational side mention should be made of the Industrial Training Institute in Hosur which has existed since 1965 but seems to have escaped the attention of the Census enumerators. A similar institute exists in Vellore although there is none in Ranipet. The Hosur ITI awards certificates in various skilled industrial trades (e.g. fitters, turners, machinists, electricians and welders) to between 100 and 200 graduates every year and there are plans to expand its capacity in the near future.

Banking facilities have also improved in both Ranipet and Hosur with two different banks having branches in the towns themselves and the Indian Overseas Bank additional branches at the SIPCOT Complex office buildings. In Hosur the State Bank of India has also opened an extra branch at the Industrial Complex.

The transport and communications facilities of Ranipet and Hosur have already been covered in the previous chapter and here the national highways and main railway lines in the area are given on the map of population density and urbanisation (Figure 3). Both towns are on

Table 11: Facilities and Civic Amenities in Ranipet and Hosur as per the 1971 Census

Source: Census of India, 1971, District Handbooks for Dharmapuri and North Arcot Districts. Town Directories: Statements I - VII

<u>Functional Category</u>	<u>Ranipet</u>		<u>Hosur</u>
	1961 Census	Industry	Services/Primary Activities/Industry
	1971 Census	Industry	Industry/Services Primary/Activities
<u>Civic & Other Amenities, 1969</u>			
Latrines			
Water Borne Service		163	-
Other		3,377	212
		100	50
Protected Water Supply			
Overhead Tank		1-234,000 litres	2-30,150 litres
Surface Reservoir		8-28,800 litres	-
Fire Fighting Service		Yes	-
Electrification (No. Connections)			
Domestic		1,346	534
Industrial		180	37
Commercial		476	438
Road Lighting		819	3/281
Others		84	12/1024

Medical, Educational, Recreational & Cultural Facilities, 1969

Hospital	(Walajahpet: 32 beds)	15 beds
	(Vellore: 1,455 beds)	
Dispensaries	2	-
Other	1 with 5 beds	-
Colleges:		
Arts, Science,		
Commerce	(Walajahpet)	(Krishnagiri)
Medical	(Vellore)	-

Table 11 (Continued):

	<u>Ranipet</u>	<u>Hosur</u>
Engineering	-	
Polytechnic	-	
Vocational	Shorthand & Typing (1)	Typing (2)
Higher Secondary School	3	2
Junior Secondary School	14	-
Primary School	2	6
Others	1	1
Stadia and Parks	2	-
Cinemas	1	1
Auditoria and Drama Halls	-	-
Public Libraries/Reading rooms	5	2

Trade, Commerce, Industry and Banking, 1969

Names of 3 most Important Commodities

Imported	Sulphur, Wattle Extract & G.S. Powder	-
Exported	Sanitary Ware, Tanned Hides & Skins	-
Manufactured	Fertiliser, Sanitary Ware, Tanned Hide and Skins	
Number of Banks	1	2
No. of Agricultural Credit Socs.	-	2
No. of Non-Agric. Credit Socs.	4	1

important national highway routes and both have somewhat poor access to the railway system, Ranipet because it is about 17 kilometres from an important station and Hosur because, although it has its own station, this is on a minor metre gauge railway line.

Though Ranipet is by far the larger of the two towns, Hosur is perhaps more important in the role it plays. Ranipet is really part of a complex of three fairly large towns, of which the other two, Arcot and

Walajahpet, are both administratively more important, even though the latter is considerably smaller (both are taluk headquarters) in size. Moreover these three towns are overshadowed by the proximity of an urban centre of major regional and even some national importance: Vellore. Considerably more urban development would have to occur before these four towns could be seen as part of one agglomeration, as Vellore is some fifteen to twenty kilometres away from the other three, but there is no doubt that the existence of particular urban facilities in Vellore does discourage their provision in Ranipet/Arcot/Walajahpet as well.

With the presence of the old EID Parry factory in Ranipet, the town has long been the one out of the four with the most industrial character in terms of modern industry; this has of course been reinforced by the establishment of the SIPCOT Complex just outside the town. However, Arcot and Walajahpet have also been industrial centres for many years given the position they enjoy in the traditional leather industry along with Gudiyatham and Vaniyambadi further up the Palar Valley.

Hosur on the other hand is much more remote than Ranipet, despite the fact that it is only 35 kilometres from Bangalore. It is the only town in the taluk of the same name and apart from Bangalore the other towns nearest to it are 24 and 50 kilometres away (Denkanikotta and Krishnagiri respectively). But precisely because of this remoteness it is perhaps more important in local terms than Ranipet is in its area. First of all Hosur is the administrative centre of the taluk and in this capacity, as well as because there are no other towns in the taluk, it accommodates all government extension offices which are located at taluk level. In addition it is the only services, medical and educational centre and it is the main market town of the area. Thus despite its relatively small size in comparison with Ranipet, in a remote and sparsely populated area, Hosur assumes a much greater importance in local life than its larger counterpart in North Arcot District.

2.4 Educational Levels, Occupation Structure & Economic Activity

The 1971 Census of India Primary Census Abstract for Tamil Nadu State gives a detailed account of the education levels and occupation distribution of the population in each taluk of the State. These data for the taluks of North Arcot and Dharmapuri Districts have been collated in Table 12. As well as the basic data for each taluk and district the table gives the rural-urban breakdown for the districts and the data for selected towns in the area. The towns were selected on the basis of their proximity to one or other of the SIPCOT Complexes.

The first thing to note from this table is the much higher level of literacy and education in North Arcot District than in Dharmapuri. That this is related to the level of urbanisation in North Arcot District is evident from the even higher levels in urban areas and in the most urbanised taluks. The more urbanised taluks in Dharmapuri also have higher levels of literacy but these never quite attain those in North Arcot. As an example, 55% of Ranipet's population is classified as literate or educated while in Hosur this level is only 46%. Some of the more remote parts of Dharmapuri such as Denkanikotta Taluk and Palacode Sub-Taluk (part of Dharmapuri taluk adjacent to Denkanikotta) have very low levels of literacy indeed; only one taluk in North Arcot, Chengam, has a level anywhere comparable. These low levels of 20% literacy or less is one good indication of the backwardness of these taluks.

Both districts have similar labour force participation rates of about 36% rising to 37% in rural areas and standing at 29% in urban areas. (Interestingly the towns of Hosur and Ranipet have the lowest participation rates among those registered on the table: 27.9% and 25.3% respectively). The proportion of workers involved in agriculture is also very high in both districts but it is noticeably higher in Dharmapuri than in North Arcot. There is also a higher proportion of people classified as cultivators rather than agricultural labourers in Dharmapuri, while in North Arcot the levels are much more similar (57.2 and 26.3 in Dharmapuri and 38.3 and 31.2% in North Arcot) indicating a more commercialised farming system in North Arcot with larger farms and

TABLE 12: North Arcot & Dharmapuri Population by Occupation (1971)

DISTRICT/Taluk/Town	Total Population	% Literate & Educated Persons	Total Workers		Percentage of Workers Classified as						
			Persons	as % of Popul- ation	I Cultivators	II Agricultural Labourers	V Manufacturing, Processing Servicing and Repairs Household Not-household	VII Trade & Commerce	VIII Transport & Storage & Communications	IX Other Services	
NORTH ARCOT (Total)	3,755,797	34.6	1,333,169	35.5	38.3	31.2	4.1	7.0	6.1	2.6	8.0
(Rural)	2,972,702	29.8	1,107,027	37.2	45.0	36.2	3.1	3.4	2.6	0.9	6.2
(Urban)	783,095	52.8	226,142	28.9	5.1	6.9	9.0	24.2	23.1	11.2	16.9
Talúks: Arkonam	311,147	34.0	114,360	36.8	34.1	38.3	5.3	3.6	4.4	6.1	6.7
Waiyahpet	253,209	36.1	83,612	33.0	40.0	22.8	7.2	9.6	6.3	2.4	9.5
Gudiyatham	426,205	35.2	144,258	33.8	27.6	33.9	5.8	12.3	6.1	2.9	8.8
Vaniyambodi	339,202	35.9	114,198	33.7	27.8	31.6	2.5	15.6	9.4	2.8	7.6
Tirupattur	314,564	29.2	108,010	34.3	43.3	27.9	2.4	7.2	6.8	3.9	6.9
Vellore	415,265	47.1	126,755	30.5	25.3	20.6	3.5	14.6	12.3	5.3	15.4
Arni	182,247	36.9	68,838	37.8	32.6	32.9	8.3	6.1	7.2	2.0	7.6
Cheyyar	230,279	34.0	88,894	38.6	47.0	33.3	6.2	1.6	2.5	0.7	6.1
Wardiwash	239,620	33.8	99,235	41.4	42.5	38.9	4.1	1.8	2.9	0.8	6.5
Polur	292,954	30.0	105,078	35.9	49.3	32.3	2.7	1.8	3.5	0.8	6.6
Chengam	265,004	22.8	104,130	39.3	49.2	35.9	1.2	1.7	2.9	0.3	5.7
Tiruvanamalai	314,245	32.0	113,429	36.1	50.0	25.7	1.9	3.1	6.5	2.6	7.0
Arcot	171,736	40.6	61,751	36.0	34.4	33.8	4.5	7.1	7.0	2.1	8.1
DHARMAPURI (Total)	1,677,775	22.3	610,878	36.4	57.2	26.3	1.3	2.0	4.1	1.2	5.5
(Rural)	1,533,834	19.7	569,310	37.1	60.6	27.7	1.1	1.2	2.4	0.5	4.4
(Urban)	143,941	50.2	41,568	28.9	11.5	7.0	4.1	13.1	27.7	10.9	21.1
Talúks: Hosur	163,826	21.3	58,142	35.5	62.5	20.6	1.6	1.6	3.7	1.0	6.0
Denkanikota	212,254	19.1	76,346	36.0	64.2	22.9	1.5	1.6	3.1	1.0	4.7
Krishnagiri	396,112	23.4	151,376	38.2	55.4	27.9	1.0	2.0	4.8	1.3	5.6
Uthangarai	139,423	21.0	53,171	38.1	53.7	31.5	1.5	1.7	3.9	0.5	5.3
Hosur	280,197	23.3	100,025	35.7	55.0	30.5	1.2	1.9	3.2	1.0	4.9
Palacode (sub. Taluk)	146,414	18.4	54,514	37.2	60.2	24.0	0.8	2.2	4.8	1.1	4.8
Dharmapuri	339,549	25.0	117,304	34.5	54.7	24.4	1.8	2.7	4.7	1.7	6.7
TOWNS: Hosur	16,591	46.1	4,629	27.9	12.3	9.2	6.4	13.2	22.1	8.3	23.4
Ranjipet	29,281	55.1	7,405	25.3	4.5	7.9	3.7	35.1	14.1	8.4	22.4
Arcot	30,230	54.1	8,692	28.8	2.9	4.7	9.7	25.3	28.7	11.6	13.7
Waiyahpet	16,400	50.5	5,312	32.4	3.7	5.1	38.6	13.7	15.9	4.5	15.4
Vellore	139,082	59.1	40,350	29.0	1.1	1.0	3.3	26.3	28.0	11.9	25.2

N.B. The following categories of occupation have been omitted as they were consistently very poorly represented: III Livestock, Forestry, etc; IV Mining & Quarrying; VI Construction

Source: Census of India 1971 - Tamil Nadu - Primary Census Abstract, General Population Tables: Occupations.

more paid labour. This seems to be particularly marked in the taluks of the Palar Valley, nearly all of which have more workers classified as agricultural labourers than as cultivators; the exceptions are the two taluks of Vellore and Walajahpet which have very few agricultural labourers indeed (20.6% and 22.8% respectively). This latter tendency may be due to the higher levels of urbanisation in these two taluks and the decision by underemployed agricultural labourers to try and find work in towns rather than in the countryside.

In both North Arcot and Dharmapuri there tends to be a higher proportion of cultivators to agricultural labourers as one moves further west into the more remote and backward areas of the region, and in the case of North Arcot as one moves south into the more hilly taluks of the District. The consistency of this trend would seem to confirm that the ratio of cultivators to agricultural labourers in a particular area can give us some indication of the level of commercialisation or capitalisation of agricultural practices in the area.

In their work on changes taking place in the Tamil Nadu economy between the two Census years of 1961 and 1971, Kurien & James (1979) identify a very striking trend of increasing proportions of agricultural labourers to independent cultivators. The trend is apparent throughout the State and is so dramatic as to force them to conclude that it is evidence of a real change taking place in the organisation of Tamil Nadu farming³. They report the existence of this trend in both North Arcot and Salem/Dharmapuri.

In North Arcot paddy is increasingly important in agricultural production, gradually challenging the traditional dominance of millet crops. To some extent this is also true in Dharmapuri (Kurien & James 1979 pp.86-87 & p.106).

The next two occupation categories in the table: III, Workers in Livestock, Forestry, Fishing, Hunting and Plantations and IV, Mining and Quarrying are not significant in North Arcot and Dharmapuri. In

both districts they employ about 1% of the workers each. Category V, Manufacturing is, however, a good deal more important. This category is broken up into Household and Non-Household manufacturing, a division which is extremely useful to indicate the relative importance of the informal sector and the modern industrial sector as employers.

Overall, Manufacturing only employs 11% of the workers in North Arcot and 3.3% in Dharmapuri. This confirms the largely rural-agricultural character of both districts. Within these overall figures there are some major variations. Thus 33% of the workers in urban areas of North Arcot are employed in manufacturing and 17% in Dharmapuri. Within this again about three quarters of these urban manufacturing workers are in Non-Household manufacturing. In most taluks in both districts there are generally more workers in Non-Household than in Household manufacturing. The exceptions to this are the taluks of southern North Arcot. In the five towns shown in Table 12 there is consistently a higher percentage of workers in Non-Household manufacturing except in Walajahpet where the proportions are completely reversed (38.6% of workers in Household manufacturing as opposed to 13.7% in Non-Household). According to the Chief Inspector of Factories List for 1979 this must be related entirely to the concentration of the leather industry in the town as there are some 60 leather firms in the taluk, nearly 50% of which operate without power, suggesting that much of the leather industry is still organised on traditional rather than modern capitalist lines. Ranipet is the town with the highest proportion of workers in Non-Household manufacturing (35% as opposed to only 3.7% in Household manufacturing). Hosur is the town with the smallest proportion of workers in manufacturing: 13.2% in Non-Household and 6.4% in Household manufacturing.

The next four categories of Construction (VI), Trade and Commerce (VII), Transport, Storage and Communications (VIII) and Other Services (XI) all employ relatively few workers in both taluks. Together they employ only 17.8% of the workers in North Arcot and 11.6% in Dharmapuri and in both cases half of this is made up of workers in the last category of Other Services and about one third in Trade and Commerce.

Not unexpectedly, however, the pattern changes if urban workers alone are considered. Thus 16.9% of the urban workers in North Arcot are employed in Other Services while a further 23.1% are in Trade and Commerce; in Dharmapuri the comparable figures are 21.1% and 27.7%. Looking at the five towns listed in Table 12 Trade and Commerce are very important employers in Hosur, Arcot and Vellore while Other Services is important in Hosur, Ranipet and Vellore. (In all these cases the category in question employs between 20 and 30% of the workers in the towns referred to).

Data from the Chief Inspector of Factories List on organised sector industry include only nine taluks which in 1979 had over 10 factories. Six of these are the North Arcot taluks in the Palar Valley and among them is Walajahpet where Ranipet is located which has the second highest number of factories (84) after Vaniyambadi with 130. The remaining three taluks are the south-eastern taluks of Dharmapuri: Harur (14), Dharmapuri (14) and Krishnagiri (10). Hosur and Denkanikotta taluks only have 8 factories listed between them (Table 13).

Maps 4 and 6 in Mackie (1981) show this distribution of numbers of taluk and the number of workers they employ and demonstrate clearly the concentration of factories in the taluks of the Palar Valley. Table 13 also gives the distribution of factories by size according to the number of workers employed. Again the taluks of the Palar Valley stand out as being the only ones with large scale employers, with the exception of Dharampuri taluk where there is one factory employing 393 workers (a sugar refinery).

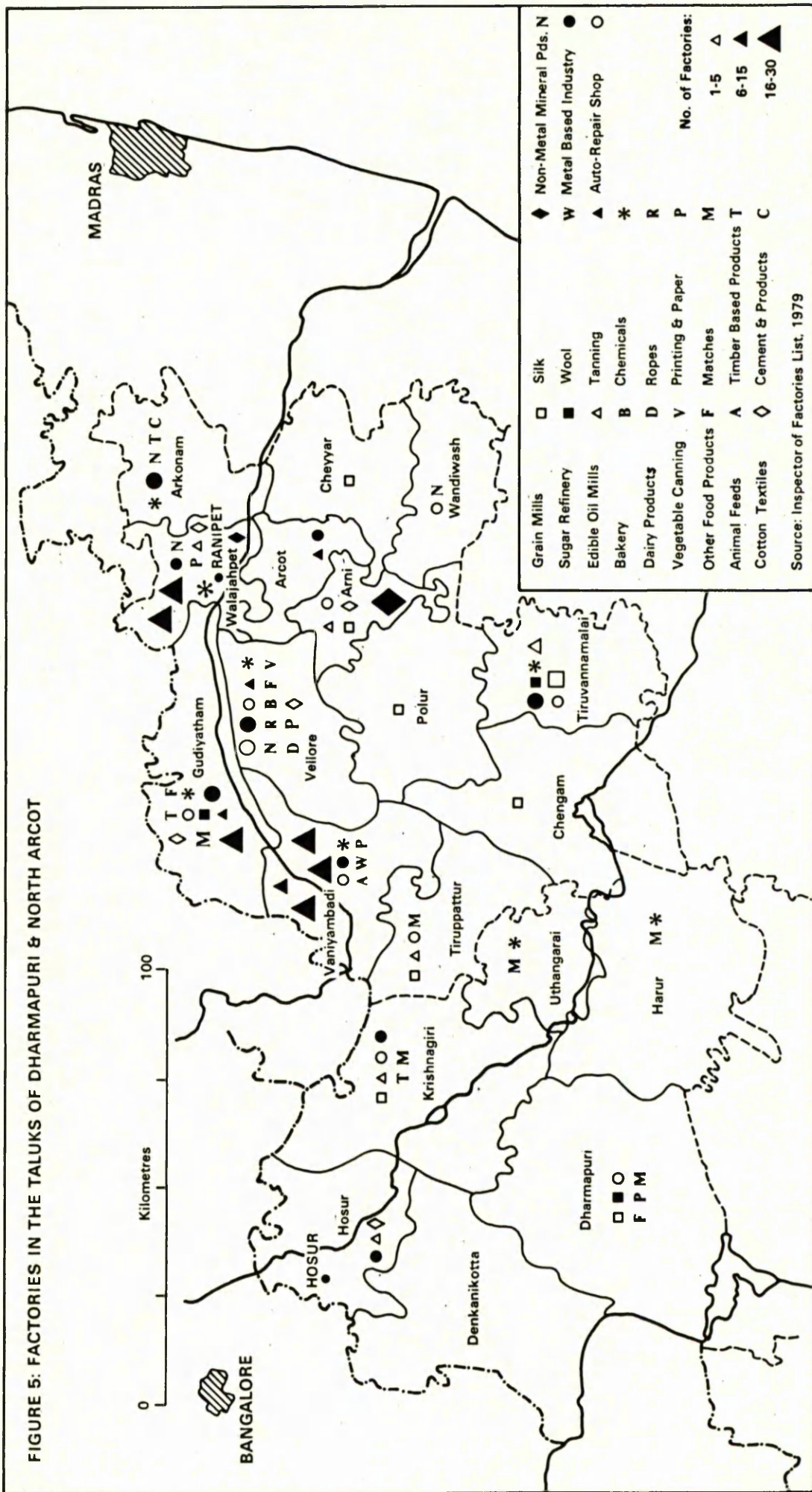
As for the different industrial branches represented, Figure 5 shows the distribution of some of the major industries. To this should be added the note that two thirds of the 338 factories in Arcot, Walajahpet, Gudiyatham, Vellore and Vaniyambadi are manufacturing leather or leather products. There are also 8 cotton mills and about 20 chemicals factories in the Palar Valley taluks, a few of which are in the Ranipet Complex. In Arni taluk there are 31 factories in the silk

TABLE 13: Factories and Workers Employed in North Arcot and Dharmapuri (1979)

	Total Number of		No of Factories Employing:			No. of Workers in Factories of 249 plus Workers
	Factories	Workers	up to 49 Workers	50-249 Workers	249 plus Workers	
<u>NORTH ARCOT DT.</u>						
Arkonam	13	2,486	8	2	3	2,096
Cheygar	4	120	4			
Arcot	5	150	5			
Walajahpet	84	5,445	66	16	3	1,865
Gudiyatham	72	3,655	58	13	1	490
Vellore	47	2,780	37	8	2	800
Arni	42	1,495	39	3		
Wandiwash	2	60	2			
Polur	3	90	3			
Vaniyambadi	130	6,665	106	21	3	1,110
Chengam	2	60	2			
Tiruvannamalai	27	810	27			
<u>DHARMAPURI DT.</u>						
Harur	14	565	13	1		
Uthangarai	2	105	1	1		
Krishnagiri	10	345	9	1		
Hosur)	8	375	5	3		
Denkanikota						
Dharmapuri	14	783	13		1	393

Source: Chief Inspector of Factories, 1979, Madras cf. also Mackie, 1981, p.12

FIGURE 5: FACTORIES IN THE TALUKS OF DHARMAPURI & NORTH ARCOT



industry and spread all over both districts there are 35 grain mills and 15 edible oil mills located in various towns.

2.5 The Ranipet & Hosur Environment: Summary

By now a fairly clear picture of the physical and socio-economic environment of Northern Tamil Nadu is apparent. By a number of criteria the area is certainly backward and becomes more so as one moves further west through Dharmapuri and up into the Mysore Plateau. Though agriculture is the main economic activity in the area it is not highly developed or particularly productive. Industry is virtually non-existent except for the important leather industry in the North Arcot taluks of the Palar Valley. Indeed the Palar Valley is the part of the area where most of the population and economic activity is centred. Ranipet is on the Palar just at the point where the valley opens out from its more restricted course behind the Javadi Hills into the Coromandel Coastal Plain. Hosur on the other hand is in one of the most remote and underdeveloped parts of the region up in the more arid zone of the Mysore Plateau. Thus the environment presented by the two growth poles to incoming industrialists is markedly different.

Ranipet is already an industrial town of sorts with its old EID Parry ceramics factory and the leather industry of North Arcot spread around its area. It is also in the most urbanised part of the region, with a fairly high population density and a range of urban facilities of its own, and is within easy reach of Vellore the only really major town of the region. With less than 17,000 inhabitants in 1971, Hosur is only half the size of Ranipet and it is much more remote with no other towns nearer than Bangalore at 35 kilometres. It is essentially a market and administrative centre serving the taluk of the same name and also to a certain extent that of Denkanikota next to it. Given this role it does have a fairly wide range of services but the actual facilities are limited and of inferior quality. It has no industry to speak of other than the survey firms which have located in its neighbourhood since the mid-1970s. Agricultural production in its hinterland is also much more limited than in the area around Ranipet. Hosur's one redeeming feature

from an industrialist's point of view must be its relative proximity to Bangalore.

To what extent do Ranipet and Hosur provide the sort of environment industrialists seek? On page 218 a list of features that could be expected to interest industrialists when taking a location decision was outlined. This included first a series of infrastructural considerations. In terms of social services Ranipet offers industrialists a better environment than Hosur, except of course if Bangalore is also taken into account. The same is true of transport and communications. Though both towns are readily accessible by road, Hosur is again more accessible than Ranipet because of the proximity of Bangalore. Hosur will also be better off than Ranipet in communications terms once the new telephone exchange being built in the town is in service. Neither growth pole offers significant markets for produce or sources of materials, unless firms are intending to produce mass consumer goods on a fairly small scale in which case the urban population of the Ranipet area might offer a reasonable market. Again therefore the relative proximity and accessibility of the two growth poles to other major urban centres assumes greater importance and then Hosur is the more attractive, though Ranipet is better if accessibility to both Madras and Bangalore is sought.

Finally there is the local economy and the way in which incoming firms will relate and integrate with it. In terms of labour availability and the prospects of finding labour already used to industrial work, Ranipet has more to offer than Hosur. Also with the higher proportion of agricultural labourers to cultivators in the Ranipet area than around Hosur, there would seem to be a greater chance of getting labour to move out of agriculture and into industry with greater ease. But on the other hand if this is simply an indication of less developed and less prosperous farming in the Hosur area, there is a higher chance of labour being keen to leave a rather poor living in subsistence farming and move into secure jobs with wage incomes in industry and moreover willing to do so at lower wage levels than labour might expect in the more prosperous Ranipet area.

The chances of getting repair and maintenance and simple subcontracting jobs done locally is certainly higher in the Ranipet area than in Hosur, but then again Hosur's proximity to Bangalore makes it possible to get such jobs done in the city by a much wider range of more experienced and specialised subcontractors. Equally, for highly specialised repair work on sophisticated machinery it would be easier to get a specialist to travel the 35 kilometres from Bangalore to Hosur than the 130 from Madras to Ranipet.

It is thus clear that despite the absence of any other towns in its immediate neighbourhood Hosur has certain distinct advantages over Ranipet. To a large extent these derive from its much greater accessibility from a major South Indian urban centre. But it would also seem to be possible for industrialists to gain certain advantages from the more undeveloped character of the Hosur economy relative to that in the Ranipet area. Thus the poor quality of agriculture and the absence of any other industry in the area is likely to mean that incoming firms can pay lower wages than they might in Ranipet and obtain workers more prepared to do any work that is on offer. The counterpart of that is however, that they are much less likely to be able to find skilled labour in Hosur.

Given the lack of raw materials, the restricted or non-existent market for many products and the generally low level of industrial development in both the Ranipet and Hosur areas, it would appear that the field in which the incoming firms will have most contact with the local economy is that of employment and the provision of cash incomes. The way these firms deal with local labour therefore takes on a crucial importance. The creation of several thousand industrial jobs in each area will have a major impact on their local economies. Obviously it will boost retail trade and the provision of services paid for in cash. In more general terms it will ensure that a wider proportion of the local population is drawn into a cash economy. Those people who do not have direct access to cash incomes either through their own employment in the new firms, or through one of their family member's employment, or alternatively through the provision of goods and services to wage earning families

are likely to find themselves increasingly marginalised in the local economy.

Such tendencies are indications of the interaction that takes place between a growing capitalist mode of production and pre-capitalist modes in a situation where the latter have been predominant in the past. As the capitalist mode gets stronger and more prevalent it will tend to disrupt the operation of the pre-capitalist mode through the imposition of a cash economy and the increasing marginalisation of those with no access to it. In doing so capitalist firms will be able to accumulate higher levels of profit than they would otherwise, by taking advantage of the special conditions of production, such as low wage levels, that the precapitalist modes and the relative scarcity of wage jobs permit (cf. Chapter 2, pp.40-41).

The features of the local economies of the Ranipet and Hosur areas that have just been outlined do not permit a clear or definite characterisation of the modes of production prevalent in these two areas. But it is apparent that the capitalist mode of production is more developed in the industry and agriculture of the Ranipet area. It is suspected however, that pre-capitalist modes still do exist in the area as the work of other authors (Harriss J. in Farmer, 1977) in the agriculture of North Arcot seems to indicate. Also personal observation and interviews with people in the Tamil Nadu leather industry as well as the Census data quoted above (p.19) suggest that many of the tanning and leather product manufacturing units in North Arcot are not organised on capitalist lines, though no specific investigation into this area has been carried out. In Hosur and its surrounding area the picture seems more clear cut. There is very little evidence of a developed capitalist mode of production and the high incidence of independent cultivators in the area may indicate a farming system still predominantly organised on pre-capitalist lines.

It thus seems likely that the advent of capitalist firms to the two SIPCOT growth poles is likely to have a much more disruptive and traumatic effect on the local economy of the Hosur area than on that of

Ranipet, though even here the impact is likely to be significant. At the same time the fact that the capitalist mode of production is as yet still very poorly developed in the Hosur area compared to Ranipet should make the more remote and backward growth pole the more attractive one for industrial capitalists.

3. Questions about the Locational Behaviour of Firms

The previous two sections have raised a number of questions about the behaviour of the sample firms. Particular types of firms seem to be choosing particular locations. Furthermore the areas they were locating in seem likely to be affected by their nature and behaviour in a number of fairly specific ways. The rest of this chapter is devoted to enquiring into these issues in greater depth.

First, there is the traditional issue in industrial location studies of how the location of factories relates to markets. It was concluded above that neither Ranipet or Hosur had much to offer firms in terms of markets or sources of raw materials, though the potential of the Ranipet area was expected to be slightly better than that of Hosur. Data on where the sample firms are sending their products and buying their materials will therefore be looked at carefully. Following on from this concern with how the firms relate to the local and regional economy, the actual spatial distribution of the firms' offices, and factories other than just those on their new site, will be examined. This provides a further indication of whether the firms are as closely integrated with the Tamil Nadu industrial sector as they seem to be at first sight.

The third issue to be examined will be the labour and employment practices of the firms. It was suggested above (p.242) that this would be the most crucial way in which the firms will affect the local economy of their new environments. Finally, the financial characteristics of the firms will be examined in fuller detail as this should shed light on the questions of just how capital intensive the firms were, the implications of this for their integration into a local

rather than a wider regional economy and also a further indication of their links with established Tamil Nadu industry.

3.1 Markets for Materials and Products

Information was collected on the materials used and products made by the sample firms: the quantity, value and the percentage coming from each source or going to different markets. In aggregate these figures produce the following picture (cf. Tables 14 & 15). Although the absolute values of these data have to be treated with a certain amount of caution given that they are often derived from managing directors' memories rather than the firms' records, they can nevertheless be seen as indicative of the markets the firms deal with and the scale of their dealings. It is rapidly apparent that there are very few direct transactions between the sample firms and local sources of materials or markets for productions. Indeed, the bulk of materials in value terms seems to be purchased in the nearest urban areas or nationally. Likewise most of the products are distributed to national markets with nearby urban markets coming a close second. Just over 10% of raw materials are imported from abroad and a slightly higher percentage of products are exported. In fact, between them the sample firms are earning over Rs. 76 million per annum in foreign exchange, which represents 22% of the total value added earned by all the sample firms put together. This remarkably high percentage is indicative of both the types of markets the firms are trying to compete in and the Indian Government's continuing desire to encourage the production of goods for export.

Aggregating the value of materials coming from different sources by regional provenance (South India, All-India and Abroad) and doing the same for products (Figure 6), it appears that the firms have a good base in the South Indian economy, while at the same time maintaining a reasonable position in the All-India economy. The M.M.Nagar firms, which are virtually entirely linked to the South Indian economy, are an exception to this pattern.

TABLES 14 & 15: Total Value of Materials Brought from and Sent to Different Markets to and from Different Factory Sites.

	M.M.Nagar		Ramipet		Hbsur		Dhamepuri		Solgr.	
	'000s Rs	%	'000s Rs	%	'000s Rs	%	'000s Rs	%	'000s Rs	%
Total No. of cases in Sample:	8	100	28	100	33	100	12	100	1	100
No. of respondents - Materials:	7	88	26	93	28	84	8	66	0	0
- Products:	7	88	23	82	26	79	10	83	1	100
14: MATERIALS from:										
Complex	-	-	78.00	-	2,705.00	0.5	90.00	0.2	-	-
Districts	10,000.00	14.8	8,061.00	4.2	25,437.00	4.4	569.00	1.1	-	-
Madras	49,620.00	73.5	62,288.50	32.6	201,539.20	34.8	13,874.00	25.6	-	-
Bangalore	720.00	1.1	1,230.00	0.6	78,972.70	13.6	9,876.50	18.2	-	-
Coimbatore	-	-	-	-	1,050.00	0.2	4,080.00	7.5	-	-
South India	914.00	1.4	18,840.50	9.9	32,870.45	5.7	4,419.30	8.2	-	-
North India	1,084.00	1.6	-	-	33,483.40	5.8	4,201.50	7.8	-	-
West India	5,516.00	7.6	26,580.00	13.9	64,961.75	11.2	11,392.40	21.0	-	-
East India	-	-	53,844.00	28.2	70,092.65	12.1	4,080.00	7.5	-	-
Overseas	-	-	20,130.00	10.5	68,670.35	11.8	1,600.00	3.0	-	-
Totals	67,494.00	100.0	191,052.00	99.9	579,783.00	100.1	54,183.00	100.1	-	-
15: PRODUCTS to:										
Complex	-	-	4,540.90	1.4	4,204.20	0.9	240.00	0.1	-	-
Districts	14,388.75	14.8	17,453.00	5.6	13,552.00	2.7	23,830.00	8.0	-	-
Madras	32,314.50	33.1	68,686.40	21.9	76,386.32	15.5	16,760.00	5.6	16,500	16.500
Bangalore	1,400.00	1.4	14,350.70	4.6	54,599.64	11.1	7,637.50	2.6	-	-
Coimbatore	-	-	-	-	960.00	0.2	522.50	0.2	-	-
South India	35,230.75	36.1	34,790.70	11.1	103,350.42	20.9	25,905.16	8.5	-	-
North India	652.00	0.7	41,202.00	13.1	88,269.09	17.9	25,338.16	8.5	-	-
West India	9,937.00	10.2	54,535.50	17.4	36,094.90	7.3	97,390.84	32.7	16,500	16.500
East India	1,912.00	2.0	42,034.60	13.4	19,367.50	3.9	68,107.84	22.9	-	-
Overseas	1,680.00	1.7	36,569.70	11.6	96,712.50	19.6	31,725.00	10.7	-	-
Totals	97,515.00	100.0	314,163.50	100.1	493,496.57	100.0	297,457.00	99.8	33,000	33.000
Total value added	30,021.00	-	123,111.50	-	-86,286.43	-	243,274.00	-	(33,000)	-

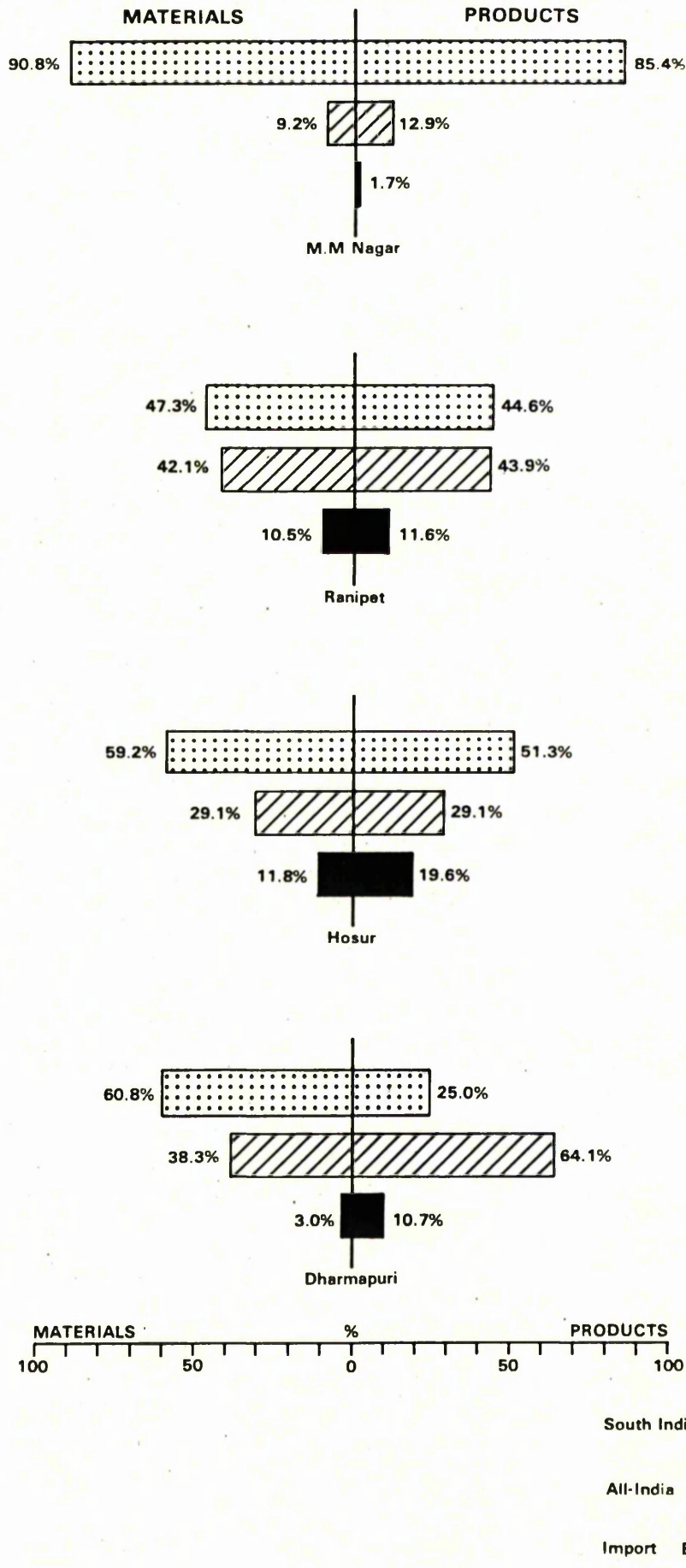
Total value of all products manufactured: Rs 1,235,632,570
 Total value of all materials used: Rs 892,512,000
 Total value added: Rs 343,120,570

Total value of exports: Rs 166,687,200
 Total value of imports: Rs 90,400,350
 Total foreign exchange earned: Rs 76,286,850

(N.B. As not all firms were in production at the time of the survey Easer gave the value of their proposed produce than gave the value of the materials they would be using. Thus for instance a negative value is recorded for Hbsur, cf. above.)

FIGURE 6: MARKET LINKS OF FIRMS BY REGION

Percentages of total value of materials brought from and products sent to different places, by firms in each industrial growth pole or area.



By modifying the aggregation classes somewhat (Figure 7), a slightly more precise picture of the types of markets in which the firms operate is obtained. This second method of aggregation (by Local, Urban South India, National Distribution and Overseas) demonstrates the very low level of linkages between the firms in the growth poles and the local economy in the districts surrounding their locations and even amongst themselves. Instead it becomes clear that most of the linkages that the firms have in South India are with South Indian urban markets, after which come national markets which inevitably also tend to be urban ('market' is used here as the place where firms both buy their materials and sell their products.) One may conclude from these histograms therefore, that for the most part the sample firms operate predominantly in an All-India urban market system with a natural tendency to concentrate on urban markets closer to their own locations rather than further away.

A further exercise was carried out with the materials and products data. Each firm was allocated a single value on the basis of its most important material source, defined as the source from which two thirds or more of its materials came. The possible material sources were grouped from very specific local places to wider regional and national areas, so that even firms which dealt with widely spread out sources of materials could be coped with in the analysis. In the same way each firm was allocated a single value for the market to which it sold most of its products. By crosstabulating these two variables against the firms' locations it emerged that the Hosur firms deal with a greater variety of sources and markets than firms in any of the other locations (Table 16).

Aside from that there are very few Dharmapuri firms which buy materials predominantly in Madras, unlike firms in all the other centres and despite the fact that taken together (Table 14) Dharmapuri firms still buy more of their materials from Madras than from any other single place. Also both the Hosur and Dharmapuri firms tend to deal more with the broader market of Urban South India while the Ranipet and M.M.Nagar firms deal more specifically with Madras, but this is only to be

FIGURE 7: MARKET LINKS OF FIRMS BY TYPE OF MARKET

Percentages of total value of materials brought from and products sent to different places, by firms in each industrial growth pole or area.

