

**SECTORAL DIVERSIFICATION AND URBANISATION
PROCESSES OF SMALL TOWNS OF INDIA :**

**A CASE STUDY OF MAHARASHTRA, RAJASTHAN AND ORISSA
1961-91**

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CERTIFICATE

This is to certify that this dissertation entitled "SECTORAL DIVERSIFICATION AND URBANISATION PROCESSES OF SMALL TOWNS OF INDIA : A CASE STUDY OF MAHARASHTRA, RAJASTHAN AND ORISSA, 1961-1991", submitted by **KALYAN DAS**, in fulfilment of six credits out of the total requirements for the award of the degree of **MASTER OF PHILOSOPHY**, is a bonafide work to the best of my knowledge and may be placed before the examiners for evaluation.

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CHAPTER - I

INTRODUCTION

1.1 Introductory Statement :

Large cities have generally low level of linkages with the rural hinterland. Such a pattern of urbanization has failed to meet adequately the needs of a predominantly agrarian economy like India. Large cities have their own dynamics of growth and development, unrelated to rural hinterland. On the other hand, growth of small towns (if not specifically induced by Government or by private authority) are affected by the process of agricultural development. Excessive concentration of urban population in large cities have led to increasing socio-economic problems, like unemployment, housing, sanitation congestion etcetera.

It is evident from the 1991 census that Small townships are not growing rapidly in numbers and are increasingly losing out their share in total urban scenario. The opposite trend can be seen in case of the large cities, as well as for intermediate towns.

The improved situation in agriculture offers sound basis for greater (diversified) economic activity (Khorev, 1974)¹. It can

¹ Khorev, B.S. (1974), "The Problem of Small Cities and the Policy of Stimulating Small City Growth", *Soviet Geography*, Vol. 15, p. 263.

initiate, expanding avenues for non-agricultural employment and rising demand for non-agricultural items. This leads to a structural change in the economy. By structural change (Kumar, 1991)², we mean real changes in the absolute levels of some basic magnitudes-as gross national product, total consumption, total investments and total employment. Industrialization lies in the central process of structural change. Agricultural growth initiates diversification by supplying raw materials to industry and creates demand for inputs and allied services. There in turn requires, improvement or creation of a system of rural service centres or of Small towns. Small towns have a role to serve the countryside as rural service, marketing and as administrative centres. Regarding the importance of Small towns, Rondinelli (1980)³ points out that "small towns provide convenient locations for extension services and sub-units of national ministries, offer basic health care through small clinics, have a relatively wide range of retail shops providing basic consumer goods and agricultural supplies, and are important centres of small scale industry and agro-processing plants. Plans for strengthening these centres, would seek to facilitate marketing and to increase agricultural productivity. A larger variety of

² Kumar, M. Satish, (1991), *The Urban Labour Market in India and the Female Workforce in the Tertiary Sector*, Unpublished Ph.D. Thesis, CSRD, Jawaharlal Nehru University.

³ Rondinelli, D.A. (1980), "Balanced Urbanization Regional Integration and Development Planning in Asia", *EKISTICS*, Vol. 284, pp. 331-339.

social, health, educational, administrative and technical assistance services must be provided in market towns and small cities if they are to filter down to the masses of the rural population" (Rondinelli, 1980 : 231). Report of the Task Force on Planning and Development of Small and Medium Towns (1975) also assumes an active and positive role of Small towns both in rural and metropolitan development. This may be effected through a planning process which may be translated into reality by government intervention and public participation. 'It is important to select those small and medium towns, which by their potentialities and propensities, can initiate and accelerate the process of urbanization', (Task Force Report 1975 : 89).⁴

Slowing down of urbanization during 1981-91, particularly for Small towns in India, questions the very basis of diversification of economic activities, at the lower levels of urban hierarchy. But to Sundrum (1987)⁵ the pessimism about the growth of the Indian economy which pervaded the 1970s gave way to optimism during the 1980s. To Task Force Report (1975) "Industrialization is not necessarily urbanization. Integrated sectoral development with a system of human settlements should

⁴ Ministry of Works and Housing (1975), *Report of the Task Force on Planning and Development of Small and Medium Towns*, p. 89.

