DISCUSSION PAPER

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A NATIONAL AND STATE ANALYSIS OF THE
INDIAN URBAN DEVELOPMENT: RPO 672-64
INTERIM SUMMARY REPORT

by

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The views presented here are those of the author, and they should not be interpreted as reflecting those of the World Bank.
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ABSTRACT

This is an interim summary report of the status of the Research Project RPO 672-64: The National and State Analysis of Indian Urban Development which started in October 1981. After explaining the objectives of the research project, the report summarizes each of the papers produced except those designed to develop a general equilibrium model of Indian urbanization. The papers summarized are:

1. The Relationship Between Urbanization and Economic Development by Edwin S. Mills and Charles M. Becker
2. Historical Analysis of Indian Urbanization by Edwin S. Mills and Charles M. Becker
3. Indian City Sizes and City Growth by Edwin S. Mills and Charles M. Becker
4. Indian Government Programs to Alter City Sizes by Edwin S. Mills and Charles M. Becker
5. Urbanization, Intertemporal and Interspatial Productivity Comparisons in Indian States by Satyendra Verma
6. Industrial Location Policy: The Indian Experience by A. Uday Sekhar
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Introduction

This research project started officially in October 1981 with the objectives of:

(a) Developing a national perspective on Indian urbanization,
(b) Identifying the effects of Government policy on urban growth process,
(c) Developing a framework for collaborative urban research in India, and
(d) Raising the level of debate on urban economic issues within India.

Objectives (c) and (d) have been substantially achieved by several missions sent to India by the Bank. The dissemination of research reports would further advance the achievement of objective (d).

For the first two objectives, two separate tasks have been identified and undertaken: (a) a series of papers on issues related to urbanization and urban policies, and (b) the development of a computable generable equilibrium simulation model for testing policy impacts with particular reference to urban development. Although the results of analysis through the simulation model are not available at this time, the series of papers produced on selected issues, the summary of which is presented below, have led to the following general conclusions.

Despite the widely held notion among Indian policy makers and intellectuals that the urbanization in India is excessive and that large cities are inordinately large and growing too fast, an international comparison of a large number of countries revealed that the level of
urbanization attained in India is well within the range to be expected in a
country having the level of economic development which India has attained.
Again on the basis of international comparison, the degree of urban primacy
(the share of the largest city in urban population) in India is shown to be
less than most other countries. In addition, the city size distribution in
India shows remarkable stability and there is no ground to believe that its
large cities are growing excessively fast.

However, these factual observations on recent and historical urban
development may not remove the uneasiness of concerned people about
urbanization. Soon after independence, the Government of India instituted a
number of policies aimed at reducing the growth of large cities and at
encouraging the development of less developed areas. The stability in city
size distribution might just conceivably have been obtained thanks to these
policies. But these policies are becoming more stringent as time passes.
Such stepped-up efforts, designed to offset the alleged "evil" of ever-
increasing urbanization and urban primacy, may also have harmful effects which
have not been adequately considered.

An examination of urban policies and industrial location policies
revealed that there are some policies which are effectively restricting the
growth of the largest cities and inducing industrial development in hitherto
underdeveloped areas. In particular, the growth of multi-million cities has
certainly slowed down and the predominance of Maharashtra and West Bengal in
manufacturing value added declined considerably in recent decades. From the
viewpoint of urban and regional policies, the Government appears to be
successful.
From the viewpoint of broader development objectives, however, serious doubt can be cast on their appropriateness. What has been lost as a result has not been given attention. Most locational policies are forcing industrialists to choose among inferior locations. The loss of productivity, or even of the amount of industrial investment, must be substantial. There is solid evidence to support this proposition. The analysis of "total factor productivity" by state has revealed that factor productivity is higher in traditionally developed states such as Maharashtra, Gujarat, Tamil Nadu and West Bengal. Analyses in other countries also suggest that marginal productivity of investment in multi-million cities is still higher than anywhere else. Therefore, the urban and regional policies of India appear to be sacrificing national growth significantly in favor of regional equity.