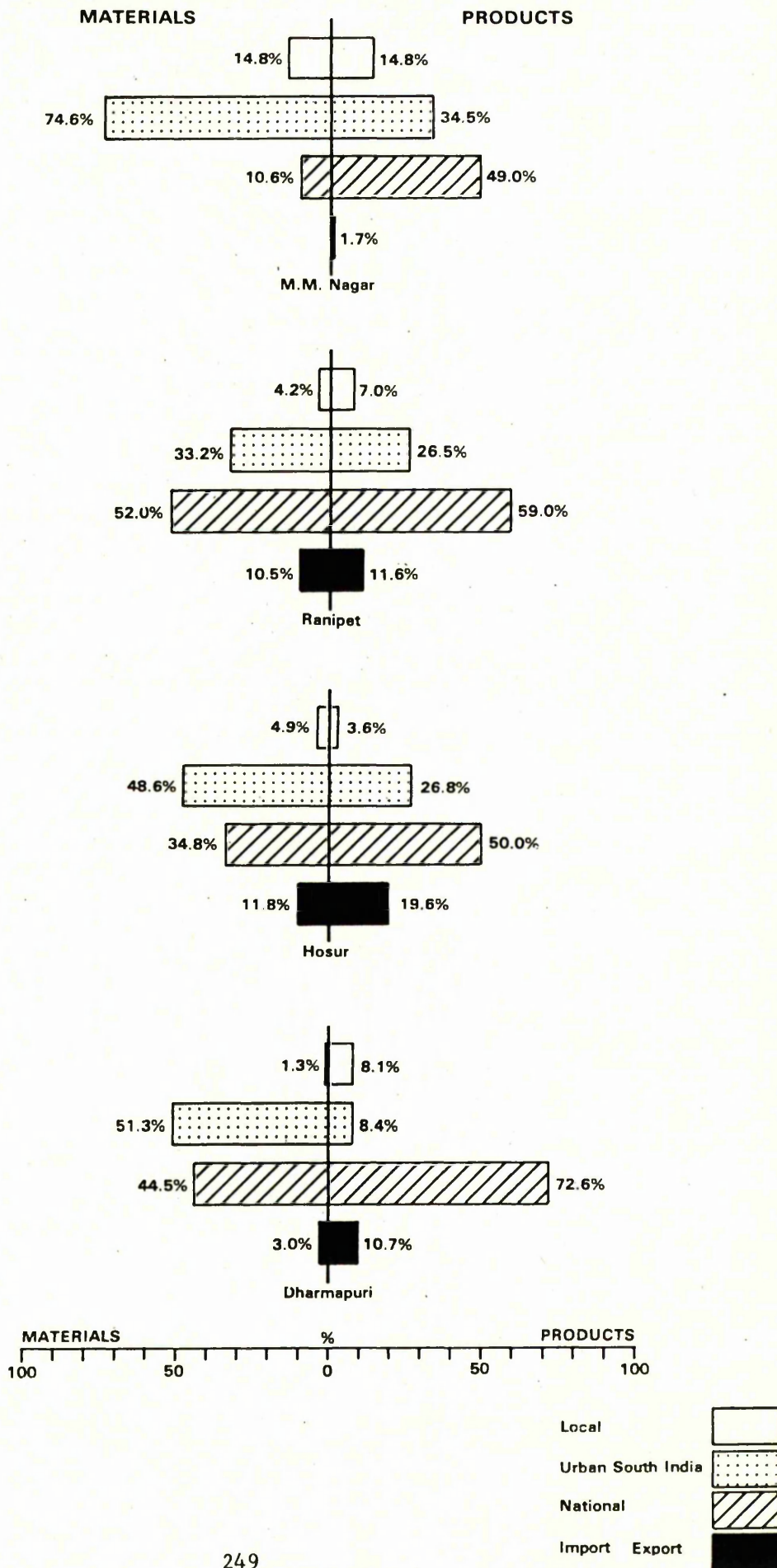


Table 16: Number of Firms Dealing Predominantly with each Market or Market Area

No. of Firms Getting					
<u>Materials From:</u>	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
Overseas	4	5	1		10
Inside Complex					
Local Districts	3	1			4
Complex & Districts				1	1
Madras	6	6	1	3	16
Bangalore		1	1		2
Urban S. India	1	5	2		8
South India	5	4	1		10
N.W. & E. India	4	4	1	1	11
All-India	3	5	3	3	14
No Reply	2	2	2		6
No. of Firms Sending					
<u>Products To:</u>					
Overseas	3	5	1		9
Inside Complex	1				1
Local Districts					
Complex & Districts				1	1
Madras	2	1			3
Bangalore					
Urban S. India		6	2		8
South India	4	4		3	11
N.W. & E. India	7	8	5	1	21
All-India	7	7	4	3	22
No Reply	<u>4</u>	<u>2</u>	<u>—</u>	<u>—</u>	<u>6</u>
Totals	28	33	12	6	82

N.B. Each firm is listed only once in each of these two distributions according to the market it deals with predominantly.

expected given the former's greater proximity to Bangalore. Finally there is a marked tendency in all locations for firms to deal predominantly with South Indian sources of materials while selling more to North, West & East India and All-Indian markets. This is entirely consistent with the image these statistics create of firms producing goods for sale on national but predominantly urban markets, for in India such markets are relatively restricted and national level distribution becomes necessary to reach large enough markets.

There is, of course, one reservation to these last comments in that these data cannot show exactly how far products are distributed and whether these urban markets act only as centres for wider and perhaps more rural distribution to consumers. This can only be answered by a careful examination of the type of products the firms are manufacturing. Briefly, although the firms produce about as many different finished goods as intermediary goods (and this is true in each location), apart from a few mass consumption articles (e.g.: food products, cotton cloth, paper, cigarettes, rubber slippers, soap and some of the drugs and tools) most of the finished goods are sophisticated tools, machinery, auto-engineering parts and vehicles not destined for general consumption. There are also a number of luxury consumption articles amongst them: canned foods, mopeds, televisions, water treatment plants, pressure cookers and other cookware.

3.2 Spatial Distribution of Firms' Factories and Offices

All firms were asked to specify where their principal offices (Registered Office, Head Office, Purchase & Sales Office, Managing Director's Office) were located and where the firm carried out its other principal functions (Main Factory, Manufacturing, Assembly, Research & Development) if applicable.

The main point that emerged from this question is that a very high proportion of firms maintain offices in Madras, on average well over 50% for all offices, though this proportion is higher for firms in M.M.Nagar and Ranipet and somewhat lower for firms in Hosur and

Dharmapuri which also have offices in Bangalore in the first case and Coimbatore in the latter. Dharmapuri and Ranipet firms also had a very low proportion of their offices located on site while in Hosur this was higher, possibly because the latter location is within easy commuting distance of Bangalore making on site offices cheaper and possibly easier.

Surprisingly, no firms at all seemed to be manufacturing on one site and assembling on another, but this may have been partly hidden by the managers' interpretations of how close links with other firms in the same group were.

Indeed it would seem that even though transport and communications have improved tremendously in India making 'backward area' industrial growth poles much more feasible, the situation has not yet improved to the extent that such spatial distributions of different functions of a firm, common in the West, are economical. Obviously if a factory is remotely situated it is still essential to maintain administrative functions requiring contact with the outside world such as purchase and sales, registered office and even the managing director's office in a city. Larger firms which can afford to install their own telex (as some of the sample firms have done) can get around this to some extent, but STD telephone services are not yet adequate to allow easy communication between remote locations and urban centres, and firms see it as being more important to be in easy reach of the people they do business with than for the administration to be right next to the factory, although such separations do cause problems. In Hosur the situation is slightly better. The Complex is in easy commuting distance of Bangalore and a new telephone exchange is being built so expectations of better communications in the near future are high. Firms seem to have responded to this by more of them locating their offices on site. That firms are not splitting up manufacturing and assembly onto different sites may also be a function of the development of transport and communications as it is essential that these should be efficient and fast to permit well coordinated and smooth operation. Despite this, however, a number of cases were noted of firms subcontracting to other

firms in very different locations which would suggest that such contractual arrangements over a distance are seen as more feasible than ones internal to the same firm. However, this could also be a result of government licensing and monopoly restrictions reducing the chances of finding manufacturers of particular components nearer by, or alternatively, simply a result of established and satisfactory contractual arrangements being easier to maintain than to start afresh.

Finally, it is worth noting that few firms have their registered offices elsewhere in India than Madras, Bangalore or Coimbatore; even elsewhere inside Tamil Nadu is rare. This would confirm that most of the firms are Tamilian or at least South Indian firms. Only a few cases of North Indian firms trying to penetrate South Indian markets or even of North Indian firms being attracted to South India by incentives or government promotion were discovered. These points also support the earlier hypothesis that a majority of the firms have close links with established South Indian and especially Tamil or Madras industry.

3.3 Labour Employed by Sample Firms

Some comments on the scale of employment have already been made (Table 6); it was noted that most firms employed less than 50 unskilled and 50 skilled workers. Hosur firms employ on average more people in all five categories of employees but this is partly due to the presence of a few very large employers pushing the averages up (Table 17). Ranipet firms employ a much lower number of skilled workers than is common amongst the other firms, though the proportion of unskilled workers they employ is similar to elsewhere. This would suggest that the Ranipet firms use technology requiring less skilled labour, explainable perhaps by Ranipet being the oldest industrial centre of those surveyed and therefore the firms there may use less sophisticated production methods.

Data collected on the wages paid by sample firms (Table 18) does on the whole seem to be fairly representative of the levels one might expect, which suggests that it is reasonably accurate despite the sensitiveness

Table 17: Average Number of People Employed by Category by Firms in Each Place

Average Number of People Employed as:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
Unskilled Workers	56.65	75.44	56.83	44.13	63.00
Skilled Workers	37.81	75.09	58.67	46.75	57.02
Clerical Staff	11.00	26.88	12.75	12.29	17.96
Technical Staff	10.44	22.34	11.92	8.25	15.45
Managerial Staff	3.20	7.34	3.17	5.13	5.13

Table 18: Average Wages Paid by Sample Firms

Average Wages Paid To:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
	(Rs. per month)				
Unskilled Workers	242.26	236.74	242.11	217.50	242.39
Skilled Workers	389.78	421.48	368.80	481.25	409.35
Clerical Staff	363.73	440.64	397.00	636.25	422.31
Technical Staff	817.38	1073.68	932.22	1595.25	994.63
Managerial Staff	1681.25	2097.05	2109.37	3133.75	2001.43

of the question. Firms may of course have consistently been answering with figures representing what they felt they should be paying rather than what they actually were paying, but it would have been difficult to crosscheck this systematically and accurately. The data for the M.M.Nagar and the Dharmapuri firms are however, more open to doubt as only 4 firms from the first place and 3 from the latter responded to this question. Moreover as the M.M.Nagar firms were not yet in production their replies would be more susceptible to exaggerations. Certainly the M.M.Nagar averages are virtually all higher than the others, the one exception being the extremely low Rs. 217/- per month

paid to unskilled workers. Otherwise the Hosur levels are the highest and the Ranipet and Dharmapuri levels are more comparable, though the higher up the scale one goes the better the Dharmapuri firms pay their employees. This would suggest that the Dharmapuri firms are having to pay fairly high wages to managers to get them to work in their more remote locations, but with their unskilled and skilled workers they can get away with fairly low levels. The same would seem to be true in Hosur though there the differential between the levels for unskilled and skilled labour is more acute. With higher wages to unskilled labour being paid in Ranipet than in Hosur our earlier hypotheses (pp.242-3) about the differences in the nature of the local economies in these two places, and the lower wages that industrialists would be able to pay in the area where the capitalist mode of production is least developed, would seem to be supported. However, these data are insufficiently systematic to prove this point.

The figures yielded by the attempt to discover whether labour was hired locally or from further afield are, it is feared, somewhat impressionistic. However, some credence may be given to them as the results are reasonably logical. Ranipet firms hire a higher percentage of their staff locally than other firms, except for clerical staff, where Hosur firms seem to be able to find more clerical staff locally. Dharmapuri firms hire the lowest percentage of employees locally except for skilled labour where Hosur firms hire even less locally. Overall the proportion of workers and clerical staff hired locally is high while for technical and managerial staff it is low. The fact that Ranipet firms hire more of their skilled workers locally than firms in the other places conforms with the fact that there already existed some industry in the Ranipet area and therefore presumably a certain pool of industrial labour. It is also possible that the relative proximity of Bangalore to Hosur and Dharmapuri made it easier to attract outside labour than it would have been in Ranipet where Madras, the nearest major industrial centre, is much further away.

The next question concerned the number of workers the firms had brought with them. Overall and consistently, the opposite proportions to the

percentages of workers hired locally emerged, which does suggest a certain degree of accuracy in these two sets of data. Ranipet firms recorded no use of imported labour at all, which seems dubious; however, as Ranipet also has a higher proportion of independent new firms than other centres, these can certainly be expected to have 'brought' fewer workers with them from elsewhere.

Regarding the adequacy of the locally hired labour's training, the majority of firms felt their unskilled and skilled labour was inadequately trained while the rest of the staff were usually adequately trained. Clerical staff in particular were usually expected to be competent even when hired locally. The main exception to this pattern was in M.M.Nagar where the workforce was generally felt to be adequately trained, presumably because the 'local' workforce here included Madras labour. Apart from this it was the Ranipet firms which were most satisfied with the level of training of locally hired labour, supporting once more the hypothesis that they had more of an existing pool of industrial labour to draw on than firms in Hosur and Dharmapuri.

Not surprisingly, the majority of firms do provide training for their workers but on the whole not for their higher echelons of employees. The big exception once again is M.M.Nagar, where 75% of the firms do not intend to provide training. The other general exception are the Dharmapuri firms, a lower proportion of which provide training in all categories than firms in either Ranipet or Hosur. This would correspond to the fact noted earlier that these firms bring in a higher proportion of their labour from outside than others and if labour is imported it can reasonably be expected to be adequately trained.

Taken together the evidence from the last two questions suggests that Dharmapuri and M.M.Nagar firms do least to improve local levels of industrial training. For M.M.Nagar firms this has been explained in terms of the satellite town's proximity to Madras, but for the more remote Dharmapuri firms one might expect them to have greater problems finding trained labour and therefore more likely to provide training.

They seem to get round this problem partly by bringing in labour but another explanation is also possible. Thus it may be that the levels of training of local labour are in fact adequate for these firms' purposes because they are also equipped with technologically advanced production methods which do not require skilled operators. Although the questionnaire provides no specific evidence of such deskilling relative to the production methods these firms might have used in their earlier factories, such an explanation would square with the earlier indications of more capital intensive technology being used by the Dharmapuri firms.

Finally the question on the residence of firms' employees shows that in Ranipet workers and other staff all tend to live nearer to the factories than in Hosur and Dharmapuri. In the latter two centres workers and clerical staff still tend to live nearby, but a high proportion of technical and managerial staff actually live in Bangalore. Thus it would seem that if a growth pole is located within commuting distance of an established urban centre, employees of the industries in the growth pole will tend to live in the city. The number and classes of employees that do is related directly to the actual distance and cost of commuting, as among the Dharmapuri firms, which are that bit more remote than the Hosur firms, only the managerial grades could afford to live in Bangalore, while among Hosur firms many of the technical staff did as well.

The labour position thus seems to vary substantially from centre to centre, though the information gathered with the questionnaire about the firms' employment practices does appear to fit the labour market characteristics outlined earlier. M.M.Nagar firms can be seen basically as drawing on the Madras labour market and though this may make the wages they have to pay slightly higher than elsewhere, it should also mean that they have fewer recruitment problems. Ranipet, on the other hand, does seem to be characterised by its own restricted pool of industrial labour which already existed before the advent of the SIPCOT Complex. Again this means that wages among these firms are slightly higher than among other sample firms, but training is also not too much

of a problem. In Hosur and Dharmapuri the picture changes. There was obviously little industrial labour in this area before the sample firms came in. They had to bring much of their labour with them and they have had to do a good deal of their own training. In Hosur in particular this is important, though the Dharmapuri firms seem to manage with less.

It is possible that these differential rates for the provision of training are also related to the types of technology being used by different firms and here the Dharmapuri firms in particular come under suspicion. They are for the most part capital intensive with high levels of investment and low levels of employment; they have also brought a fair proportion of their workers with them, hire few locally and provide little training. It is probable that some of them are fairly highly automated requiring only a few skilled operatives who know the machines well; certainly at least one of them is and employs so few workers that it falls outside the control of the Factories Act.

It is also important to note the different spatial distribution of employees' residences in each of the different centres, varying as it does with the distance from the growth pole to a major city such as Madras or Bangalore. In Ranipet, the centre furthest away from any major city, nearly all categories of employees live within a 20 kilometre radius of the factory. In Hosur only the workers and the clerical staff tend to, technical and managerial staff commuting from Bangalore in many cases. Amongst Dharmapuri firms, which are somewhat further and more inaccessible from Bangalore, only the managers with private cars were able to commute.

Before concluding this discussion on labour it is necessary to make a few comments on labour migration to the growth poles. No systematic evidence was collected on this, but from enquiries in each place there appeared to be little or no migration in the Ranipet area, whereas in the Hosur and Dharmapuri area there were several reports of labour immigration already starting. Coimbatore seemed to be one place where this labour was coming from. As the overall number of jobs being

created in Hosur is high (5,000 unskilled and skilled jobs being created by the 33 Hosur sample firms alone), and as many of these jobs were still only in the pipeline at the time of the survey, immigration to the area can be expected to increase. This is especially likely as even though the firms concerned did bring a number of workers with them, they still expected to hire a majority of their labour locally and without a massive switch by local inhabitants from agriculture to industrial jobs, this labour does not yet exist in the area.

3.4 Financial Characteristics of Firms

The absolute and average levels of fixed capital (taken as investment in land plant and machinery) and working capital investment have already been noted, but little was said about variations between different locations. Statistical details for the levels of fixed capital investment are given in Table 19, those for working capital in Table 20. It was noted earlier that the overall average fixed capital investment was Rs. 12.3 million and for working capital Rs. 4.4 Million. Dharmapuri firms had an average fixed capital investment nearly three times as large as the overall average at Rs. 34.6 million, conversely M.M.Nagar firms were much smaller with an average fixed investment of Rs. 3.4 million. Ranipet and Hosur firms fit the overall average much more closely. The figures for working capital investment show very similar variations to those of fixed capital investment, tending to be about one third of the latter. This ratio however, changes slightly from place to place with its lowest level at 1:3.5 in Dharmapuri and rising to 1:1.6 in Ranipet. Once again these data point to much more capital intensive production methods amongst Dharmapuri firms and in Ranipet, to a lower degree of fixed capital investment in relation to total investment.

The SIPCOT registers on incentives issued also yielded a figure labelled as 'Total Investment. Catalysed' in relation to each Central Subsidy allocated. This figure was found to correspond reasonably closely to the data for the fixed capital investment given by the firms themselves and thus served as a useful crosscheck. However, there is a

Table 19: Details of Fixed Capital Investment by Firms

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
					(Rs. '000s)
Mean	8,184	9,884	34,597	3,427	12,285
Median	4,000	4,483	10,287	1,300	4,500
Minimum	500	300	1,800	300	300
Maximum	50,000	70,000	141,100	10,300	141,100
Sum	204,591	306,405	345,974	27,420	921,390
Valid Cases	25	31	10	8	75
Missing Cases	3	2	2	0	7

Table 20: Details of Working Capital Investment by Firms

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
					(Rs. '000s)
Mean	4,964	3,390	9,886	1,250	4,389
Medium	1,600	1,217	2,875	962	1,502
Minimum	200	80	1,200	300	80
Maximum	35,000	22,683	45,000	2,900	45,000
Sum	124,104	101,697	69,200	8,750	307,251
Valid Cases	25	30	7	7	70
Missing Cases	3	3	1	1	12

marked tendency for firms to quote a lower figure to SIPCOT than they did in the survey which is interesting and might even indicate that they had been more frank in the survey than to government officials!

Turning to the incentives the firms are receiving, it was stressed above that the number of incentives sanctioned corresponds closely to the number of firms actually in production. However, on closer examination it becomes apparent that although the Central Subsidy seems to be distributed fairly equitably, the Sales Tax Loan sanctioning is

far more erratic. While in Ranipet about half the firms in production are receiving a Sales Tax Loan, in Hosur only one quarter are and in Dharmapuri 9 firms are while only 8 are in production! It would seem that Dharmapuri firms are benefitting far more from this incentive than any of the other groups of firms in the sample. To investigate this question further, the STL distribution was crosstabulated against the scale of firms, from which it emerged that about 50% of LSIs are receiving a Sales Tax Loan while only 23% of the MSIs and none of the SSIs are. Taking this even further, a crosstabulation of scale against stage of project shows that about half of both LSIs and MSIs are in production and therefore presumably eligible for the Sales Tax Loan, thus it would seem that LSIs are twice as successful as MSIs at actually obtaining the Loan.

Looking at the sanctioning of the different incentives through time, one or two interesting points emerge. First, no Term Loans have been approved since 1978 (i.e. for 18 months: 1979 plus first half of 1980) which is strange as since 1972 some were sanctioned every year apart from 1976. Secondly, since 1978 incentives to Ranipet firms seem to have been slowing down, which would confirm the suggestion made earlier that Ranipet is witnessing a decline in popularity as a location in the face of competition from Hosur.

Certain irregularities seem to exist in the sanctioning and disbursement of incentives and these are concentrated among those which are the responsibility of the State Government, while the Central Government 15% Subsidy is apparently being sanctioned regularly and smoothly to all firms about to go into production. That this discrepancy should exist is all the more strange as the Central Subsidy, though provided by the Government of India, is also administered by the State Government industrial promotion agencies. Possibly such State agencies are more careful with their own money than with that which comes from the Centre, but certainly it would seem that the frequent complaints made by industrialists about the State industrial promotion agencies do have some founding in reality, though obviously they affect some groups of firms more than others.

4. Conclusion

This chapter has tackled two distinct subjects. First, it has described the characteristics of the sample of firms locating new factories in the backward areas of Northern Tamil Nadu and secondly it has tried to describe the environment they are locating in and particularly that of the immediate areas around the two industrial growth poles of Ranipet and Hosur where most of them are going. As well as a simple rundown of these firms' characteristics the chapter has sought to identify certain patterns and variations in the nature of firms going to the different locations. A number of such differences were identified and for the most part these could be related to the environmental characteristics of the firms' locations.

Of particular interest in this respect were the group of a dozen firms which had chosen locations in Dhamapuri District in the vicinity of Hosur but not in the Hosur SIPCOT Complex itself. This group seems to have a number of distinct characteristics. In particular they seemed to use more capital intensive production methods, have closer links with established Madras companies and be more adept at obtaining the Sales Tax Loan incentive than the majority of the other sample firms. In addition they had deliberately chosen extremely isolated locations and paid relatively low wages. But what is even more crucial is that to a certain extent they can be regarded as trend setters because they chose their location independently of SIPCOT and many of them even before SIPCOT had announced the Hosur Complex. In the next chapter the views of these firms' managers will therefore be analysed with particular care.

However, the main value of this chapter is that it has identified a number of factors which give an indication of the type of impact that firms can be expected to have on the development of the backward areas centred on Ranipet and Hosur. In this regard the question of labour and employment were isolated as the area in which and through which the firms would probably have the greatest impact, it having been demonstrated that on a materials and products basis the firms dealt

with much wider national urban markets and not with the local economy of their immediate surroundings. It was felt that the creation of such large numbers of industrial wage jobs was likely to gradually affect the whole economy of the area around the new factories. The immediate direct effect would be felt by the workers themselves and their families but gradually through their spending the effects would be felt more widely by those involved in trade, the provision of services and the housing market. Moreover, the effect was likely to be greatest in the places where these new industrial jobs presented the greatest change from existing employment patterns in the area. Thus the impact was likely to be more dramatic in the Hosur and Dharmapuri area than around Ranipet, where the population was a good deal larger and where some capitalist industrial jobs already existed.

What the exact effect will be is hard to predict precisely, but it seems likely to be extremely disruptive at least in the short term. The new industrial jobs will for the first time be introducing a fairly large number of cash incomes into the local economy, but their number will still be restricted so that not all local people will find an industrial job or be closely related to someone who does. Of those who don't there will be a certain number who will be able to provide services or sell everyday goods to those that do and these people will also benefit immediately. The remainder, and in an economy which has included a large number of small independent farmers many of them involved in subsistence farming there are likely to be many of these, seem likely to find themselves increasingly marginalised as prices rise in response to the higher wages of the industrial workers, thereby making them relatively poorer. Again the impact will probably be greatest where a cash economy and the capitalist mode of production are least developed and the proportion of new jobs to existing population is highest. Thus in Hosur there was already evidence of rapidly rising prices for food and housing at the time of the survey, rents being close to Bangalore levels, while in Ranipet such inflation was not referred to by local residents.

This chapter has also set the scene for the next one, where the primary

objective will be to analyse why the firms have chosen their new locations and to what extent they have been influenced in doing so by the government policy and incentives. Already this chapter permits us to eliminate one or two possible reasons for the firms' location decisions. Thus it is clear that the relative locations of the firms' sources of materials and product markets were not a particularly important factor, as by and large the sample firms are operating in nation-wide urban markets and not local ones. Equally it is now clear exactly what the firms were facing in terms of infrastructural conditions when they took their location decision. Finally it is now possible to point to a number of issues which seem to require closer attention, such as the firms' view of the labour characteristics in their new environment and possibly their views on the disbursement of government incentives.

Footnotes:

- 1 In the remaining tables relating to the sample firms in this Chapter the column for Sholingur has been omitted as it contains only one firm which is not central to the case study. However, the data for this firm have been included in the Totals column of each table. Thus the Totals columns will always add up to 82 cases even though the body of the Tables only add up to 81 cases.
- 2 Much of the debate has been collated in one volume entitled 'Studies in the Development of Capitalism in India' (Patnifak, Banaj_i, Rudra, Thorner, Chattopadhyay et al.1978) which brings together 16 contributions from the EPW and the 'Social Scientist'. Without going into the intricacies of the debate, it should be noted here that most of the participants attempted to describe their view of Indian agrarian relations in terms of only one mode of production. However, in one of the few substantial reviews of the debate, Harriss (1980) suggests that throughout it there are problems with understanding the relations of production in agriculture in terms of one mode only, particularly as there is little point in doing so if it then

impossible to conceptualise the relationship between agriculture and the rest of the economy. Instead, he argues, a conceptual framework involving an articulation of several modes of production would be more useful in the Indian case as it would cover the existence of both capitalist and pre-capitalist modes in agriculture as well as in industry.

3 Other authors have also noted this trend and have suggested that it indicates an increased class polarisation (Alexander, 1975) and the emergence of capitalist farming in Tamil Nadu (Anonymous 1976). Bêteille (1965) documents the emergence of a class system in the agrarian relations of Thanjavur District and Gough (1980) concludes that the capitalist mode of production has become dominant in the same area especially with the mechanisation of agriculture since the mid-1960s.

CHAPTER 8

THE CHOICE OF FACTORY LOCATION

THE CHOICE OF FACTORY LOCATION

1. Identifying Explanatory Variables

This penultimate chapter discusses the returns of the second part of the industrial survey introduced above. This deals with the managers' opinions of the government industrial dispersal policy and their reasons for choosing their factory location. For the sake of greater clarity these returns are discussed in two stages. First, the aggregated opinions of the firms' managers are broken down by location, following the pattern established in the last chapter. Thus any major differences of opinion which result from the firms' different locations should be identified. The second part of the chapter will take this exercise further, attempting, through a series of crosstabulations, to isolate other characteristics or differences between firms which appear to help explain the opinion their managers voiced during the survey interviews.

The order in which the various issues are discussed is essentially that adopted in the original survey questionnaire.

1.1 Views of Government Industrial Location Policy

The interviewees were first asked their opinion of the three main elements of the government industrial location policy and their answers recorded on a five point scale from excellent to very bad. The resultant scores demonstrated a very high level of support for the government policies and particularly in the two locations of Hosur and M.M.Nagar (Table 1). 70% or more of firms declared each of the policies were either good or excellent. The general policy of dispersal was the one that received most support with nearly 83% of firms in favour of it. Support for the growth poles was slightly lower and for the ban on industrial development in cities lowest with 69.5% support.

Ranipet and Dharmapuri firms are on average more negative about the policies but they still follow the general pattern of response, though

support for growth poles not surprisingly drops very low among Dharmapuri firms. The response from the Dharmapuri firms is also affected by the fact that 4 of the 12 did not reply to the opinion survey questions. That Ranipet firms are slightly less keen on the policies than Hosur firms may be an indication of a growing acceptance of the policies amongst industrialists, as the latter group have on average taken their dispersal decisions some years after the former. The higher support for the more abstract principle of dispersal is understandable, particularly as most Indian industrialists would consider it very poor public relations to be caught opposing the dispersal of industry to rural parts of the country, as this is a widely accepted premise of development planning in India. The ban on industrial development in cities is a much more concrete restriction on their activities however, one which is more than likely to be financially disadvantageous. Hence the lower level of support for the ban. There were also a few interviewees who expressed dissatisfaction with it being a blanket restriction which allowed for no flexibility in dealing with firms perhaps more suited to an urban location. On the other hand there were those that felt that this was precisely its major quality as an absolute ban is easier to enforce than a partial one.

Finally the policy of establishing growth poles in backward areas is also reasonably innocuous and easy to support as it implies more help to industry from government than the latter might otherwise get round to giving. Objections to it mostly focussed around the concentration of workers in one place that growth poles create. This, it was frequently argued, encouraged trade union activity and 'labour problems'. This view was usually expressed by managers of larger units or of firms which had had recent strikes and industrial disputes in their main factories in Madras. Though smaller firms were also concerned about industrial unrest and its spreading from factory to factory in growth poles, they were usually more in favour of concentration as this could be useful in dealing with eventual problems of other sorts, such as the provision of facilities and in dealings with government bodies which were felt to be more likely to be successful if backed by several firms.

Table 1: Opinion of Main Elements of Government Industrial Location Policy

	No. Firms from:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
						No.	%
A - <u>Ban on Industrial Development in Major Cities:</u>							
Very Bad Policy	-	-	-	-	-	-	-
Bad Policy	9	7	1	1	18	22.0	
Unsure	1	-	-	1	2	2.4	
Good Policy	16	24	6	5	52	63.4	
Excellent Policy	1	2	1	1	5	6.1	
No Reply	1	-	4	-	5	6.1	
B - <u>Dispersal of Industry to Backward Areas:</u>							
Very Bad Policy	-	-	-	-	-	-	-
Bad Policy	5	1	-	1	7	8.5	
Unsure	2	-	-	-	2	2.4	
Good Policy	17	32	7	5	62	75.6	
Excellent Policy	3	-	1	2	6	7.3	
No Reply	1	-	4	-	5	6.1	
C - <u>Growth Poles for Industrial Location in Backward Areas:</u>							
Very Bad Policy	1	-	-	-	1	1.2	
Bad Policy	5	3	2	-	10	12.2	
Unsure	-	2	-	-	2	2.4	
Good Policy	17	25	5	8	56	68.3	
Excellent Policy	4	3	1	-	8	9.8	
No Reply	1	-	4	-	5	6.1	

It was also interesting that some of the managers felt the policies were in the national interest but not necessarily in theirs, so they felt a certain duty to comply with them. Others also questioned the

precise value of the policies in terms of the developmental effect they would have on the receiving 'backward areas'.

Given the usual view the public in general and government officials have of industrialists, their high degree of support for the government industrial location policies is somewhat surprising and leaves room for thought. Either industrialists do indeed have a higher sense of 'national duty' than they are given credit for, or they would at least like people, and particularly researchers, to think they do. Alternatively there are more advantages for them in these industrial location policies than is at first apparent; or in other words they may in fact be keen on dispersal for their own reasons, in which case the government policy is doing no more than facilitating or prompting a trend that already exists.

1.2 Dispersal to Backward Areas

The interviewees were asked what their ideal location would be if no government industrial location policy existed. The pattern of replies was fairly predictable with 51% of managers saying Madras, and in Ranipet and M.M.Nagar this rose to 71 and 75% respectively (Table 2). Bangalore came out as a rather poor overall second with 16% in favour of it and not too surprisingly these were nearly all Hosur firms and one Dharmapuri firm. In all about 80% of the firms specified an urban location as being preferable, while only 11% felt they would still have chosen the same location or another growth pole in a backward area. This proportion was particularly high in Ranipet (14%), while none of the Hosur firms said they would have gone there without government prompting. Dharmapuri firms had no distinct preferences and were spread fairly evenly over the whole range of different replies.

Although this pattern of response does suggest a fairly high degree of conflict between the government's policies and the aspirations of firms, there are nevertheless a number of exceptions. Thus there are the 11% of firms which would have dispersed of their own accord and among the Dharmapuri firms there is a fairly high level of preference

among those that responded for dispersed rural locations. These exceptions do suggest that the industrial dispersal policy is not simply a principle favoured by government planners but has some real support in certain industrial circles as well.

Table 2: Firms' Ideal Locations in Absence of Government Policy

Ideal Locations Suggested by	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
					No.	%
Firms: Madras	20	14	2	6	42	51.2
Bangalore	1	11	1		13	15.9
Urban (unspecific)	1	7	2		10	12.2
Same Loc./G. Pole	4		2	2	9	11.0
Rural			1		1	1.2
Semi-urban	1				1	1.2
No Reply	1	1	4		6	7.3

Table 3: Operating in a Dispersed Backward Area Location

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
					No.	%
A Lot More Difficult	4	7	2	1	14	17.1
More Difficult	14	14	4	5	38	46.3
No Real Difference	4	5			9	11.0
Easier	5	7	1	2	15	18.3
A Lot Easier					-	-
No Reply	1		4		5	6.1

In an attempt to assess just how difficult operating in a backward area location was for firms, several questions were asked about the

difficulties involved, whether it was uneconomic without the government incentives and whether the incentives were adequate to meet the costs. From this it emerged that most firms did indeed find or expect to find it more difficult, though surprisingly 11% of them felt there was or would be no real difference and over 18% felt it was or would be easier than operating in an urban location (Table 3). The main difficulties specified involved, above all, the lack of various facilities: housing, infrastructure, medical and educational facilities were frequently referred to, especially by Hosur managers. There were also other problems relating to the operation of firms: the lack of skilled labour (particularly Hosur firms again), difficulty in getting technical and managerial staff to work in remote locations and the cost and problems of transport. A few also complained about the inefficiency of government agencies in providing facilities and the lack of ancillary and repair workshops in the area, though others especially in Ranipet said these were beginning to appear. Finally, there were a number of complaints about the lack of an 'industrial culture' among the local inhabitants, by which was meant absenteeism among local labour and the unreasonably high expectations of local labour with respect to wages and conditions. In general, however, such comments about wage levels were made by managers recently involved in pay disputes with their workers.

On the whole these complaints are predictable both in their nature and in the frequency with which they were raised. The absence of a whole variety of facilities that would be available in an urban setting is extremely important to firms, and the feeling that the government agencies should be doing more about such lacunae was common. Transport is apparently the most crucial problem, as many firms in both Ranipet and Hosur complained about this. Communications, on the other hand, is a problem more closely associated with Hosur and presumably the new telephone exchange will do a lot to relieve that. The lack of social facilities has considerable repercussions on the recruitment of skilled personnel and a high level of government investment and coordinated effort would be required to alleviate this with the speed industrialists would like. A unitary agency on the lines of a British

New Town Development Corporation would seem to be one way of tackling the coordinated planning and implementation required to solve this type of problem. However, the cost of developing a full new town would be high and there is a danger of creating a new isolated industrial township rather than actually developing the 'backward area' as originally intended.

On the question of the adequacy of government incentives, 61% of firms felt they were inadequate to meet the costs of locating in a backward area, and this proportion rose to 87% amongst M.M.Nagar firms who were not eligible for the Central Subsidy (Table 4). In Hosur there was a markedly higher level of acceptance of the adequacy of the incentives than elsewhere, but it is unclear why this should be the case as the feeling is not shared by the Dharmapuri firms located in the vicinity.

Table 4: Firms Views on the Adequacy of Incentives

Are Incentives	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
Adequate to Meet Costs					No.	%
of Backward Area?						
No	17	18	7	7	50	61.0
Yes	8	14	1	1	24	29.3
Unsure	2	1			3	3.7
No Reply	1		4		5	6.1

As to whether operating in a backward area would be uneconomic without the government incentives, 69% of the firms not unexpectedly replied Yes and 24% No. But the distribution of these varied greatly from place to place (Table 5). Ranipet firms were strongest in their insistence that government incentives were necessary with 89% replying Yes and only 7% No. At the opposite end of the spectrum Dharmapuri firms, again not surprisingly, insisted that backward area operation was economical in a ratio of 50% replying No and only 17% Yes. Hosur and M.M.Nagar

firms were much closer to the average replies.

Table 5: Economics of Backward Area Location

Is Backward Area Location Uneconomic Without Incentives?	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
					No.	%
No	2	9	6	2	20	24.2
Yes	25	23	2	6	56	68.3
Unsure		1			1	1.2
No Reply	1		4		5	6.1

The most remarkable aspect of these replies is really the strong feeling among Ranipet firms that backward areas are uneconomic. The nearly 90% replying Yes here contrasts with Hosur's mere 70%. This too at a time when the Ranipet firms are more established and therefore more likely to be economically secure than the Hosur firms which for the most part are just starting up. The difference could be explained in two ways. First one might argue that the Ranipet firms with their longer experience are more realistic about the problems and costs of operating in a backward area. Alternatively one might argue that this difference is another sign of an increasingly positive perception of backward areas as viable and advantageous locations for industry. Thus the Hosur firms which took the decision to disperse later than their Ranipet counterparts were keener to do so than the latter which moved much more reluctantly. But this argument could be countered by the fact that Hosur is not an average backward area, given its proximity to Bangalore and that therefore the Hosur firms' perception of what a backward area location involves is likely to be more positive than that of firms which have experienced a more remote backward area.

1.3 Growth Poles for Industrial Location in Backward Areas

Growth poles were certainly seen as easier locations in backward areas by most firms (73%) but fewer firms felt that they were their preferred location in a backward area (Tables 6). Hosur firms were much more in favour of growth poles than their Ranipet counterparts. In view of their opinion that fewer of them felt backward areas were uneconomic than Ranipet firms this more positive reaction to growth poles is a little surprising. This could be interpreted as a more general support for the government's industrial location policy on the part of the Hosur firms while those in Ranipet are keener on the cash incentives.

Table 6: Growth Poles as Backward Area Locations

	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>	
					No.	%
Is a Growth Pole						
Easier as a Backward						
Area Location?						
No	7	4	4		16	19.5
Yes	20	28	4	8	60	73.2
Unsure		1			1	1.2
No Reply	1		4		5	6.1
Is a Growth Pole the						
Preferred Location in						
a Backward Area?						
No	7	7	5	1	21	25.6
Yes	20	25	3	6	54	65.9
Unsure		1		1	2	2.4
No Reply	1		4		5	6.1

Alternatively it could again have a temporal explanation, with Ranipet firms more aware of the disadvantages of growth poles and the limited

degree to which they really mitigate the difficulties of operating in a backward area. For the firms that did not like growth poles their main reason appeared to be that the concentration of factories encouraged labour unrest and industrial disputes. 13 or one third of the firms commenting on their reasons for disapproval stated this as their main reason. Obviously the avoidance of industrial unrest is seen as one of the main advantages of a really remote location.

As to whether the growth pole policy could be improved, only 5% of firms felt no improvement was possible while all the others felt improvements were possible and most of these gave details as to how this might be done. The suggestions were numerous and varied but most of them could be grouped into four categories. Infrastructural improvements received the most mention. Financial and incentive improvements were not mentioned frequently and when they were it was usually in terms of advocating more of the same. No new incentives were suggested. Improvements to the government administration of growth poles were frequently referred to, often in comparison with other States like Maharashtra. Finally, changes in actual policy were suggested. The main infrastructural improvements that were suggested were social facilities: housing, education and medical facilities. However, other improvements, all more related to the operational side of industry were also raised. These included better provision of electric power, roads, rail connections, sewage plants for industrial effluent (especially popular among the chemical firms in Ranipet), public transport, technical training facilities, etc.