⁵ Sundram, R.M. (1987), *Growth and Income Distribution in India : Policy and Performance since Independence*, SAGE, New Delhi as quoted in M. Satish Kumar (1991), *op. cit.*, p. 109.

be the base for urbanization. The diversification of the industrial base necessary so as to cater for agricultural development which would strengthen the whole system of markets in its wake".

Most of the literature related to urbanization favour development of Small towns as a strategy for improving rural employment and rural development scenario. Literature related to non-agricultural employment, Ho (1979)⁶, Anderson and Leiserson (1980)⁷, Chadha (1986)⁸, Papola (1987), Shukla (1989)⁹, Mellor (1991)¹⁰, Chandrashekhar (1993)¹¹, emphasize on 'agriculture led

⁶ Ho, Samuel P.S. (1979), "Decentralized Industrialization and Rural Development : Evidence from Taiwan", *Economic Development and Cultural Change* 28(1), October, pp. 77-96.

⁷ Anderson D. and Leiserson, M.W. (1980), "Rural Non-Farm Employment in Developing Countries", *Economic Development and Cultural Change*, Vol. 28, No. 2, January, pp. 227-248.

⁸ Chadha, G.K. (1986), "Agriculture Growth and Rural Non-Farm Activities : An Analysis of Indian Experience in Y. B. Choe, and F. C. Lo (ed) : *Rural Industrialization and Non-Farm Activities*, Korea Rural Economics Institute, Seoul.

⁹ Sukla, T. (1989), "Rural Non-Agricultural Employment : A Report of the National Seminar on Non-Agriculture Employment in India", *Economic and Political Weekly*, Sept. 2-9, pp. 1993-95.

¹⁰ Mellor, J.W. (1991), "Agricultural Links to Non-Agriculture Growth : Urbanization, Employment, Poverty", *The Pakistan Development Review*, 30(4), pp. 439-451.

¹¹ Chandrasekhar, C.P. (1993), "Agrarian Change and Occupational Diversification : West Bengal", *The Journal of Peasant Studies*, Vol. 20(2).

growth' strategy for enhancing rural employment, outside agriculture; for increasing inability to absorb more labour in agriculture.

Small towns are related to rural hinterland, and much of its growth depend upon development of rural areas, or on agriculture development. Its existence lies on how it can serve the rural hinterland as service centre. Relevance of linking small town growth with non-agricultural growth lies in the fact that, there is simultaneous growth of Small towns with the growth of non-agricultural employment, which in turn depends upon agricultural growth. A linkage that helps to serve the rural hinterland and its (Small town) sustainability lies in the growth of rural hinterland. The major objective of this study lies on this premise.

Apart from linking non-agricultural employment with growth of Small towns, growth of towns also depends upon overall development of the districts. Growth of towns may also be looked at in terms of its economic base, mainly its manufacturing (Kumar, 1991)¹² and export base.

Visualizing the importance of Small towns, it may be worthwhile to see the growth of Small towns from the point of view of processes of occupational diversification, at both the rural and urban level.

¹² Kumar, M. Satish (1991), *op. cit*, p. 471.

Our study area comprises of 65 districts from the states Maharashtra, Rajasthan and Orissa. This is based on three time periods of 1961-71, 1971-81 and for 1981-91. The three lower size classes of India's urban hierarchy with a population of below 20,000 in referred to as Small towns. The National Industrial Classification (1970) data, at the two digit level has been used to analyse sectoral diversification. Several development indicators have also been taken into account to analyse urban growth.