Two issues arise. First, are the policies in force consistent with national objectives? Broadly speaking, policies aimed at interstate redistribution of manufacturing industries might be considered as desirable in view of the serious concern with regional equity. However, those aimed at decentralization on a metropolitan regional scale need to be reviewed critically. Second, given the objectives held by the Government, are there any better ways of achieving them? In this area, a number of points can be made. Industrial location policies through mandating such measures as selective licensing and land use control can frequently be damaging for industrial development. Incentive policies such as concessional financing and the provision of infrastructure are more amenable to industrial development. If pollution is the problem in large cities, discharge of pollutants should be directly controlled instead of industrial location. Similarly, if congestion
is the problem, either appropriate pricing or investment or their combination are preferable to locational control. If the problem is that protected industries tend to locate in very large cities, the benefit of such protection needs to be weighed against its locational impacts.

Thus, the urbanization and location policies in force in India raise a number of serious issues. It is the intention of this project to start serious discussion on the current policies in India through the dissemination of these research outputs.

In the following, the summaries of the papers produced under this project are presented.

1. **The Relationship between Urbanization and Economic Development**
   
   by Edwin S. Mills and Charles Becker

   Economic development has been accompanied by urbanization in both developing and developed countries. This is an obvious and well-established fact, but intensive debates are still going on in India on this issue. This paper examines this relationship in recent decades in the international context and attempts to identify the characteristics of urbanization in India in the world-wide content.

   As the economy develops, urbanization (i.e., the share of population in urban areas) follows because as income levels rise, resources are shifted from agriculture to manufacturing and services (Engel's law) and the manufacturing and service activities tend to be located in urban areas. In addition apparently faster rates of technical progress in manufacturing than in agriculture further help to increase urbanization as the economy grows.
The reasons why non-agricultural activities tend to be located in densely developed, urban areas are mainly scale economies and transportation costs. For most manufacturing activities, scale economies cannot be exhausted in a scale of one or several households. Furthermore, modern production processes require extensive interindustry linkages among firms. To reduce costs of transportation, particularly of persons, firms tend to locate in proximity to each other. Thus, urbanization proceeds as the economy develops.

An analysis has been made for 105 countries, excluding city states and high income oil exporting countries with data in 1960 and 1980. Having the percentage of urban population as the dependent variable, and GNP per capita, the share of labor force in agriculture, population density and the time variable as independent variables, logistic functions and quadratic functions have been estimated through regression analysis. The following results were obtained:

\[
U_{it} = 73.0286 - .7157 A_{it} + 13.3706 Y_{it} - 6.6886 Y_{it}^2 + 1.0338t
\]

\[ (15.19) \quad (1.67) \quad (1.58) \quad (1.30) \]

\[ R^2 = .799 \quad (6) \]

\[
\ln(U_{it}^{-1} - 1.05) = -1.6409 + .0448 A_{it} - .1282 Y_{it} + .1603 Y_{it}^2 - .0996t
\]

\[ (14.99) \quad (.25) \quad (.60) \quad (1.97) \]

\[ R^2 = .769 \quad (7) \]

and

\[
U_{it} = 13.98 - .0358 A_{it} - 18.2518 D_{it} + 17.0928 Y_{it} - 10.7269 Y_{it}^2 + .9228 U_{it-2}
\]

\[ (.70) \quad (2.73) \quad (2.24) \quad (2.13) \quad (15.97) \]

\[ R^2 = .930 \quad (8) \]
where

\[ U_{it} \] is the percentage share of urban population in year \( t \),
\[ Y_{it} \] is GNP per capita in \( t \) where \( t = 0 \) for 1960 and \( t = 2 \) for 1980,
\[ D_{it} \] is population density in year \( t \),
\[ A_{it} \] is the percentage share of labor force in agriculture in year \( t \), all in country \( i \), and the value in parentheses is the absolute value of t-ratio.

In all three regressions, coefficients have plausible signs. High agricultural labor force shares always lead to low values of \( U \). In each regression, the derivative of \( U \) with respect to \( Y \) is positive and becomes small at high income levels. In both (6) and (7), urbanization increases as time passes for given values of other independent variables. But, significance levels of t values are not high and the coefficients are small. In (6), the urban share increases only one percentage point per decade as a result of the passage of time. In (7), the effect of time on urbanization disappears as high levels of urbanization are reached. Thus it can be concluded that to only a small extent urbanization occurs independently of economic development.