Administrative improvements referred to, involved for the most part pleas for faster and more efficient work by government agencies but also included frequent suggestions that SIPCOT should be more dynamic and enterprising in its style of operation and here SICOM and GIDC (cf. Chapter 6) were usually cited as models. This is not to say that SIPCOT came off poorly in comparison with other industrial promotion agencies in the country. On the whole it was seen as one of the best, but usually managers felt that it could still learn from its Maharashtra and Gujarat counterparts. Once or twice the idea of a unitary agency to

develop both the industrial side of growth poles and the residential and social aspects was mooted. Alternatively a single agency office on site with powers to handle all the different sanctions and approvals required by different government departments was suggested.

Changes to the policy of growth pole development were not too frequently raised but a few are worth mentioning: smaller growth poles and more of them; restrictions on Large Scale Industry so they would not dominate growth poles; an initial development boost provided by the installation of a large public sector plant; more industry specific growth poles and locating them further away from large cities (than Hosur from Bangalore) were all suggested. One or two firms also felt that the ban on development in cities should only apply to LSIs which should 'open up' backward areas with MSIs following them at a later stage.

Overall then the picture is one of general approval of the growth pole policy and the lines on which it is being run. The complaints about government inefficiency are far from surprising and indeed might have been expected to occur more often. The area which needs the most improvements is the whole field of urban infrastructure provision. The idea of setting up a unitary agency to deal with such development seemed a popular one although it was not the subject of a specific question in the questionnaire.

The question about whether a selection procedure for industries going to growth poles should be instituted, did not meet with any particular enthusiasm or even give rise to interesting replies. Opinion seemed to be fairly evenly split on the issue and all the suggestions made as to what type of procedure was possible were standard mundane replies, many of them contradicting each other. Apparently industrialists have no better ideas about the operation of industrial development processes than planners in industrial promotion agencies do!

1.4 Formation of Industrial Links

The questions on the industrial links firms were proposing to establish with other units in their respective Complexes or in the neighbouring districts resulted in little extra conclusive information. However, it did emerge that only about two thirds of the firms in each place expected to establish links and also that they anticipated no major difficulties in doing so.

Of greater interest were the replies to a question on the time firms expected it to take for them to establish the local links they required. This yielded the information that one third of the firms expected to have formed the necessary links inside the first year from the commencement of production, 50% by the first year and a half and 75% after 2.5 years (Table 7). The number of firms expecting it to take

Table 7: Years Firms Required to Establish Links

<u>No. of Years</u>	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>		<u>Cumulative</u>	
					<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
0	13	9	7		29	35.4	29	35.4
1	5	10	2	4	21	25.6	50	61.0
2	3	5		1	9	11.0	59	72.0
3	1	2		1	4	4.9	63	76.9
4	2	2	1		5	6.1	68	83.0
5	2	1	2	1	6	7.3	74	90.3
6				1	1	1.2	75	91.5
7							75	91.5
8	1	1			2	2.4	77	93.9
9	2	2			5	6.1	82	100.0

longer dropped away rapidly after the two year limit. Thus one can reasonably expect that after two to three years a new firm in the area should have established the links it requires. Expanding this to the level of the whole industrial growth pole, it would seem that from the time the first firm goes into production, and providing there is a steady rate of new firms starting up, five to ten years should see a well established network of industrial linkages in and around a successful growth pole. It will of course take another few years before the full force of the multiplier effects through these initial links and then secondary links come to be felt throughout the area around the growth pole. Thus after about ten years of operation it should be possible to assess the impact a growth pole will have on the local economy of its region.

1.5 The Effect of the Ban on Madras Industry

In an attempt to gauge how managers visualised the future of industry in big cities after the ban on industrial development in major urban areas, they were asked a few questions about industry in Madras. Few felt that the ban would have any serious effect on the health of industrial development in general. If firms were going to be set up or expand, such a ban was not going to stop them, and only one or two managers were able to think of cases of proposals for new industrial projects which had been shelved because of the ban.

Asked what type of industry they felt was suited to cities such as Madras and should perhaps be exempted from the ban, managers gave a very wide range of replies. Despite this variety and the impossibility of identifying one coherent view of what industry industrialists felt should be allowed in cities, it was interesting to note a fair degree of consensus around environmental considerations and pollution. Possibly this is a sign of a broader concern with industrial congestion in cities; certainly it relates to an increasing awareness amongst upper class sections of Indian society with the quality of their environment. Congestion is seen as one of the most important problems of Indian cities and apparently some industrialists at least realise

that they may directly contribute to its reduction through the intelligent location of their factories.

The other consideration that was frequently raised here was the use of infrastructure available in Madras. Many managers felt that firms which had a particular need for certain facilities available in Madras and not elsewhere should be allowed to locate in or near the city. Import or export oriented firms were an obvious example. Scientific laboratories and testing facilities was another example, though Bangalore was usually referred to in this context. Also firms which were direct auxiliaries to already existing Madras firms were mentioned. Finally selection on the basis of the technology employed was suggested, and although different firms raised some completely contradicting ideas here, the general principle seemed to be that the rational expansion of Madras's existing industrial base should be allowed.

1.6 Firms' Views of the Government Incentives

There is little doubt that the most popular incentives provided by the government are the financial ones and in particular the outright cash grant of the Central Government 15% Subsidy on fixed capital investment (Table 8). The incentive schemes relating to production (Sales Tax Loan & Income Tax Relief) came second. Physical infrastructure was next, with development advice services and administrative assistance in dealing with Central Government being of little importance. In all, therefore, a pattern of preference much as one would expect emerged. There was also little variation in the response from firms in the different locations, though M.M.Nagar firms which are not eligible for the Central Subsidy did not put it in first place. Nor did the Dharmapuri firms for that matter, even though they are eligible; they tended to prefer the Income Tax Relief scheme. This latter deviation from the overall pattern is very probably linked to the high level of capital investment among Dharmapuri firms, as the Central Subsidy has a ceiling of Rs 1.5 million on it and therefore becomes of little consequence to projects of over Rs.15 to Rs.20 million.

Table 8: Importance of Government Incentives in Firms' Location Decisions

No. of Points (1-8) Given by Firms to:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u> No.	%
Concessional Finance	78	93	8	45	224	34.1
Central 15% Subsidy	159	195	33		395	60.2
Sales Tax Loan	154	118	30	25	333	50.8
Cheap Electricity	92	61	28	23	209	31.9
Assistance with Govt. Permits	20	17	7	2	46	7.0
Industrial Devlpmt. Advice	7			2	9	1.4
Site & Infrastructure	72	103		26	201	30.6
Income Tax Relief* (Income Tax Relief Adjusted)	(15)	100	39	(0)	162 (324)	24.7 49.4)

The Firms ranked the 8 incentives from 1 to 8, these ranks were then used as point scores for this table, thus total possible: 656 or 100%

* Due to an error in the questionnaire, the first 38 interviewees mostly in Ranipet and M.M.Nagar, were not asked about the Income Tax Relief, thus the scores for these two places are not truly representative and in the last row of the table the score of the Income Tax Relief has been adjusted upwards, extending the response pattern of firms who were asked.

On the question of what other sort of incentives could be provided, responses tended to confirm the above pattern. Financial incentives were the most frequently mentioned, physical infrastructure coming second. Interestingly, however, in addition to about 6% of firms which gave no reply to this question, 19.5% felt that no more incentives were

required and another 15% that all that was required was to improve existing incentives, by which they usually meant improve the administration, efficiency and speed with which incentives were granted. Some firms felt that the industrial promotion agencies were not as forthcoming with the incentives as they should be, and frequently that the attitude of the administrative officers was to ensure that they released as little cash as possible rather than to encourage firms facing difficulties with a new project in a remote location.

Thus although there are frequent complaints about the level of incentives and the way they are administered, there are also a fair number of industrialists, one third of this sample, who feel that the government agencies are doing a reasonable industrial promotion job.

1.7 Firms' Reasons for Location Decision

From the response to this multiple choice question it would appear once again that the government financial incentives are the most important deciding factor in the sample firms' decision making (Table 9). Overall, proximity to a city was the second most important reason and the provision of infrastructure came third. Although this is true overall as it is true among the two largest groups in the sample, the Ranipet and Hosur firms, it does not hold among the M.M.Nagar and Dharmapuri firms. These seem to have somewhat different priorities. Obviously if M.M.Nagar firms had been in need of money, they would have chosen Ranipet and Hosur where the Central Subsidy is available. Not surprisingly therefore they attached more importance to a developed site with infrastructure and the proximity of Madras. Indeed M.M.Nagar is the nearest place to Madras where industrial development is permitted. Similarly Dharmapuri firms seemed to be primarily concerned about two things: proximity to Bangalore (they couldn't get nearer and remain in Tamil Nadu, which most of them have to because their licences are State specific if not District specific), and the desire to avoid industrial unrest, for which they feel as remote a location as possible is best. That Dharmapuri District should also have a good climate and

be a backward area with government incentives available are added advantages, but arguably no more than that given the rating they received in this question.

Table 9: Importance of Factors Influencing Location Decision

Adjusted Weighting* of Importance of Following Factors:	<u>Ranipet</u>	<u>Hosur</u>	<u>Dharmapuri</u>	<u>M.M.Nagar</u>	<u>Total</u>
	%	%	%	%	%
Near to Existing Operations	30	48		50	35
Developed Site	57	55	6	62	51
Climatic Factors	4	51	50		28
Near Materials & Fuel	26	23	6	50	25
Govt. Financial Assistance	83	91	50	56	80
Availability of Labour	9	8	12	31	11
Nearness to Market	11	22	19	50	20
Low Cost of Site	37	47	31	37	41
Ban on Urban Industry	20	50	31	50	37
Less Industrial Disputes	17	17	75	37	26
Proximity to a City	31	73	75	56	60
Other 1	17	23	12	12	20
Other 2	2	3			3
No. Firms not Replying	1	1	4		6
Total Score Possible (100%)	54	64	16	16	152

* To make all columns comparable scores were adjusted to percentages of Total Score Possible. Responses were weighted (influential: x1; very important: x2) to give scores.

The ranking of the three most important reasons for firms' location decisions produced essentially the same pattern of response with one or two minor differences in emphasis. The importance Dharmapuri firms

attached to the avoidance of industrial disputes rose slightly to become the most important factor in their decision making. The importance the Ranipet and Hosur firms gave to the ban on industrial development in cities also increased to become the third most important factor for both groups. Apparently the ban was instrumental in the decision by many firms to disperse, though it never became the most important reason.

1.8 Opinion of Location of Existing Growth Poles

The final questions in the questionnaire related to how firms viewed the actual location of the growth pole they had chosen or had located near. Had SIPCOT made a good choice of site? Support for all three locations (Ranipet, Hosur and M.M.Nagar) was generally high, though markedly less for Ranipet than for the other two, and given the replies to previous questions this can probably be mostly attributed to its greater distance from a major urban centre. Certainly when this question was followed by asking managers why they thought the site of their growth pole had been well chosen, most of them referred to its being on a National Highway and those in Hosur nearly always referred to the proximity to Bangalore.

1.9 Location as an Explanatory Variable

Of the three main elements of the government industrial location policy, the decision to disperse industry from major urban-industrial centres to designated rural 'backward areas' was the one that received the most support from the industrialists in the sample. 83% of them supported the policy, yet in further questioning it emerged that 80% of them would also ideally locate in an urban centre if there were no government dispersal policy. The contradiction is fairly blatant yet probably remains a fair representation of their views. In an ideal world industrialists would no doubt prefer an urban location, but they are also fully aware of their current position. Several recognised that arguably they had a certain 'developmental responsibility to the nation' and had to adhere to the dispersal policy. Others realised that

urban pollution and congestion might be reduced if industry could be dispersed. There were also 11% of managers who said they would have chosen the same location even in the absence of government dispersal policies. In some ways then the absolute ban placed on industrial development in cities was a very shrewd measure in that it placed all industrialists in the same boat, leaving little room for abuse or giving certain firms a differential advantage over others; many managers, though rueful about the problems the ban caused them personally, were prepared to admit the wisdom of it. Finally of course there were a number of firms which actually wanted to disperse for their own reasons and for them, that others should be forced to do so as well was no disadvantage.

Despite this overall approval of the dispersal policy, there was also a good deal of anxiety about its implications and the difficulties it created for industrialists. Certainly the bulk of them would be extremely unlikely to go to a backward area if they were not receiving any government assistance. The overall attitude appears to be one of resignation in the face of something that has to be done to develop the nation and managers are adamant that the state has a clear responsibility to help them in this. There are variations in the support for the policy however, thus Ranipet and Dharmapuri firms are less keen on it than the others. Ranipet firms were also those who thought the incentives were the most necessary and the least adequate. Dharmapuri firms, though recognising the difficulties of operating in a backward area, seemed to think it was possible. On the other hand the Hosur firms gave an impression of much greater optimism.

Although these differences in opinion do vary from place to place and might be causally associated with the places in which the firms are locating, the variations are not sufficiently clear cut to be really satisfactorily explained on this basis. It may also be that the firms' different views are associated with a temporal explanation. Thus the Hosur firms' optimism might be a result of ignorance of how difficult operating in a backward area growth pole is going to be, whereas the Ranipet firms are more realistic because they have on average more

experience of the problems. However, clearer explanations must still be looked for in the next section of this chapter. The one exception to this is with the Dharmapuri firms, whose particular reasons for choosing their location provide a certain rationale for their managers' opinions of the government policy. Even with these firms however, more precise details of their character should emerge in the subsequent analysis.

Returning to the views of government policy expressed in the first part of this chapter, support for the growth poles policy was also widespread. Certainly improvements were possible, particularly in providing for the housing, medical, educational and other social needs of firms' employees. The lack of these facilities caused problems for firms by making the recruitment of their more highly qualified personnel difficult and the lives of all their employees more problematic and expensive. Other infrastructural shortcomings, in transport and communications especially, made the actual operation of firms more difficult. Managers obviously felt that the government agencies could be providing a much wider range of services with greater speed, efficiency, coordination and less red tape and bureaucracy. The idea of a unitary planning and implementation agency with a remit to develop a whole range of urban facilities as well as industrial infrastructure appealed to many. Growth poles did also have their opponents; however, the chief objection raised to them being the labour unrest and demands for higher wages that were supposed to result from the concentration of so many workers in one place.

It was quite clear that the financial incentives offered by the government were the most popular ones, though firms in different locations had slightly different preferences among them. It also emerged that these financial incentives were one of the most decisive factors in firms choosing these new dispersed locations. Other factors such as the availability of physical infrastructure, the ban on development in cities and the desire to escape from poor industrial relations in existing major industrial centres were also extremely important but never as generally important as the financial incentives proffered.

Finally the information that most managers expect to have formed the industrial links they require in the 2 or 3 years after going into production, but that only about two thirds of the sample firms intend to establish such links, gives us additional information on the likely impact of the policies on further industrial growth and development in the areas surrounding the new factories and the time this process can be expected to take.

2. Alternative Explanations

In an attempt to avoid oversimplistic explanations of firms' behaviour and their managers' opinions, a lot of different crosstabulations of the survey variables were carried out. In essence virtually all the behavioural and opinion variables were crosstabulated against all the factual variables about the characteristics of the firms. There were of course exceptions to this general pattern in cases where it seemed extremely unlikely or logically impossible for two variables to have any effect on each other's behaviour. Also much of this crosstabulation produced little of value or interest, but equally a number of unexpected patterns did emerge. Such a crosstabulation exercise does not, of course, permit one to draw strong conclusions about causal relationships, but it does serve to indicate what explanations are plausible and possible and which ones are entirely erroneous. Such inferences can also be used to check whether the known causes of a particular firm's behaviour seems to be replicated in others. But in all cases it is tendencies and patterns of behaviour which appear to be explainable by such and such factors which are being sought, and no attempt was made to formulate hypotheses for more advanced statistical testing, it being deemed that the detection of such wider tendencies was sufficient to back up the direct impressions of firms' behaviour gained from personal interviewing.

The first variable for which the crosstabulation exercise was carried out was the behavioural one of the spatial distribution of firms' offices and possible other factories. Following that, the opinion variables from the questionnaire are dealt with one by one in the same

order as in the first part of the chapter where they are crosstabulated purely against location.

2.1 The Spatial Distribution of Firms

The basic pattern of behaviour of firms described by this variable was outlined in the previous chapter (Chap. 7 Section 3.2), where it was noted that the two main conclusions that could be drawn from the data collected were first that a very high proportion of firms had offices in Madras, particularly Registered Offices but also administrative offices. Secondly there were no cases recorded of firms splitting up their production operations onto different sites with, for example, assembly in one place and manufacturing in another. These tendencies were both tentatively explained in terms of the lack of adequate communications and transport facilities.

By crosstabulating these data with various other characteristics of the sample firms, further conclusions emerge (Table 10). First and most important there appears to be a marked link between the location of firm's offices and the NIC (National Industrial Classification) group the firm belongs to. In addition this link seems to correspond fairly well to the existing bases of established South Indian industry, thus confirming the earlier hypothesis that the sample firms had strong links with established industry (Chap.7 p.9). Thus the sample firms in the NIC categories Chemicals & Products or in Transport Equipment virtually all have their offices in Madras where these two industries are principally based in South India. Machinery firms on the other hand have their offices more evenly distributed between Madras, Bangalore and Coimbatore. Cotton Textile mills have offices in Madras, Coimbatore or elsewhere in Tamil Nadu. Fruit and Vegetable Products firms are entirely centred on Bangalore. This result is not really surprising but it does emphasise the importance of the links between the sample firms and established South Indian industry.

Interestingly, there appears to be little difference between Small, Medium and Large Scale Industry in their distribution of offices,

TABLE 10: Crosstabulating the Location of Firm's Elements by Different Groupings of Firms.

Firms Grouped By:	No of Firms		On Site			In Madras			In Bangalore			In Coimbatore			Other Tamil Nadu			In Bombay, Calcutta or Delhi			
	RD	MF	RD	PS	MD	RD	MF	RD	PS	MD	RD	MF	RD	PS	MD	RD	MF	RD	PS	MD	
NIC																					
Fruit & Veg Prod.	20	1	1	1	1	1	1	1	2	1	1	2	2								
Food Products	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Drinks, Tobacco	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cotton, Textiles	23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wood & Prods.	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Paper & Publishg.	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Leather & Prods.	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rubber, Plastic	30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chemicals	31	17	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ametal Mineral	32	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Base Metal Alloy	33	11	1	5	3	2	7	2	2	1	6	7	1	1	1	1	1	1	1	1	1
Metal Prods.	34	8	1	1	3	2	2	2	2	1	2	2	4	1	1	1	4	4			
Machinery	35	13	1	1	6	2	2	8	5	3	3	6	7	2	1	1	3	2	2	2	2
Elec. Machinery	36	5	1	3	3	2	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2
Transport Equipmt.	37	9	1	1	4	3	2	8	7	7	4	6	7								
Other Manufg.	38	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SCALE																					
Small (SSI)	7	1	3	1	1	5	3	3	1	5	5	1	1	1	1	1	1	1	1	1	1
Medium (MSI)	48	4	2	4	24	17	12	28	11	7	6	25	27	10	3	4	1	6	7	1	1
Large (LSI)	26	2	2	3	13	2	5	14	8	7	3	15	14	2	1	1	1	3	2	3	3
STATUS																					
Expansion Existg Firm	4	1	1	1	1	4	4	3	3	4	4										
Subsidiary or Branch	16	1	1	2	4	2	1	10	9	8	3	11	10	2	2	2	1	2	2	1	1
Member Company Group	32	2	2	2	18	4	7	15	7	6	2	17	17	8	2	3	1	5	5	2	2
Independent New Firm	23	3	1	13	8	13	1	11	3					3	1	1					
Joint Sector	5	1	3	2	1	4	1	3	4												
Public Sector	2	1	1	1	1	1	2	1	1	1	1	1	1								

(Continued on next page)

TABLE 10 (continued): Crosstabulating the Location of Firm's Elements by Different Groupings of Firms.

Firms Grouped By:	No of Firms in Class	On Site						In Madras						In Bangalore						In Coimbatore						Other Tamil Nadu						In Bombay, Calcutta or Delhi					
		RO	MO	MF	RD	PS	MD	RO	MO	MF	RD	PS	MD	RO	MO	MF	RD	PS	MD	RO	MO	MF	RD	PS	MD	RO	MO	MF	RD	PS	MD	RO	MO	MF	RD	PS	MD
STAGE																																					
Not in Production	37	1			15	11	6	22	8	9	5	21	23	9	3	4	2	5	6													4	3	2			
In Production	38	6	3	6	21	9	11	21	10	6	4	18	20	3	1	1	4	3	3	3	3	2	2	3	3	2	1	1	1	1	1	1	1	3			1
Trial Production	5			3					3	3	2	1	3	3	1																						
Cancelled	2	1	1	1	1	1	1	1	2	1																											
MATERIAL SOURCE																																					
Overseas	10	1	1	1	9	3	3	7	2			6	7	1												1											1
Complex	4																																				
Nearby Districts	1																																				
Local Area	16	2	1	7	4	3	9	5	4	2	10	9	3			2	3														1	1				1	
Madras	2	1	1	1	1	1	1	1	1	1	1	1	1	1																							
Bangalore	8			3	3	1	4	2	2	2	2	3	2	2	1	2	1	1	1													1	1				1
Urban South India	10	1	1	1	4	4	3	5	1	1	2	4	5	2	1	2	2	2													1	1				1	
South India	11			1	5	1	2	6	4	2	2	7	6	3	1	1	2	2													2	1				1	
N.W. & E. India	14	2	1	2	8	5	3	11	6	5	2	7	10	1												1	1										
All-India	6	2	1	2	2	2	2	2	1	1	1	1	2	1												1	1					1	1				2
No Reply																																					
PRODUCT MARKET																																					
Overseas	9	1	1	5	1	1	1	5	2	1	1	5	5	3	2	2	1	3	3																		
Complex	1																																				
Nearby Districts	1																																				
Local Area	3	1	1	1	2	2	2	1				1	1	1																		1	1				
Madras																																					
Bangalore	8	1		2	2	2	2	2	1	1	1	1	4	2	1	4	4	1	1													1	1				
Urban South India	11	1	1	1	5	4	3	7	1	1	2	6	6	1																		1	1				1
South India	21	2	1	11	6	4	13	8	7	4	12	14	2			1	1	1	1	1	1	1	1	1	1	1					2	1				1	
N.W. & E. India	22	1	2	11	5	4	16	9	5	3	14	15	1			1	1	2	2	2	2	2	2	2	1	1					1	1				1	
All-India	6	2	1	3	1	2	2	2	1	2	2	3	2	1																		2					2

RO: Registered Office

HD: Head Office

MF: Main Factory

RD: Research & Development

PS: Purchase & Sales Office

MD: Managing Director's Office

N.B. - Manufacturing and Assembly have been left out of this Table because all firms carried out these activities on site.

- One firm had its Main Factory elsewhere in India, this has also been left out of the Table.

though there is definitely a higher proportion of LSIs with Head Offices and Main Factories elsewhere, than MSIs or SSIs. This would indicate that most of the high capital investment firms in the sample are part of larger groups of companies or even subsidiaries, whereas independent firms are more likely to be found among MSIs and SSIs. This fact is confirmed by crosstabulating separately firms' scale by their corporate identity.

More of the firms classified as Members of Company Groups have their offices on site or in cities close by, than firms classified as Subsidiaries or Branches, many of which have their offices further away, and even in Northern India. This is even true of the Managing Director's Offices, which suggests that control and decision making for Subsidiaries tends to be more removed from the actual factory than in the case of Members of Company Groups. Incidentally this indicates that, despite the reservations expressed above (Chap.7 p.211 & Table 3), there is some accuracy in the classification of corporate identity used.

There is also a higher proportion of firms with Madras offices among those already in production than among those which have not yet started. This demonstrates that at first it was Madras firms which were most involved in the industrial dispersal programme, while firms from outside the State were only attracted at a later stage.

Finally it would seem that the distribution networks, whether for materials or products, in which the firms operate do not affect much the location of firms' offices. Selling to North Indian or Overseas markets for instance does not necessarily mean a firm will not have offices on site, and firms with Madras offices buy materials and sell products to all the different market areas.

These crosstabulations suggest that the main determining factors in the location of the sample firms' various offices and other elements are the individual firms' origins and their connections with other existing industrial concerns. Firms are obviously still keen on maintaining

offices in major urban centres, very probably because of still inadequate communications and transport facilities, but the choice of urban centre is not necessarily related to a firm's sources of raw materials or markets. Even firms with very distant markets in India and abroad sometimes have their offices on site, so this is by no means entirely impossible despite the preference for offices in urban locations. Such a conclusion corroborates the evidence about the raw material and product markets the sample firms do operate in, and the fact that these markets appear to have little influence on firm's decisions to set up factories in remote locations (Chapter 7 Section 3).

2.2 Explaining Firms' Views of the Location Policy

At the beginning of the chapter it was noted that there was a very high degree of support among the sample firms for the three main tenets of the government industrial location policy: the ban on urban location, industrial dispersal and the industrial growth poles in backward areas; with particularly high support for the principle of dispersal. It also seemed to be the case that the newer firms in Hosur were more in favour of the policies than older firms in other centres. Although further crosstabulations produce a rather confused picture it does indeed seem to be the case that the age of firms is related to their view of the policy (Table 11). It emerged for instance that new independent firms were keener on them than firms with links with established industry, but the correlation seemed to be even stronger when firms had received incentives. Thus those that had received both the Sales Tax Loan and the Central Subsidy were strong supporters, those that had only got the Central Subsidy were critical, while those new firms which had as yet received neither and were therefore expecting to get them were once again strong supporters of the policies.

The size of firms also seemed to affect their opinion of the policies. Judging size by capital investment, support was highest amongst Medium Scale units and lowest amongst Small Scale firms, though there were one or two variations in this general pattern. Larger units were the most

opposed to the growth pole policy and smaller units most opposed to the ban on industrial development in cities. Response was similar when size was judged by scale of employment. Although there was a good general level of support all round, this was most sustained among the medium scale employers, while the large employers were particularly keen on the dispersal policy and the growth poles, and the smaller employers particularly opposed to the urban ban.

No other possible and consistent explanations emerged from this series of crosstabulations. So one is left with the impression that the managers' views of the government industrial location policies are principally determined by three criteria: the newness and scale of the project and whether or not they received all the government incentives. Thus it would appear that new firms are enthusiastic about the policies, but become critical with experience and especially when they do not receive any Sales Tax Loan. Moreover, given these replies, it seems that the policies are best suited to the needs of medium scale firms (whether judged by capital investment or employment numbers), while smaller firms are critical of the urban ban and the larger firms (judged by scale of investment) are critical of growth poles, though the larger employers still support them.

2.3 Ideal Location in Absence of Industrial Location Policy

It was noted above that 80% of firms would have chosen an urban location as their ideal location in the absence of any government industrial location policy. Only 11% would choose the same location or a rural location. Further examination of this distribution showed that 6 out of the 9 firms which would have chosen the same location are Large Scale Industries, indeed they make up 25% of the LSIs in the survey sample (Table 12). Dividing up the firms by scale of investment into even smaller categories shows that the medium scale investors are the most conservative in what they would choose as an ideal location, the big majority of them specifying Madras, Bangalore or at least an urban location. This tails away on either side of the medium scale categories, with particularly the largest but also to some extent the

TABLE 12: Crosstabulation of Firms' Ideal Location by Different Groupings of Firms.

Firms Grouped By:	No of Firms in Class (=100%)	Ideal Location if no Dispersal Policy Existed					Rural or Semi-Urban %
		Madras %	Bangalore %	Urban (un-specific) %	Same locn or Growth Pole %	Urban %	
SCALE							
Small (SSI)	7	4 57.1	1 14.3	1 14.3	1 14.3	1 14.3	
Medium (MSI)	48	28 58.3	9 18.8	4 8.3	3 6.3		
Large (LSI)	26	10 38.5	2 7.7	5 19.2	6 23.1	1 3.8	
FIXED CAPITAL (Rs '000s)							
SSI: up to 1,000	15	7 46.7	2 13.3	1 6.7	2 13.3	1 6.7	
MSI: 1,000 - 2,499	13	5 38.5	5 38.5	1 7.7	1 7.7		
2,500 - 3,999	9	4 44.4	1 11.1	1 11.1	2 22.2		
4,000 - 5,499	15	11 73.3	2 13.3	1 6.7	1 6.7		
5,500 - 6,999	5	3 60.0	1 20.0	1 20.0			
7,000 - 8,499	4	3 75.0					
LSI: 10,000 - 19,999	10	3 30.0	2 20.0	2 20.0	1 10.0	1 10.0	
20,000 - 29,999	4	2 50.0	1 25.0	1 25.0			
30,000 Up	9	4 57.1	2 28.6	1 14.3			
NO UNSKILLED WORKERS							
1 - 49 Workers	48	24 50.0	9 18.8	6 12.5	3 6.3	2 4.2	
50 - 99 Workers	17	10 58.8	2 11.8	2 11.8	3 17.6		
100 - 149 Workers	6	5 83.3	1 16.7				
150 - 199 Workers	1		1 100.0				
200 - 249 Workers	2		1 50.0				
250 plus Workers	6	2 33.3	1 16.7		3 50.0		
Not Known	2	1 50.0					
NO SKILLED WORKERS							
1 - 49 Workers	58	29 50.0	10 17.2	7 12.1	4 6.9	2 3.4	
50 - 99 Workers	10	6 60.0	1 10.0	1 10.0	2 20.0		
100 - 149 Workers	4	2 50.0	1 25.0		1 25.0		
150 - 199 Workers	2	1 50.0		1 50.0			
200 - 249 Workers	2	1 50.0	1 50.0				
250 plus Workers	6	3 50.0	1 16.7	2 33.3			
Firms Grouped By:	No of Firms in Class (=100%)	Ideal Location if no Dispersal Policy Existed					Rural or Semi-Urban %
		Madras %	Bangalore %	Urban (un-specific) %	Same locn or Growth Pole %	Urban %	
STATUS							
Expans Existing Firm	4	4 100.0					
Subsidiary or Branch	16	5 31.1	2 12.5	4 25.0	2 12.5	2 12.5	
Member Company Group	32	15 46.9	8 25.0	3 9.4	4 12.5		
Independent New Firm	23	13 56.5	3 13.0	3 13.4	2 8.7		
Joint Sector	5	4 80.0			1 20.0		
Public Sector	2	1 50.0					
NIC							
Fruit & Veg Prod.	20	1 50.0		1 50.0			
Food Products	21	1 50.0					
Drinks, Tobacco	22	1 100.0					
Cotton, Textiles	23			3 100.0			
Wood & Prods.	27	1 100.0					
Paper & Publishg.	28	1 100.0					
Leather & Prods.	29	2 100.0					
Rubber, Plastic	30	2 50.0	1 25.0		4 23.5		
Chemicals	31	12 70.6					
Ametal Mineral	32	1 50.0	1 50.0				
Base Metal Alloy	33	3 27.3	3 27.3	1 9.1	3 27.3	1 12.5	
Metal Prods.	34	2 25.0	4 50.0	1 12.5			
Machinery	35	8 61.5	1 7.1	1 7.1			
Elec. Machinery	36	2 40.0	2 40.0	1 20.0			
Transport Equipmt.	37	5 55.6	1 11.1	2 22.2	1 11.1		
Other Manufg.	38	1 100.0					
STAGE							
Not in Production	37	21 56.8	8 21.6	3 8.1	4 10.8		
In Production	38	17 44.7	5 13.2	5 13.2	4 10.5	2 5.2	
Trial Production	5	3 60.0		1 20.0	1 20.0		
Cancelled	2	1 50.0		1 50.0			
TOTAL SAMPLE	82	42 51.2	13 15.9	10 12.2	9 11.0	2 2.4	

smallest investors having the most diverse opinion on what would be an ideal location. Judging scale by employment levels, the pattern is less clear but it would seem to be again the largest firms which are most likely to choose the same location though some of the smallest employers will as well.

Looking for other explanations for firms' locational preferences, it emerged that firms under the tightest corporate control (Subsidiaries & Branches) were most likely to choose dispersed locations, as again were firms in three of the more established industrial sectors in Tamil Nadu: Chemicals & Products, Base Metal & Alloy Products and Transport Equipment. Both these pieces of information suggest that it is the firms with the most solid financial backing which are the ones that would have chosen a rural or backward area location without any government encouragement. Thus financial security seems to remain one of the most important concerns for firms contemplating a rural or backward area location. Only those with sufficient established backing consider it possible without government assistance, a not too surprising result but nevertheless an important one, as it demonstrates that dispersal is not yet an easy undertaking for firms.

It was also apparent that firms not yet in production were more likely to be conservative in their view of what might be an ideal location, whereas those already in production seemed slightly more prepared to consider a dispersed location. This can possibly be interpreted as a positive sign, as it would suggest that once firms have taken the step of dispersing they seem to find it less difficult than they had initially expected.

Finally it was evident that the material and product distribution networks in which firms operated were not a crucial determinant of their choice of ideal location, though at the same time no contradictory behaviour, with firms specifying ideal locations totally unsuited to their markets, was apparent. Thus firms dealing with overseas did prefer Madras, while those dealing with Urban South India seemed to regard Bangalore as a good location. At the same time the

firms dealing with wider regional markets all over India were the least concerned about an urban location.

The overall picture that emerges, therefore, is that the firms which are the largest and have the soundest backing are the most likely to choose non-urban locations. Many of them would in fact have chosen the same dispersed location they are in even if no government dispersal policy existed. Medium scale firms, on the other hand, seem to be the most conservative in their view of what constitutes an ideal location and by and large prefer urban sites. Finally it appears that once in production firms become more, rather than less, likely to see a dispersed location as ideal.

2.4 Problems with Dispersal to Backward Areas

Confirming these conclusions, it once again appears to be the larger firms which are least worried about operating in a backward area (Table 13). They are also apparently quite aware of the difficulties, indeed they often think it will be more difficult than some of the smaller firms do, but on the other hand they regard the incentives provided by and large as adequate and believe that backward area operation would not be that uneconomic without them. Overall they thus seem to be more realistic in their approach than some of the smaller firms which seem to be taking much more of a gamble with what may easily be an inadequate understanding of the difficulties. Medium Scale firms, while they do not feel unduly worried about the problems of operating in a backward area location, are very clear that it would be uneconomic to do so without government incentives. Looking at firms by scale of employment, the larger an employer the easier they expect operation in a backward area to be and the more adequate they find the incentives. This is particularly true of employers of large numbers of unskilled workers, but firms that employ a lot of skilled labour are slightly more worried about backward area operation, presumably because they expect recruitment problems.

TABLE 13: Crosstabulating Managers' Views of Backward Areas by
Different Groupings of Firms.

Firms Grouped By:	N° of Firms in Class (=100%)	Degree of Ease (+) or Difficulty (-) of operating in a dispersed location % Points (100% = N° x 2) (-2 to +2)		Are Backward Area Locations uneconomic without Government incentives? Points % (-1 to +1)		Are Incentives Adequate? Points % (-1 to +1)	
		Points (-2 to +2)	% (100% = N° x 2)	Points (-1 to +1)	%	Points (-1 to +1)	%
SCALE							
Small (SSI)	7	-8	-57.1	3	42.8	-4	-57.1
Medium (MSI)	48	-28	-29.2	26	54.2	-23	-47.9
Large (LSI)	26	-14	-26.9	6	23.1	2	7.7
N° UNSKILLED WORKERS							
1 - 49 Workers	48	-36	-37.5	24	50.0	-24	-50.0
50 - 99 Workers	17	-13	-38.2	1	5.9	-6	-35.3
100 - 149 Workers	6	-3	-25.0	6	100.0	0	
150 - 199 Workers	1	1	50.0	1	100.0	0	
200 - 249 Workers	2	0		-1	-50.0	1	50.0
250 plus Workers	6	2	16.7	4	66.7	4	66.7
Not Known	2	-2	-50.0	1	50.0	-1	-50.0
N° SKILLED WORKERS							
1 - 49 Workers	58	-36	-31.0	26	44.8	-26	44.8
50 - 99 Workers	10	-9	-45.0	4	40.0	-6	60.0
100 - 149 Workers	4	-3	-37.5	2	50.0	2	50.0
150 - 199 Workers	2	-1	-25.0	0		2	100.0
200 - 249 Workers	2	-2	-50.0	-2	-100.0	0	
250 plus Workers	6	0		6	100.0	2	33.3
STAGE							
Not in Production	37	-22	-29.7	17	45.9	-10	-27.0
In Production	38	-24	-31.6	20	52.6	-13	-34.2
Trial Production	5	-4	-40.0	-1	-20.0	-3	-60.0
Cancelled	2	-1	-25.0	0		0	
RECEIPT OF INCENTIVES							
Sales Tax Loan: No	59	-44	-37.3	33	55.9	-20	-33.9
Yes	23	-7	-15.2	3	13.0	-6	-26.1
Central Subsidy: No	36	-19	-26.4	16	44.4	-25	-69.4
Yes	46	-32	-34.8	20	43.5	-9	-19.6
Term Loan No	65	-44	-33.8	22	33.8	-26	-40.0
Yes	17	-7	-20.6	14	82.3	0	
STATUS							
Expansion Existing Firm	4	-4	-50.0	2	50.0	0	
Subsidiary or Branch	16	-10	-31.2	-1	-6.2	-4	-25.0
Member Company Group	32	-13	-20.3	14	43.7	-10	-31.3
Independent New Firm	23	-21	-45.7	17	73.9	-10	-43.5
Joint Sector (TIDCO)	5	-2	-20.0	3	60.0	-1	-20.0
Public Sector	2	-1	-25.0	1	50.0	-1	-50.0
TOTAL SAMPLE	82	-51	-31.1	36	43.9	-26	-31.7

Following the points made earlier (Section 1.2) that the Ranipet firms felt much more strongly than the Hosur firms that operating in a backward area was difficult and uneconomic without government incentives and that the incentives themselves were inadequate, it appears that this is also more generally the case with firms in production, while those not yet in production are on average slightly more optimistic and perhaps less realistic about the difficulties ahead.

Firms which have not received the Central Subsidy are particularly adamant that the incentives are inadequate. As these firms are unlikely to have received any of the financial incentives as yet, because the Subsidy is the first to be sanctioned, this is not too surprising. Those firms which have not received the Term Loan feel very strongly that backward areas are uneconomic without the government incentives. This would corroborate the point made earlier (Chap.7, p.214) that the few Term Loans that have been awarded (only 17 among the sample firms) are generally given to firms experiencing particular difficulties. Aside from these two points the crosstabulation of these questions on dispersal against whether or not firms were getting the incentives suggested nothing of interest. On the other hand one further cross-tabulation showed that independent firms are clearly more apprehensive about backward area locations, the economics of locating in them and the adequacy of incentives than any of the other firms which are part of larger corporate structures or in the public sector.

In sum, while overall the majority of firms expect to find operation in a backward area difficult, uneconomic without the incentives and the incentives inadequate, some groups of firms seem to think it will be relatively easier than others. Essentially there are two ways these groups tend to be identifiable: first larger firms with higher capital investment or more employees and links with established industry expect to find it easier than smaller firms; secondly there is also a tendency for older firms already in production to believe it is more difficult than newer projects not yet in production. On the whole however, the first characterisation is the more accurate and useful one; moreover it

fits in with the conclusions reached in the previous section (p.297) The second characterisation is more problematic as it seems to contradict the conclusion of the last section. The only explanation to reconcile these two tendencies would seem to be that although firms already in production are more aware of the difficulties involved in a backward area location they nevertheless are prone to conclude, if they are large well backed firms, that such a location can be quite acceptable.

2.5 Choosing a Growth Pole Location

A fairly clear picture of which firms prefer the growth poles most emerges with relative ease, and presumably it is these firms which find the growth poles most suited to their needs. They are essentially the medium scale firms both in terms of capital investment and in terms of employment numbers. On either side of the group, approval of growth poles diminishes as one moves towards smaller scale or large scale firms. It would also seem that newer firms are keener on the growth poles than older firms, that is firms which are not yet in production and those which have not yet received government incentives (Table 14).