1.2 Choice of Study Area :

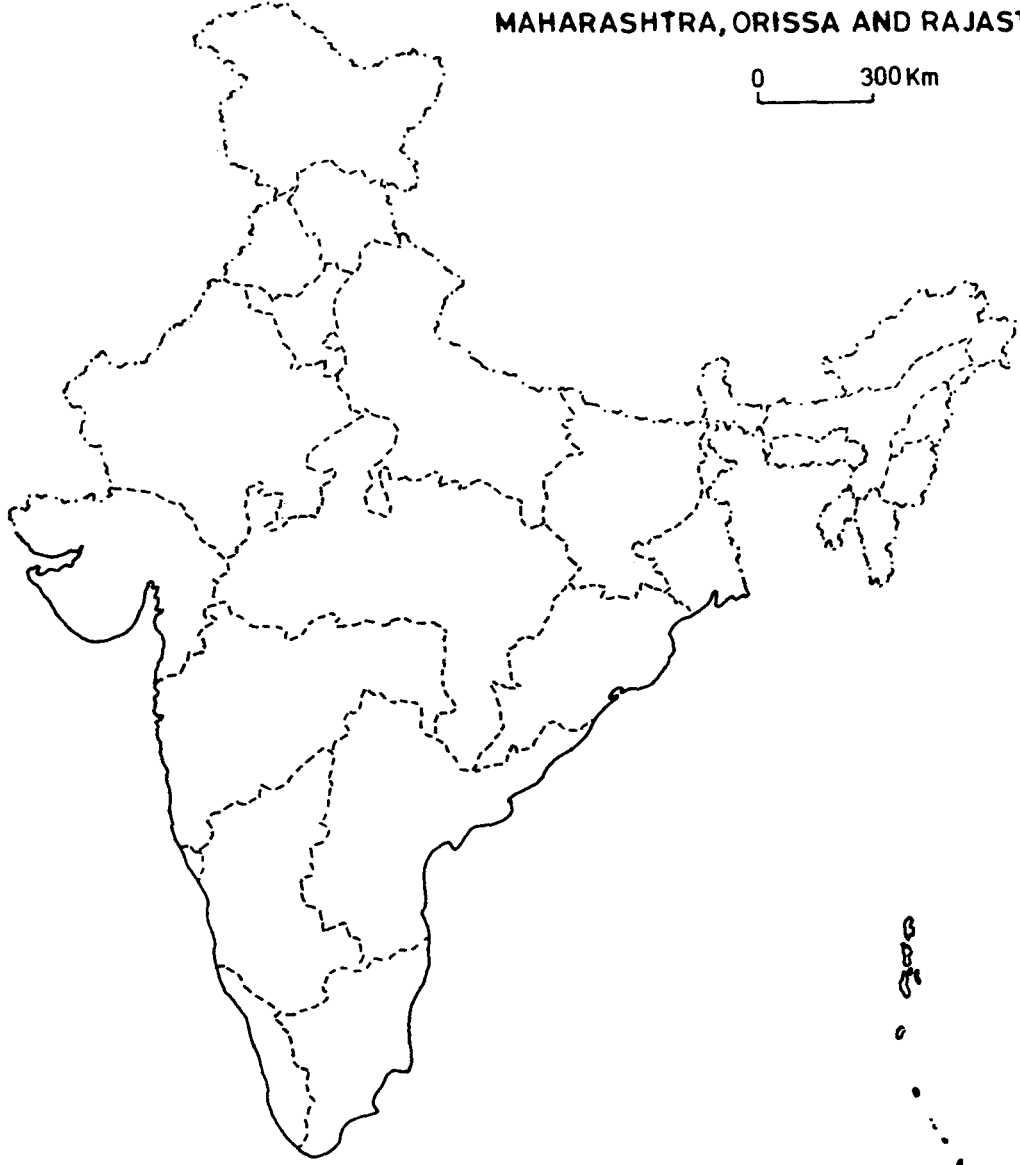
The study consists of district level analysis of the States of Maharashtra, Rajasthan and Orissa. This enables us to study the urbanization processes of Small towns and their sectoral diversification for States which are developed backward and are an intermediary stage of development. These three states have been selected on the basis of per capita income. Per capita income in these three states, show that they are not necessarily in the highest lowest or at intermediate levels, in rank, in different time periods among the other States of India, (Table 1.1). Urbanization for these three states can also be used as a basis to suggest that Maharashtra is a developed state, Rajasthan is at an intermediary stage and Orissa is backward. Table 1.2 shows level of urbanization and urban growth rate for some selected states of India.