Equation (8) states that if we are concerned with the increment in \( U \) from 1960 to 1980, it can be very well explained by GNP per capita and population density, and thus the share of labor force in agriculture becomes unimportant. This is so probably because national differences in the share of agriculture labor force with respect to income level are reflected in the share of urban population in 1960.

The calculated value of \( U \) in 1980 for India by these equations ranges from 20.6\% to 24.9\%, while the 1981 value was 23.7\%. Therefore, the urbanization in India is consistent with world-wide trends of urbanization.
With reasonable assumptions about future GNP per capita, the share of agriculture labor force and population density, the 1990 share of urban population has been predicted by the use of the three equations. The figures center around 27% and 28%. If 28% is adopted, the urban population of India in 1980 will be 224 million, an increase of 68 million from the 1980 level, implying an annual increase of 4.0%.

2. Historical Analysis of Indian Urbanization

by Edwin S. Mills and Charles Becker

Population census is available for India since 1901. During the 80 year period since 1901, the share of urban population increased consistently from 11% to 23.7% in 1981. The growth in urbanization has accelerated since about 1931. It was particularly great from 1941 to 1951, reflecting impacts of the Partition in 1947. Since 1951, urbanization is proceeding steadily and with an accelerating rate.

However, the industrial composition of the labor force in India shows remarkable stability since 1901, the share of agriculture being about 70% and the share of manufacturing about 10% for the past 70 years up to 1971. On the other hand, the industrial composition of GDP, for the period for which data are available, shows general trends of diminishing agriculture and increasing manufacturing shares. The share of agriculture declined from 59% in 1950 to 43% in 1977 and the share of manufacturing grew from 10% to 15% during the same period.

A question arises as to why urbanization proceeded while the share of labor force in presumably urban oriented industries such as manufacturing
and service stayed at constant levels in the past. By examining labor force by the location of residence, it has been revealed that Indian urbanization from 1951 to 1971 resulted mostly from the urbanization of manufacturing and service industries, and to some extent from urbanization of mining and construction. Among them, urbanization of the manufacturing sector is most prominent. In fact, this urbanization is understood as the decline of the household manufacturing sector which is predominantly rural and the rise of the non-household manufacturing sector which is predominantly urban.

One noteworthy fact is that the urban share of the non-household manufacturing sector declined from 70% in 1961 to 65% in 1971, while the urban share of all other sectors increased during the period. This may be due to the government policy to disperse industry to less developed areas, but its specific causes are not easily identifiable.

Using Indian states as units of observation, the same regression equations have been estimated relating urbanization to development indices. The results are:

\[
U_{it} = -10.758 - 0.1055 A_{it} + 1625.65 Y_{it} - 1382.64 Y_{it}^2 \\
- 0.5953t \\
(1.10) \quad (3.67) \quad (2.42) \\
(0.48)
\]

\[ R^2 = .673 \]  

and

\[
\ln \left( \frac{U_{it}}{1.9} \right) = 4.0545 + 0.0102 A_{it} - 156.25 Y_{it} \\
+ 1390.57 Y_{it}^2 + 0.6570t \\
(1.18) \quad (3.91) \quad (2.70) \quad (0.59)
\]

\[ R^2 = .667 \]  

As with the international comparison, A, Y, and Y^2 have coefficients of the expected sign. But, being different from the cross-country regressions, the
coefficients of \( Y \) and \( Y^2 \) are more significant than \( A \)'s, although the coefficients of \( Y \) and \( Y^2 \) are not directly comparable to those in the cross-country regressions because the monetary units used are different. Another notable feature is that, according to either equation, \( U \) peaks at a \( Y \) value less than twice the average but greater than the largest \( Y \) value in the sample. In addition, the coefficient of the time variable has a different sign in either case, although the level of significance is low, implying the share of urban population would fall over time if the share of labor force and the level of per capita product remain the same.