Opinions on a possible selection procedure for firms coming to growth poles are more confused but on the whole it would seem to be the larger firms and those already in production which are most in favour of the idea. On the other hand small scale firms, those not yet in production and those not yet receiving incentives are much more doubtful. This would seem to be directly related to their perception of how they might themselves fare under such a selection procedure. Without it even being specified what criteria the selection procedure might be based on, these firms, whose common bond appears to be their greater vulnerability, react against the idea of yet another administrative obstacle to be overcome in setting up a project in a growth pole.

Attitudes towards the actual location of existing growth poles seemed to be primarily based on which growth pole is being referred to, with

TABLE 14: Crosstabulating Managers' Views on Growth Poles by
Different Groupings of Firms.

Firms Grouped By:	N ^o of Firms in Class (=100%)	Are Growth Poles				Could Growth Pole Policy be Improved?		Is Selection Required for Growth Pole Industry?	
		Easier for B.A. Location? Points % (-1 to +1)	Preferred for B.A. Location? Points % (-1 to +1)	Points % (-1 to +1)	Points % (-1 to +1)	Points % (-1 to +1)			
SCALE									
Small (SSI)	7	1 14.3	1 14.3	7 100.0	-3 -42.9				
Medium (MSI)	48	31 64.6	27 56.3	37 77.1	4 8.3				
Large (LSI)	26	11 42.3	4 15.4	21 80.8	6 23.1				
N^o UNSKILLED WORKERS									
1 - 49 Workers	48	27 56.3	24 50.0	38 79.2	4 8.3				
50 - 99 Workers	17	9 52.9	6 35.3	13 76.5	5 29.4				
100 - 149 Workers	6	5 83.3	4 66.7	6 50.0	-6 -100.0				
150 - 199 Workers	1	1 100.0	1 100.0	1 100.0	-1 -100.0				
200 - 249 Workers	2	1 50.0	1 50.0	1 50.0	1 50.0				
250 plus Workers	6	2 33.3	-2 -33.3	6 100.0	4 66.7				
Not Known	2	-1 -50.0	-1 -50.0	1 50.0	-1 -50.0				
N^o SKILLED WORKERS									
1 - 49 Workers	58	31 53.4	28 48.3	46 79.3	6 10.3				
50 - 99 Workers	10	6 60.0	6 60.0	9 90.0	-2 -20.0				
100 - 149 Workers	4	2 50.0	2 50.0	4 100.0	4 100.0				
150 - 199 Workers	2	2 100.0	0	2 100.0	0				
200 - 249 Workers	2	2 100.0	1 50.0	1 50.0	-2 -100.0				
250 plus Workers	6	1 16.7	-4 -66.7	5 83.3	0				
STAGE									
Not in Production	37	25 67.6	22 59.5	31 83.8	-2 -5.4				
In Production	38	16 41.1	9 23.7	29 76.3	7 18.4				
Trial Production	5	1 20.0	0	4 80.0	1 20.0				
Cancelled	2	2 100.0	2 100.0	2 100.0	0				
RECEIPT OF INCENTIVES									
Sales Tax Loan: No	59	37 62.7	32 54.2	88.1	-3 -5.1				
Yes	23	8 34.8	1 4.3	14 60.9	9 39.1				
Central Subsidy: No	36	24 66.7	20 55.6	33 91.7	0				
Yes	46	20 43.5	13 28.3	33 71.7	6 13.0				
Term Loan: No	65	36 55.4	25 38.5	54 83.1	0				
Yes	17	8 47.1	8 47.1	12 70.6	6 35.3				
TOTAL SAMPLE	82	44 53.7	33 40.2	66 80.5	6 7.3				

Hosur being more highly regarded than Ranipet. Otherwise Medium Scale firms seemed to be the most satisfied with the locations. Recipients of incentives and firms dealing with the wider regional markets in India (i.e. South, North, West & East India or All-India) were the only other two groupings which stood out as being particularly pleased with the locations and no groups were particularly critical of them.

2.6 Patterns in the Formation of Industrial Links

Once again some fairly clear results are produced by this set of crosstabulations (Table 15). It would seem that the formation of industrial links can best be explained by two variables: the scale of the firms and the principal sources of materials and markets it deals with. Thus Large Scale industries are more likely to form links than either MSIs or SSIs, they also think it is easier to do so than the smaller firms, but they expect to take longer over the whole process of establishing all the links they need. Similarly it would seem that firms that deal predominantly with Urban South India including Madras and Bangalore specifically, are more likely to form links, do so more easily, but take longer over it, than firms dealing with wider regional markets in India which are much less likely to form links or those dealing with overseas which are very unlikely to do so. Interestingly those few firms which are dealing mostly with really local markets in the Districts around the growth poles are not that likely to form links. However, there are only about a dozen firms in this category so their behaviour cannot be taken as too representative.

One or two other interesting facts emerged from these crosstabulations. First it would seem that the firms in production have actually formed fewer links than those not yet in production expect to in the future. On the other hand, they seem to go about it faster than the latter expect. Secondly, it was not possible to isolate any particular industrial classification group that was more likely to form links than any other, although there were a few minor variations in their practice.

TABLE 15: Crosstabulating Data on Formation of Industrial Links by Different Groupings of Firms.

Firms Grouped By:	Firms in Class (=100%)	Likelihood of Firms forming links with other Firms in:		Ease or Difficulty Expected in Formation of Links with other Firms in:		Average No of Years Required to Form Links	No of Years Required to Form 75% of Links
		Complex %	Area %	Complex %	Area %		
MATERIAL SOURCE							
Overseas Complex	10	20.0	20.0	50.0	71.4	0.9	2
Nearby Districts	4		50.0	50.0	50.0	1.2	1
Local Area	1	-100.0	100.0	0	100.0	1.0	1
Madras	16	56.2	68.7	40.0	40.0	3.6	5
Bangalore	2	0	0	100.0	100.0	3.0	6
Urban South India	8	87.5	87.5	85.7	85.7	2.0	2
South India	10	-50.0	-10.0	0	37.5	1.6	2
N.W. & E. India	11	18.2	9.1	42.9	50.0	2.3	3
All-India	14	57.1	71.4	0	-14.3	2.2	4
No Reply	6	33.3	33.3	20.0	20.0	0.2	0
PRODUCT MARKET							
Overseas Complex	9	44.4	22.2	85.7	28.6	1.3	2
Nearby Districts	1	100.0	100.0	-100.0	-100.0	9	9
Local Area	1	-100.0	-100.0	0	100.0	1	1
Madras	3	-33.3	-33.3	0	0	1.7	5
Bangalore							
Urban South India	8	37.5	87.5	0	57.1	3.5	4
South India	11	36.4	36.4	20.0	27.3	2.3	5
N.W. & E. India	21	28.6	47.6	27.8	27.8	1.9	2
All-India	22	27.3	31.8	50.0	56.2	1.8	2
No Reply	6	33.3	66.7	60.0	60.0	1.3	3
SCALE							
Small (SSI)	7	14.3	42.9	50.0	60.0	1.7	1
Medium (MSI)	48	10.4	31.3	29.7	33.3	2.0	3
Large (LSI)	26	63.4	61.5	37.5	39.1	2.3	3
STAGE							
Not in Production	37	32.4	62.2	46.4	58.1	2.5	4
In Production	38	23.7	23.7	40.6	28.1	1.3	2
Trial Production	5	60.0	60.0	-40.0	0	1.4	1
Cancelled	2	0	0	-100.0	-100.0	0.5	1
TOTAL SAMPLE	82	29.3	42.7	34.8	38.2	2.0	4

2.7 Explaining Firms' Views of the Government Incentives

The aggregate statistics on these views presented above (Table 8), brought out the very clear preference the managers have for the financial incentives offered by the government. Among the incentives, the Central Government 15% Subsidy was the usual first choice except for firms from M.M.Nagar, which are not eligible for it, and for those from Dharmapuri. This overall pattern remains in further crosstabulations (Table 16), the preferences of the Dharmapuri firms coming out in the very largest category of firms (by capital investment) putting the Income Tax Relief Scheme as its first choice, the Sales Tax Loan second and the Central Subsidy only third. The broader category of Large Scale Industries also put the Sales Tax before the Central Subsidy but relegated the Income Tax Relief to fourth place even after the low electricity tariff. It was interesting to note that when LSIs were broken down into three categories by scale of investment it was only the very largest that didn't put the Central Subsidy first. This means that most firms with a fixed capital investment of up to Rs.30 million find the Central Subsidy attractive despite the ceiling of Rs.1.5 million, or only 5% of Rs.30 million, that it carries.

One curious point which emerged here was that the very smallest category of firms, those with a fixed capital investment of less than Rs.1 million, actually preferred the Sales Tax Loan to the Central Subsidy. As there is no obvious explanation for this and as there is some discrepancy between the Small Scale Industries category under the two different systems of classification, this is probably a spurious result indicative of a mistake in the classification.

The one other variable which produced interesting results here is the classification of firms by whether or not they are in production. While those firms which are already in production do conform to the general pattern of preferring the Central Subsidy above other incentives, those not yet in production don't. They prefer the Sales Tax Loan, and they also put a much higher emphasis on the availability of a site with

TABLE 16: Crosstabulating Importance Attached to Government Incentives by Different Groupings of Firms.

Firms Grouped By:	No of Firms in Class (=100%)	Maximum No of Points (=100%)	Concessional Finance	Central 15% Subsidy	Sales Tax Loan	Cheap Electricity	Assistance with Govt. Permits	Industrial Dev. Advice	Site & Infra structure	Income Tax* Relief
			Points %	Points %	Points %	Points %	Points %	Points %	Points %	Points %
SCALE										
Small (SSI)	7	56	23 41.1	27 48.2	26 46.4	8 14.3			19 33.9	
Medium (MSI)	48	384	157 40.9	245 63.8	165 43.0	108 28.1	39 10.2	9 2.3	129 33.6	81 21.1
Large (LSI)	26	208	38 18.3	116 55.8	121 58.2	89 42.8	7 3.4		48 23.1	81 38.9
FIXED CAPITAL (Rs '000s)										
SSI: up to 1,000	15	120	29 24.2	48 40.0	64 53.3	35 29.2	3 2.5		34 28.3	6 5.0
MSI: 1,000 - 2,499	13	104	50 48.1	64 61.5	54 51.9	20 19.2	16 15.4	2 1.9	48 46.2	28 26.9
2,500 - 3,999	9	72	26 36.1	39 54.2	24 33.3	22 30.6	6 8.3	5 6.9	32 44.4	6 8.3
4,000 - 5,499	15	120	56 46.7	96 80.0	57 47.5	34 28.3	9 7.5	2 1.7	25 20.8	5 20.8
5,500 - 6,999	5	40	5 12.5	36 90.0	28 70.0	24 60.0	5 12.5		15 37.5	16 40.0
7,000 - 8,499	4	32	20 62.5	10 31.2	26 50.0	11 34.4			9 28.1	
8,500 - 9,999										
LSI: 10,000 - 19,999	10	80	8 10.0	47 58.7	39 48.7	30 37.5			34 42.5	26 32.5
20,000 - 29,999	4	32	6 18.7	26 81.2	18 56.2	9 28.1	8 25.0		4 12.5	16 50.0
30,000 Up	7	56	24 42.9	29 51.8	33 58.9	24 42.9				39 69.6
STAGE										
Not in Production	37	296	125 42.2	116 38.2	164 55.4	93 31.4	20 6.8	4 1.4	121 40.9	95 32.1
In Production	38	304	91 29.9	192 63.2	150 49.3	95 31.3	19 6.2	5 1.6	74 24.3	47 15.5
Trial Production	5	40		19 47.5	19 47.5	14 35.0	8 20.0			20 50.0
Cancelled	2	16	8 50.0	8 50.0		7 43.7			6 37.5	
TOTAL SAMPLE	82	656	224 34.1	395 60.2	333 50.8	209 31.9	46 7.0	9 1.4	201 30.6	162 24.7

*Due to an error in the questionnaire 38 inter-viewees were not asked about the Income Tax Relief, thus the scores in this column are not as high as they could be.

infrastructure, again putting this ahead of the Central Subsidy. The greater importance attached to the site and physical infrastructure can be attributed to the immediate concerns of these firms which are struggling to get their project off the ground and operating, but the preference for the Sales Tax Loan is harder to explain. One can only suggest that it is again a result of the lower likelihood of firms getting a Sales Tax Loan than a Central Subsidy. Thus while the Sales Tax Loan seems a more attractive long term proposition at first sight, when firms actually get around to claiming it, they encounter difficulties and fast realise that the cash grant of the Central Subsidy, which by then they have safely in their pockets, is more valuable to them.

There being no other variable which brought out different information when crosstabulated with these attitudes to the government's incentives, one can only conclude that the sample firms' attitudes here can be largely explained by their scale of investment and the stage which their project has reached.

2.8 Explaining Firms' Location Decisions

The high degree of uniformity in the firms' rationales for choosing their new locations, which was noted earlier (p.283) persisted despite most attempts to isolate particular groups of firms with different priorities (Table 17). Throughout, the financial incentives offered by the government remain the most important attraction of the locations considered, with proximity to a city second and the provision of infrastructure third. This having been said there are a number of minor variations which should be mentioned.

First, the two firms in the NIC group of Food Products put the availability of raw materials on a par with the financial incentives as their most important criteria and the two Cotton Textiles firms did likewise with climatic conditions. For the four Rubber, Plastic and Petroleum Products firms proximity to their existing operations was considered more important than the financial incentives.

TABLE 17: Cross-tabulating Reasons for Location Decisions by Different Groupings of Firms.

Firms Grouped By:	NP of Firms in Class (x2=100%)	Near to Existing Operations	Developed Site	Climatic Factors	Near Materials and Fuels	Govern ^{nt} Financial Assistance	Availability of Labour	Nearness to Market	Low Cost of Site	Ben on Urban Industry	Less Industrial Disputes	Proximity to a City	Other 1	Other 2
		%	%	%	%	%	%	%	%	%	%	%	%	%
NIC														
Fruit & Veg Prod.	20	25.0	50.0	25.0	100.0	50.0	25.0	50.0	50.0	50.0	50.0	50.0		
Food Products	21	25.0	75.0			100.0	50.0		50.0	100.0		50.0		
Drinks, Tobacco	22	100.0		66.7		66.7	50.0		16.7	16.7	33.3	50.0	33.3	
Cotton, Textiles	23	50.0	50.0		100.0	50.0	50.0		50.0	50.0		50.0		
Wood & Prods.	27	100.0	100.0		100.0	50.0	50.0		50.0	50.0		50.0		
Paper & Publishg.	28	25.0	25.0	25.0	75.0	100.0	100.0		50.0	50.0		25.0	37.5	
Leather & Prods.	29	100.0	75.0	25.0	12.5	87.5	100.0		62.5	25.0		87.5	17.6	
Rubber, Plastic	30	38.2	67.6	17.6	17.6	70.6	8.8	14.7	47.1	29.4	8.8	26.5		
Chemicals	31	25.0	100.0	25.0	25.0	100.0	25.0	50.0	25.0	25.0	50.0	50.0	50.0	50.0
Met. Mineral	32	27.3	36.4	18.2	36.4	63.6	13.6	40.9	36.4	45.5	40.9	59.1	9.1	9.1
Base Metal Alloy	33	56.3	25.0	31.3	19.2	81.3	20.0	12.5	25.0	50.0	19.2	75.0	12.5	
Metal Prods.	34	15.4	40.0	30.8	30.0	73.1	20.0	11.5	30.8	26.9	19.2	42.3	26.9	3.8
Machinery	35	5.6	44.4	22.2	11.1	77.8	22.2	16.7	38.9	55.6	61.1	77.8	22.2	
Elec. Machinery	36			100.0	100.0	100.0						100.0		
Transport Equipmt.	37													
Other Manufg.	38													
SIAGE														
Not in Production	37	44.6	58.1	29.7	32.4	79.7	12.2	24.3	43.2	45.9	24.3	59.5	16.2	5.4
In Production	38	22.4	36.8	17.1	14.5	69.7	9.2	13.2	30.3	21.1	19.7	42.1	18.4	1.3
Trial Production	5	20.0	30.0	60.0	30.0	50.0	10.0	30.0	50.0	40.0	50.0	100.0	20.0	
Cancelled	2	50.0	75.0	50.0		100.0			50.0	75.0	50.0	100.0	50.0	
SCALE														
Small (SSI)	7	21.4	57.1	7.1	28.6	64.3	14.3	28.6	42.9	57.1	21.4	35.7	14.3	
Medium (MSI)	48	32.3	54.2	31.2	27.1	75.0	6.2	17.7	42.7	33.3	18.7	57.3	9.4	2.1
Large (LSI)	26	38.5	30.8	21.2	13.5	73.1	15.4	15.4	25.0	28.8	34.6	55.8	36.5	5.8
No Reply	1		50.0	50.0	50.0	100.0	50.0	100.0	100.0	100.0	50.0	100.0		
FIXED CAPITAL (Rs '000s)														
SSI: up to 1,000	15	26.7	6.7	13.3	16.7	50.0	10.0	20.0	36.7	46.7	20.0	33.3	23.3	3.3
MSI: 1,000 - 2,499	13	38.5	61.5	46.2	30.8	76.9	11.5	26.9	50.0	30.8	11.5	50.0		
2,500 - 3,999	9	33.3	66.7	5.6	27.8	61.1	5.6	5.6	50.0	11.1	16.7	50.0	11.1	
4,000 - 5,499	15	26.7	50.0	36.7	30.0	86.7	10.0	20.0	33.3	46.7	13.3	66.7	16.7	
5,500 - 6,999	5	20.0	40.0	20.0	40.0	100.0	10.0	40.0	40.0	30.0	50.0	40.0	20.0	20.0
7,000 - 8,499	4	37.5	50.0	25.0	25.0	62.5	12.5	12.5	37.5	12.5	25.0	62.5		
8,500 - 9,999														
LSI: 10,000 - 19,999	10	40.0	35.0	15.0	10.0	90.0	15.0	10.0	15.0	30.0	25.0	45.0	10.0	
20,000 - 29,999	4	37.5	50.0	25.0	25.0	75.0	25.0	12.5	37.5	50.0	50.0	87.5		
30,000 Up	9	42.9	21.4	42.9	7.1	71.4	14.3	21.4	42.9	35.7	57.1	78.6	71.4	14.3
NP UNSKILLED WORKERS														
1 - 49 Workers	48	32.3	46.9	24.0	28.1	78.1	8.3	24.0	40.6	30.2	18.7	55.2	13.5	2.1
50 - 99 Workers	17	26.5	38.2	26.5	20.6	61.8	11.8	8.8	35.3	44.1	44.1	64.7	14.7	8.8
100 - 149 Workers	6	41.7	75.0	41.7		91.7	8.3	16.7	50.0	50.0	25.0	58.3	33.3	
150 - 199 Workers	1	50.0	100.0			100.0	50.0		100.0	100.0	100.0	100.0		
200 - 249 Workers	2	50.0	25.0	50.0		50.0	50.0		100.0	25.0	100.0	25.0		
250 plus Workers	6	50.0	50.0	16.7	16.7	66.7	25.0	16.7	25.0	33.3	16.7	25.0	66.7	
Not Known	2			50.0	50.0	50.0		25.0				50.0		
NP SKILLED WORKERS														
1 - 49 Workers	58	31.0	50.0	27.5	28.4	73.3	8.6	18.1	37.9	31.0	19.8	52.6	7.8	1.7
50 - 99 Workers	10	25.0	30.0	15.0	10.0	75.0	20.0	25.0	45.0	45.0	55.0	75.0		
100 - 149 Workers	4	25.0	87.5	25.0	37.5	100.0	25.0	50.0	50.0	25.0	12.5	50.0	50.0	
150 - 199 Workers	2	75.0	75.0	25.0		100.0			25.0	100.0	25.0	25.0	50.0	
200 - 249 Workers	7	50.0	75.0	25.0		50.0			25.0	100.0	25.0	100.0	50.0	

Second, firms not yet in production were considerably more bothered by the ban on industrial development in cities than firms already in production. This can be explained by the introduction of the urban ban fairly recently (1977), which means it did not affect earlier firms. Although the ban does not feature as an important reason for dispersal in the overall pattern of response, this last point indicates that it is a more important factor in forcing firms to consider backward area locations than the overall response suggests.

Finally, the one way that any different and systematic reordering of priorities emerged was when classifying firms by their size. While the primary position of the financial incentives remains throughout, different secondary ranking of priorities become evident. Thus Small Scale Industries appear to be more concerned with the cost and convenience of their site, while MSIs, though still attaching some importance to these practical considerations, tend to emphasise more the need to be near a city. Larger Scale Industries on the other hand place much more importance on the distance to a city and bring a concern with industrial relations into third place. Moreover as the scale of the firms increases, the weighting given to the financial incentives goes down. Dividing the firms up into smaller categories by scale of investment, it appears that the top two categories of firms, namely those with fixed capital investments of over Rs.20 million, actually feel that proximity to a city is their most important concern and that financial incentives come second. They also place much more importance on the availability of labour and the need to avoid labour unrest by locating in a remote location than other firms do. They are therefore seeking to achieve a delicate balance between proximity to a large city and remoteness for good labour relations.

When these criteria for location decision making were tabulated against firms grouped by numbers of workers employed no different patterns emerged. Surprisingly, in view of the last point made, the firms employing large numbers of workers were not the ones most concerned with labour unrest, instead it was those employing between 50 and 99 unskilled workers. This suggests that the concern of the high capital

investment firms with labour unrest is not directly related to the number of workers they employ. Rather one must assume that this concern is derived from previous negative experience these firms have had on other sites. Certainly this is the case for a few of them, as several firms which had been subjected to prolonged strikes in recent years expressed the hope that in moving to a remote location they might be able to avoid such disputes.

3. Summary & Conclusion

This chapter has been concerned with trying to explain why a particular sample of firms which have followed the government industrial dispersal policy have chosen the locations they have. The characteristics of the firms and those of the environmental setting they are locating in were presented in the previous chapter. Here the firms' views of the government policy and their rationale for their location decisions are first described and then related to their characteristics.

The first overriding point which was noted was the very high degree of support that the government industrial dispersal policy commanded amongst the sample firms. At the same time it was noted that by and large firms would ideally still prefer to locate in or near an urban centre, but there was a minority exception to this. 11% of the sample firms insisted they would have chosen the same or another rural location even if the dispersal policy had not existed. Thus there exists both general support for industrial dispersal and a willingness on the part of some firms to consider it without government encouragement or assistance. In essence the aim of this chapter was to try and explain why this support for the principle of dispersal exists and isolate the group or groups of firms most in favour of it.

Initially these questions were considered in terms of the locations the firms had chosen. It emerged that the firms locating in Dharmapuri District in the vicinity of Hosur but not actually in the Hosur Complex seemed to comprise a group with specific characteristics of their own which moreover seemed to have a different set of locational priorities

than the rest of sample firms in Ranipet, Hosur and to a certain extent M.M.Nagar. The characteristics of the Dharmapuri firms were summarised in the Conclusions of the previous chapter (Chapter 7, Section 4) and their special behaviour and attitudes were again noted halfway through this chapter . Typically the Dharmapuri firms used more capital intensive methods of production than other firms in the sample and had extremely close links with established Madras industry either as Subsidiaries or as Members of Company Groups.

The first indication of capital intensive production methods is usually given by the scale of a firm's investment and in the second half of this chapter, the scale of a firm (Large/Medium/Small) has consistently been one of the factors which has affected their behaviour and attitudes. Other characteristics have helped to explain certain features of the sample firms' behaviour and attitudes but none as consistently as their scale of investment.

The two behavioural characteristics examined in the chapter were first the spatial distribution of the firms' component parts, and secondly the industrial links they have or intend to form. It was concluded that the spatial distribution of the firms' component parts was largely a result of their historical origins rather than of the market areas with which they dealt. It was also noted that firms with connections furthest away in northern India had a larger proportion of Large Scale units among them. The propensity to form industrial links seemed to be most pronounced amongst firms dealing with Urban South India (including Madras and Bangalore specifically) markets, either for materials or for selling products, and lower among firms dealing with more distant markets. Equally, larger units are more likely to do so than MSIs or SSIs. Thus it would seem that Large Scale units dealing with Urban South India markets are those which can be expected to have the most pronounced effect on industrial development through industrial multiplier effects.

Turning to the sample firms' opinions of the government industrial location policy, it appears that their attitudes are largely determined

by the newness of the project, its scale of investment and whether the firm has or has not received government financial incentives. Newer firms tended to be keener and so do Medium Scale firms, while SSIs are critical of the urban ban and LSIs of the growth pole policy. Those firms which have not received the Sales Tax Loan, even though they are in production and therefore should be eligible, are particularly critical.

In greater detail it seems that the actual policy to disperse industry to backward areas is particularly suited to the priorities of Large Scale firms and especially those with strong connections with established industry and therefore sound financial backing. This is partly because of the advantageous production related financial incentives the government offers, the Income Tax Relief Scheme and the Sales Tax Loan which they are in a particularly good position to benefit from, but also because of their desire for better industrial relations which they hope to find in remote locations. At the same time these large firms do not want to be too isolated from a major city, so the Dharmapuri-Hosur area is just about ideal from their point of view. Thus these large scale firms may in some ways be seen as trend-setters in that they have recognised that dispersed backward area locations have specific advantages other than simply the incentives the government provides to make them attractive, but also because the survey returns seem to indicate that the dispersal policy is becoming more popular with time. Certainly once firms have been operating in dispersed locations for a while they tend to become more rather than less in favour of dispersal.

While the policy of dispersal is suited to the priorities of Large Scale firms that of establishing growth poles in backward areas seems to be what makes dispersal possible for Medium Scale firms. Growth poles also appeal to newer firms, largely it would seem because it reduces their apprehension of the difficulties of operating in a remote backward area.

Again the scale of a firm's investment seems to affect its managers'

opinion of the government incentives as well as their reasons for choosing a particular location. However, the views of the incentives are also affected by whether a firm is in production or not.

There is widespread agreement that the best incentives the government offers are the financial ones, and for most firms this is more specifically the Central Government 15% Subsidy. However, for larger firms the Sales Tax Loan and the Income Tax Relief are relatively more attractive, basically because of the Rs.1.5 million ceiling on the Central Subsidy. But it also seems likely that the LSIs are in a better position to benefit from these two production-related incentives, because they have a tendency to be financially sounder projects with a greater likelihood of achieving successful production and large volume production at that.

Various clues also suggested that firms were experiencing difficulties in getting a Sales Tax Loan sanctioned and this seemed to be a possible explanation for a sharp fall in the popularity of the incentive among firms in production and therefore presumably eligible to receive it. Large Scale firms, on the other hand, seemed to have little difficulty in obtaining it, possibly because of their greater political clout in government circles.

The government financial incentives are also undoubtedly the most influential factor on firms' locational decision making. But again, the scale of firms' investment in their new projects seemed to explain variations in their priorities. Generally the larger a firm the less important the incentives seem to be, though they always remain an important factor. In more detail it seems that after the incentives, SSIs are most concerned with the cost and convenience of their site in terms of the facilities it offers. MSIs also find these considerations important but in addition they place more emphasis on proximity to a city. For LSIs proximity to a city becomes even more important but they also want to balance this with a certain remoteness in their search for good labour relations. With the really high capital cost projects, that is those involving more than Rs.20 million, this latter concern becomes

even more important, but it is only amongst the Dharmapuri firms that it becomes the most important factor to the extent of displacing the government financial incentives.

In sum it would seem that there does exist a certain group of Indian industrialists who are interested in setting up factories in remote backward area locations for reasons other than the government industrial dispersal policy. That the government should help them in doing so with a number of financial incentives is of course an added bonus, particularly because these industrialists have the financial and political muscle to ensure that they do benefit from all the incentives that are available. But their main priority remains one of finding a site where the local labour is sufficiently docile to not disrupt the operation of their factories with the strikes they are used to in their old urban locations. This group of industrialists, however, remains small because while backward area locations are now possible to operate in from an infrastructural point of view given the development of India's road and telecommunications network, they remain an expensive and risky choice which most industrialists are not yet in a position to contemplate. Thus it seems that the government industrial dispersal programme, typified here by the package of incentives and infrastructure offered by SIPCOT in Tamil Nadu State, provides the necessary backing which most industrialists lack and which makes the dispersal of their factories possible.

One of the essential elements of the package of assistance provided by SIPCOT to aid industrial dispersal is the establishment of the growth poles themselves. From the replies of the Medium Scale firms it is evident that these growth poles are indeed essential, but given the difference in popularity of Ranipet and Hosur and the way the latter seems to be eclipsing the former because of its site so near to Bangalore, one cannot help but feel that SIPCOT is playing into the hands of the Hosur firms. With the extremely high level of support industrialists maintain they give to the industrial dispersal policy, it seems likely that SIPCOT could easily have sited their second Complex a good deal further from Bangalore southwards down the road

from Hosur to Krishnagiri without losing too many firms. The impact on the Dharmapuri District backward area might then have been greater and the lost secondary multiplier effects of incomes and wages spent in Bangalore less.

One of the initial aims of conducting the survey of the SIPCOT firms was to establish whether these firms were choosing their new dispersed locations because of the government industrial location policy and incentives package or whether they had other motives of their own. In the event, the survey has successfully identified a small group of firms which had other motives to disperse, even though it has also proved that for the majority of firms the government programme was essential to help them disperse.

For the first small group of firms the government dispersal therefore plays directly into their hands; for the majority of firms less so, but even for them the policy is not as harsh as it might appear. Thus SIPCOT's choice of Hosur as a growth pole site seems to have been made more on the basis of what industrialists would like rather than in terms of the possible developmental impact on the backward area.

CHAPTER 9

REVIEW AND CONCLUSIONS

REVIEW AND CONCLUSIONS

This dissertation has analysed the subject of industrial location trends and policy at four different levels. Initially the subject was tackled at a purely theoretical level, sufficiently general to be applicable in most Third World countries. The other three levels all dealt specifically with the Indian case, first at a national level in Chapters 3 and 4, then a regional one in Chapters 5 and 6 and finally at a local, firm-specific level in Chapters 7 and 8. This separation was necessary for various reasons. Thus while Indian industrial location policy has been formulated at a national level it is implemented at a federal State level. So Chapters 3 and 4 discussed its formulation and the national influences on it, as well as the general characteristics and problems of Indian industry, while the next two chapters described its implementation in the one State of Tamil Nadu. Equally, though it was possible to provide a sufficiently detailed analysis of the spatial distribution of industry in the State of Tamil Nadu (Chapter 5), this would have been a forbidding task at a national level. Finally, a survey of firms following the industrial dispersal policy and a proper examination of their reasons for doing so could only be conducted within a more restricted local area. For the sake of clarity this final chapter summarises the findings at these four different levels of analysis.

1. Theoretical Arguments

Chapter 2 pointed first to the basic difference between industrial location trends and industrial location policy. One of the central concerns of this thesis has been to consider whether in India, where the state has instituted an industrial dispersal policy, there also exists a distinct dispersal trend which would have occurred even if the policy had not been instituted. In order to answer this question a theoretical approach to the study of industrial location was suggested which explained the appearance of new location trends in terms of major restructuring of industrial capital in the face of new problems and opportunities. As industrial capital continues its process of

accumulation it is continually involved in a certain degree of restructuring of its production (both its means and its methods of production) in order to maximise profits. While much of this restructuring simply involves small changes internal to a factory or on the same site, periodically the restructuring required is of sufficient scale and importance to warrant the need for a new site. The decision on the new location will then again be taken with the intention of maximising profits and the capitalist will seek to reduce any problems he might have been experiencing on his old site and take full advantage of any (new) opportunities which are available to him. Each time an industrialist takes such a location decision the context is slightly different. Industry in general and his branch or sector in particular will be experiencing specific problems, many of which will be different as certain locations become congested or restricted by the actions of other bodies and as other new locations, previously inaccessible or problematic for other reasons, become possible. In addition the industrialist's knowledge and perception of these problems and opportunities cannot be perfect and to a certain extent therefore, he can be expected to imitate other industrialists who have recently taken location decisions in similar circumstances to himself. In this way trends in industrial location will emerge.

Actions taken by the state as part of an industrial location policy, and for that matter independently of such a policy, obviously impinge on location decisions and can therefore influence the direction of new industrial location trends. But the state's action, whether in terms of placing restrictions on certain locations or of improving the physical environment and providing incentives in other locations, is only one of the factors the industrialist takes into account in making his decision. The problem posed in the introduction to the thesis involved trying to clarify just how important the Indian state's actions were in influencing the direction of the Indian industrial dispersal trend of the 1970s. This therefore necessitated the identification of other possible influences on the trend and an examination of the state of development and current problems of Indian industrial capital, as well as a study of the environment and location choices it is faced with.

In addition to this conceptualisation of the dynamics of industrial location trends it was also necessary to provide a framework within which the activities of the state could be interpreted and related to the process of capital accumulation. Thus for example, it is not adequate to conclude that state policy is the major influence on any new industrial location trend if industrial capital has persuaded the state to institute policies that suit it in the first place. For this study it was also important that the framework should incorporate some understanding of the nature of Third World economies and not apply simply to the Western capitalist economies in which industrial location is usually discussed. For this purpose a framework based on modes of production theory was adopted.

Thus it was argued (Chap.2 p.48) that Third World social formations should be conceptualised as consisting of an articulation of different modes of production amongst which the capitalist mode of production could be expected to hold an important though not always dominant position. Moreover, this articulation could be expected to have a differential spatial distribution with the capitalist mode more important in urban centres where modern industry had developed and less so in underdeveloped rural areas with no industry and little commercialised agriculture. Within such a framework the role of the state is seen as providing the conditions for production and capital accumulation but, depending on the importance and strength of the different modes of production within the articulation, it need not necessarily be providing the conditions for capitalist production. The state will, of course, be responding to the demands of the more important classes and groups present in the social formation and in a social formation where the capitalist mode of production is dominant or at least powerful it may well accede to the demands of industrial capital. However, other groups might also be of sufficient political strength to command attention, thereby involving the state in seemingly contradictory behaviour.

Regional policy of which industrial location policy is one element is an important part of the state's function of providing the conditions

for production. The state may have a number of reasons for instituting an industrial dispersal policy and it may be trying to please a number of different parties in doing so, but clearly industrial capital will be one of those most affected. Indeed it was suggested that one of the most important features of an industrial dispersal and more particularly a growth pole policy in a Third World social formation, is that it represents a state organised attempt to encourage the spread of the capitalist mode of production to underdeveloped regions where it has hitherto not been the dominant mode or has even hardly existed.

The final value of the modes of production conceptualisation is that it provides some indication of what the effect of industrial dispersal might be. Thus having argued that the crucial feature of this dispersal is that it represents the spread of the capitalist mode of production, it also suggests that the major impact will be in how the incoming capitalist mode of production interacts with any other modes of production that previously existed in the area. Should the capitalist mode destroy these other modes, then the people involved in them can be expected to suffer. Those local inhabitants who are able to participate in the new capitalist mode, either through jobs in the incoming firms or through selling goods and services to those who obtain these jobs, can be expected to benefit most. Depending just how disruptive the new industry is of the old modes of production in the area and how many new jobs are created, the dispersal policy can be expected to have both a negative impact and a positive developmental value.

The adoption of this theoretical framework suggested a number of areas which had to be discussed with respect to the Indian case under study. It also helped to crystallise two hypotheses out of the initial questions about the Indian industrial dispersal policy posed in the Introduction. First, that the Indian industrial dispersal policy was instituted in part at least to serve the interests of industrial capital, and second, that the dispersed industry and the growth poles would not have the straightforward positive developmental effect expected of them.

The areas for further study suggested by the theoretical framework included first a detailed examination of Indian industry, its extent and level of development, the current industrial investment climate and the problems of accumulation it was faced with, as well as the various options available for tackling these problems. Secondly they included various considerations relating to the Indian state, its relationship with industrial capital, the formulation and implementation of the industrial location policy and the rationale and influences that went into its establishment.

2. Analysis at the National Level

Chapters 3 and 4 introduced the Indian case at a national level. This proceeded from a description of the evolution of the industrial location policy, to a more analytical discussion of the trends in Indian economic and development planning policy combined with an account of the progress of industrial development.

The discussion of the evolution of the industrial dispersal policy presented in Chapter 3 shows first of all how, despite a long-standing commitment to regional development little has been done to institute a system of regional planning. In effect the industrial dispersal policy is the only national regional planning policy that exists at present and it only emerged in 1970 after 20 years of statements of intent. The aim of the dispersal policy is the development of backward areas but the way it has been designed and is being implemented is simply oriented to encouraging more industrialisation in these backward areas. Little or no attention is paid to the broader developmental impact this industry might have.

A number of changes were made from the original proposals in the formulation of the final policy package and in the process the developmental aim of the policy was sacrificed to a more straightforward one of encouraging the maximum amount of industrial growth possible. At the same time the scope of the package was widened to cover a much larger number of districts and the differential

advantages given to certain more backward States were reduced so that all States had a much more similar access to the incentives schemes. Effectively this watered down the policy, spreading its possible impact much more thinly across the country, and ensured that its most important impact has been in the already more industrialised States whose 'backward areas' are often much less backward than the 'advanced areas' of the less industrialised States. It is also evident that much of the concessional finance provided to industry by the national public finance institutions and development banks is still going to help industry which is not in the designated backward areas. All these changes seem to indicate that the first priority of the Indian Government remains the encouragement of as much industrial growth as possible and the developmental impact of industry on backward areas is but a secondary consideration. Whether this is a result of pressure from particular groups such as industrial capital or the Chief Ministers of the Indian States is unclear at this stage, though it is likely that these two groups in particular would have made some representation to the Government on this policy.

The links between the state and industrial capital were examined in the next Chapter: number 4. This was done in the context of a broader discussion on the formulation of Indian Government economic and development planning policy and how it evolved over the 30 years since Independence. At the same time the overall growth and trends in India's industrial development were described and related to the state development policy. Among other things this discussion made it amply clear that the capitalist mode of production is well developed at least in the Indian industrial sector.

The analysis of the evolution of Indian government economic and planning policy identified above all a major change of approach which occurred in the mid-sixties and to some extent seems to have been related to the death of Jawaharlal Nehru. At this time there was a clear movement away from a development philosophy based on state directed development to one which gave a much greater importance to private enterprise backed up by the state. The industrial dispersal

policy emerged shortly after this change of emphasis had taken place and this seems to provide a possible explanation for the confusion surrounding its aims. Thus while the objective of using industrial dispersal as a means to counter uneven regional development can originally be traced back to the development plans prepared during the Nehru era, the way the policy was finally formulated and established accords best with the new entrepreneurial style of the post Nehru years. At the same time the radical, even populist, developmental light in which the policy continues to be portrayed by the state possibly originated from its appearance at a point when Mrs Gandhi was introducing a number of radical measures in response to demands from the more radical political supporters she depended on at the time. Like some of these other measures the industrial dispersal policy thus acquired a more radical image than its actual content merited.

While there is no evidence that industrial capital directly persuaded the Indian government to institute the dispersal policy, there is little doubt that business interests were one of the main forces behind the overall switch in emphasis in the state's development planning policy and behind the establishment of the whole system of concessional public finance for private industry. Equally it is evident from the material covered in Chapter 4 that in conjunction with the changes in development planning philosophy of the mid-1960s there was also a move towards greater decentralisation of planning with the Chief Ministers of each State demanding a greater say in determining their own affairs.

The current development trends and accumulation problems of industrial capital were also discussed in Chapter 4. First it was noted that industrial growth during the 1970s had been limited compared to that during the two previous decades, which means that for the whole period of implementation of the dispersal policy the potential for investment in new dispersed factories was also limited. Three important trends which could all have contributed to encouraging dispersal were however, identified. First there was a tendency towards the use of more capital intensive production methods and therefore presumably a change in the nature of industry's labour requirements possibly involving a certain

degree of deskilling. The second trend, which is likely to have been aggravated by the first, is the dramatic rise in industrial unrest and strikes during the early 1970s. At the same time there is also a third trend towards an increased proportion of industrial production being in the consumer durables and export sectors. Inside India both these sectors are highly competitive which would presumably result in industrialists trying to increase productivity levels and reduce production costs. Thus at a time when industrial unrest was increasing, causing productivity to fall, industrialists were anyway trying to improve productivity, let alone deal with any losses due to strike action, and were also trying to change their methods of production in a way likely to further displease their labour force. Arguably one of the very few solutions to this predicament was choosing new factory locations in areas where labour had previously no experience of industrial work and could therefore be trained to the required standards without fear of retribution from skilled labour, could be paid lower wages and had no experience of organised labour unions.