MAP NO. 1A

STUDY AREA

MAHARASHTRA, ORISSA AND RAJASTHAN

0 300 Km



0
1
2
3
4
5
6
7
8
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0

INDEX MAP

MAP NO. 1-B



Table I.1

Per Capita Income in Selected States in India
(At constant prices) Base 1980-81

	(in rupees)	
	1980-81	1988-89
Andhra Pradesh	1,380	1,692
Assam	1,200	1,516
Bihar*	441	-
Gujarat	1,951	2,631
Haryana	2,370	3,160
Himachal Pradesh	1,698	1,921
Jammu & Kashmir*	642	-
Karnataka	1,612	2,041
Kerala	1,494	1,530
Madhya Pradesh*	517	691
Maharashtra	2,427	2,026
Orissa	1,231	1,493
Punjab	2,675	3,421
Rajasthan*	537	583
Tamilnadu	1,498	2,030
Uttar Pradesh	1,286	1,555
West Bengal	797	-

Source : State Statistical Bureaus and CSO, Govt. of India.

Note : * at 1970-71 prices.

Table I.2

**Urban Growth Rate and Level of Urbanization
for Selected States**

Rank	State	Percentage of urban population to total, 1981	Rank	State	Decadal Growth rate of urban population 1971-81
1.	Maharashtra	35.03	1.	Orissa	68.54
2.	Tamilnadu	32.95	2.	Uttar Pradesh	60.62
3.	Gujarat	31.10	3.	Haryana	
4.	Karnataka	28.89	4.	Rajasthan	58.69
5.	Punjab	27.68	5.	Madhya Pradesh	56.03
6.	West Bengal	26.47	6.	Bihar	54.76
7.	Andhra Pradesh	23.32	7.	Karnataka	50.65
8.	Haryana	21.88	8.	Andhra Pradesh	48.62
9.	Rajasthan	21.05	9.	Punjab	44.51
10.	Madhya Pradesh	20.29	10.	Gujarat	41.42
11.	Kerala	18.74	11.	Maharashtra	39.99
12.	Uttar Pradesh	17.95	12.	Kerala	37.64
13.	Bihar	12.47		West Bengal	31.73
14.	Orissa	11.79	14.	Tamilnadu	27.98

Contd.....

**Urban Growth Rate and Level of Urbanization
for Selected States**

Rank	State	Percentage of urban population to total, 1991	Rank	State	Decadal Growth rate of urban population 1981-91
1.	Maharashtra	38.73	1.	Kerala	60.89
2.	Gujarat	34.40	2.	Madhya Pradesh	44.98
3.	Tamilnadu	34.20	3.	Haryana	43.07
4.	Karnataka	30.91	4.	Andhra Pradesh	42.64
5.	Punjab	29.72	5.	Rajasthan	39.24
6.	West Bengal	27.39	6.	Uttar Pradesh	38.97
7.	Andhra Pradesh	26.84	7.	Maharashtra	38.66
8.	Kerala	26.44	8.	Orissa	36.08
9.	Haryana	24.79	9.	Gujarat	33.60
10.	Madhya Pradesh	23.21	10.	Bihar	30.39
11.	Rajasthan	22.88	11.	Punjab	29.11
12.	Uttar Pradesh	19.89	12.	Karnataka	29.09
13.	Orissa	13.73	13.	West Bengal	28.90
14.	Bihar	13.17	14.	Tamilnadu	19.28

Source : Provisional Population Total : Rural-Urban Distribution, Paper 2 of 1991, Census of India

1.3 Objectives

Major objectives of the present study were :

- (i) To analyse the pattern of growth of Small towns, individually as well as at district level, for different size classes for the three decades 1961 to 1991.
- (ii) To show the pattern of growth of Small towns in developed and backward districts,
- (iii) To identify the various factors responsible for the growth of Small towns,
- (iv) To express the linkages between growth of non-agricultural employment (rural and urban separately) and the growth of Small towns,
- (v) To highlight the association between rural and urban non-agricultural employment growth.

1.4 Hypotheses :

We proposed the following hypotheses regarding urbanization processes in the Small towns :

- (i) Higher the level of development in a district higher is the level of urban growth,
- (ii) Lower the level of development in a district greater

will be the role of Small towns in augmenting urbanization processes,

- (iii) Greater the agricultural development in a district greater the growth of Small towns,
- (iv) Higher the rural density higher will be the urban growth,
- (v) Greater the proximity to large cities, slower will be the growth of Small towns in a district,
- (vi) Growth of towns are positively associated with growth of non-agricultural sectors. The speciality of this hypothesis is that according to one of the criterion of urban area, adopted by Indian census is, at least 75 percent of male working population should engaged in non-agricultural pursuits.