These facts indicate, contrary to the predominant view in India, that although the level of urbanization attained in India now is in line with other developing countries in relation to its development indices, the country appears to have a number of external factors, government policies or otherwise, which tend to resist urbanization.

3. **Indian City Sizes and City Growth**

by Edwin S. Mills and Charles M. Becker

The city size distribution is a subject of intense public and government concern in India. Most concern focuses on the sizes and growth rates of the largest cities. Much popular and scholarly writing accepts as nearly axiomatic that large cities are too large and grow too fast, at least in the absence of constraints imposed by governments. It has been national government policy to constrain the growth and sizes of large, and not-so-large, cities since shortly after Independence.
Much writing on allegedly excessive city sizes in India emphasizes the increasing share of the population in class I cities (i.e., those with a population of 100,000 or greater) within urban population. In fact, this percentage increased consistently from 26% in 1901 to 60% in 1981. But, during the period the total urban population increased from 26 million to 156 million. As a result, almost all the cities must have witnessed an increase of population several times and consequently many cities must have crossed the boundary into class I cities. As far as the population growth rates of the four largest cities are concerned, only Delhi and Madras had a growth rate greater than the national average growth rate of urban population during the 1961-1981 period and, during the most recent decade of 1971 to 1981, only Delhi exceeded the national average.

A more systematic analysis of city size distribution can be done by estimating the Pareto distribution:

\[ R = A P_R^{-\beta} \]

where \( R \) is the number of urban areas with at least a population of \( P_R \), and \( A \) and \( \beta \) are constants to be estimated from the data. Since cities of higher rank (smaller \( R \)) have larger populations, both \( A \) and \( \beta \) are positive. The larger the value of \( \beta \), the more nearly equal are cities of various ranks. The equation can be estimated by ordinary least square method by taking
logarithms of both sides. The results of estimation for class I cities are shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>ln A</th>
<th>β</th>
<th>Number of Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>13.96</td>
<td>1.02</td>
<td>49</td>
</tr>
<tr>
<td>1911</td>
<td>14.02</td>
<td>1.02</td>
<td>44</td>
</tr>
<tr>
<td>1921</td>
<td>14.36</td>
<td>1.04</td>
<td>53</td>
</tr>
<tr>
<td>1931</td>
<td>15.62</td>
<td>1.13</td>
<td>62</td>
</tr>
<tr>
<td>1951</td>
<td>15.73</td>
<td>1.07</td>
<td>75</td>
</tr>
<tr>
<td>1961</td>
<td>17.31</td>
<td>1.17</td>
<td>99</td>
</tr>
<tr>
<td>1971</td>
<td>17.17</td>
<td>1.13</td>
<td>99</td>
</tr>
<tr>
<td>1981</td>
<td>17.30</td>
<td>1.10</td>
<td>216</td>
</tr>
</tbody>
</table>

The results show remarkable stability of β and, if anything, imply that cities become somewhat more nearly even from 1901 to 1961 and slightly less so from 1961 to 1981.

A further analysis shows that the relative size of the largest ten cities did not change during the 1961-1981 period as much as the change in β indicates. Therefore, large cities in ranks below must have grown relatively fast.

1/ Due to data constraints, only male population was used for city population in the estimation. But the analysis of 1981 data shows that the value does not change significantly if total population is used.
The above results do not indicate any success of national government programs to disperse population from large cities. Nor do they suggest that the relatively large sizes of the largest Indian cities are a legacy of colonialism.

The Pareto distribution equation has been fitted to each of five regions of India in a similar way: North, South, East, West and Central Regions. The estimated β values differ greatly among regions, but the disparities have become smaller as time has passed. Until 1961, the largest was about twice the size of the smallest. By 1981, the largest was only 1.3 times the smallest. This convergence appears to indicate that the regions of India are increasingly integrated into a national economy.