There would therefore appear to be an argument based on pertinent economic considerations to suggest why Indian industrial capital might have been interested in industrial dispersal away from major industrial centres during the 1970s. Equally it was noted that increasingly during this decade, a major element of new investment in industry was financed from public funds, which suggests that there was also a certain financial expediency for industrialists to keep on the right side of the state and comply with its policies where possible. Thus Chapter 4 concluded that at a national level of analysis there appeared to be both an economic rationale for industrialists to choose new dispersed locations as a solution to some of the problems industrial capital was facing during the 1970s and a certain degree of financial expediency in complying with the state's policies in this respect. At the same time however, the discussion in Chapter 3 made it clear that on the part of the Indian state the dispersal policy was watered down to include many less acutely underdeveloped areas nearer to established industrial regions. Moreover the policy was established in conjunction with a major expansion of the availability of public funds for private

industry, which suggests that it was to a certain extent the price that industrialists had to be seen to pay for a development philosophy which otherwise blatantly favoured their interests.

It is thus already apparent that the industrial dispersal policy is not simply a straightforward state attempt to force industrialists into backward areas in order to encourage the latter's development. Instead while the state gains valuable popular political support from establishing a policy which is considered to help backward areas at the expense of industrial capital, it is also able to increase its financial support to industrial capital as a result, in the full knowledge that dispersal is not the hardship it may seem for the industrialists involved, as it may in fact help solve some of their current problem.

3. Analysis at a Regional Level

Chapters 5 and 6 took the analysis down to the level of an individual State in the Indian Union: Tamil Nadu. This was necessary in order to be able to go into the degree of detail required of the analysis. Given the wide variations in the levels of industrial development of India's States this focus on one of them, was not intended to be representative of all the others, particularly as Tamil Nadu is one of the most industrialised, but rather to act as a case study within which to examine the more detailed aspects of the policy.

The two chapters presented an analysis of the aims and methods of the industrial dispersal policy as it is being implemented in the State of Tamil Nadu. Thus Chapter 5 examined the nature and the extent of the development of industry in Tamil Nadu as well as the pattern of its spatial distribution, while Chapter 6 described the work of the industrial promotion agency, SIPCOT, charged with implementation of the dispersal policy. In doing so the chapters provided the context for the even more specific discussion in the final section of the thesis, which deals with the survey of a sample of firms locating new factories in backward areas of Tamil Nadu State.

Chapter 5 started by describing the major industries of Tamil Nadu and a number of important features of the State's industrial development, the availability of materials, levels of employment in the sector and the relative importance of the small scale industrial sector. It went on to examine the spatial distribution of industry in the State and showed that even in a relatively industrialised State, industry was extremely unevenly distributed with most of it still concentrated in the major cities which were already economically important before Independence. Thus in Tamil Nadu Madras is still by far the most important industrial centre with only one other town, Coimbatore, having any real national significance. A few other towns such as Salem, Madurai, Tiruchirapalli and Tuticorin have a number of factories each but otherwise there is very little industry dispersed around the State and hardly any in rural areas. It was thus quite clear that there does exist a real problem of industrial concentration in the State with which the Union Government industrial dispersal policy can legitimately concern itself.

The broad outlines of the State Government industrial development and location policy were also considered and the various areas designated as backward in the State were examined. On this point it was concluded that while the State Government had certainly selected the most backward districts for the distribution of their incentives, the areas designated as backward for the purposes of the Central Government 15% Subsidy were not always those with the least industry. The chapter concluded with some observations on the latest trends in industrial location in the State and it was noted that while during the 1960s there was a definite trend towards greater concentration of industry in the State it would appear that this had been reversed during the 1970s. With large and medium scale industry this has mostly been associated with the state's efforts. Thus a fair number of public sector and joint sector factories have been started in dispersed locations in the State, often associated with sources of particular mineral raw materials, but equally a certain amount of private sector industry has chosen dispersed locations and taken advantage of the

government incentives to do so. The dispersal policy has therefore not been entirely ineffective. However, the chapter ends with the telling statistic that the 260 odd firms which had received the 15% Central Subsidy in Tamil Nadu by the end of March 1980 represented only about 10% of the new factories established during the decade. Even though many of these other new factories are small ones and have not all located in Madras but have gone to the Coimbatore-Salem area as well, it is clear that there is plenty of scope for the dispersal policy to be a good deal more effective.

Chapter 6 went on to examine the operation of the dispersal policy in much more detail by focussing attention on the work of the State Industries Promotion Corporation of Tamil Nadu (SIPCOT), the industrial promotion agency in charge of implementing the policy and administering the package of incentives in the State of Tamil Nadu. The chapter outlined the various aspects of the agency's policy, describing the incentives it offered and the backward area growth poles it had started where it provided infrastructural facilities for industry. The agency's work was then compared with that of other similar agencies in several of the other major industrial States of India.

On the whole SIPCOT comes out well of this comparison both in terms of the number of large and medium scale firms it has helped to set up new factories and in terms of the degree of dispersal it has succeeded in encouraging. However, this dispersal is still restricted to a small number of very specific pockets. The Ranipet-Vaniyambadi belt of North Arcot is one and the three western taluks of Ramanathapuram is another. Both were already the two most industrialised parts of the designated backward areas in the State. In addition SIPCOT established its first growth pole at Ranipet, thereby encouraging this concentration. The other place where there is a significant concentration of new factories assisted by SIPCOT is in and around its second growth pole at Hosur in Dharmapuri District. This pocket on the contrary, is in one of the most backward parts of Tamil Nadu which previously had virtually no industry at all. However, it is also just across the border from the major industrial city of Bangalore in

Karnataka State and therefore in regional terms represents much less of a dispersal than it would seem.

Despite these reservations SIPCOT's achievement is not negligible. Although the firms it has helped have not established factories in locations as dispersed as might have been hoped, they do represent industrial development in places where it would have been unlikely to occur to the same extent otherwise.

4. The Contribution of the Survey Analysis

The final and most specific level of analysis of the thesis was that carried out in Chapter 7 and 8 on the returns of the industrial questionnaire survey. The survey was prompted by the need to obtain some fairly specific information with which to answer many of the questions posed earlier in the thesis. It was particularly important to find out directly from a sample of industrialists why they had chosen to comply with the state industrial dispersal policy and at the same time to get a clearer indication of what type of firms were choosing dispersed locations for their new factories.

Chapter 7 first introduced the sample of firms surveyed, then described the environment of the Ranipet and Hosur areas of Northern Tamil Nadu that they are locating their new factories in, and finally examined the question of what type of firm is choosing which type of location. Chapter 8 tackled the returns of the second part of the survey which dealt with the firms' managers' opinions of the dispersal policy and its implementation, attempting first to see if these varied according to the location the managers had chosen and secondly whether there was any other way of identifying groups of firms whose managers had particular opinions of the dispersal policy.

The survey made it clear first of all that the firms setting up new factories in the SIPCOT growth poles at Ranipet and Hosur and in the area around Hosur were, by and large, well connected with established Tamilian and particularly Madras industry. This was evident from both

the types of industries represented and from the corporate structures of the firms. Typically the firms were Medium Scale Industries in terms of capital investment and employed less than 50 unskilled and 50 skilled workers. There were however also a significant number of LSIs, some of which employed very few workers and were therefore using relatively capital intensive production methods. By and large firms were dealing with South Indian sources of raw materials while at the same time they were selling their products to All-India urban markets with a natural tendency to sell somewhat more in urban markets nearer home than in those further away. Finally it was noted that of the main state financial incentives only the Central Government 15% Subsidy seemed to be reaching the majority of those firms eligible to receive it.

The section of Chapter 7 which dealt with the Ranipet and Hosur environments described in detail the features they presented to incoming industrialists. It was noted that, while the economy of both areas was certainly backward there were major differences between the two. Thus the Ranipet area was more heavily populated, indeed it was fairly urbanised, while the population of the Hosur area was much more sparse and there were no other towns inside a 35 kilometre radius. On the other hand Hosur was much nearer to Bangalore than Ranipet was to Madras, making it a good deal more attractive for industry. Ranipet had some previous experience with industry, with the long standing presence there of the EID Parry ceramics factory and the important traditional leather and tanning industry around it in North Arcot, Hosur on the other hand had no industry to speak of. Finally agriculture in the Ranipet area was better developed, somewhat more prosperous and appeared to be a good deal more commercialised than around Hosur.

The attempt to see whether different types of firms were choosing different locations did not bring out too many important results, although it did show a number of minor points such as the fact that following SIPCOT policy chemical firms were indeed locating in Ranipet, the growth pole with the better water supply. However, the one important result that it did produce was that the firms locating in

Dharmapuri District in the area around Hosur but not in the Hosur growth pole, appeared to form a reasonably homogenous group with distinct characteristics. They were relatively capital intensive production units, with particularly strong corporate links with established Madras industry, paying lower than average wages except to managerial staff and were by and large choosing remote locations away from the main National Highway, and well removed from Hosur town and even smaller settlements. As most of these firms had chosen their new location before SIPCOT announced the Hosur Complex, indeed their choice seems to have been an important factor in SIPCOT's choice of Hosur, their reasons for doing so are of prime interest to this thesis. Because this fairly similar group of firms is acting to a large extent independently of SIPCOT it was felt to be likely that they represent the type of firm most interested in industrial dispersal for their own reasons. Thus their responses to the opinion part of the questionnaire were examined with particular attentiveness in Chapter 8.

In effect this was one of the main aims of the first part of Chapter 8 where the firms' behaviour, location choice rationale and opinions of the dispersal policy were analysed against the location they had chosen. While for the most part the results of this exercise were too diffuse to fit into general patterns, they did confirm the earlier view that the Dharmapuri firms constituted a special group. However, it is clear that the latter's choice of a common location is not an adequate explanation of why they are special. Rather they share common characteristics, experiences and concerns which have pushed them into taking similar location decisions. Identifying these was the aim of the second part of Chapter 8 which broadened out the analysis and attempted to identify patterns of behaviour and opinion not only by location, but also by the whole range of the firms' other characteristics that the questionnaire had collected information on.

One of the main results of the opinion survey was to demonstrate an extremely high level of support for the state industrial dispersal policy amongst the sample firms' managers. At the same time an equally high proportion still felt that the ideal location for their new

factory would have been in or near a major urban centre. The industrialists' support for the policy is therefore based on a fair degree of pragmatism about their own position vis à vis the state and the nation's developmental needs. However, there were also a small proportion (11%) of the firms who were not being purely resignedly pragmatic in their support for the policy. These maintained that even if the dispersal policy had not existed they would have chosen the same location, or at least another backward area or rural location for their factory. While this group were not all firms located in Dharmapuri there were a higher proportion in this latter location than elsewhere.

Throughout the analysis the firms' scales of investment proved to be one of the most useful explanatory variables for their priorities. Thus while Medium Scale Industries and new firms were the most in favour of the overall policy package, Small Scale Industries were critical of the ban on industrial development in cities while remaining generally in favour of the dispersal principle and the growth poles, and Large Scale Industries didn't like the growth poles but were in favour of both the ban and dispersal. Other characteristics of the firms explained various other variations in their behaviour and priorities but none were as consistently useful as their classification by scale of fixed capital investment.

Putting all these various clues together the survey results demonstrate that the Indian industrial dispersal policy is particularly well suited to the priorities of Large Scale Industry and especially those firms which form part of larger company groups. These have the financial backing required to cope with the difficulties of operating in backward area locations; they are in a good position to take full advantage of the production related financial incentives offered by the state, which if production can be got going fast enough and on large enough a scale are the most advantageous of the incentives; they are also those who are keenest to find remote locations where they can escape the poor industrial relations they (or their managers as part of larger company groups) have experienced in established urban industrial centres. These firms thus have reasons of their own to disperse, the financial

capability to do so on their own and would seem to have the financial and technical capability and experience as well as the political muscle to ensure that they both obtain and can take fullest advantage of the state financial incentives that are on offer.

Smaller and more independent firms (and there is a tendency among the firms for the larger ones to be more closely linked to established industrial capital and the smaller ones to be more independent) do not have the financial stature to handle dispersal on their own, they therefore need (as opposed to simply benefitting from) the state assistance, and the added structure, assistance and sense of security they find in the growth poles are important to them. They may also be concerned about labour relations, indeed they are very likely to consider the demands of labour as the greatest obstacle to the ultimate profitability of their firms, but they do not seem themselves as being in a position to do anything about this. Thus it is that these firms do not share their larger colleagues' independent reasons for choosing a dispersed location. Instead the assistance from the state, both financial incentives and physical facilities, becomes their overriding rationale for dispersal. Ironically, however, the SIPCOT data on sanctioning and dispersal of the financial incentives show that it is these same firms which are the least likely to obtain the incentives on offer and because many of them may experience difficulties and delays with going into full production they will also receive proportionately less from the production related incentives once they manage to obtain them.

Thus the scale of a firm's capital investment is only one important determinant of its problems, its priorities and options, its attitude towards the industrial location policy and ultimately of its choice of location. The other major determinant is its corporate status and related financial security. While larger scale investments tend to be related to stronger connections with established industrial capital and firms involving less capital tend to be more independent, the two variables do not overlap precisely, thereby producing variations in firms' priorities and behaviour. Moreover, despite the importance of

these two determinants in this survey, the effect of other factors on individual firms should not be dismissed, as the particular circumstances and characteristics of individual firms go a long way to explain variations from overall patterns of behaviour.

The group of Dharmapuri firms in the overall sample stands out precisely because it contains a high proportion of the specific type of firm, LSIs with strong links with established industrial capital, which benefit most from the dispersal policy and are prepared to disperse without too much assistance from the state. But they also stand out because they have chosen to concentrate in a fairly small area. As was discussed in Chapter 5 there are very few private enterprise firms of the same scale and corporate status locating in backward areas in Tamil Nadu outside the SIPCOT growth poles, and this group in Dharmapuri represent most of them. That they should all locate in such a small area is surprising and can be entirely related to the area's proximity to Bangalore. This was, after all, given as another major factor in their choice of location after the avoidance of industrial unrest. The area of Dharmapuri around Hosur therefore combines a number of advantages for these firms, a certain degree of remoteness, yet adequate accessibility to one of South India's most dynamic established urban industrial centres and finally the backward area designation with the financial advantages that brings.

The other major aim of the survey was to acquire sufficient information about the type of firms complying with the dispersal policy to make it possible to draw conclusions about the developmental impact they could be expected to have on the backward areas they were locating in. The survey results indicated that as the firms were for the most part dealing with the urban markets far removed from the backward areas for their materials and the sale of their products, and as overall they expected to form only a limited number of subcontracting links locally, the major area of their impact would be through employment generation, particularly as in general the firms expected to find most of their labour locally. It was also concluded from the analysis of the respective economies of the Ranipet and Hosur areas that the creation

of large numbers of industrial jobs could be expected to have a different effect in each place.

Thus in Hosur with its smaller local population and a population which was considerably less urbanised and extremely unfamiliar with industrial work the sample firms were going to create between them about 5,000 jobs for skilled and unskilled labour to which must be added a further 1,300 jobs from the Dharmapuri firms, whereas in Ranipet only about 2,400 jobs were being created. On those grounds alone the impact was likely to be very different. Given the fact that the urban population of the Ranipet area (Ranipet, Arcot, Walajahpet and Vellore) was over 200,000 people in 1971 compared to Hosur's 16,500, this difference would be pronounced. The required industrial labour would of course be made up in two different ways, from slack in other areas of employment, principally agriculture, and through immigration. There were already some signs of immigration in the Hosur area though none was reported in Ranipet. Both immigration and the flow of labour from agriculture to industry in the Hosur area can therefore be expected to be high and their impact considerable. If nothing else the population of Hosur town may easily double or treble in ten years. But there is also the effect these new trends will have on the existing local and largely agricultural economy. Given the different characteristics and levels of development of the farming systems in each area the impact can again be expected to be different in both Ranipet and Hosur.

In Chapter 2 it was suggested that one of the best ways of conceptualising such a relationship between an existing and an incoming economic system was to look at in terms of modes of production theory. What little evidence that could be found on the nature of the modes of production in existence in the Ranipet and Hosur areas was presented in Chapter 7. It led to the conclusion that pre-capitalist modes of production did exist in both areas and were particularly widespread around Hosur. While there is some evidence of capitalist production methods in both industry and agriculture in the Ranipet area the capitalist mode of production had not eliminated all other

pre-capitalist modes.

Given the existence of these pre-capitalist modes it was concluded that incoming capitalist firms would gradually disrupt the traditional economy by increasing the commercialisation of the distribution systems and imposing the norms of a capitalist mode of production. The impact could be expected to be all the more dramatic in the Hosur area where the influx of capitalist firms was all the greater and as yet a capitalist mode of production hardly existed at all. With time the capitalist mode of production could be expected to become more dominant in both areas.

5. Conclusions

The thesis started from the dual presumptions that India's industrial dispersal policy operated to the advantage of those industrialists who complied with its prescriptions and that it would not have the purely positive developmental effect on the receiving backward areas that was predicted. The rationale behind these two hypotheses was first explored at a theoretical level.

The theoretical arguments suggested a way of conceptualising the process of industrial dispersal in Third World nations, which in turn suggested reasons why Third World industrial capital might, in certain conditions, consider it advantageous to locate factories away from traditional urban industrial centres in underdeveloped rural regions. Equally these arguments provided a framework within which to understand the activities of the state in the field of regional planning, its role in providing the conditions and appropriate environment for continued production, as well as the political pressures that would influence its policy formulation in this respect. Finally the theoretical model provided a way of understanding the effect dispersing capitalist industry might have on the receiving backward areas, it being argued that the crucial feature of such a industrial dispersal policy in a Third World context was that it represented a state organised attempt to encourage the penetration and spread of a capitalist mode of

production to areas hitherto characterised by pre-capitalist modes.

Having advanced a theoretical model it was then necessary to test its value against the Indian case being studied. This was tackled first at a national level. The evolution and formulation of the industrial location policy was examined in detail, revealing a number of apparent inconsistencies between the stated aims of the policy and the way it had been formulated. It emerged for instance, that the policy appeared to be more oriented towards encouraging maximum absolute industrial growth than extending its developmental impact. Equally there was evidence that certain political pressures had influenced the final form the policy was to take.

A broader study of the Indian state's economic policy formulation and its relationship with industrial capital was also conducted. This revealed that a major shift in direction of India's development philosophy took place during the 1960s shortly before the industrial location policy was formulated. From a philosophy which advocated a state led and directed development programme, the emphasis switched to the efforts of private capital and enterprise as the prime movers of development backed up by assistance from the state. It was argued that the industrial dispersal policy was an integral part of this new philosophy and indeed acted as one of its main legitimisers, by providing a seemingly harsh framework of conditions with which industrialists had to comply if they were going to receive the increased levels of state financial aid being made available.

The same chapter also examined the level of development of Indian industry and identified a number of accumulation problems that industrial capital was experiencing during the 1970s. It became clear that industrialists perceived deteriorating labour relations as one of their worst problems. In addition, with the difficult years that Indian industry was going through at the time, competition was severe and productivity and production costs were prime considerations. A shortage of investment capital was also perceived as a major problem. To solve these problems only limited options were open to industrialists but it

was argued that dispersal to underdeveloped rural areas was possibly one of the most attractive, as industrialists would perceive it as combining a chance to install more efficient machinery, employ cheaper and more malleable labour and escape from the powerful labour unions of Indian's main industrial centres.

It thus appeared that the state industrial dispersal policy could be argued to have a number of major advantages for industrial capital and could realistically be seen as an integral part of the Indian state's new, more entrepreneurial approach to development planning. That it could also be presented as a policy which placed restrictions on industry and encouraged the development of the nation's backward areas, made it much more viable on a broader political level and explains the manner in which it is presented by state agencies. So far it would seem that the theoretical model advanced initially is correct and has pointed the study in the right direction, but it was necessary to confirm its value more adequately with a detailed case study.

The case study examined the implementation of the policy in one State of the Indian Union: Tamil Nadu. The existing industry in Tamil Nadu and its spatial distribution was described, showing how acute a problem industrial concentration in a few major cities is in India. In turn the State's backward areas were described to demonstrate the nature of the problem that the dispersal policy was intended to tackle. A further chapter examined how the dispersal policy was being implemented in the State. This indicated that although industrial dispersal was taking place the numbers of firms involved was still limited and only restricted parts of the designated backward areas were seeing any industrial development. As a rule these tended to be those parts of the backward areas which already had some industry.

Ultimately the case study was taken down to a level of even greater detail with a survey of firms establishing new factories in two backward area growth poles in northern Tamil Nadu and also in the vicinity of one of them. The survey was intended to collect information not available from published sources about the firms involved in the

dispersal programme: What sort of firms were complying with the policy and why were they doing so? More detailed information on the specific backward areas they were locating in was also provided. The results of the survey showed first of all that the firms could be expected to produce only limited multiplier effects on the local economies of their new environments. By and large the firms were bringing their materials from well outside the area and selling their products in urban markets all over India rather than locally. Moreover, they only expected to do a small proportion of their subcontracting locally. The major local effect would therefore be through the jobs and industrial wages that they would provide. Furthermore it was suggested that the capitalist mode of production of the incoming firms would have a disruptive effect on the pre-capitalist modes which appeared to still exist in the two backward areas being studied. While industrial wages would give some local inhabitants access to higher standards of living, many others would not feel the benefits and would be relatively worse off.

However, the most important result of the survey was that it demonstrated the existence of a group of firms that had chosen to comply with the dispersal policy for precisely the reasons postulated earlier in the theoretical section of the thesis and in the general study of Indian industrial development. Their main reason for choosing their new remote location was to try and find cheap, malleable labour as yet unaffected by labour unions. That this group of firms was small is not surprising, only the largest companies with strong links with established industrial capital and therefore financially secure could afford to take the risk still inherent in operating in a remote backward area environment. In a way this group should be perceived as trend setters, the first to realise the possible benefits of a backward area location. For the trend to expand and become well established, state assistance both financially and with infrastructure was essential to provide the backup and security for smaller less well-endowed firms. These are the ones keen on the new growth poles. In establishing these growth poles and providing the financial assistance these medium scale firms require, the Indian state is thus in effect fulfilling its regional planning role: establishing and maintaining the conditions and appropriate environment for capitalist production.

APPENDIX

QUESTION DESIGN & SURVEY METHODOLOGY

The questionnaire survey was conducted by the author between January and June 1980 with the intention of obtaining detailed information on firms responding to the Indian Government industrial location policy. There is hardly any up to date and detailed data on the precise location of industry in India, let alone on how much and what industry is moving to backward areas, yet without such information a critical evaluation of the dispersal policy is impossible. Equally it was important to obtain some idea of the industrialists' view of the policy to set against information and interpretations supplied by government sources.

To achieve this goal a fairly straightforward questionnaire in two separate parts was prepared. The first part covered factual details about the characteristics of the individual firms being approached, while the second part consisted of a series of behavioural and opinion questions designed to form the basis of a structured interview with the managing director or other senior executive of the firm. This division is reflected in the way the two chapters (7 & 8) dealing with the survey results have been arranged. Chapter 7 covers the basic characteristics of the sample of firms surveyed. Chapter 8 outlines the information gathered from the opinion part of the questionnaire and then analyses the results of the full survey by attempting to relate the opinions of the managers to the characteristics of the firms.

1. Choice of Sample

The sample of firms chosen for investigation was taken from the files of the Tamil Nadu government industrial promotion agency SIPCOT. This was partly for reasons of convenience as the officers of SIPCOT were prepared to provide access to their registers and some of their files, but this was also the most accurate way of obtaining a sample of firms moving to backward areas as virtually all firms doing so dealt with SIPCOT as was noted above. Again as the majority of firms going to backward areas in Tamil Nadu were locating in the two growth poles of

Ranipet and Hosur, the sample consisted primarily of all the firms going to these two centres. To this was added a number of firms locating factories in the area of Dharmapuri District around Hosur and a few firms in the joint SIPCOT-MMDA satellite town of Maraimalainagar (M.M.Nagar) just outside Madras. Finally, a number of major firms setting up new factories in other backward areas of Tamil Nadu were approached, but there were few of these (cf. Chapter 6 above) and even fewer responded. In all 114 firms were approached and information was collected on 82.

Although it was impossible to take a strictly random sample, this can nevertheless be taken as fairly representative of the major aspects of current trends in industrial location in Tamil Nadu. Thus 82 firms represent a large proportion of the organised sector industry which has located new factories in backward areas of the State since the inception of the dispersal programme. The concentration on Ranipet and Hosur is justifiable as they are by far the two most important locations chosen by these firms and because they constitute such an important element of the SIPCOT programme.

2. Questionnaire Design

As explained at the beginning of the Appendix two very different types of information was sought from the firms. First factual data about the type of firm and industry involved, including such characteristics as its size, capital and labour involvement and output levels. Secondly, attitudinal and behavioural information about the management's views of the government policies and the reasons for their backward area location choice.

For the second type of information an interview with the managing director or other senior executive party to the location decision making was obviously essential, but the first type of information could be more usefully collected on a simple questionnaire form to be completed by more junior administrative staff. Thus the questionnaire was divided into two parts: a single sheet factual information form

sent in advance with the request for an interview with the M.D. and a longer questionnaire to be completed personally in the interview. Ideally it was intended that the first sheet would be complete and ready for collection on the day of the interview with the Managing Director, so that it could be rapidly checked for completeness and accuracy in his presence. On the whole this system worked well, although as could be expected firms required varying degrees of persuasion and pushing before they complied fully. Some firms also refused to participate in the survey and there was a good deal of variation in the time they were prepared to devote to it. The minimum interview time was about half an hour, but most lasted an hour and a number of managers insisted on going on much longer than necessary. The questionnaire was designed with sufficient open ended questions and space for extra comments to cope with most of the extra information and opinions that managers offered, though subsequently it was not always possible to include such information in the systematic analysis.

The first part of the questionnaire (SECTION I; cf. questionnaire reproduced at end of Appendix) thus contained questions on the corporate status of the firm; the stage the project had reached; the expected date of commencement of production; the location of the principal offices, factories, and research and development work of the firm; the labour employed: its numbers, wages, training, origins and places of residence for each of five categories of employees: unskilled and skilled workers, clerical, technical and managerial staff; the capital employed, both fixed and working capital; the materials used, their value, quantity and provenance; the products, again with their value, quantity and market distribution; and finally the nature of the transport facilities used. a/

The second part was more complex. It first contained a question (SECTION II, Question 1) on direct attitudes to the three main elements of the government policy: the ban on industrial development in cities; the dispersal of industry to backward areas; and the promotion of growth poles for industrial location in backward areas. Attitudes to these three policies were recorded on a five point scale from excellent

to very bad. Section II then broadened out with a series of questions on the effect these policy measures were likely to have on industry. Where possible a Yes/No/Unsure answer was requested here, but space for comments was also provided. This series of questions enquired into the firm's ideal location; the difficulties of operating in backward areas; the adequacy of government incentives and the desirability and value of locating in one of the government growth poles.

Section II then continued with a series of questions on the managers views of the developmental value of the location policy. This concentrated mostly on whether or not firms would be forming links with other industries but also included questions on whether the firm considered it had a 'developmental responsibility' or not and whether it was necessary to be selective in the choice of firms encouraged to come to growth poles. The Section was concluded with several questions on the likely effect the dispersal of industry would have on established industrial centres such as Madras.

Section III dealt more specifically with the managers' views of the growth poles. First there was a question on which of the financial and material incentives provided by SIPCOT had been most instrumental in persuading them to choose their new location, and they were then asked to suggest any other incentives they would like to have seen provided. The next question gave a series of possible reasons which might have caused them to choose their new location, managers were asked which ones had been influential and to rank the most important reasons. The final question asked them whether they felt their particular SIPCOT Complex was well situated or not and why.

Inevitably, administering the questionnaire revealed a number of problems in its layout and wording. Some of these it proved possible to correct as they became apparent in the first few interviews and would not affect the statistical validity of the responses, others just had to be left. A quick pilot survey was also conducted which led to a number of major improvements in the final version of the questionnaire.

3. Survey Coverage & Response

As stated earlier 114 firms were approached. This number included all the firms listed as either already operating in or definitely intending to operate in the two principle growth poles of Ranipet and Hosur at the time of the survey, that is February to May 1980. As well as this all the five firms already operating or at least constructing their factories in M.M.Nagar were approached and a further 10% random sample of all the other firms listed as negotiating for a place in M.M.Nagar were included. Then all the dozen or so firms listed by SIPCOT as operating in Dharmapuri District in the area around the Hosur Complex were approached. Finally a few major projects elsewhere in Tamil Nadu were approached, this producing one interview with a firm starting a plant in a small backward area town in North Tamil Nadu called Sholingur. In all, therefore, the lists from which the sample was drawn included 154 firms (Table 1).

TABLE 1: Response Rate to Survey

Location:	<u>Ranipet</u>	<u>Hosur</u>	<u>M.M.Nagar</u>	<u>Dharmapuri</u>	<u>Other</u>	<u>Total</u>
Total N ⁰ of Firms:	37	63	38	14	2	154
N ⁰ approached:	35	50	14	13	2	114
Respondents:	28	33	8	12	1	82
- Full						
respondents:	18	27	2	6	1	53
- Partial						
response:	10	6	6	6	-	28
Mailed: no						
response:	-	6	6	-	1	13
Non respondents:	6	9	-	1	-	16
Cancelled						
projects:	3	2	1	-	-	6

In Hosur in particular, where many of the projects were extremely new, (indeed some of them were only being announced during the course of the survey) it often proved very difficult to contact the project promoters or to get detailed information on projects which had only just been formulated, which is why the response rate in Hosur is poorer than in Ranipet. The 'Mailed: no response' category in Table 1 applies to firms that did not yet have offices on site and whose offices were so far away and by themselves that they did not warrant a special trip. Most of the interviews were conducted on site or at the firms offices in and around Madras and Bangalore.

The full responses in Table 1 represent a 50% sample survey in Ranipet, 43% in Hosur, 5% in M.M.Nagar and 43% in Dharmapuri (outside the Hosur Complex). However, the partial responses all contain useful information which adds to the accuracy of the data collected when in aggregate form. These returns have therefore also been added to the data analysed and in doing this the above coverage rates rise to 75% for Ranipet, 52% for Hosur, 21% for M.M.Nagar and 85% for Dharmapuri. Finally if one excludes from the Hosur 'Total No. of Firms' of 63 those projects which were only announced during the course of the survey, the final coverage rate for Hosur rises to 66%. These coverage rates are taken to be fairly representative sampling rates for the population surveyed given the various circumstances just described.

4. Statistical Analysis of Survey Returns

Most of the analysis of the survey returns was done by computer at the University of London Computer Centre. The main programme used was SPSS (Statistical Package for the Social Sciences), but for one set of calculations on the data about the values and quantities of materials used and products manufactured by the firms as well as their respective sources and destinations, a short FORTRAN programme was specially designed.

The SPSS analysis consisted largely of straightforward but extensive and time consuming crosstabulations. It was found that these produced

the most appropriate and valuable form in which the data could be used. Other simple statistical tests such as a chi-square test were attempted but were found to be inappropriate for the distribution of the data collected. Thus for instance for the chi-square test the data distributions often involved fairly large numbers of categories many of which, with a particular variable, registered no values thereby violating one of the assumptions of the chi-square test (Norcliffe, 1977, p.93).

However, it was found that the crosstabulations produced by SPSS with their absolute and percentage (by row, column and full table) values proved adequate for most purposes. This does of course, mean that the analysis of the survey results and the conclusions drawn from it should not be attributed greater significance than is warranted by such simple statistical work. The level of significance that can be attached to these results is however, deemed to be adequate for a study of this nature which has sought to identify trends and tendencies rather than prove their absolute or relative statistical validity.

5. Copy of Survey Questionnaire

Survey of Industrialists Opinions of Government Industrial Location Policy

James W. Mackie
Geography Department
School of Oriental & African Studies
University of London

Madras, Feb. 1980

Name of firm: Address:.....
..... Site at:..... Site No:....

Please answer questions on the dotted lines provided or, in the case of multiple choice answers, by ticking in the appropriate space or circling the appropriate answer.

SECTION I: Factual Information about Firm

Are you a subsidiary of a larger firm? Yes, No

Is your unit in the SIPCOT Complex - already in production: Yes
 or - still under construction: Yes

Actual or expected date of commencement of production:

Month:..... 19...

For firms with one year of production already completed please answer questions, if possible, with actual average figures for this last year. If not possible and for those firms who have not yet started or are only in trial production please give estimated figures for expected full production levels.

If you are answering questions with estimates please tick here:

I.1 Location of functions:

	<u>On Site</u>	<u>Madras</u>	<u>Bangalore</u>	<u>Other(name)</u>
If you are a subsidiary,				
where is your Head Office:
& Main Factory:
For all firms,				
where do/will you carry out the following functions				
Manufacture (of parts):
Assembly (of parts):
Research & Development:
Purchase & Sales Office
Director's Office:

I.2 Labour: (Persons you employ/expect to employ at your site in the SIPCOT Complex)

	<u>workers</u>		<u>other employees</u>		
	unskilled	skilled	clerical	technical	managerial
Number
Wages/Salaries (Total, in Rs.)
How many hired locally?
If you are a subsidiary, How many brought with firm?
Of those hired locally, is their level of training usually adequate?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Do you provide any training?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
For firms already in production only:					
How many of each group of your employees currently live in:					
-
- Nearby villages:
-
-
-
- Other:.....

Do you provide any daily bus service for your employees? Yes, No
 If Yes, To your site from where:

I.3 Capital Investment

Fixed Capital Working Capital

I.4 Production:

<u>Raw materials used by your firm:</u>	1	2	3	4	5
Names of raw materials:
<u>Input per annum:</u>					
- Quantity (units?):
- Value (Rs. lakhs):

Markets where products are sold: (please give % sold in each place)

- Inside SIPCOT Complex:%%%%%
- In nearby District(s):%%%%%
- In Madras (city):%%%%%
- In Bangalore:%%%%%
- Elsewhere: (please specify place name, State or country)
-:%%%%%
-:%%%%%

Products which your firm produces:

	1	2	3	4	5
Names of products:

Output per annum:

- Quantity (units?):
- Value (Rs. lakhs):

Used for further production (P)

or public consumption (C)?: P/C P/C P/C P/C P/C

Places where raw materials come from: (please give % brought from each place)

- From inside SIPCOT Complex:%%%%%
- From nearby District(s):%%%%%
- From Madras (city):%%%%%
- From Bangalore:%%%%%
- From elsewhere (please specify place name, State or country):
-:%%%%%
-:%%%%%

I.5 Transport:

What percentage of your transport of materials and products goes through or to and from:

Madras:% and Bangalore:%

Do you have your own transport facilities to transport your materials and products?

Yes, No, Some

For firms moving to Ranipet and Maraimalainagar only:

What percentage of your transport of materials and products to your site was/will be by:

Rail:% and by Road:%

Do you have any comments you would like to make on this Section of the questionnaire or its subject matter?

Thank you for your cooperation and patience.

Survey of Industrialist's Opinions of Government Industrial Location Policy

James W. Mackie

Geography Department

School of Oriental & African Studies

University of London

Madras, Feb. 1980

Name of firm: Address:.....
..... Site at:..... Site

Date of interview: 1980

Name of person interviewed: Designation:.....

Please insert answers to questions in the space provided or, in the case of questions with multiple choice answers, please circle the appropriate answer.

SECTION II: Attitudes to Industrial Location Policy in General

II.1 The government policy for industrial location regulation consists of the following three main elements; what do you think of each of them?

- A. - The Policy banning industrial expansion in Madras, is it a excellent, good, unsure, bad or very bad policy?
- B. - The policy of dispersing industry from big urban centres to backward areas, is it a excellent, good, unsure, bad or very bad policy?
- C. - The policy of promoting growth centres for industrial location in backward areas, is it a excellent, good, unsure, bad or very bad policy?

Let us now discuss the effect of these policies in more detail. There now follows a list of questions to guide the discussion but please feel free to add any comments.

Firstly the effect these policies are likely to have on your firm and on industry in general.

II.2 If there were no government industrial location policy where would you have chosen to invest? Town:

II.3 Are you finding/expecting to find it more difficult or easier to make your firm prosper in this backward area than you would in Madras?

A lot more difficult, more difficult, no real difference, easier, a lot easier.

Briefly, why?:

II.4 The government recognising that there are certain difficulties for firms moving to backward areas offers them concessions and incentives to help them. Do you think these are adequate to make

up for the difficulties encountered by firms locating in backward areas?

Yes, No, Unsure

II.5 Without such incentives would you find it uneconomic to run your firm in a backward area?

Yes, No, Unsure

II.6 The policy of promoting growth centres as well as offering incentives is intended to make location in backward areas even easier for firms, do you think it does?

Yes, No, Unsure

II.7 So, if you are going to locate in a backward area you would prefer to do so in a government growth centre than in any other spot?

Yes, No, Unsure

Yes: Even though you would thus have a more restricted choice of location?

Yes, No, Unsure

No: Why?:

II.8 Do you feel that growth centre policy as implemented at the moment in Tamil Nadu could be improved?

Yes, No, Unsure

Yes: Any particular way?

II.9 Do you think that because of the ban placed on industrial expansion in Madras and the attempt by government to force to move to backward areas there have been firms who have simply decided not to expand?

Yes: (- 10, 10-50, 50-), No, Unsure

Do you know of any personally?

Yes: (- 10, 10-50, 50-), No

Secondly the effect these policies are likely to have on the backward areas the firms are going to locate in and on Madras where they are moving from.

You will be aware the main justification for these industrial dispersal policies is that government planners feel that industrial firms can have a positive effect on the general economic development of the area in which they locate.

(Aware? Yes, No)

II.10 Do you think that government planners are expecting too much from firms in this respect?

Yes, No, Unsure

Comments?:

II.11 Are there any ways in which you think your firm is/will be encouraging the local economy of the area surrounding your new factory?

II.12 Do you think that government planners should be more selective in the type of firms they want to locate in backward areas?

Yes, No, Unsure

II.13 What characteristics should they be looking for in such firms?

II.14 Do you think that the firms SIPCOT has managed to encourage to locate in this growth centre (Complex) are going to have the desired effect in terms of developing the local economy of this area?

Yes, No, Unsure

II.15 Have you/Would you hope to establish industrial links with other firms in:

- this Complex? Yes, No, Unsure
- the surrounding area? Yes, No, Unsure

II.16 Have you found it/Are you expecting to find it easy to establish the links you want in:

- this Complex? Yes, No, Unsure
- the surrounding area? Yes, No, Unsure

II.17 Do you expect these links to form only after some time?
Yes, No, Unsure

If Yes, How many years do you think it will take your firm to integrate with the local economy in this way?

..... years

II.18 Do you have any other observations you would like to make about the formation of industrial links?

Turning now to the effect these industrial dispersal policies are likely to have on Madras.

II.19 Do you think that they will help slow down the growth of Madras and thereby help solve the congestion and resulting urban problems of the city?

Yes, No, Unsure

Comments?:

II.20 Do you think that banning industrial expansion in Madras might have a serious effect on the city's economy and its future development prospects?

Yes, No, Unsure

Comments?:

II.21 It is sometimes argued that industrial employment is needed in Madras and that therefore government planners should allow certain firms to expand in or near the city. Would you agree with this?

Yes, No, Unsure

II.22 Assuming the need for some industrial growth in or near Madras what type of industrial activity and firms do you think should be allowed to expand in or near the city?

II.23 Given the importance of the 'informal sector' in employment terms in the Madras economy, do you think the government should be trying to encourage the further expansion of this particular sector?