Whereas workers in occupations of fishing, livestock, hunting, logging, plantations and orchards etc. falling in industrial category III, were treated as under non-agricultural activities in 1961 and 1971 censuses. In the 1981 census and for 1991, these activities were treated as agricultural activities for purpose of determining the male working population in non-agricultural activities.

So definition of urban areas become more stringent after 1971 census.

- (vii) Growth of urban non-agricultural activities also lead to rural non-agricultural growth in a district.

1.5 Data Base :

(a) Census of India, gives the data for urban population, townwise.

For the four time periods we get data from the following tables.

- (i) Census of India 1961, Vol. 1, Part II-A (i) General Population Tables;
Table A-IV, Towns and Towns Groups Classified by population in 1961.
- (ii) Census of India 1971, Series 1 Part II-A (i) General Population Tables;
Table A-IV, Towns and Urban Agglomerations, classified by population in 1971.
- (iii) Census of India 1981, State Series 12, 16 and 18, Part II-A - General Population Tables;
Table A-4, Towns and Urban Agglomerations, classified by population in 1981.
- (iv) Census of India 1991, Series 1 Paper 2 of 1991;

Provisional Population Tables, Rural-Urban Distribution, Provisional Population Table-4, Population of Urban Agglomerations, Cities and Towns, 1991.

Data for Small towns, size class IV, V and VI were taken into account for our analysis.

The growth rate of population in different size categories are computed by keeping the town in each category in the terminal year the same as the base year. For example, while computing the growth rate of 1961-71, in 1971, the number of towns kept same as the 1961 census. Though there might be exclusion or inclusion of particular category of towns during that period. Same is done for 1971-81 and for 1981-91 time periods.

"Estimates must be obtained by keeping the towns of each category the same as in the base year. Besides, it ought to be ensured that no declassified towns is excluded from the analysis, and that the rural population figures of all such towns are added to the terminal year population" (Kundu 1983).¹³

Rakesh Mohan and Pant (1982)¹⁴ have computed the growth for different categories of towns by taking the population at the two

¹³ Kundu, A. (1983), "Theories of City Size Distribution and Indian Urban Structure" *Economic and Political Weekly*, 18(31), p. 1361.

¹⁴ Rakesh Mohan and Pant, C.S. (1982), "Morphology of Urbanization in India - Some Results from 1981 Census", *Economic and Political Weekly*, 17 (38 and 39), pp. 1534-40.

census points only for those towns, which belonged to that category in the base year. It is however important, to note that, in computing the rates they excluded the declassified towns from both the time period. This may give a bias in the growth estimates for the lower category of towns, (Kundu 1983).

(b) The source of workforce data for this study was also taken from census of India.

In classifying the workers, the National Industrial Classification (NIC 1970) scheme was adopted.

B-12 table of the General Economic Tables, 1981, which deals with Industrial Classification of main workers, other than cultivators and agriculture labours by sex and residence, and by Division, Major group and Minor group was used in this study.

B-12 table of 1981 corresponds to table B-IV Part A of 1971 Census, General Economic Tables.

But 1961 census adopted, in classifying the workers, Indian Standard Industrial Classification (ISIC) evolved by Director General of Employment and Training in 1958. But 1971 and 1981, economic data are tabulated, using the NIC of 1970. The ISIC has 10 Divisions, 45 Major Groups and 343 Minor Groups. The NIC on the other hand, has 10 Divisions, 66 Major Groups and 386 Minor Groups. These have created problems of comparability with the past data.

Methodology to compare Indian Standard Industrial Classification (ISIC) data with National Industrial Classification (NIC)

Although the names of the workforce categories have remained by and large unchanged in NIC to ISIC, their coverage vary significantly. If we peep into the Major and Minor Groups in the ISIC and NIC Divisions, we can make up the adjustment needed for comparability of 1961 census data with those to the subsequent censuses.

On this regard, earlier work was done by Kundu (1985).¹⁵ Our study is an extended version of Kundu's work, with some modification in the adjustment procedure, (Table 1.3).