Next, the growth rate of individual cities has been analyzed. The possible determinants of city growth are considered to include the growth in manufacturing employment, the national rate of population growth, the initial size of the city, the level of per capita product, the influence of the nearest class I city and regional influences. As per capita product data (for states) are available, only since 1961, two regression equations were estimated, one for the entire period of 1901 to 1971 and the other for 1961 to 1971:

\[
G_{it} = 4.052 + .105 G_{Mit} + .905 G_t + .560 P_{i,t-1} - .036 P^2_{i,t-1} + 2.955 N + 2.454 S - 2.244 E + 8.972W
\]

\[
R^2 = .355 \quad (6)
\]

and
where $G_{it}$ is the growth rate of city i's population in percent between census years $t-1$ and $t$,

$G_{mit}$ is the growth rate of city i's manufacturing employment in percent during the same decade,

$G_t$ is the growth rate of national population in percent during the same decade,

$P_{i,t-1}$ is city i's population in census year $t-1$, $\text{N, S, E and W are the regional dummy variables (central being the norm)}$,

$NDP_{161}$ is 1961 real per capita net domestic product in the state in which city i is located,

$P_{ic61}$ is the 1961 population of the closest class I city to city i,

$d_{ic}$ is airline distance from city i to the closest class I city.

$t$ - statistics are in parentheses beneath coefficients to which they apply.

The results indicate that rapid growth of its manufacturing employment and of national population induce fast growth in a city's population. The coefficient of $G_t$ in (6) is close to unity but slightly below, implying that fast national population growth causes nearly as fast a growth in a city's population, contrary to the notion that national population growth leads to an even faster growth of urban population. The
coefficients of $G_M$ are highly significant, but much less than unity. This implies that the share of manufacturing employment would fall as the city grows, contrary to what the economic base theory predicts. The coefficients of $P$ and $P^2$ indicate that the city growth would be greatest when the initial city size is in the range of 800,000 to 900,000.

The coefficient of NDP indicates that cities grow faster in high income states. The coefficient of $P_{ic}/d_{ic}$ variable shows that cities grow faster the farther they are from the nearest class I city and the slower the nearer the class I city is. These results are as expected.

The above results provide no support for the belief that large cities over one million grow faster than small ones. However, as far as the period after 1951 is concerned, the growth of the largest cities may have been restrained by various government policies, particularly with regard to industrial location. The decline in the share of manufacturing employment in largest cities since 1951 is dramatic and may be attributable to government policies.

4. **Indian Government Programs to Alter City Sizes**

by Edwin S. Mills and Charles M. Becker

The belief is widespread in both developing and developed countries that large cities are too large and grow too rapidly unless governments adopt measures to control their sizes. Governments in many countries have a variety of programs intended to limit growth or reduce sizes of large cities. Most programs are aimed at employment location and at manufacturing in particular through the use of direct controls such as land use control, licensing, input
rationing and location policies for public enterprises and indirect controls such as investment subsidies, tax concessions and infrastructure investment.

Careful attempts to interfere with the process of city size and location determination can improve things, but misguided attempts to reduce the sizes or growth rates of large cities can do great harm, insofar as they are successful. The greatest danger is that desperately needed industrial production will be made nonviable or will be unable to grow to its full potential because it is forced or induced to locate in the wrong place by misguided government decisions.

The Government of India has adopted a number of measures directed to control the size of large cities. Industrial location has been controlled by the use of industrial licenses since 1951. Since 1977 licensing has become more stringent for larger metropolitan areas and urban agglomerations. Direct investment in public enterprises is another way to develop low income, rural areas or small towns. Still is the policy to equalize delivered prices of basic products in all locations. Although its impact on city size is not direct, the policy encourages inefficient and perhaps excessive rural-to-small town location.

Another important policy is encouragement of small scale industry through a large number of measures including exemption from licensing requirements, prohibition of production of specific products in factories, concessionary finance, input allocations, training programs, technical and marketing assistance and industrial estate development. The locational choice of industrial estates development has been a significant instrument for industrial dispersal and small town and rural development. The land use
control in urban planning has also been used for restricting industrial growth in central areas. Finally, there is an important program to develop backward districts, whose instruments include subsidies for capital investment and transport, income tax concessions and concessional loans.

The net impact of these policy measures on city size distribution cannot be known precisely. But it can be said that they did not alter city size distribution significantly, as seen in the previous paper. However, it is possible that they somewhat reduced the growth rate in a handful of the largest cities during the last two to three decades.