Yes, No, Unsure

Comments?:

II.24 Do you have any other observations you would like to make about government industrial location policies in general?

SECTION III: Attitudes to Government Growth Centre Policy

III.1 Of the following types of incentives SIPCOT provides to firms which locate in their growth centres, which ones influenced your decision to locate here?

Financial Assistance (Loans, Loan Guarantees, Seed Capital	Yes, No
Financial Incentives (Subsidy on Assets, Sales Tax Loan)	Yes, No
Concessional Tariffs on Power and Water	Yes, No
Assistance in dealing with Central Government (Licences, etc.)	Yes, No
Industrial Development Advisory Services	Yes, No
Equipped Sites and Infrastructure	Yes, No
Income Tax Relief	Yes, No

III.4 Do you think this SIPCOT Complex is well located?

Yes, No, Unsure

For any particular reasons?

Would you have any suggestions for an alternative location?

That is the end of the questionnaire, unless you have any further comments you would like to make about the movements and location decisions of large and medium scale industries in the Madras region?

Thank you very much indeed for your cooperation and patience.

LIST OF COMMON ABBREVIATIONS

GoI	Government of India
GoTN	Government of Tamil Nadu
IDBI	Industrial Development Bank of India
IFCI	Industrial Finance Corporation of India
ICICI	Industrial Credit & Investment Corporation of India
SIPCOT	State Industries Promotion Corporation of Tamil Nadu
TIDCO	Tamil Nadu Industrial Development Corporation
TIIC	Tamil Nadu Industrial Investment Corporation
SIDCO	Tamil Nadu Small Industries Development Corporation
SICOM	State Industrial & Investment Corporation of Maharashtra
MIDC	Maharashtra Industrial Development Corporation
GIDC	Gujarat Industrial Development Corporation
GIIC	Gujarat Industrial Investment Corporation
WBIDC	West Bengal Industrial Development Corporation
WBIIDC	West Bengal Industrial Infrastructure Development Corporation
KSIIDC	Karnataka State Industrial Investment & Development Corporation
KIADB	Karnataka Industrial Areas Development Board
IIC	Indian Investment Centre
FICCI	Federation of Indian Chambers of Commerce & Industry
NIC	National Industrial Classification
ASI	Annual Survey of Industries
LSI	Large Scale Industry
MSI	Medium Scale Industry
SSI	Small Scale Industry
MRTP	Monopolies & Restrictive Trade Practices Act, 1969
FERA	Foreign Exchange Regulation Act, 1973
MMDA	Madras Metropolitan Development Authority
CMDA	Calcutta Metropolitan Development Authority
M.M.Nagar	Maraimalainagar
Tiruchy	Tiruchirapalli
EPW	Economic & Political Weekly

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THE CHIEF INSPECTOR OF FACTORIES LIST
AS A SOURCE OF DATA ON THE
DISTRIBUTION OF INDUSTRY
IN TAMILNADU, SOUTH INDIA.

by James W. Mackie



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Introduction

The aim of this paper is to make more widely available industrial distribution data drawn from an infrequently used source: the Chief Inspector of Factories List for Tamilnadu. It is not intended to comment at any length on the data but merely to provide a sample of some of the aggregated tables and statistics that can be derived from the List, present these in map form and add a few comments on the conclusions they permit and on the limitations and advantages of the data base.

The main source of industrial statistics in India is the Annual Survey of Industries. Unfortunately, although the Survey is a very detailed source of information, it is virtually useless for work on the locational distribution of industry as its principal means of guarding the confidentiality of the information collected is to not disclose the location of industry below the level of the State.

There are several advantages in the use of the Chief Inspector of Factories List for industrial location studies. First, obviously it avoids the principal problem of the ASI by providing a comprehensive listing of all factories in the State. For each factory it lists the precise location and address as well as the industrial classification (NIC) code and the number of workers employed in the factory (Factory as defined in the Factories Act, 1948, see below). Its other major advantage is the speed with which the data is available and the frequency with which it is collected. Although the data is only published in aggregated form after several years, it is available direct from the Chief Inspector's Office within about a year of the collection date. The List is compiled for the 1st of January each year. Unfortunately earlier years to the one in process of compilation are not as readily accessible, making it much more difficult to obtain data for time series studies over several years. The data base used in this paper is the List for the 1st of January, 1979.

The factories from which the List is compiled are those registered under The Factories Act, 1948 which regulates working conditions in factories in India. Under the Act only factories with ten or more workers and power or twenty or more workers and no power need register (full definitions given in Appendix I). Thus the List is of little use for the study of small scale industries; however, with the exception of a few capital intensive firms which deliberately install plant requiring less than ten workers to operate, it covers virtually all medium and larger scale factories. The likelihood of firms being missed out is very small indeed. There is however one major area where errors do creep in and that is that The Act requires factories to be listed even if they have only been in operation for one day in the preceding twelve months. This means that factories which have closed down during the year may remain on the List for up to two years after they have closed. Also factories which only operate intermittently or seasonally are listed in the same way as those in continuous operation. This is frequently the case with plants processing agricultural products such as cashew nuts for instance, such plants can employ several thousand workers for only a couple of months or even a few weeks in the year and in doing so they grossly exaggerate the level of industrial employment in the taluk,

particularly if it is a rural taluk with few factories.

For this study the data were collected for each taluk (the smallest administrative area in India) by National Industrial Classification code to three digits. For each NIC code the number of factories by grouped employment sizes was listed. The groups used being: factories employing 10 to 49 workers, 50 to 99, 100 to 149, 150 to 199, 200 to 249 and 250 or more. For factories in the last 250 or more category the actual number of workers employed was recorded and usually the name of the factory as well.

Apart from two taluks, which were missing, information was collected for all the taluks in the State and all the divisions of Madras City. The two missing taluks are Kodaikanal in Madurai District and Orathanadu in Thanjavur District.

I Presentation of Data

The data presented here is only a small proportion of all the information that could be derived from the List. However, it includes some of the major aggregated statistics of general interest such as the total number of factories and number of people employed in factories in each taluk, also a breakdown of factories in each taluk by scale of employment and the proportion of workers employed in large factories. In addition a few tables showing the number of factories and people employed in selected industries in each taluk have been prepared. For this some of the major Tamilnadu industries such as Cotton Textiles, Chemicals and Transport Equipment were chosen.

All the tables prepared are also presented on maps. These maps have been plotted by computer on a specially prepared base map of the administrative areas of Tamilnadu. The Computer mapping was done with the package programme "CHORO" at the University of London Computer Centre. "CHORO" is a package designed purely for choropleth mapping and is particularly suited for this type of work where a large number of different data series have to be run on the same base map. The programme was originally compiled for the University of Manchester Regional Computer Service by M.J. Blakemore and D.E. Reeve.

As well as plotting the maps "CHORO" will actually categorise the data it is provided with. It allows for three different types of data categorisation: equal interval, 'n'tile and standard score. In addition users may also simply specify their own categories. After some experimentation it was decided that the data in this current study could best be presented using both equal interval and decile categorisation and to avoid any confusion these two methods have been used throughout. Thus each map is presented twice, the data being categorised in equal intervals in the first and in deciles in the second.

The choice of these two methods of categorisation was largely dictated by the nature of the data being dealt with. These data series tend to have a large number of cases concentrated at the bottom of their range, for example a lot of taluks with only ten or so factories, and a few cases with very high values such as Madras City and Coimbatore

with lots of factories. The equal interval categorisation thus differentiates fairly neatly between different high values at the top of the scale but then groups as many as twenty or thirty cases in the bottom categories of the scale which is of little use. The decile categorisation on the other hand puts about the same number of cases into each category, thereby giving a more detailed breakdown of differences at the bottom of the scale though it obscures those at the top of the scale. Thus the two systems of categorisation should be seen as complementary. The equal interval system is valuable for differentiating between the high values and the decile system for the low values.

As well as the data maps based on the Chief Inspector of Factories List, two others have been included with additional relevant information. A map giving the code numbers assigned to each taluk, and a map showing the 'backward areas' designated by the Government of India as suitable locations for industrial location and where certain incentives to encourage industrialists are provided.

Notes on the Tables and Maps

Number of Factories by Taluk: There are a few taluks with very large numbers of factories, Madras, Saidapet and Coimbatore, at the top of the data series. These are followed by a big gap before the secondary level of industrial taluks is reached including such places as Salem, Palladam, Madurai South, Tiruchy and Sattur. Comparison of the equal interval and decile maps for this series brings this out clearly.

The decile map also suggests the formation of fairly wide areas or pockets of industrial development: the traditional one around Madras, also the Coimbatore area which seems to be expanding into an industrial belt stretching from Coimbatore through Erode to Salem. The importance of this belt should not however be exaggerated as a glance back at the equal interval map will show. There are other small pockets centred on such towns as Madurai, Tiruchy and even Thanjavur. Lastly there is evidence of a fair amount of industrial development in the Tuticorin-Tirunelveli-Sattur area. The Sattur peak of course represents the concentration of match and firework factories in the taluk, many of which operate without power.

The taluks where there is little industrial development are mostly in the east though they are divided into two distinct areas by a belt of more industrialised taluks along the Cauvery river. The southern area consists of most of Ramanathapuram, and the southern parts of Tiruchy and Thanjavur Districts. The northern area covers North and South Arcot, Dharmapuri, northern Tiruchy and a belt of Chingleput District around and surprisingly near Madras and Saidapet. There are of course also the hilly areas of northern Coimbatore, the Nilgiris and western Madurai which have, not surprisingly, little industry.

These areas of little industrialisation compare more or less with the Central Government's backward areas, though South Arcot is completely excluded and some of the designated area in Madurai District and North Arcot seems to have more industry than the term 'Backward

Area' would perhaps imply.

Number of Factory Workers: These two maps are understandably very similar to the last set, but in comparing the two sets a few interesting points emerge. They show for instance that there is a higher ratio of number of factories to numbers employed in Madras than in the other major industrial centre of Coimbatore. Madras has a higher proportion of factories employing few people, while Coimbatore has a higher proportion of large employers. A glance at the raw data file shows that these are mostly concentrated in the cotton industry but there are also a few in machinery manufacturing. Whether Madras' smaller employers are mostly also low capital investment small scale industry in the traditional sense or capital intensive firms employing few workers cannot of course be told from these statistics, but an intelligent guess would suggest a fairly high proportion of the former and perhaps increasing numbers of the latter.

The pockets of industrialisation outlined in the last section are not so well marked on this decile map but stand out nevertheless. The level of industrial employment is perhaps a slightly better indication than the number of factories in an area of the effect of industrialisation on the local economy and level of development so this map should probably be taken as a more precise indication of the existence of these pockets.

Number of Factories with different Numbers of Workers: These six maps show the distribution of factories divided into three categories according to the number of workers they employ: less than 50, 50 to 249, and more than 249 workers. They confirm the much higher concentration of small employers in Madras hinted at above and show how the large employers are principally concentrated in Coimbatore and Sattur taluks and then on the outskirts of Coimbatore and Madras in Palladam and Saidapet. There are also a number of taluks along the Kerala border which have big employers: Pollachi and Udumalpet where this is in the Cotton Textile industry and Vilavancode in the South where the large employers are cashew nut processing plants.

Finally these maps demonstrate that for the most part the Coimbatore-Salem industrial belt is made up of small employers. The same is true of the Tirunelveli-Tuticorin area and Madurai. Tiruchy has a more even distribution of large and small employers.

Number Employed in Factories with more than 249 Workers: Only in Coimbatore, Madras and Sattur are there really large numbers of workers employed in large factories. In fact from the decile map it is apparent that 90 per cent of taluks with large employers have less than 12,000 workers in their large factories, and there are only 76 taluks which have factories employing more than 249 workers.

Percent Employed in Factories with more than 249 Workers: Udayarpalayam stands out as being the only taluk with 100 per cent of its factory workers employed in a factory with more than 249 workers. In effect the taluk has only this one factory registered, a cashew factory employing 250 workers. Other taluks with high scores here are also rural taluks with very few factories in them.

Looking at the major industrial cities it is worth noting that Tiruchy and Coimbatore have a fairly high proportion of workers in large factories, between 63.5 per cent and 67.1 per cent in fact. Whereas Madras and Madurai have considerably less, 54.1 per cent to 63.2 per cent, and Salem has very few indeed: between 25.3 per cent and 17.3 per cent.

Distribution of Selected Industries: For each of the following industries four maps have been prepared. The first two show the number of factories from the appropriate NIC categories which exist in the taluk with, as usual, an equal interval and then a decile distribution. The second two maps show the total number of workers registered as being employed in these factories in the taluk, again by equal interval and then decile distribution. The three industries chosen are Cotton Textiles (NIC categories 230-239), Chemicals and Chemical Products (NIC categories 310-319) and Transport Equipment and Parts (NIC categories 370-379), all three chosen for their relative importance in the Tamilnadu industrial economy.

1. Cotton Textiles The Cotton Textile industry is one of the most widespread in Tamilnadu, though as the four maps show it is most important in the Western part of the State around Coimbatore and then in parts of Ramanathapuram and Tirunelveli Districts. Madras though still employing fairly large numbers of workers in Cotton Textile mills has actually very few of them indeed. It should be remembered that these figures predate the closure of Binny's Buckingham and Carnatic Mills which employed 11,100 out of the total of 11,300 workers employed in the Cotton Textile industry in Madras City.

As there are 27 taluks with only one Cotton Textile factory the decile map for the number of factories is somewhat distorted with these 27 in one group and only four to five taluks in the other nine groups. It is worth noting that these 27 taluks are nearly all in the Eastern parts of the State, the distribution of Cotton Textile factories thus corresponding fairly closely to the cotton growing areas of the State.

2. Chemicals and Products The spatial distribution of the Chemical industry in Tamilnadu has a number of interesting features to it. This is partly because the NIC categories 310 to 319 include such things as matches, fireworks and explosives which are traditionally very important and heavily localised industries in Tamilnadu but also because it is an industry where there has been a fairly high level of capital investment in recent years, and a lot of it in large scale public sector plants which are frequently located in areas with traditionally little industry.

In most taluks there are very few Chemicals firms. Again this is brought out by the decile map where 19 taluks are shaded as only having one factory in them and 12 with only two factories. The two main centres of the chemical industry are Madras and the Sattur/North Tirunelveli District area. The peak of 209 firms employing 42,000 workers in Sattur is of course entirely a result of the concentration of the match and firework industry in the taluk; a very high proportion of these firms (58 per cent) do not use power and many of

them are probably only seasonal in their operation. The match industry also spreads over into the neighbouring taluks of Kovilpatti, Sriviliputtur and Sankaranainarkoil. After Sattur with 209 and Kovilpatti with 71 factories the next largest is Saidapet with 69 and 6,200 workers.

It is interesting to note that the Madras concentration of Chemical factories is on the outskirts of the city in Saidapet rather than in the Madras City Corporation area itself, indicating the much more recent growth of the chemical industry relative to the cotton industry which had its factories located near the centre of the modern city.

Other important centres for employment in Chemicals are Tuticorin, Tiruchendur, Madurai, Coimbatore and curiously the Nilgiris. This last characteristic is a result mainly of the Hindustan Photo Films and a public sector Cordite Factory located in Ootacamund and Coonoor taluks respectively.

3. **Transport Equipment** Though Tamilnadu is fairly well known for its Transport Equipment industry as railway rolling stock and most types of road transport vehicles are manufactured in the State, this industry is fairly heavily concentrated around Madras as these four maps demonstrate clearly. Saidapet taluk is in fact the most important taluk for the industry as it contains Ambattur where most of the TVS groups of firms is located as well as Ennore, the home of Ashok Leyland and Enfield India. Most of the other transport equipment factories are associated with the larger cities and towns with the two exceptions in Ramanathapuram Dt. of Tirupattur where the new Enfield motorcycle plant is located at Singamuneri and a shipyard in Ramanathapuram taluk itself. The large numbers of workers employed in the industry in Arkonam and Tiruchirapalli are of course associated with large railway workshops.

The data for the number of Transport Equipment factories in each taluk could only be grouped into eight different value categories, so no decile map was prepared, instead a map with these eight different categories replaces it.

APPENDIX I

Extracts from the Factories Act, 1948 - Government of India

Chapter I: Section 2

Definitions:

'Factory' means any premises including the precincts thereof

(i) whereon ten or more workers are working or were on any day of the preceding twelve months and in any part of which a manufacturing process is being carried out with the aid of power, or is ordinarily carried on

or

(ii) whereon twenty or more workers are working or were on any day of the preceding twelve months and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily carried on

but does not include a mine subject to the operation of the Mines Act, 1952 or a mobile unit belonging to the armed forces of the Union a railway running shed or a hotel, restaurant or eating place.

'Manufacturing Process' means any process for

(1) making, altering, repairing, ornamenting, finishing, packaging, oiling, washing, cleaning, breaking up, demolishing or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal,

or

(ii) pumping oil, water, or sewage or any other substance or device by which the motion of a prime mover is transmitted to

(iii) generating, transforming or transmitting power or

(iv) composing types for printing, printing by letter press, lithography, photogravure or other similar process or book binding; or

(v) constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels, or

(vi) preserving or storing any article in cold storage.

APPENDIX II - Statistical Tables

Number of Factories & Number of Factory Workers in Tamilnadu by Taluk

Code	Taluk Name	Total Number of:		Number of Factories with:			No. of Workers in Factories of 249 plus workers
		Factories	workers	up to 49 Workers	50-249 Workers	249 plus Workers	
1	Ponneri	7	350	5	2	-	-
2	Tiruvallur	18	1,277	15	2	1	627
3	Madras City	998	94,671	776	180	42	51,341
4	Saidapet	795	80,268	589	159	51	45,168
5	Sriperumbudur	38	13,436	23	5	9	11,896
6	Tiruttani	9	793	8	-	1	453
7	Arkonam	13	2,486	8	2	3	2,096
8	Kanchipuram	25	1,216	21	3	1	361
9	Chingleput	25	1,911	16	8	1	281
10	Maduranthakam	8	678	5	2	1	378
11	Cheyyar	4	120	4	-	-	-
12	Arcot	5	150	5	-	-	-
13	Walajahpet	84	5,445	66	16	3	1,865
14	Gudiyatham	72	3,655	58	13	1	490
15	Vellore	47	2,780	37	8	2	800
16	Arni	42	1,495	39	3	-	-
17	Wandiwash	2	60	2	-	-	-
18	Tindivanam	14	785	9	5	-	-
19	Gingee	-	-	-	-	-	-
20	Polur	3	90	3	-	-	-
21	Vaniyambadi	130	6,665	106	21	3	1,110
22	Tiruppattur	7	210	7	-	-	-
23	Chengam	2	60	2	-	-	-
24	Tiruvannamalai	27	810	27	-	-	-
25	Tirukoilur	7	210	7	-	-	-
26	Villupuram	22	1,218	17	4	1	408
27	Pondicherry	-	-	-	-	-	-
28		-	-	-	-	-	-
29	Cuddalore	45	4,997	35	5	5	3,497
30	Chidambaram	18	820	14	4	-	-
31	Vridhachalam	23	4,741	12	8	3	3,156
32	Kallakurichi	12	1,119	8	2	2	754
33	Harur	14	565	13	1	-	-
34	Uthangarai	2	105	1	1	-	-
35	Krishnagiri	10	345	9	1	-	-
36	Hosur	8	375	5	3	-	-
37	Denkanikota						
38	Dharmapuri	14	783	13	-	1	393
39	Mettur	29	10,650	15	6	8	9,675
40	Omalar	11	760	7	4	-	-
41	Salem	402	16,225	373	22	7	2,975
42	Attur	110	3,440	108	2	-	-
43	Perambalur	3	310	2	-	1	250
44	Ariyalur	2	105	1	1	-	-

Code	Taluk Name	Total Number of:		Number of Factories with:			No. of Workers in Factories of 249 plus workers
		Factories	workers	up to 49 Workers	50-249 Workers	249 plus Workers	
45	Udayarpalyam	1	250	-	-	1	250
46	Kumbakonam	55	5,745	39	27	7	2,250
47	Mayuram	33	2,005	21	11	2	500
48	Sirkali	12	720	4	8	-	-
49	Karaikal	-	-	-	-	-	-
50	Nannilam	54	3,030	14	7	-	-
51	Nagapattinam	14	785	7	7	-	-
52	Tiruthuraipoondi	24	2,860	12	6	6	2,000
53	Mannargudi	14	1,575	5	7	2	750
54	Papanasam	10	345	9	1	-	-
55	Thanjavur	63	5,210	36	22	4	2,000
56	Lalgudi	43	4,850	5	36	2	1,500
57	Thuraiyur	6	680	1	4	1	250
58	Namakkal	76	2,510	72	4	-	-
59	Rasipuram	148	4,895	139	9	-	-
60	Tiruchengode	166	7,946	156	8	2	2,516
61	Sankari	38	3,839	35	2	1	449
62	Bhavani	11	1,575	5	5	1	1,000
63	Gobichettipalayam	34	3,610	12	14	7	1,750
64	Coonoor	95	9,780	18	39	5	2,750
65	Ootacamund	38	4,990	8	24	6	2,500
66	Gudalur	17	1,980	1	14	2	500
67	Avanashi	70	12,100	15	40	15	7,500
68	Erode	217	9,955	142	61	9	3,250
69	Karur	57	6,300	35	17	5	4,000
70	Musiri	6	680	1	4	1	250
71	Kulithalai	1	30	1	-	-	-
72	Tiruchirapalli	281	42,770	119	134	28	27,500
73	Kulathur	8	565	3	5	-	-
74	Orathanadu	-	-	-	-	-	-
75	Pattukottai	21	1,170	14	6	1	250
76	Arathangi	6	400	5	-	1	250
77	Tirumayam	3	635	1	1	1	500
79	Alangudi	30	3,725	10	11	9	2,500
80	Manapparai	8	1,300	5	1	-	-
81	Vedasanthur	1	30	1	-	-	-
82	Palani	39	5,310	22	12	5	3,500
83	Dharapuram	49	2,900	30	18	1	500
84	Palladam	469	38,985	236	178	51	26,500
85	Coimbatore	796	111,835	365	321	108	72,500
86	Pollachi	173	19,665	78	57	38	12,000
87	Udumalpet	45	7,245	15	19	11	5,020
88	Kodaikanal	-	-	-	-	-	-
89	Dindigul	123	8,710	67	43	13	4,250
90	Melur	8	1,003	6	1	1	698
91	Tirupattur	46	2,567	41	3	2	962
92	Tiruvadanai	6	375	5	1	-	-
93	Sivaganga	22	2,075	13	6	3	1,135
94	Madurai North	75	4,361	65	7	3	1,836

FACTORIES LIST TAMILNADU

<u>Code</u>	<u>Name</u>	<u>Total Number of:</u>		<u>Number of Factories with:</u>			<u>No. of workers in Factories of 249 plus workers</u>
		<u>Factories</u>	<u>workers</u>	<u>up to 49 Workers</u>	<u>50-249 Workers</u>	<u>249 plus Workers</u>	
95	Madurai South	251	21,097	222	19	10	12,562
96	Nilakottai	14	2,000	4	4	6	1,500
97	Periyakulam	44	5,000	15	17	9	2,500
98	Uthamapalayam	29	2,595	9	19	11	500
99	Usilampatti	11	330	11	-	-	-
100	Tirumangalam	24	2,002	19	2	3	1,282
101	Arupukottai	21	3,450	5	12	4	2,250
102	Paramakudi	9	415	8	1	-	-
103	Ramanathapuram						
104	Pambam Island (pars R)	17	1,178	12	4	1	318
105	Mudukulathur	3	330	1	2	-	-
106	Vilathikulam	8	240	8	-	-	-
107	Sattur	371	54,062	58	209	104	32,250
108	Sriviliputtur	110	12,900	35	58	17	6,000
109	Sankaranainarkoil	77	3,095	69	7	1	250
110	Kovilpatti	145	10,096	97	45	3	1,676
111	Tuticorin	148	6,222	136	9	3	1,467
112	Srivaikuntam	23	735	22	1	-	-
113	Tirunelveli	120	5,909	102	15	3	1,524
114	Tenkasi	32	1,055	31	1	-	-
115	Shenkottai	17	705	16	1	-	-
116	Ambasamudram	42	4,945	35	6	1	3,345
117	Vilavancode	116	22,892	45	37	34	15,297
118	Kalkulam	54	5,189	37	9	8	2,879
119	Thovalai	4	215	3	1	-	-
120	Tiruchendur	20	1,798	16	2	2	1,018
121	Nanguneri	20	1,369	18	1	1	604
122	Agastheeswaram	55	2,379	48	6	1	289

**Number of Factories and Persons Employed in Selected Industries in
Tamilnadu by Taluk**

NIC 230-239 Manufacture of Cotton Textiles
 310-319 Manufacture of Chemicals and Chemical Products
 (except Coal and Petroleum based)
 370-379 Manufacture of Transport Equipment and Parts

Code	Taluk Name	Cotton Textiles		Chemicals & Products		Transport Equipment	
		Number of Factories & Persons		Number of Factories & Persons		Number of Factories & Persons	
1	Ponneri	-	-	1	75	-	-
2	Tiruvallur	-	-	-	-	1	30
3	Madras City	7	11,283	37	2,348	30	18,905
4	Saidapet	5	465	69	6,188	78	20,989
5	Sriperumbudur	-	-	7	1,030	4	4,248
6	Tiruttani	1	453	1	30	-	-
7	Arkonam	-	-	1	30	2	1,395
8	Kanchipuram	4	451	-	-	1	30
9	Chingleput	-	-	-	-	1	30
10	Maduranthakam	-	-	-	-	-	-
11	Cheygar	-	-	-	-	-	-
12	Arcot	-	-	-	-	-	-
13	Walajahpet	1	225	6	552	-	-
14	Gudiyatham	3	480	15	705	-	-
15	Vellore	1	426	1	30	-	-
16	Arni	2	205	-	-	-	-
17	Wandiwash	-	-	-	-	-	-
18	Tindivanam	1	225	1	75	-	-
19	Gingee	-	-	-	-	-	-
20	Polur	-	-	-	-	-	-
21	Vaniyambadi	1	30	2	60	-	-
22	Tiruppattur	-	-	1	30	-	-
23	Chengam	-	-	-	-	-	-
24	Tiruvannamalai	-	-	-	-	-	-
25	Tirukoilur	-	-	-	-	-	-
26	Villupuram	1	175	2	65	-	-
27	Pondicherry	-	-	-	-	-	-
28		-	-	-	-	-	-
29	Cuddalore	1	30	2	105	-	-
30	Chidambaram	2	205	-	-	-	-
31	Vridhachalam	-	-	1	1,150	-	-
32	Kallakurichi	1	303	-	-	-	-
33	Harur	-	-	1	30	-	-
34	Uthangarai	-	-	2	110	-	-
35	Krishnagiri	-	-	2	110	-	-
36	Hosur	-	-	-	-	-	-
37	Denkanikota	-	-	-	-	-	-
38	Dharmapuri	-	-	2	60	-	-
39	Mettur	10	2,671	5	1,494	-	-
40	Omalur	-	-	1	30	-	-
41	Salem	33	2,083	7	210	-	-

FACTORIES LIST TAMILNADU

Code	Taluk Name	Cotton Textiles		Chemicals & Products		Transport Equipment	
		Number of Factories & Persons	Number of Factories & Persons	Number of Factories & Persons	Number of Factories & Persons	Number of Factories & Persons	Number of Factories & Persons
42	Attur	1	125	-	-	-	-
43	Perambalur	2	60	-	-	-	-
44	Ariyalur	-	-	-	-	-	-
45	Udayarpalyam	-	-	-	-	-	-
46	Kumbakonam	-	-	5	385	1	30
47	Mayuram	1	250	-	-	1	250
48	Sirkali	-	-	-	-	-	-
49	Karaikal	-	-	-	-	-	-
50	Nannilam	-	-	1	75	1	30
51	Nagapattinam	-	-	-	-	1	30
52	Thiruthuraipoondi	-	-	-	-	-	-
53	Mannargudi	1	250	-	-	-	-
54	Papanasam	-	-	-	-	-	-
55	Thanjavur	3	1,530	4	170	1	75
56	Lalgudi	1	75	-	-	-	-
57	Thuraiyur	-	-	3	355	-	-
58	Namakkal	-	-	2	155	-	-
59	Rasipuram	8	240	-	-	-	-
60	Tiruchengode	117	3,961	-	-	-	-
61	Sankari	27	810	-	-	-	-
62	Bhavani	4	305	-	-	-	-
63	Gobichettipalayam	11	1,255	-	-	-	-
64	Coonoor	-	-	1	2,000	-	-
65	Ootacamund	-	-	3	2,280	-	-
66	Gudalur	-	-	-	-	-	-
67	Avanashi	33	9,870	5	2,750	-	-
68	Erode	60	5,695	2	60	-	-
69	Karur	12	1,995	-	-	2	150
70	Musiri	-	-	3	355	-	-
71	Kulithalai	-	-	-	-	-	-
72	Tiruchirapalli	5	1,785	9	640	1	2,000
73	Kulathur	1	75	1	30	-	-
74	Orathanadu	-	-	-	-	-	-
75	Pattukottai	-	-	-	-	-	-
76	Arathangi	1	250	-	-	-	-
77	Tirumayam	1	500	-	-	-	-
78	..	1	500	-	-	-	-
79	Alangudi	-	-	-	-	-	-
80	Manapparai	1	1,000	-	-	-	-
81	Vedasenthur	-	-	-	-	-	-
82	Palani	10	3,325	-	-	-	-
83	Dharapuram	7	865	-	-	-	-
84	Palladam	137	28,850	2	375	-	-
85	Coimbatore	134	56,520	21	1,275	34	5,070
86	Pollachi	38	5,720	7	395	-	-
87	Udumalpet	24	10,475	1	75	-	-
88	Kodaikanal	-	-	-	-	-	-
89	Dindigul	13	3,575	3	230	1	30
90	Melur	1	698	2	155	-	-
91	Tirupattur	2	776	2	105	15	831

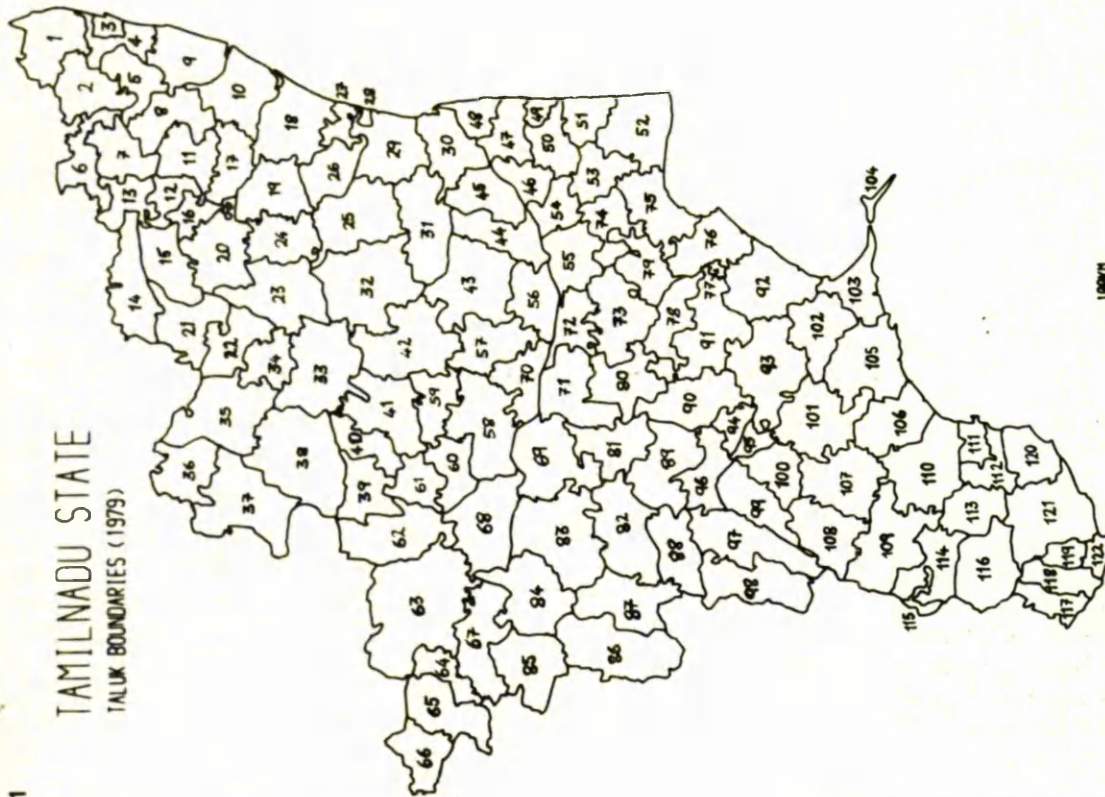
Code	Taluk Name	Cotton Textiles		Chemicals & Products		Transport Equipment	
		Number of Factories & Persons		Number of Factories & Persons		Number of Factories & Persons	
92	Tiruvadanai	1	225	-	-	-	-
93	Sivaganga	6	1,460	2	60	-	-
94	Madurai North	10	2,046	3	90	2	60
95	Madurai South	43	9,394	15	570	5	1,811
96	Nilakkottai	-	-	1	250	-	-
97	Periyakulam	19	1,805	1	30	-	-
98	Uthamapalyam	7	525	-	-	-	-
99	Usilampatti	2	60	1	35	-	-
100	Tirumangalam	6	652	6	455	-	-
101	Aruppukottai	5	2,200	1	250	-	-
102	Paramakudi	1	125	-	-	-	-
103	Ramanathapuram	1	318	-	-	2	255
104	Pambam I. (Pars R.)	1	318	-	-	2	255
105	Mudukulathur	-	-	-	-	-	-
106	Vilathikulam	4	120	1	30	-	-
107	Sattur	15	1,735	209	41,995	-	-
108	Sriviliputtur	70	11,915	13	1,450	-	-
109	Sankaranainarkoil	59	2,045	10	810	-	-
110	Kovilpatti	37	2,620	71	5,976	-	-
111	Tuticorin	9	1,262	5	625	-	-
112	Srivaikuntam	4	120	-	-	-	-
113	Tirunelveli	8	670	5	250	-	-
114	Tenkasi	1	30	-	-	-	-
115	Shenkottai	1	225	1	30	-	-
116	Ambasamudram	9	3,725	-	-	-	-
117	Vilavancode	-	-	-	-	-	-
118	Kalkulam	-	-	-	-	-	-
119	Thovala	1	30	-	-	-	-
120	Tiruchendur	1	487	4	771	-	-
121	Nanguneri	1	225	-	-	-	-
122	Agastheeswaram	1	125	-	-	-	-

APPENDIX III - Maps

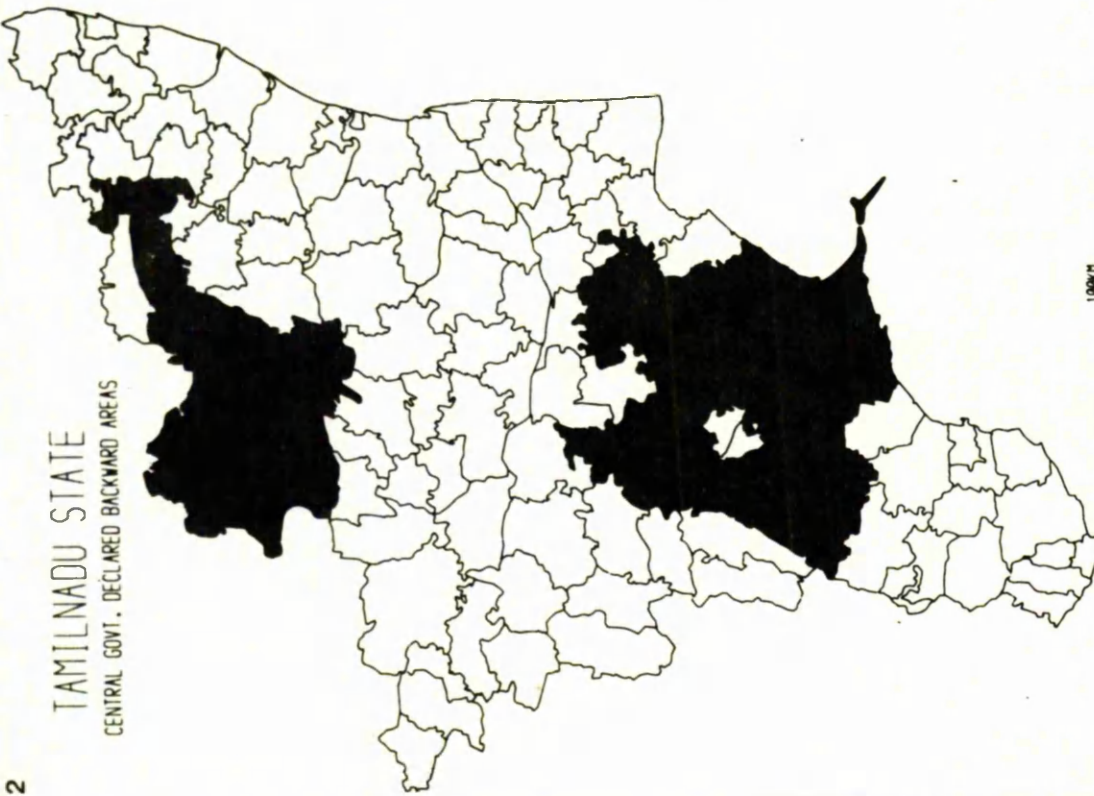
- 1 Taluk Boundaries and Code Numbers
- 2 Central Government Declared 'Backward Areas'
- 3 Number of Factories per Taluk (equal interval)
- 4 .. (decile)
- 5 Number of Factory Workers per Taluk (equal interval)
- 6 .. (decile)
- 7 Number of Factories with up to 49 Workers by Taluk (equal interval)
- 8 .. (decile)
- 9 Number of Factories with 50-249 Workers by Taluk (equal interval)
- 10 .. (decile)
- 11 Number of Factories with 249 plus Workers by Taluk (equal interval)
- 12 .. (decile)
- 13 Number Employed in Factories with 249 plus Workers by Taluk
(equal interval)
- 14 Number Employed in Factories with 249 plus Workers by Taluk
(decile)
- 15 Percent Employed in Factories with 249 plus Workers by Taluk
(equal interval)
- 16 Percent Employed in Factories with 249 plus Workers by Taluk
(decile)
- 17 Number of Cotton Textile Factories by Taluk (equal interval)
- 18 .. (decile)
- 19 Number Employed in Cotton Textile Factories by Taluk
(equal interval)
- 20 Number Employed in Cotton Textile Factories by Taluk (decile)
- 21 Number of Chemicals and Products Factories by Taluk
(equal interval)
- 22 .. (decile)
- 23 Number Employed in Chemicals Factories by Taluk (equal interval).
- 24 .. (decile)
- 25 Number of Transport Equipment Factories by Taluk (equal interval)
- 26 .. (decile)
- 27 Number Employed in Transport Equipment Factories by Taluk
(equal interval)
- 28 Number Employed in Transport Equipment Factories by Taluk
(decile)