The adjustment procedure is presented in Table 1.3. Following Kundu's approach, we introduced the modification in the Division 7, 8 and 9 for the years 1971 and 1981. From ISIC Division 7, minor group, information and broadcasting (732), is subtracted, to make it comparable with NIC Division 7. This Minor Group (732) goes to Division 9 in NIC. Major Group, Community, Services and Trade and Labour Association (85) is added to 6 and 8 (partly) of ISIC to make them comparable with NIC 9 for the year 1971. Now ISIC (85) corresponds to NIC Division 8. Distribution of motion picture (697) of ISIC included in Community, Social and Personal Services (Division 9 NIC). Other

¹⁵ Kundu, A. (1985), "Analysing the Structural Changes in the Indian Economy - Certain Avoidable Anomalies in the usage of The Population Census Data, *Population Geography*, Vol. 7, (1 and 2), pp. 66-82.

Divisions remain the same with Kundu's retabulation procedure. The Table is self explanatory in this regard.

Table - 1.3

Correspondence between Major Division of the Indian Standard Industrial Classification (ISIC), 1958 and the National Industrial Classification (NIC), 1970

NIC Divisions	Description	ISIC Divisions	Retabulation Procedure
0	Agricultur, Hunting, Forestry & Fishing	0 and part of 8	Division 0; and agricultural services (not specified in ISIC) from Division 8
1	Mining & Quarrying	1	Division 1
2 & 3	Manufacturing, Processing, Servicing and Repairs	2 & 3	Division 2 & 3
4	Electricity, Gas and Water	5 (-511)	Division 5; subtract garbage and sewerage disposal, operation & drainage system and all other types of work connected with public health and sanitation (511)
5	Construction	4	Division 4
6	Wholesale and Retail Trade Restaurants & Hotels	6 & 8 partly	From division 6 subtract trade and commerce, Miscellaneous (69) and add services rendered by hotels, boarding houses, eating houses, cafes, restaurants and similar other organisation to provide lodging and boarding facilities (882)
7	Transport, Storage and Communication	7 (-732)	Division 7; subtract information and broadcasting (732)
8	Financing, Insurance, Real Estate and Business Services	6 & 8 partly	Major groups 69 (except 697); legal services (840) and major group 85, community services and trade and labour association
9	Communities, Social and Personal Services	5,6,7,8 partly	Division 8; subtract 840 and 882 and 85; and add 511, 732 and distribution of motion pictures (697)
10	Activities not adequately defined	9	Division 9

Note : From Kundu (1985) with some modification

* shows the modification as proposed in this study.

The procedure of comparison, extended to Major Groups of ISIC and NIC. Table explains these retabulation procedure at two digit level, (Table 1.4).

Table - 1.4

Correspondence between Major Groups of the Indian standard Industrial Classification (ISIC), 1958 and the major groups of NIC 1970

NIC Major Groups		ISIC Major Groups
10	Coal Mining	10
11	Crude Petroleum and Natural Gas	10
12	Metal Ore Mining	10
13	Other Mining	10
20-21	Manufacture of Food Products	20-21 (subtract minor groups 210, 211, 212, 213, 214 and add (338)
22	Manufacture of Beverages, Tobacco	22 (add 210, 211, 212, 213 & 214)
23	Manufacture of Cotton Textiles	23
24	Manufacture of Wool, Silk and Synthetic Fibre Textiles	25 & 26 and subtract (256) 266, add 279)
25	Manufacture of Jute Hemp & Mesta Textiles	24
26	Manufacture of Textile Products (including Wearing Apparel other than Footwear)	27, and add 256 266; subtract 279
27	Manufacture of Wood and Wood Products, Furniture and Fixtures	28

Contd.....