Regardless of the effectiveness of these measures, the rationale for government intervention in size distribution of cities requires examination. Most arguments for controlling the growth of large cities are based on the following: disamenities of large cities, effects of government programs, misallocation of infrastructural investment and inter-regional equity. These points will be discussed below.

Large cities are suffering from disamenities created by pollution and congestion. By shifting urban growth from large cities to smaller ones, large cities may be saved from worsening disamenities. This is, however, no more than a temporary solution. Very soon disamenities would spread to all cities. A more fundamental solution is, in the case of pollution, to restrict the amount of pollutants which can be discharged. Discharge standards may well vary from large cities to small cities, with greater stringency in large cities. In other words, government programs to abate pollution should do so by abating pollution, not by controlling city sizes through controls on industrial location and other activities. Similarly, congestion in large
cities should be dealt with by proper transportation management and investment.

Sometimes, certain government programs which are aimed at other objectives also encourage the growth of large cities. One such example is the protection of domestic manufacturing. Since manufacturing tends to be concentrated in large cities, such protection by means of tariffs and quotas is thought to make large cities excessively large, and justifies controls on location of manufacturing. However, if it is worthwhile to stimulate manufacturing growth by import controls, it would be worthwhile to permit it to locate where it is most efficient. Otherwise, the protection will not result in the largest possible increment in manufacturing production and employment.

It is frequently argued that excessive infrastructure investment is made in large cities because, as data shows, per capita investment is greater in large cities. However, this fact alone does not prove misallocation of resources. First, unit costs are usually higher in large cities. Second, just like any other regular commodities, the demand for public services increases as income level rises. The greater per capita investment may be a simple reflection of high income as long as a system exists which relates the willingness to pay of the residents to public investment resource allocation. Therefore, the real issue is not the per capita infrastructure investment but to set prices for public services to appropriate levels for reflecting real resource costs.

The industrial location policies against large cities could be supported on the basis of inter-regional or inter-areal equity, as industrial
jobs are usually high paying jobs. However, whether or not restrictions on
growth of large cities are an effective way to increase incomes of low income
areas is another issue. For industries to prosper, certain conditions need to
be satisfied. The great danger in India is that desperately needed
industrialization will be slowed down because the government insists that
industries cannot locate where they prefer. It is quite possible that the
widely discussed decreases in Indian industrial capital productivity during
the 1960s and 1970s resulted in part from government attempts to disperse
industrial investment from large cities. The danger is especially great in
attempts to limit growth of large cities, because they are very special places
in terms of market size, labor and other input supplies, port and other
transportation facilities, and so forth.

Policy content is also important. Policies that motivate location
such as concessionary loans in smaller cities, higher taxes in large cities
and infrastructure provision are much better than those that mandate location
such as licensing, because the economic costs of the former are identifiable
and, therefore, would not become too excessive.

5. Urbanization, Intertemporal and Interspatial Productivity
Comparisons in Indian States
by Satyendra Verma
Migration among states in India has been analyzed by dividing it
into urban and rural migration by destination, and attempts have been made to
explain it by economic variables.
By comparing net immigration rates from 1971 to 1981 to different states in India, it was found that these rates are closely correlated with the wage rate in the manufacturing sector and the total factor productivity as estimated by the method developed by Jorgensen and Mishmizu (1978) and Denny and Fuss (1981).

With regard to migration to rural areas, high immigration rates are positively correlated with high output-worker ratio and high interstate productivity index, while they are not correlated with high wage rate. This is probably due to the fact that monetary wage rate in the agricultural sector does not represent well the true cost of production or the real benefit to workers.

6. Industrial Location Policy: The Indian Experience

by A. Uday Sekhar

The share of manufacturing in GDP in India stood at 15% in 1977, which was not small relative to national income level. However, the geographic distribution of industries is quite uneven. The four states of Maharashtra, West Bengal, Gujarat and Tamil Nadu are industrial leaders, having collectively 55% of national value added and 52% of manufacturing employment in 1976.