TALUKS AND CODE NUMBERS LISTED BY DISTRICT

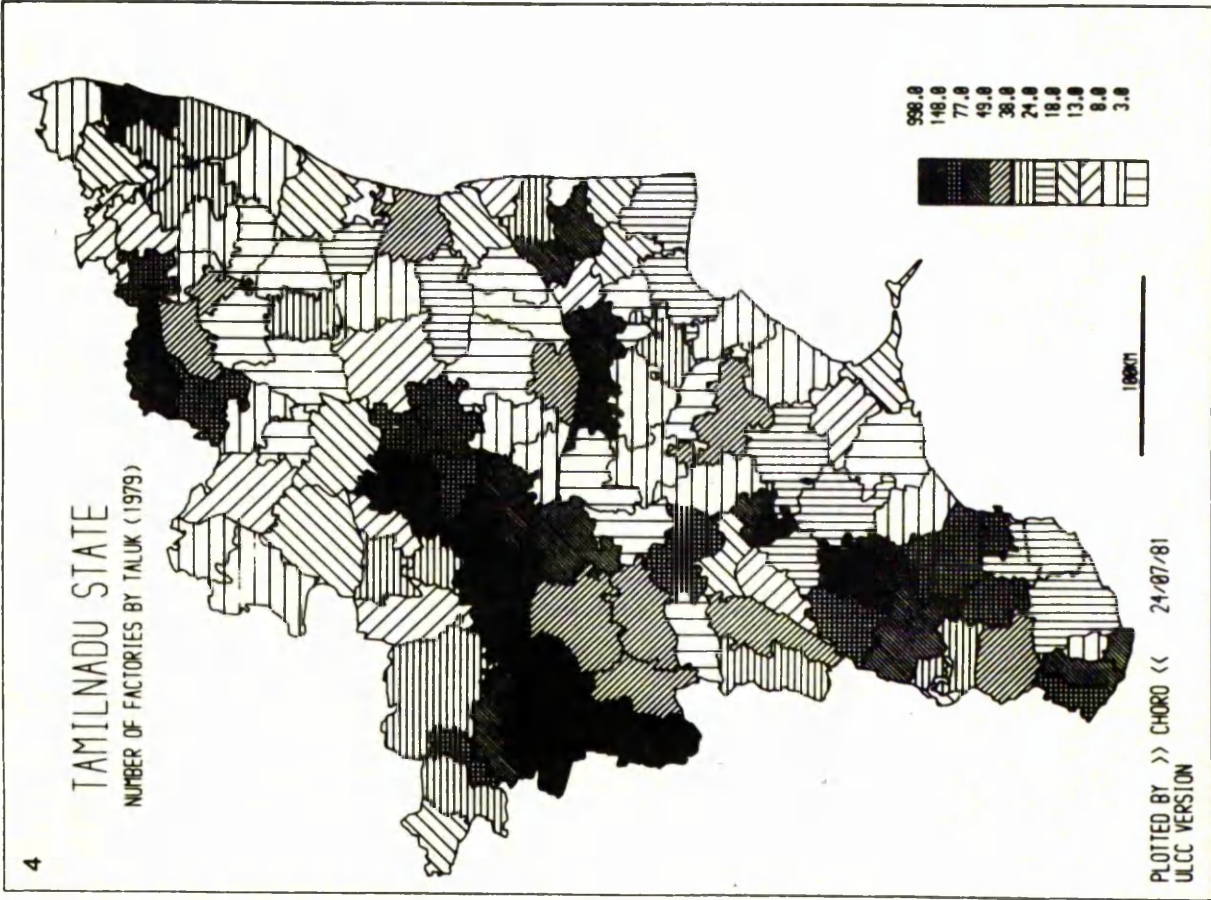
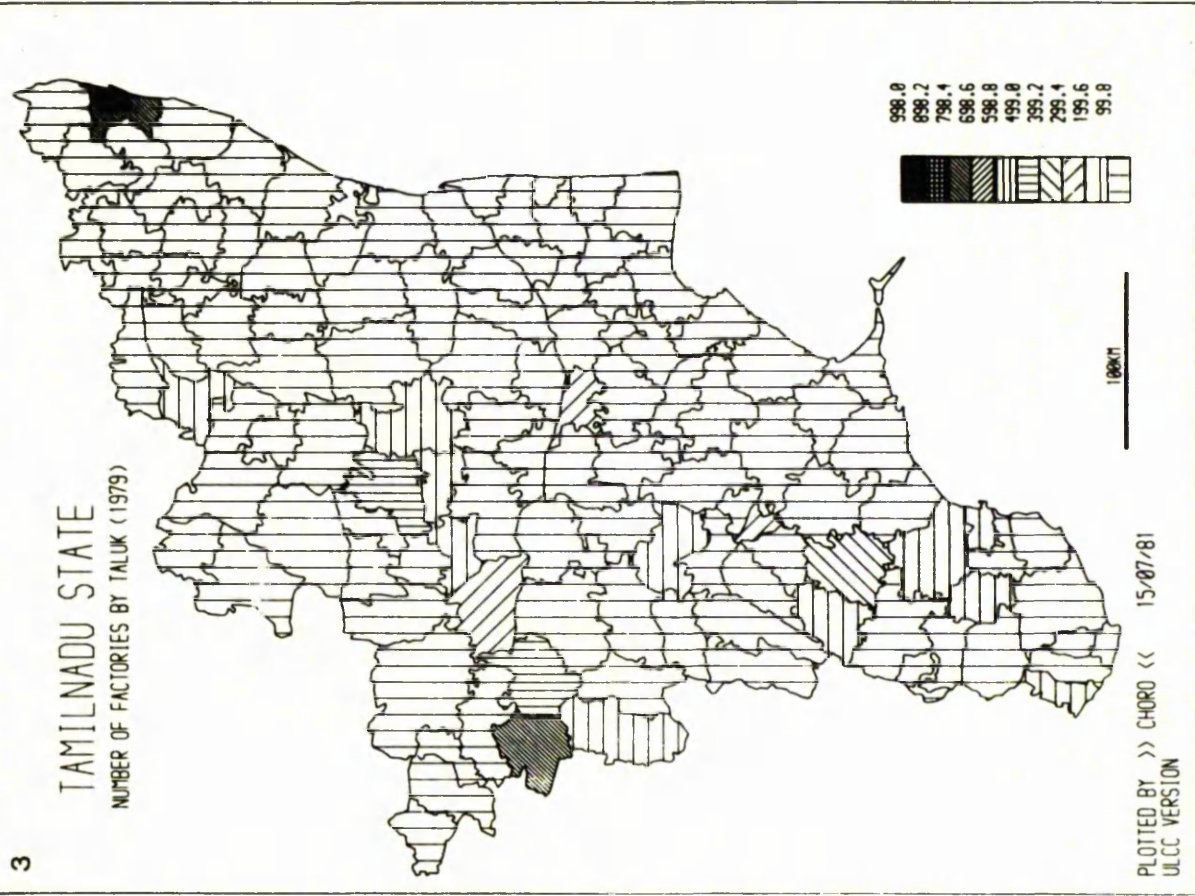
<u>Chingleput:</u>		<u>North Arcot:</u>		<u>South Arcot:</u>	
Ponneri	1	Arkonam	7	Tindivanam	18
Tiruvallur	2	Cheyar	11	Gingee	19
Madras City	3	Arcot (p. Walajah)	12	Tirukoilur	25
Saidapet	4	Walajahpet	13	Villupuram	26
Sriperumbudur	5	Gudiyatham	14	Cuddalore	29
Tiruttani	6	Vellore	15	Chidambaram	30
Kanchipuram	8	Arni	16	Vridhachalam	31
Chingleput	9	Wandiwash	17	Kallakurichi	32
Maduranthakam	10	Polur	20		
		Vaniyambadi	21		
		Tiruppatur	22	<u>PONDICHERY</u>	27 & 28
		Chengam	23		
		Tiruvannamalai	24		
<u>Dharmapuri:</u>				<u>Tiruchirapalli:</u>	
Harur	33			Perambalur	43
Uthangarai	34			Ariyalur	44
Krishnagiri	35			Udayarpalayam	45
Hosur	36	<u>Salem:</u>		Lalgudi	56
Denkanikota	37	Mettur	39	Thuraiyur	57
Dharmapuri	38	Omalar	40	Musiri	70
		Salem	41	Kulithalai	71
		Attur	42	Tiruchirapalli	72
<u>Thanjavur:</u>		Namakkal	58	Kulathur	73
Kumbakonam	46	Rasipuram	59	Tirumayam	77 & 78
Mayuram	47	Tiruchengode	60	Alangudi	79
Sirkali	48	Sankari	61	Manapparai	80
Nannilam	50			Karur	69
Nagapattinam	51	<u>KARAIKAL</u>	49		
Tiruthuraipoondi	52	<u>Nilgiris:</u>		<u>Coimbatore:</u>	
Mannargudi	53	Coonoor	64	Bhavani	62
Papanasam	54	Ootacamund	65	Gobichettipalayam	63
Thanjavur	55	Gudalur	66	Avanashi	67
Orathanadu	74			Erode	68
Pattukottai	75			Dharapuram	83
Aranthangi	76	<u>Ramanathapuram:</u>		Palladam	84
		Tirupattur	91	Coimbatore	85
<u>Madurai:</u>		Tiruvadana	92	Pollachi	86
Vedasenthur	81	Sivaganga	93	Udumalpet	87
Palani	82	Aruppukottai	101		
Kodaikanal	88	Paramakudi	102	<u>Tirunelveli:</u>	
Dindigul	89	Ramanathapuram	103	Vilathikulam	106
Melur	90	Pamban I. (p.R)	104	Sankaranainarkoil	109
Madurai North	94	Mudukulathur	105	Kovilpatti	110
Madurai South	95	Sattur	107	Tuticorin	111
Nilakkottai	96	Sriviliputtur	108	Srivaikuntam	112
Periyakulam	97	<u>Kanyakumari:</u>		Tirunelveli	113
Uthamapalayam	98	Vilavancode	117	Tenkasi	114
Usilampatti	99	Kalkulam	118	Shenkottai	115
Tirumangalam	100	Thovala	119	Ambasamudram	116
		Agastheeswaram	122	Tiruchendur	120
				Nanguneri	121



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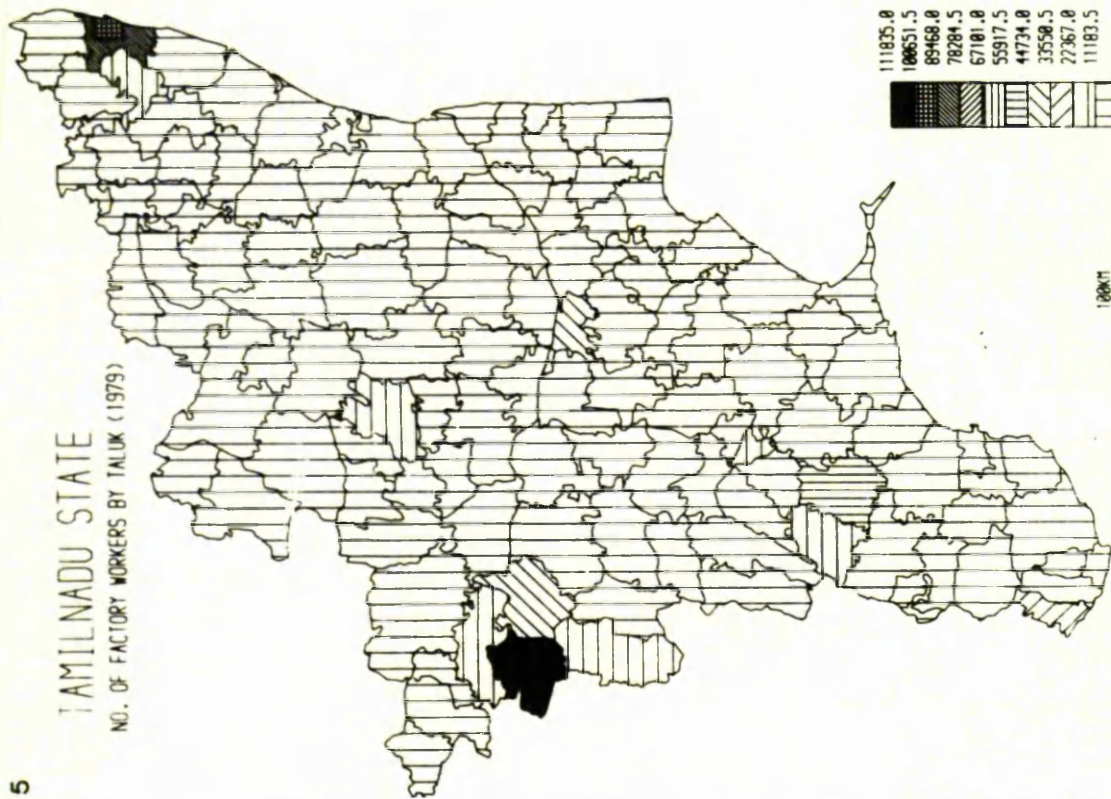
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ULCC VERSION



5

TAMILNADU STATE

NO. OF FACTORY WORKERS BY TALUK (1979)

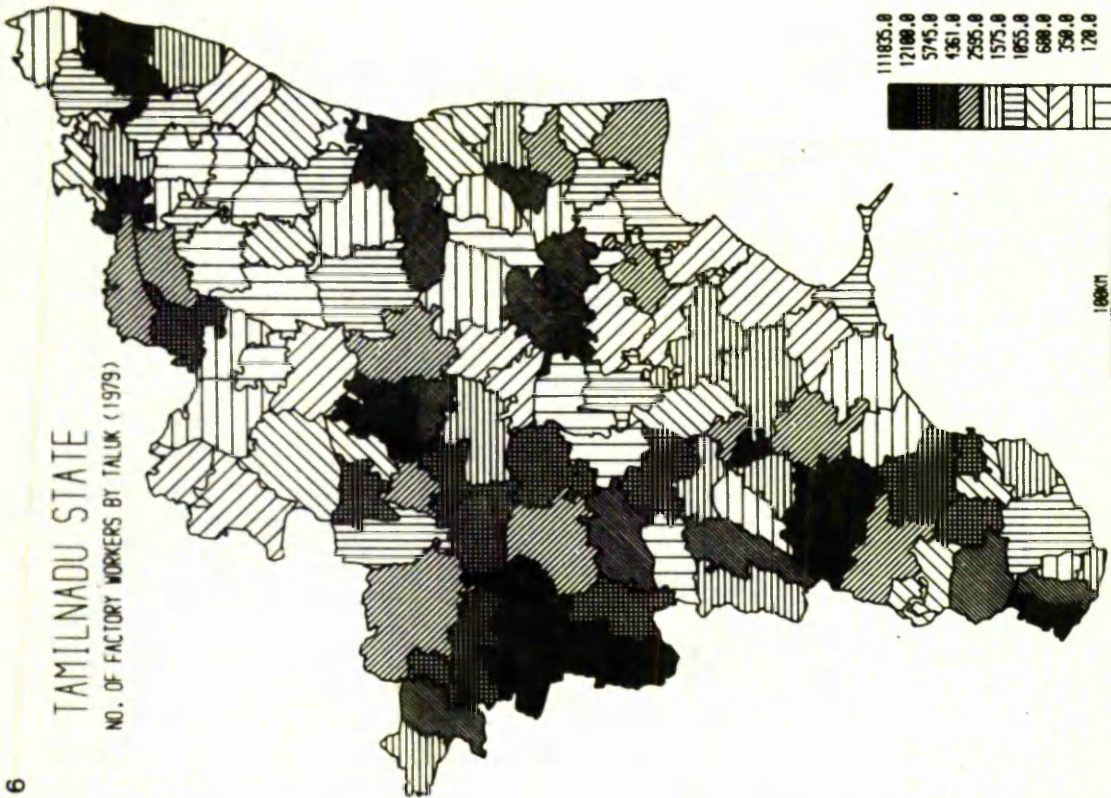


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6

TAMILNADU STATE

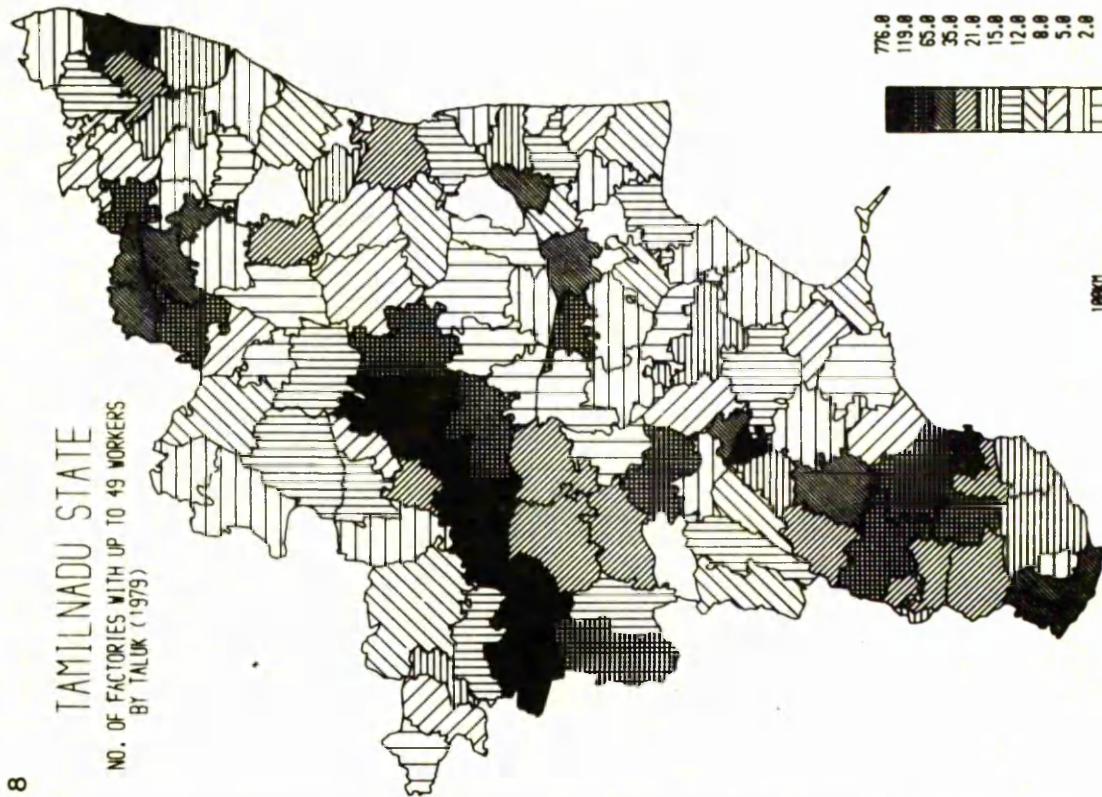
NO. OF FACTORY WORKERS BY TALUK (1979)



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ULCC VERSION

8

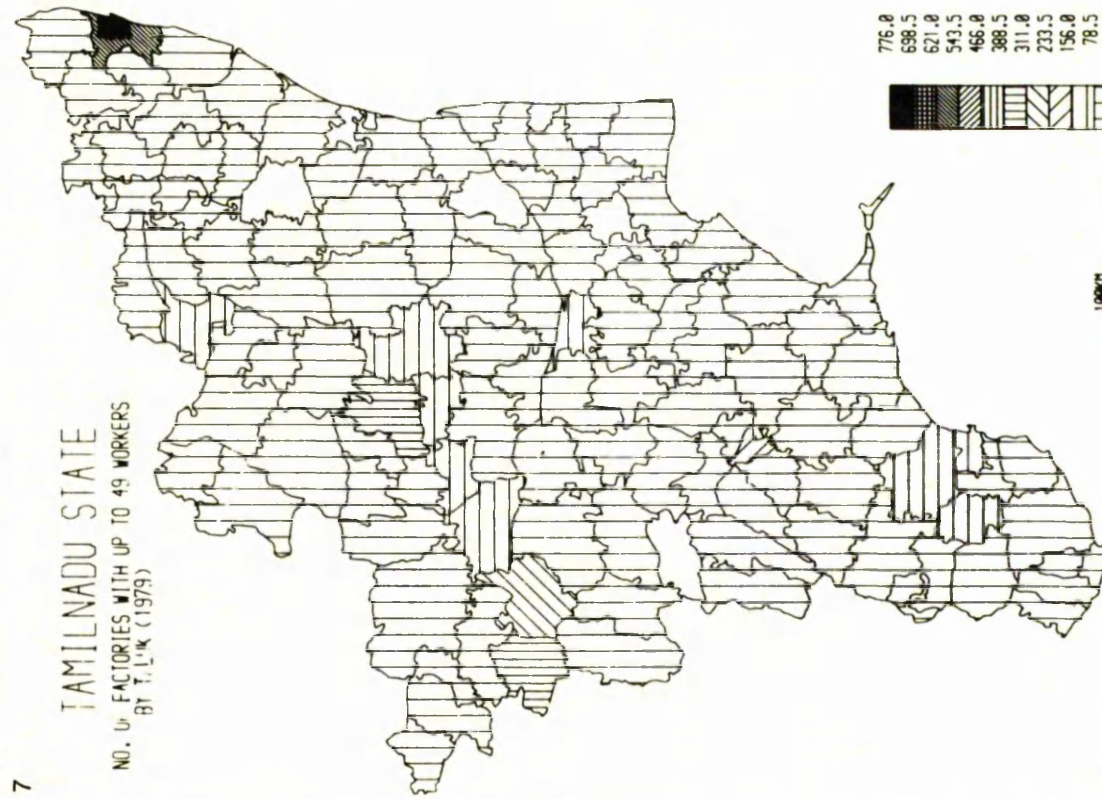
TAMILNADU STATE
 NO. OF FACTORIES WITH UP TO 49 WORKERS
 BY TALUK (1979)



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 ULCC VERSION

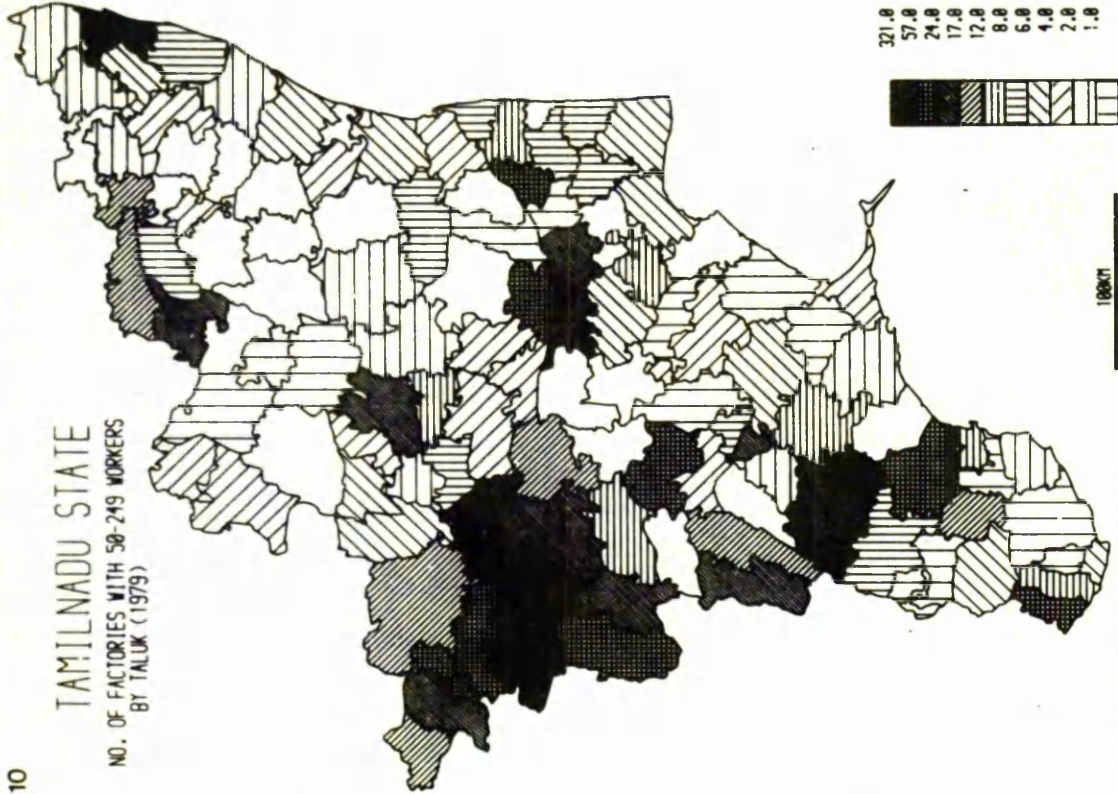
7

TAMILNADU STATE
 NO. OF FACTORIES WITH UP TO 49 WORKERS
 BY T. LUK (1979)



PLOTTED BY >> CHORO << 22/07/81
 ULCC VERSION

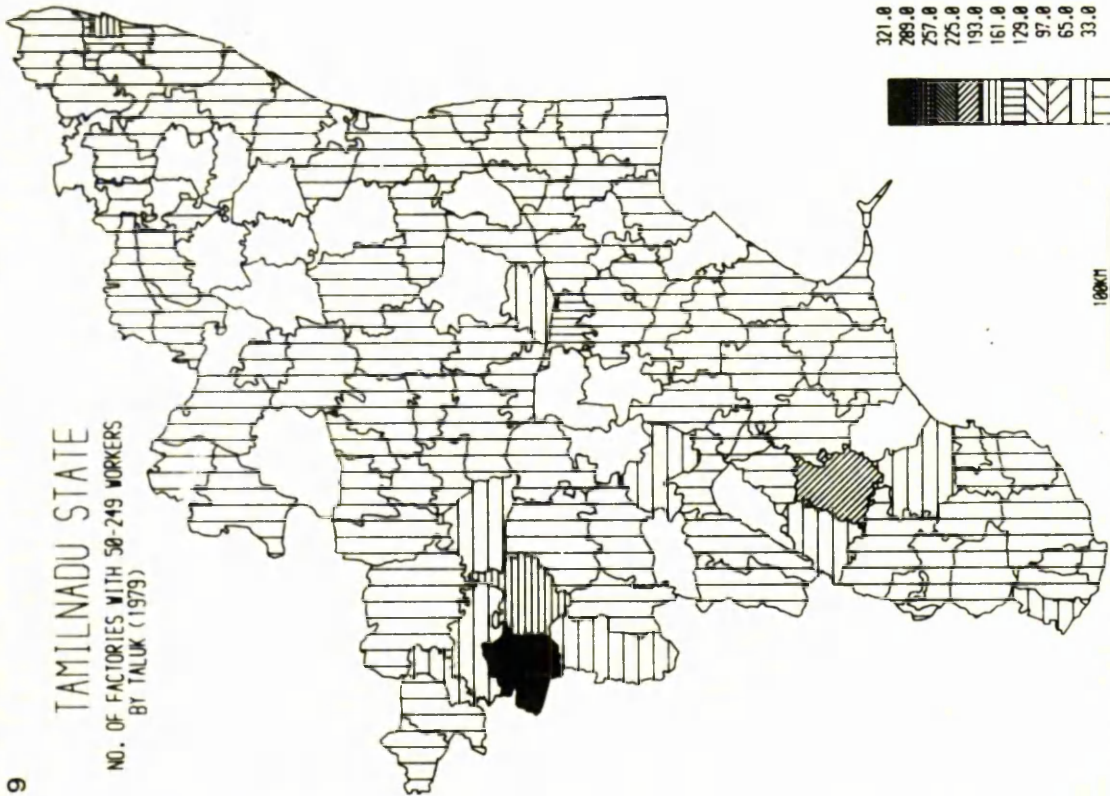
TAMILNADU STATE
NO. OF FACTORIES WITH 50-249 WORKERS
BY TALUK (1979)



1980/71

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ULCC VERSION

TAMILNADU STATE
NO. OF FACTORIES WITH 50-249 WORKERS
BY TALUK (1979)

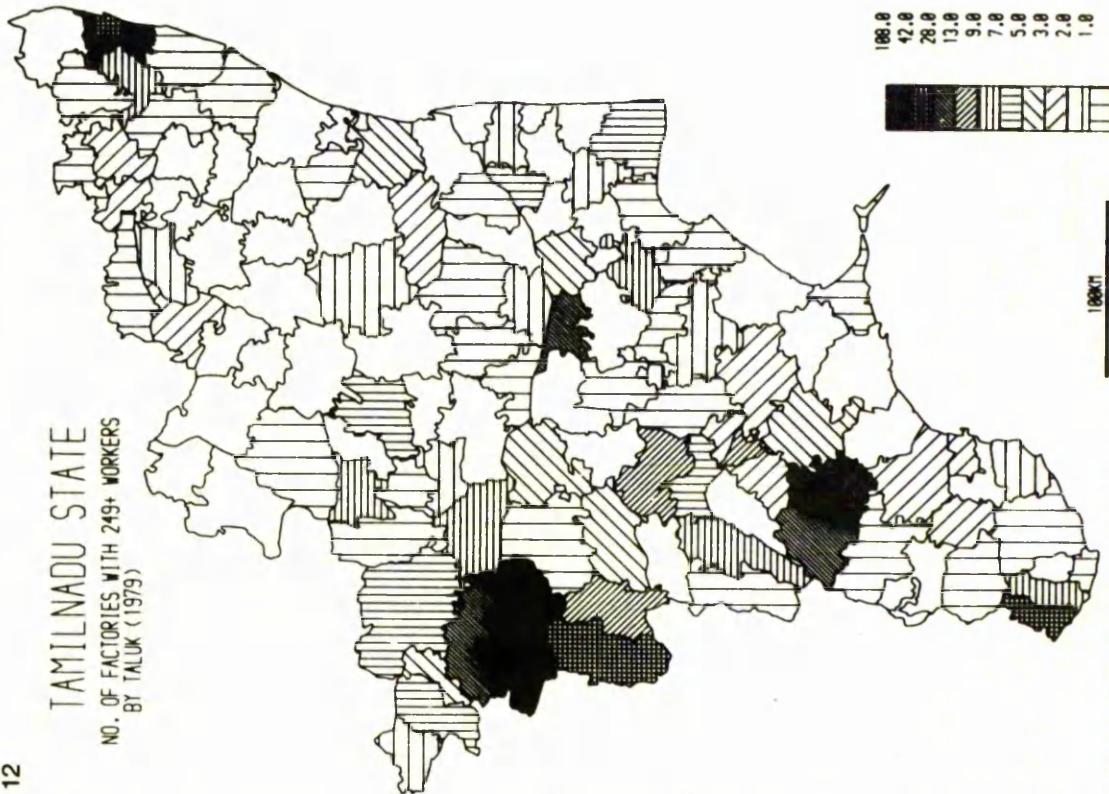


1980/71

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12

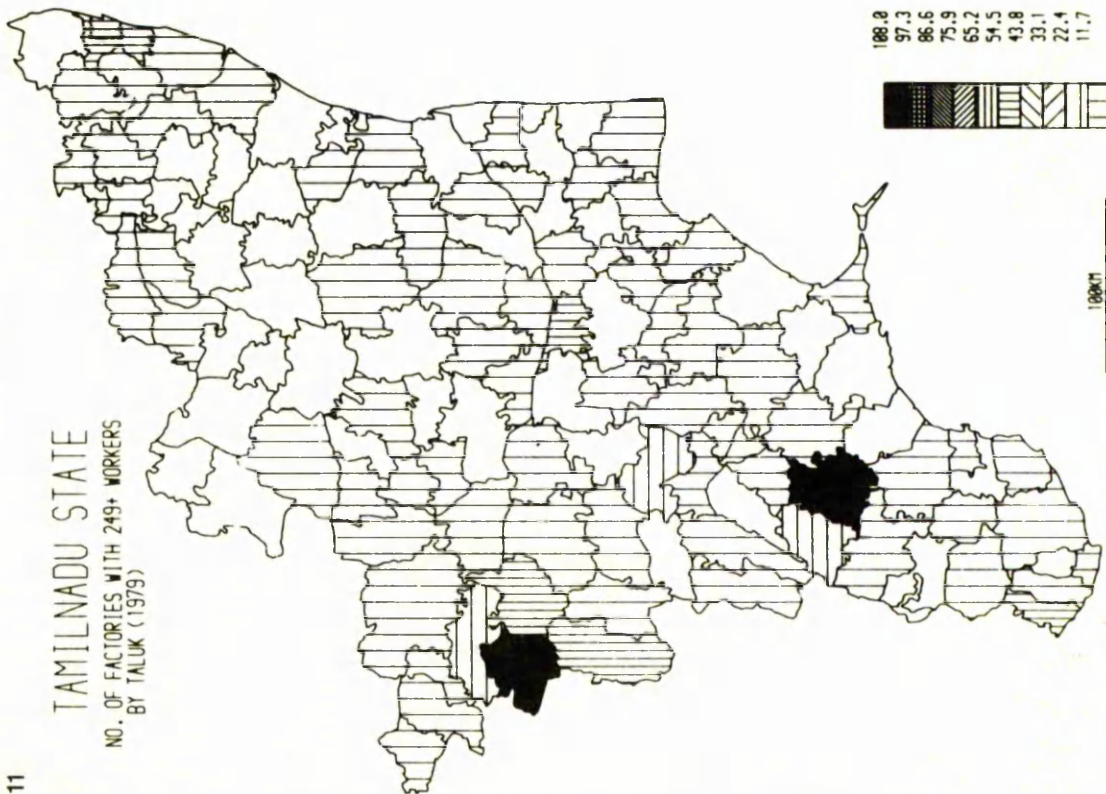
TAMILNADU STATE
 NO. OF FACTORIES WITH 249+ WORKERS
 BY TALUK (1979)



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 ULCC VERSION

11

TAMILNADU STATE
 NO. OF FACTORIES WITH 249+ WORKERS
 BY TALUK (1979)

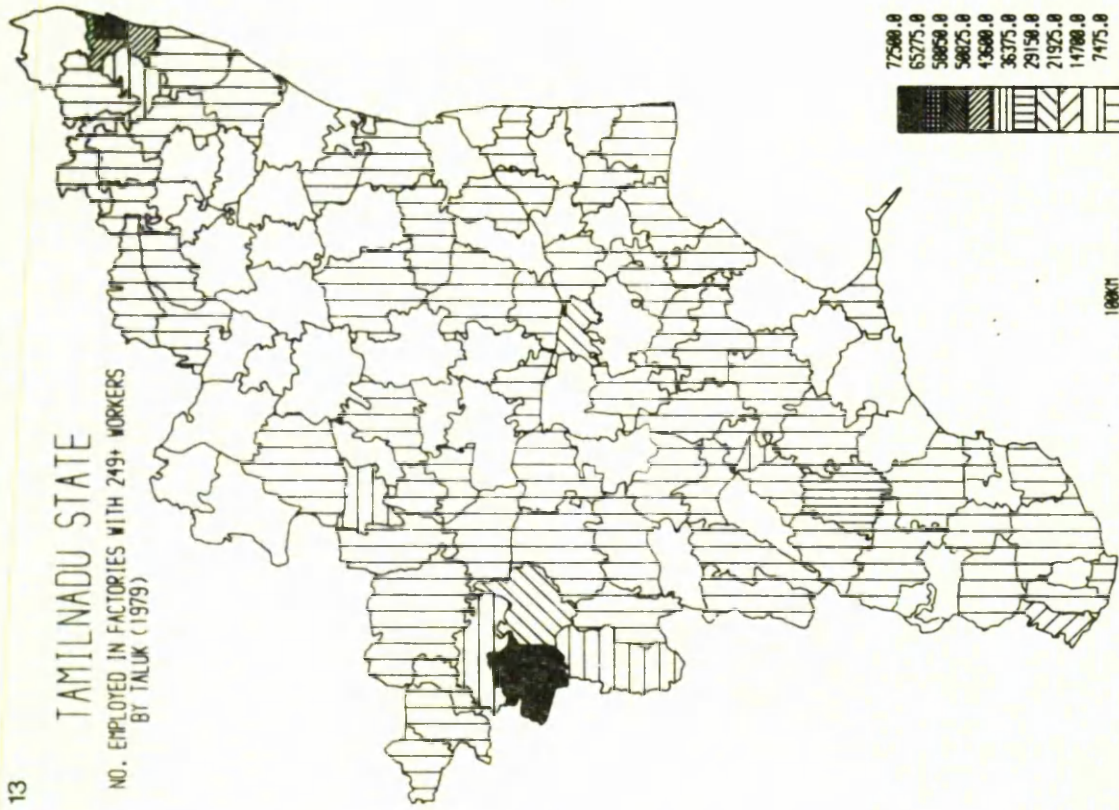


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13

TAMILNADU STATE

NO. EMPLOYED IN FACTORIES WITH 249+ WORKERS
BY TALUK (1979)

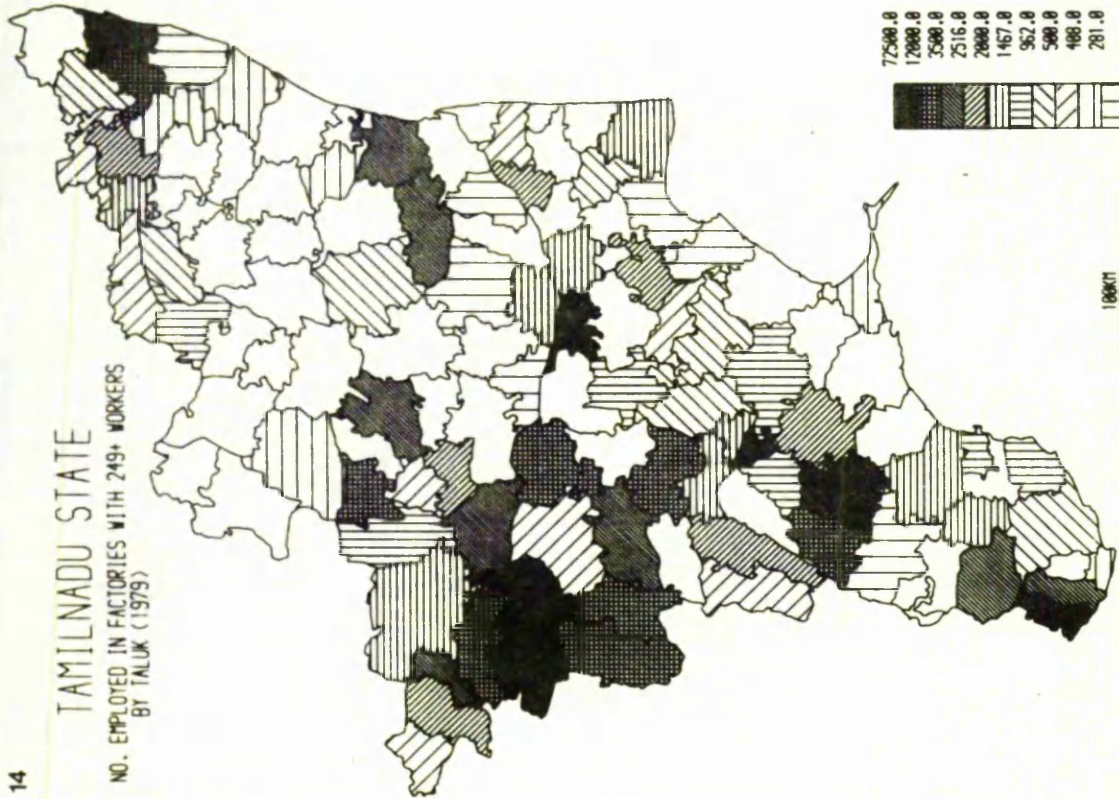


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TAMILNADU STATE

NO. EMPLOYED IN FACTORIES WITH 249+ WORKERS
BY TALUK (1979)