The government established a policy of achieving more even distribution of industry among regions soon after independence. The following measures have been introduced: industrial licensing, location of public sector plants, distribution and pricing policies for intermediate industrial inputs, and state government incentives.
In order to achieve a more balanced regional development, industrial licensing has been used by the Central Government as a tool. To what extent this tool was effectively used is an open question, but the policy appears to have been strengthened during the 1960s. The proportion of approvals to license applications by state was correlated with the share of manufacturing in state GDP, with the correlation coefficient of 0.44 in 1960, but which went down to -0.09 in 1965. Similarly, its correlation coefficient with state per capita was -0.10 in 1960 and declined to -0.50 in 1965. In 1977 more explicit licensing criteria were instituted against metropolitan cities with a population of one million and above and those with one of 0.5 million and above.

In India the public sector is an important element in the manufacturing sector (12% of value added in 1972). Regional consideration has always been important in deciding the location of public sector manufacturing plants. Low income states of Bihar and Madhya Pradesh have been primary beneficiaries of investment for Central public undertakings. Per capita investment in Central public undertakings by state is definitely correlated with state per capita income for any period since 1950. In six states the share of Central public undertaking in the total manufacturing and mining employment exceeds 20% in 1975. They are, in descending order, Bihar (40%), Madhya Pradesh (37%), Orissa (36%), Assam (30%), and Uttar Pradesh (20%).

The Indian Government has followed a policy of control on the prices and distribution of basic commodities with a view to attaining regional equity. Through pooling of freight, the price of a controlled commodity is set equal in all locations. Although their spatial implications are not
readily predictable, these controls have encouraged industries to select inefficient locations.

State governments are competing with each other by offering incentives for industry to locate within their own state boundaries. Due to competition among them, the net effect is difficult to assess.

In addition to policies addressed to achieve inter-regional balance in industrial development, there are policies aimed at intra-regional balance in industrial location. These consist of (1) policies for encouraging (a) village and cottage industries and (b) modern small scale enterprises, (2) the industrial estates program, (3) the rural industries projects program, (4) metropolitan planning in the major cities, and (5) incentives to promote industrial development in backward districts including (a) Central Government incentives, (b) concessional finance from all India financial institutions and (c) state government incentives. All these are aimed at developing less developed parts of a region. Among them, the industrial incentives in favor of backward districts will be reviewed below.

During the early part of the 1970s, a number of incentives schemes were established for developing backward districts. Although there are some variations in the definition of backward districts, one prominent program classifies backward districts in such a way that they account for 71% of total land area and 59% of total population. Even in most developed states, such as Maharashtra, Gujarat or Tamil Nadu, nearly one half or more of population belongs to backward districts. Indeed, the amount of reimbursement from the Central investment subsidy, for example, has increased dramatically since the early 1970s, but there is a high concentration of subsidy payment to a few
districts. The implication is that a bulk of subsidies are being absorbed by a handful of the best-off districts among the backward districts.

When the inter-state distribution of industry is measured by various concentration indices, it is seen that concentration has declined from the early 1960s to the present, although the precise contribution of government policies cannot be identified.

When the distribution of manufacturing employment is examined in relation to the size of city in which it is located, class I cities (those of 100,000 and above) had the same ratio of non-household manufacturing employment to population in 1971 as in 1961. This seems to imply that large cities were industrialized in the same degree in these two years, but class I cities contain a large variation in city size. A closer look reveals that the ratio fell in the highly industrialized states of Maharashtra and Gujarat.

When these policies are evaluated with respect to both explicitly stated and implicit objectives, serious doubt is cast on their adequacy. These conclusions may be found in "Indian Government Programs to Alter City Sizes".

7. Some Aspects of Urban Housing in India
by Devendra B. Gupta

The share of the housing sector in national income during the period 1960-61 to 1977-78 remained at around three to four percent, the housing investment as a proportion of gross capital formation declined from about 30 percent in 1950 to 9.4 percent in 1975-76, and the rate of growth of gross capital stock in housing (in terms of real value) stayed around 1.5 to 1.6
percent per annum. Even if we make allowance for possible underestimation in these aggregates, these trends cannot be considered as encouraging when compared to the experience in the developed countries, or even in some of the developing nations.

An analysis of the factors affecting housing demand highlight the importance of the rapid pace of urbanization, especially in metropolitan and large cities. A trend towards larger households is also indicated. Further, a vast majority of urban population continue to live in abject poverty. The fact that almost half of the urban population belongs to the economically weaker sections, with a share of less than 20 percent of total income, one eighth of wealth and less than five percent of the gross savings, is reflected in the structure of housing demand. Analysis of the trends in housing stock indicate that there are more households than dwellings. The worsening of the housing situation is reflected in the fact that the extent of overcrowding increased from 2.62 person per room to 2.77 during 1961-71. Further, floor space availability per person between 1953-54 and 1973-74 declined from 7.9 to 6.9 square meters, with an even lower average availability of floor space in metropolitan cities. An analysis of the tenure status indicates that nearly half of the urban households live in rented accommodations, a proportion unchanged changed over time. However, the percentage of persons living in rented accommodation is substantially higher in large cities and in relatively more industrialized states.

In terms of the building materials used in housing, almost one fifth of the housing stock is katcha, with a similar percentage in dilapidated condition requiring urgent repairs. Further, almost half of the housing stock
is more than 20 years old. An analysis of availability of various housing amenities reveals that the proportion of dwellings lacking these facilities had declined steadily during the period of study, although the situation remains far from satisfactory, especially with regard to the toilet facilities. Also, most urban households are without the exclusive use of these amenities. The slums and squatter areas lack the most basic housing amenities and such basic urban infrastructural facilities as paved roads, electricity, underground sewerage and garbage disposal systems. Further, despite various government programs, the problem of slums and squatting remains acute. A study of three metropolitan cities emphasized that there was no single, unique solution to this problem, and that it had to be tackled according to the specific needs of the city concerned.

There are various supply constraints that require appropriate government intervention. First, land prices in urban areas, particularly in large cities, have been rising rapidly, and despite the enactment of the Urban Land (Ceiling and Regulation) Act, 1976, the situation continues to be alarming. Indications are that the 1976 Act has adversely affected both availability of land and new construction activity. Admittedly, the high land values may have prompted more efficient utilization of scarce urban land resources. The rent control acts in India do not appear to have affected the supply of urban housing adversely. It appears, however, that the increasing burden of maintenance costs has resulted in deterioration of old housing stock. Rising construction costs and high standards (both in architectural design and in the quality of building materials) imposed by the building byelaws have generally placed pucca housing beyond the reach of a
vast majority of the urban population. Finally, a study of the various finance institutions indicate the inadequacy of the available funds for housing construction. Further, a very small segment of the poor population seems to have benefited from various public housing schemes. The government, on the other hand, has been taking some positive fiscal measures to promote housing. The linking of property tax to rent control, however, seems to have negatively affected the revenues of both local and central governments, and the entire question of legal provisions, the fiscal structure and their impact on this area calls for a fresh and urgent review.

There are indeed many areas requiring further investigation. First, of course, the existing data base needs to be updated. Second, we need to devote greater attention to the estimation of housing demand, considering such factors as income and wealth status, as well as other household characteristics. Other issues relate to the desirability of diversion of investment to housing, and the relative advantages of providing housing infrastructure and security of tenure to slum dwellers and squatters. In addition, it is relevant to know just how serious the housing problem is, whether it is becoming more or less acute, and whether the poor themselves view the problem in the same way as the society at large.

Finally, on the supply side, there are a number of issues on which more work is needed, including various government regulations influencing both new and replacement investment in housing. Rent control acts, the Urban Land (Ceiling and Regulation) Act of 1976, land use policies, and building byelaws are possible candidates for further work. At the moment, prospective house builders have to go through several local bodies in order to obtain the
sanction for building plans and completion certificates, a process both
d expensive and time consuming. A study of the time and expenditure incurred
can be very instructive in streamlining these procedures and saving the
housebuilder from much harassment. Apart from various government regulations,
the availability of funds for house construction is a serious constraint. The
whole question of housing finance thus needs a thorough study.