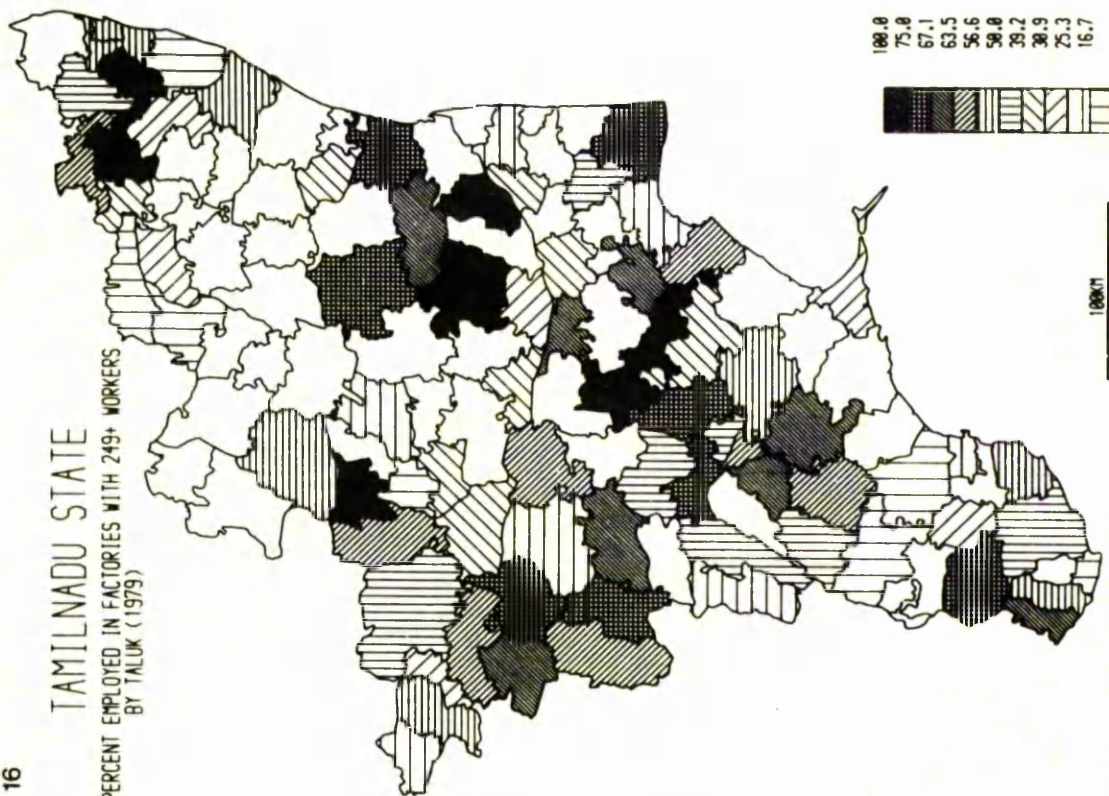


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TAMILNADU STATE

PERCENT EMPLOYED IN FACTORIES WITH 249+ WORKERS
BY TALUK (1979)



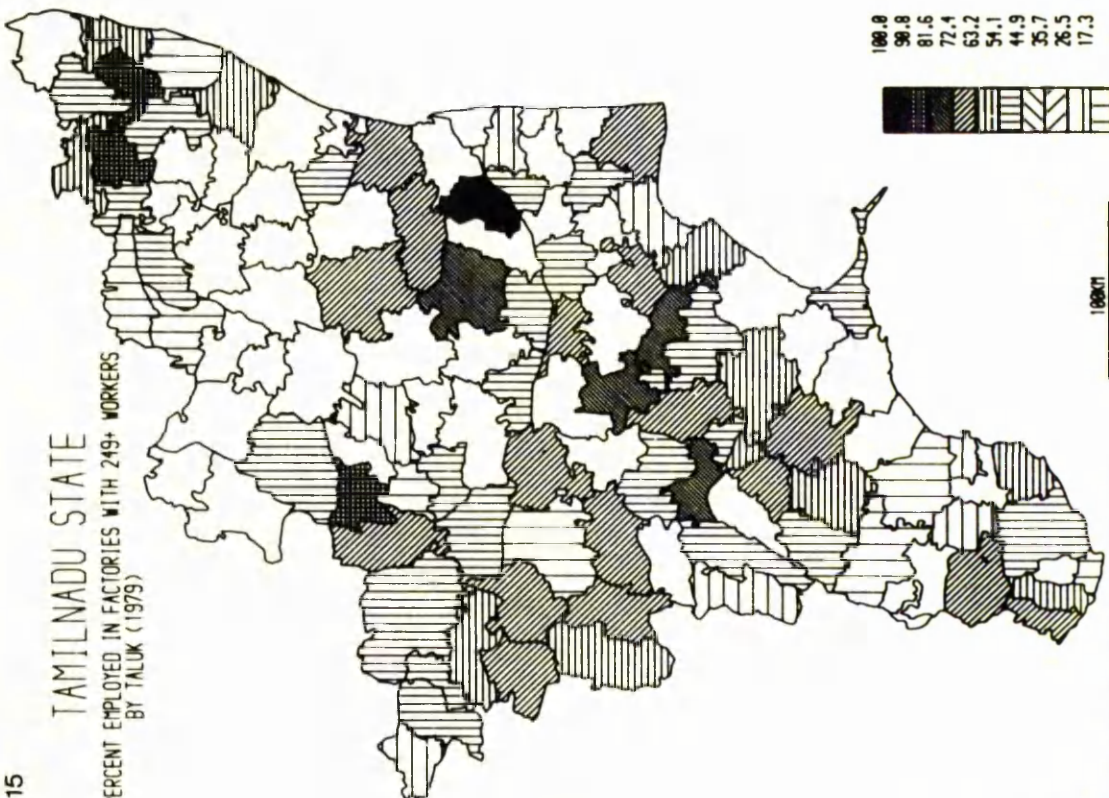
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PERCENT EMPLOYED IN FACTORIES WITH 249+ WORKERS
BY TALUK (1979)

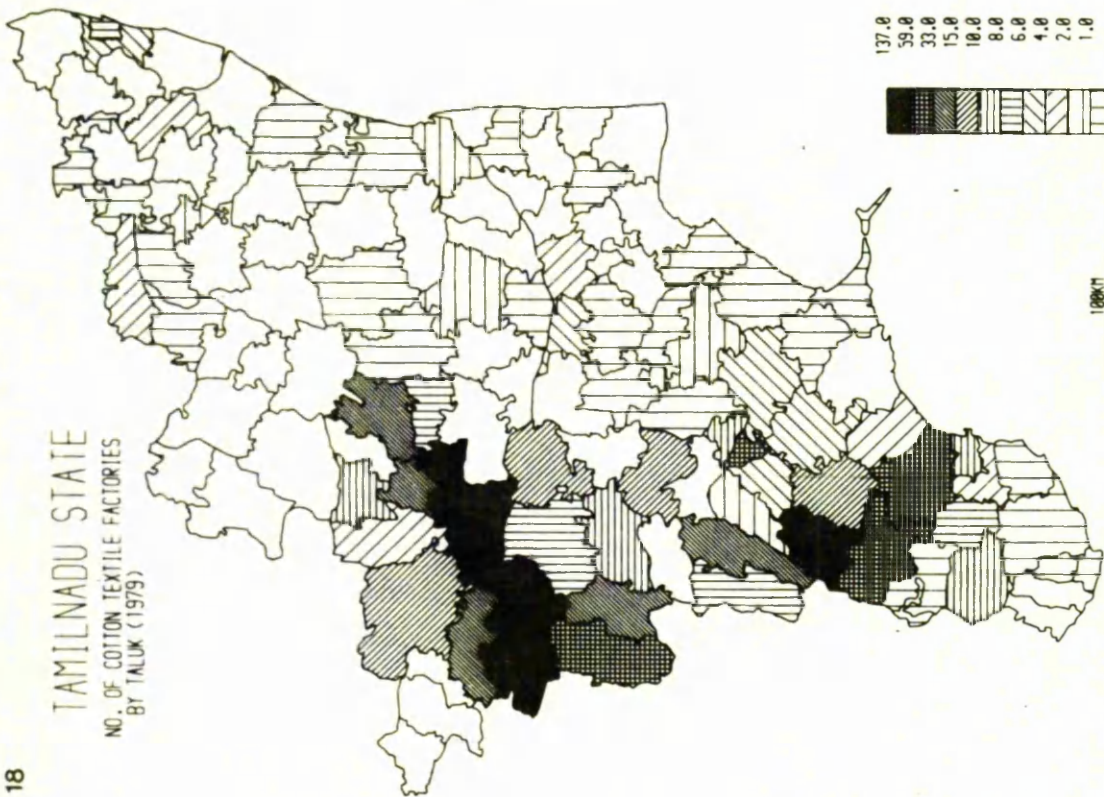


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TAMILNADU STATE
NO. OF COTTON TEXTILE FACTORIES
BY TALUK (1979)

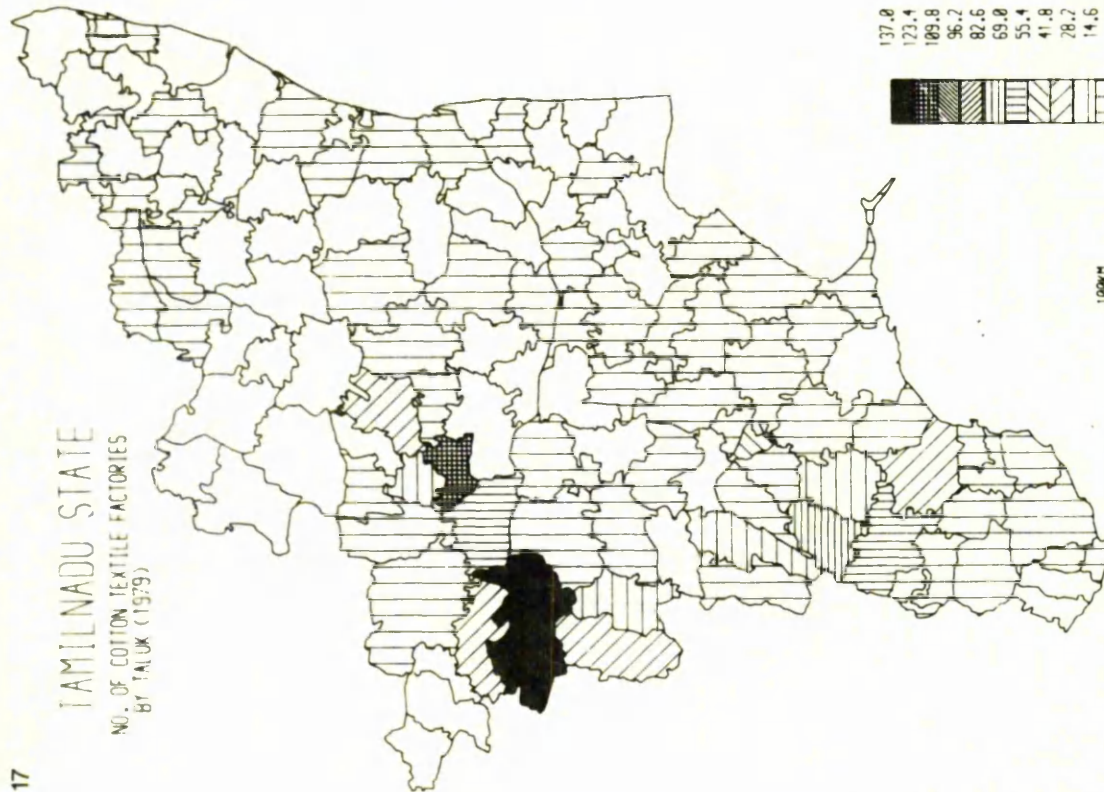


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PLOTTED BY >> CHORO << 01/09/81
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TAMILNADU STATE
NO. OF COTTON TEXTILE FACTORIES
BY TALUK (1979)



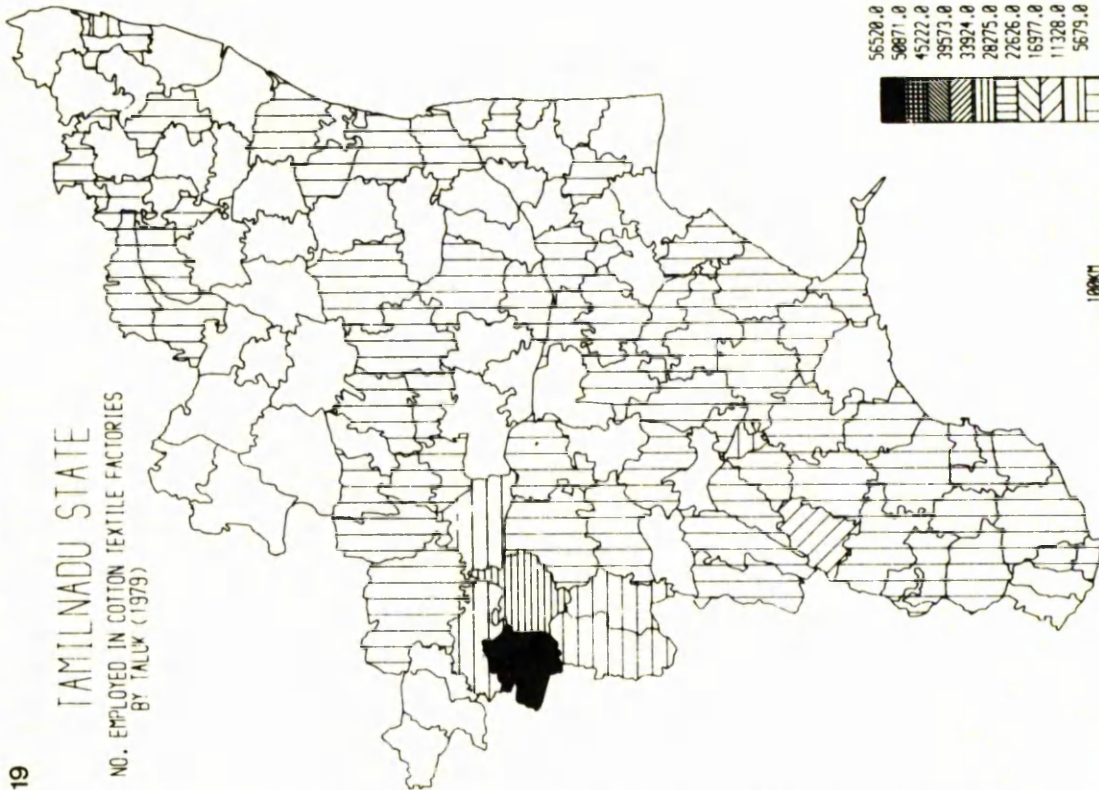
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TAMILNADU STATE

NO. EMPLOYED IN COTTON TEXTILE FACTORIES
BY TALUK (1979)



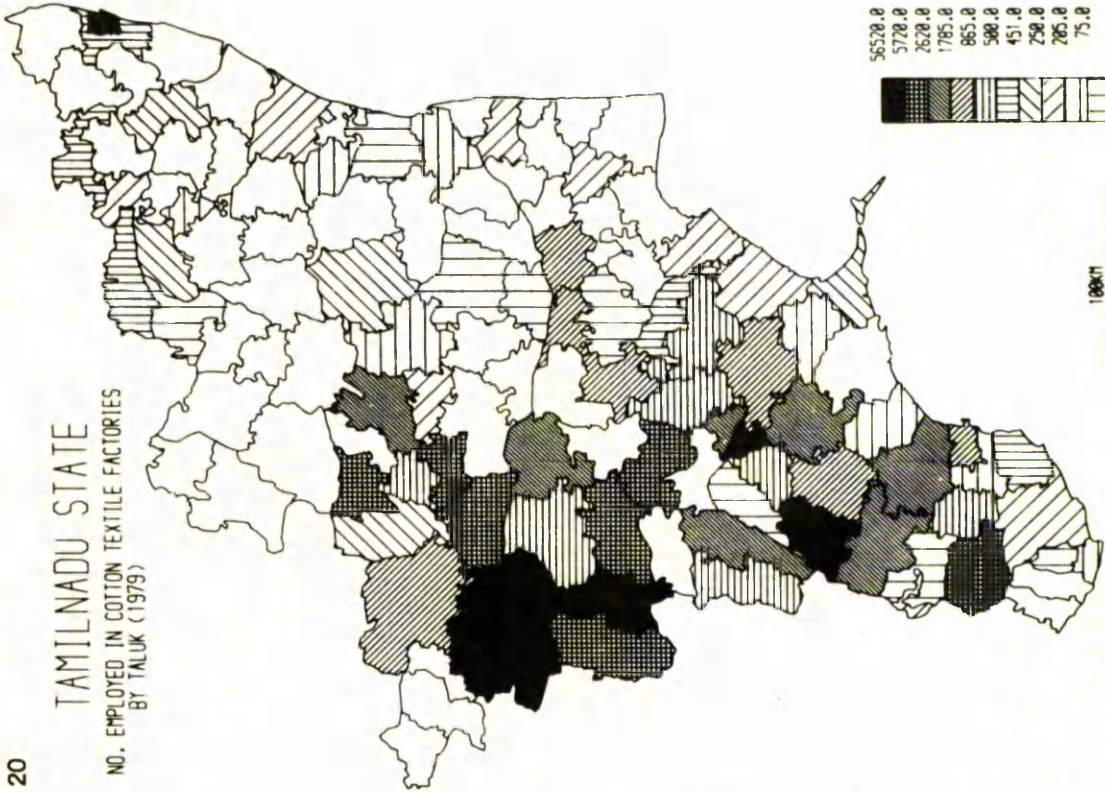
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TAMILNADU STATE

NO. EMPLOYED IN COTTON TEXTILE FACTORIES
BY TALUK (1979)

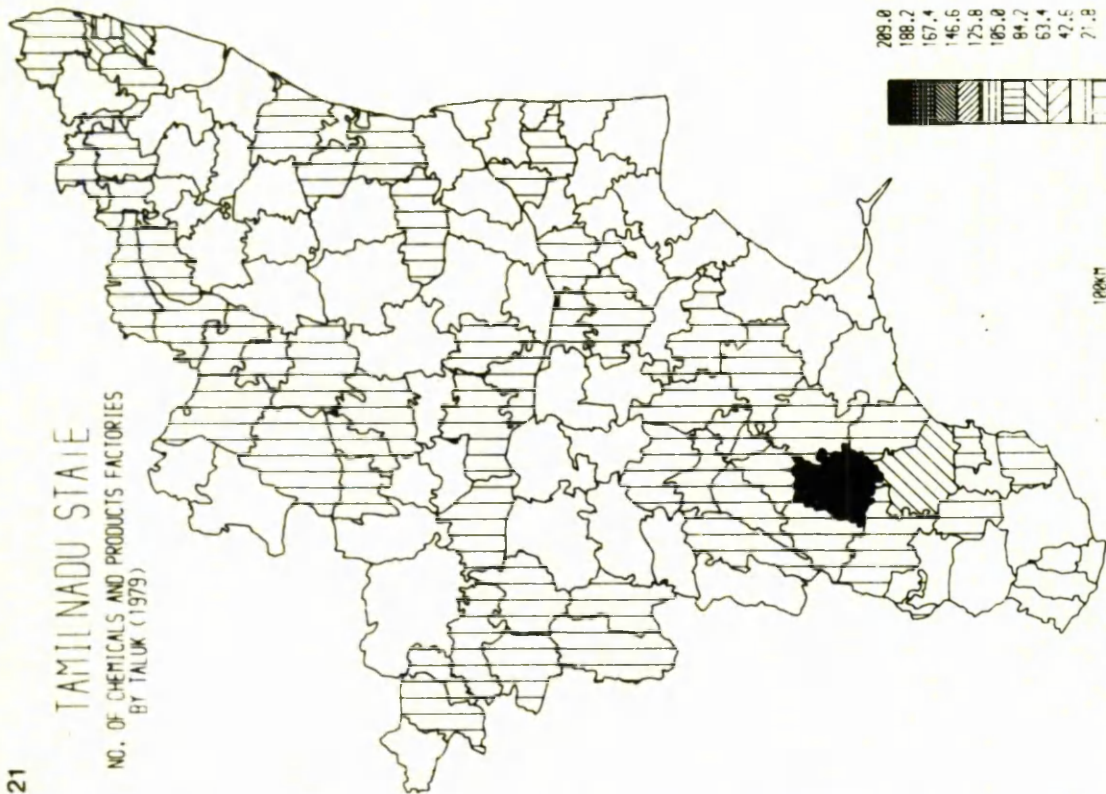


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ULCC VERSION

TAMILNADU STATE

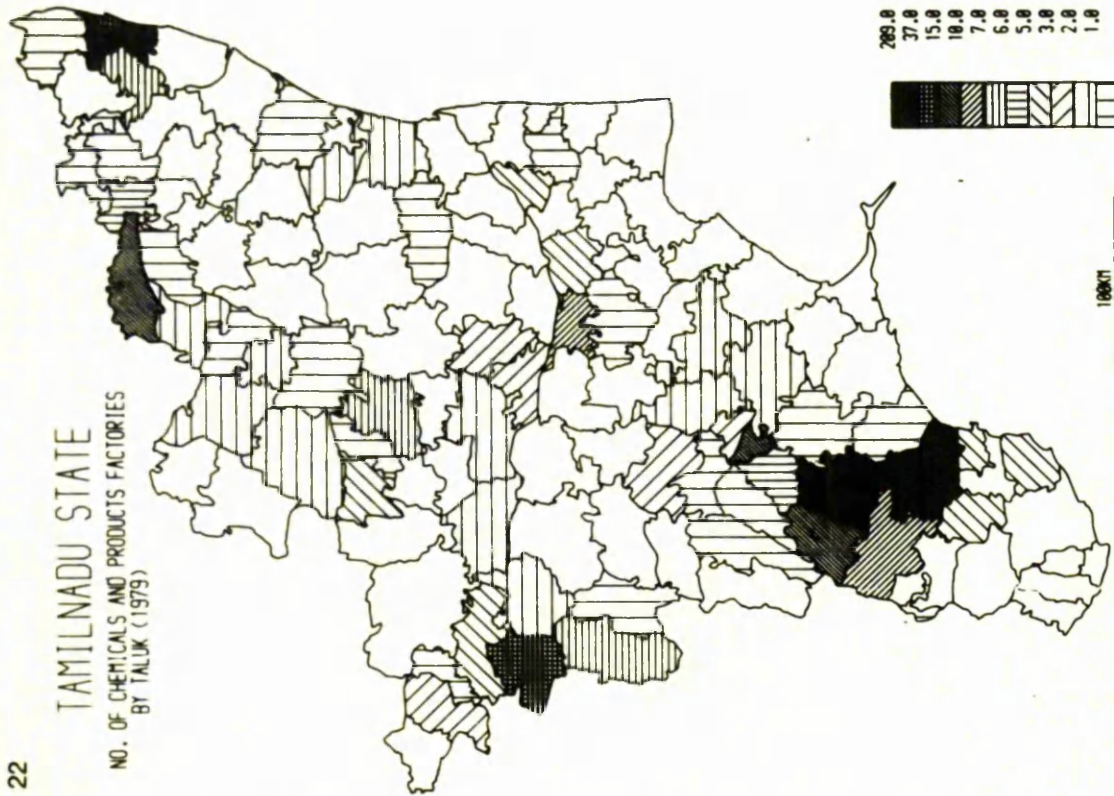
NO. OF CHEMICALS AND PRODUCTS FACTORIES
BY TALUK (1979)



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ULCC VEPSTON

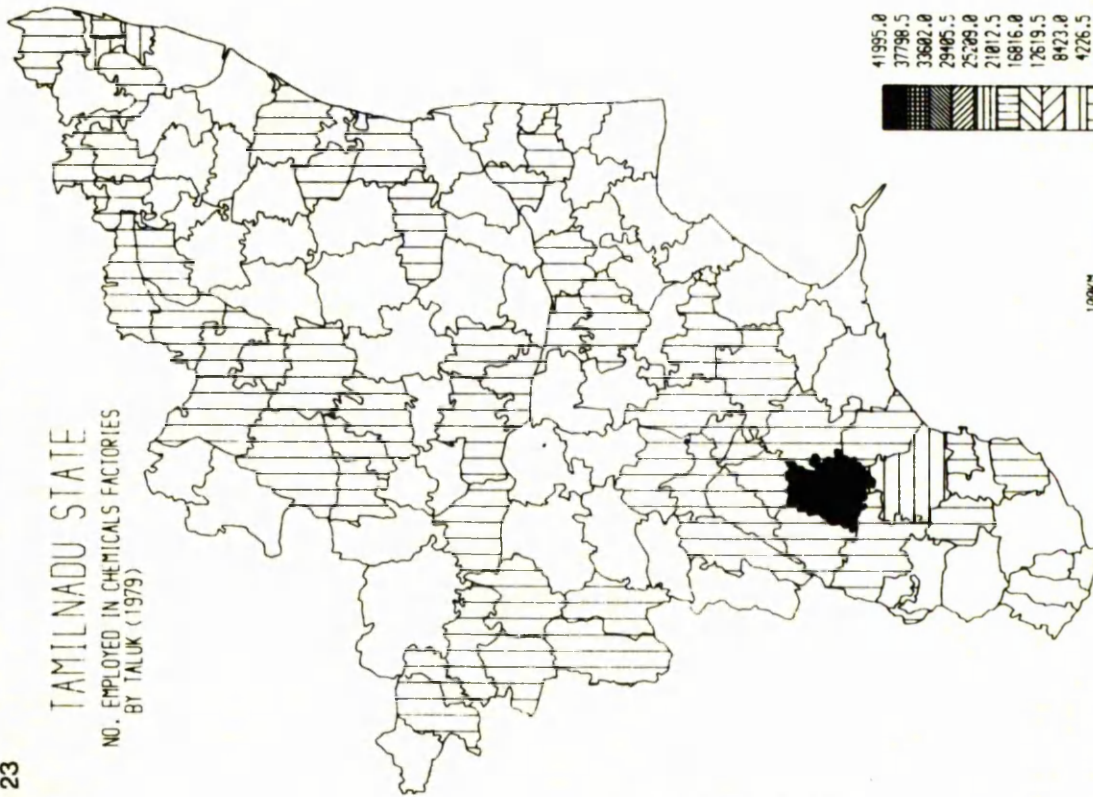
TAMILNADU STATE

NO. OF CHEMICALS AND PRODUCTS FACTORIES
BY TALUK (1979)



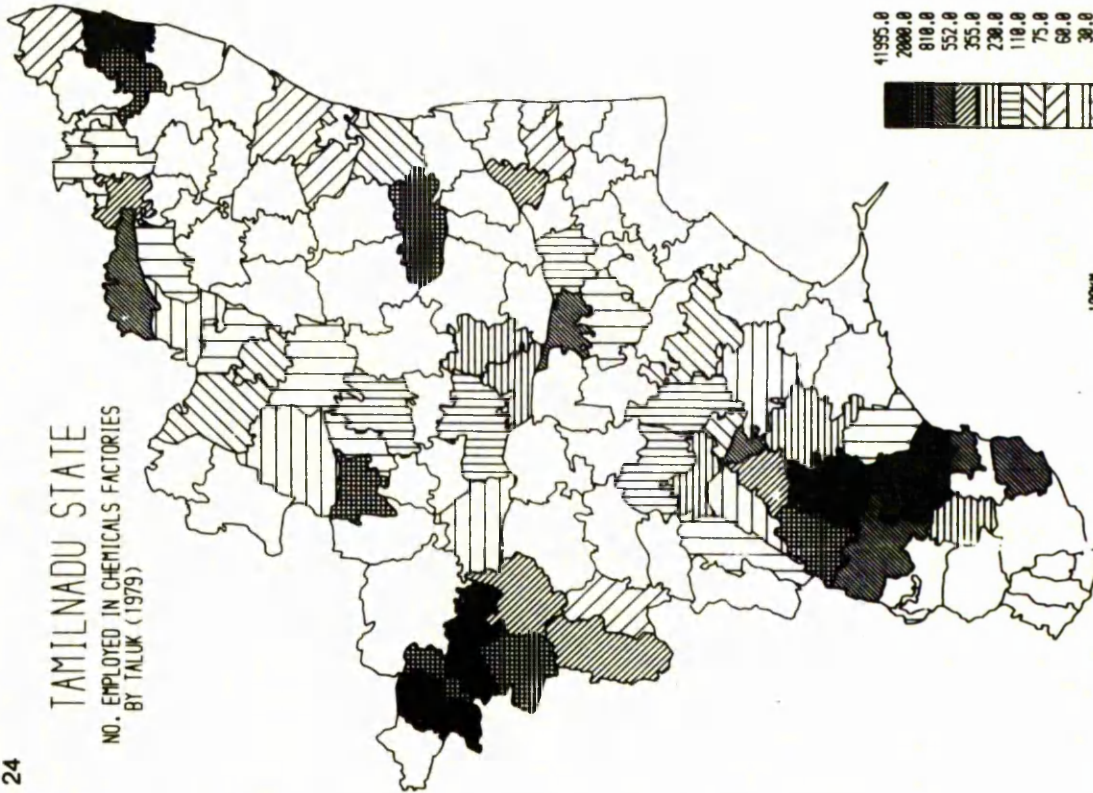
PLOTTED BY >> CHORO << 03/09/81
ULCC VEPSTON

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BY TALUK (1979)



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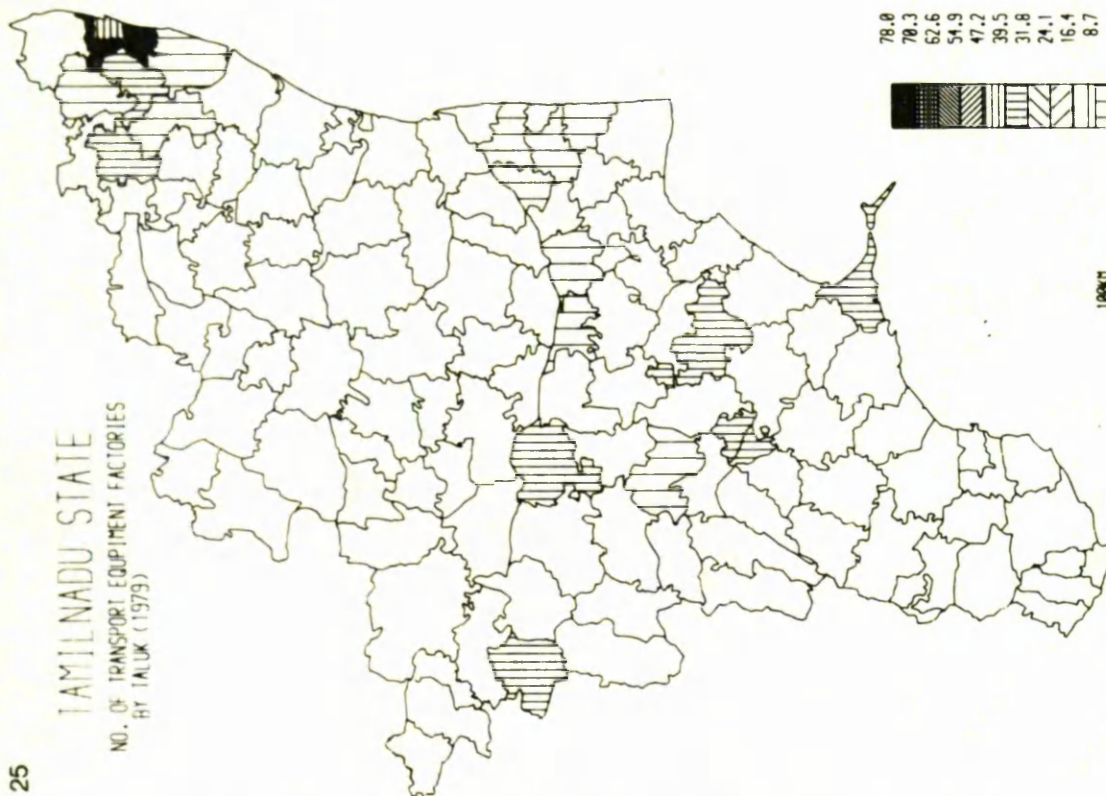
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NO. EMPLOYED IN CHEMICALS FACTORIES
BY TALUK (1979)



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ULCC VERSION

TAMILNADU STATE

NO. OF TRANSPORT EQUIPMENT FACTORIES
BY TALUK (1979)



78.0
70.3
62.6
54.9
47.2
39.5
31.8
24.1
16.4
8.7

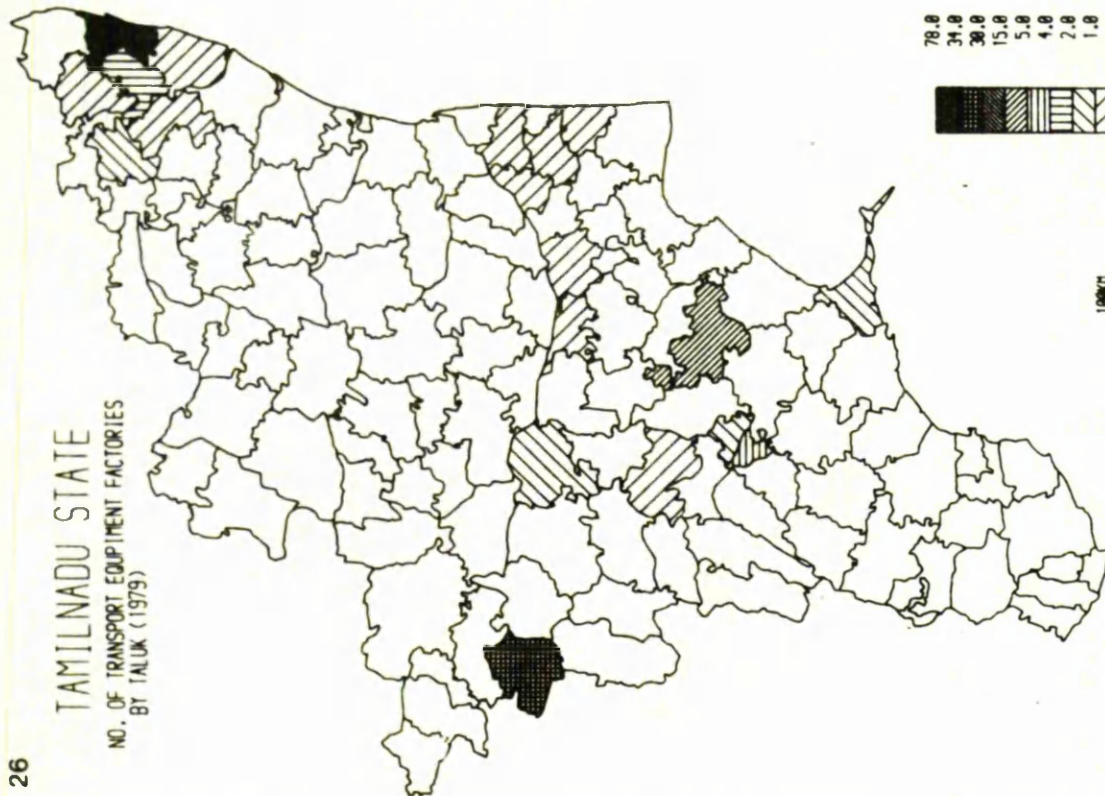


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ULCC VERSION

TAMILNADU STATE

NO. OF TRANSPORT EQUIPMENT FACTORIES
BY TALUK (1979)



78.0
34.0
30.0
15.0
5.0
4.0
2.0
1.0

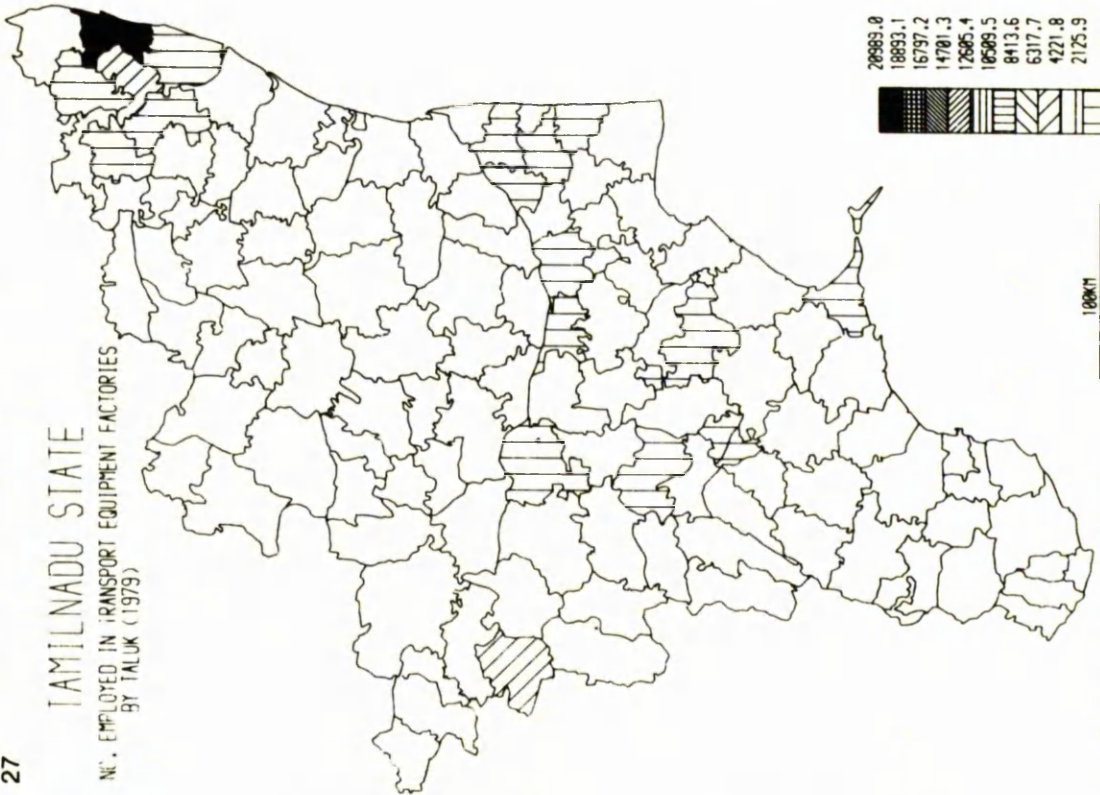


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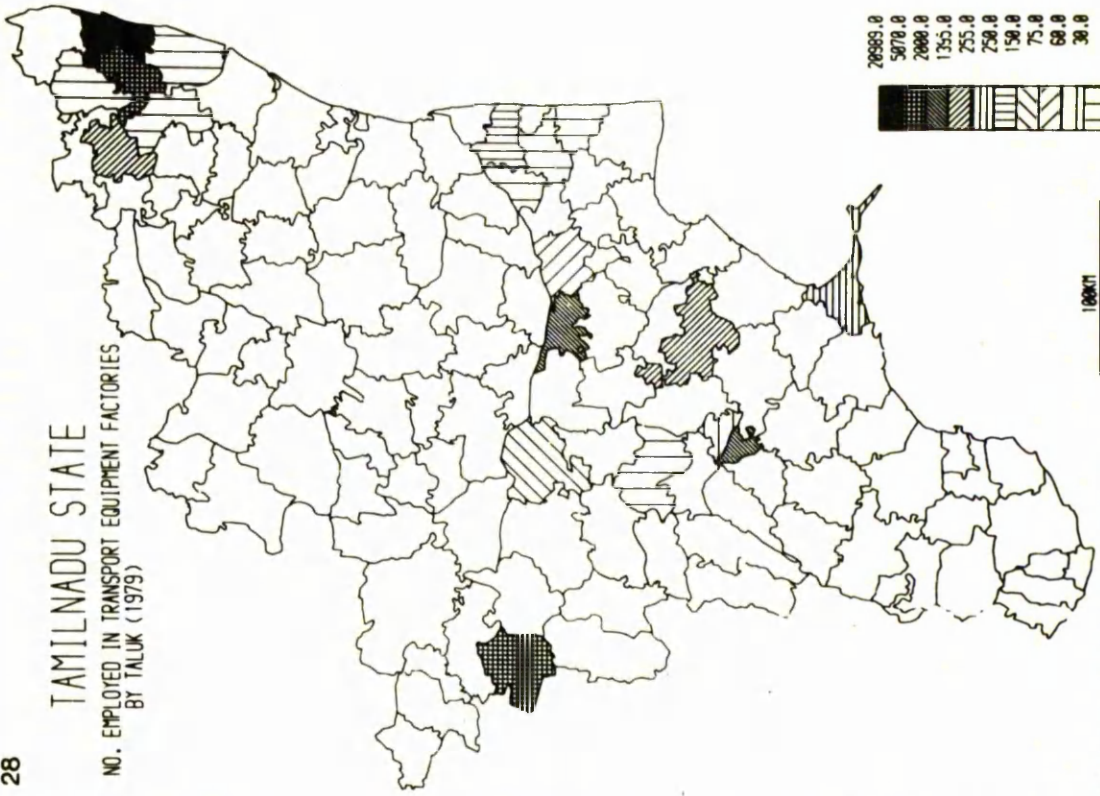


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TAMILNADU STATE

NO. EMPLOYED IN TRANSPORT EQUIPMENT FACTORIES
BY TALUK (1979)



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