NIC Major Groups		ISIC Major Groups
28	Manufacture of Paper and Paper Products and Printing Publishing and Allied Industries	29 & 30
29	Manufacture of Leather and Leather & Fur Products (except repair)	31 (exclude 341, 315)
30	Manufacture of Rubber, Plastic Petroleum and Coal Products	32
31	Manufacture of Chemicals and Chemical Products (except Products of Petroleum and Coal)	33 (subtract 338)
32	Manufacture of Non-Metallic Mineral Products	34 & 35
33	Basic Metal and Alloys Industries	36
34	Manufacture of Metal Products & Parts, except machinery and Transport Equipment	36
35	Manufacture of Machinery, Machine Tools and Parts, except Electrical Machinery	37
36	Manufacture of Electrical Machinery, Apparatus, Appliances and Supplies and Parts	37
37	Manufacture of Transport Equipment and parts	38 (subtract 384,388)
38	Other Manufacturing Industries	39 (subtract 392,399)
39	Repair	Minor Groups (314, 315, 384, 388, 392, 399)
40	Electricity	50
41	Gas and Steam	50

Contd.....

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NIC Major Groups		ISIC Major Groups	
-----		-----	
42	Water Works and Supply	51	(subtract 511)
50	Construction	40	
51	Activities Allied to Construction	Does not appear in ISIC	
60	Wholesale Trade in Food, Textiles, Live Animals, Beverages and Intoxicants	60	
61	Wholesale Trade in Fuel, Light Chemicals, Perfumery, Ceramics and Glass	Part of 61; 610, 611, 612, 613 only	
62	Wholesale Trade in Wood, Paper, other Fabric, Hide and Skin and inedible oils	Minor Groups of 617, 621, 630 and 634	
63	Wholesale Trade in all types of Machinery, Equipments, including Transport and Electrical Equipment	Minor groups 632 and 633	
64	Wholesale Trade in Miscellaneous Manufacturing	61 part (614, 615, 616, 617), 62 part (620) and 63 part (635, 636, 637, 638 & 639)	
65	Retail Trade in Food and Food Articles, Beverages, Tobacco and Intoxicants	Part of 64 subtract 645, 647 & 648)	
66	Retail Trade in Textiles	650 minor group	
67	Retail Trade in Fuel and other Household Utilities and Durables	Minor groups of 645, 651, 653, 660, 662, 663, 682 & 686	
68	Retail Trade in Others	Minor groups of 652, 655, 664, 670, 671, 672, 673, 688 & 689	

Contd.....

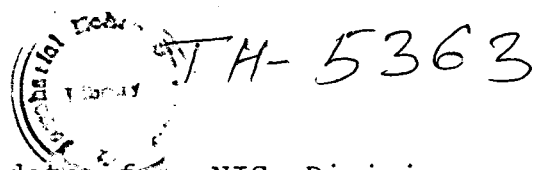
NIC Major Groups		ISIC Major Groups
69	Restaurants & Hotels	Minor group 882
70	Land Transport	70
71	Water Transport	70
72	Air Transport	70
73	Services Incidental to Transport	71
74	Storage and Warehousing	72
75	Communications	73, subtract (732)
80	Banking and Similar Type of Financial Institutions	Part of 69 (694 695)
81	Providents and Insurance	Part of 69 (693)
82	Real Estate and Business Services	Part of 69 and 85, (691, 696, 699, 850, 851, 852 & 853)
83	Legal Services	(840)
90	Public Administration and Defence Services	80
91	Sanitary Services	(511), minor group
92	Education Scientific and Research Services	81
93	Medical and Health Services	82
94	Community Services	83 and minor groups of (841, 860 and 861)

Contd.....

NIC Major Groups		ISIC Major Groups
95	Recreational & Cultural Services	87 and minor groups of (697, 732 and 862)
96	Personal Services	88, subtract (882)
98	International and Other Extra Territorial Bodies Services	Does not appear in ISIC
99	Services not elsewhere classified	890

Table - 1.5 shows that NIC Divisions, 0, 1, 2 & 3, 5 and 7 corresponds to census workforce categories of III, IV, Va, Vb, VI and VIII respectively.¹⁶ Workforce category of VII corresponds two NIC Divisions 6 and 8, Category IX corresponds to NIC Divisions 4, 9, and X. Workforce categories I and II are not part of NIC. The few adjusted categories are included in 1991, to get a picture of non-agriculture sector, corresponding to NIC. It is not possible to convert all workforce categories to NIC Division.

(c) Following Indicators are used as explanatory variables for urban growth and non-agricultural employment growth for the year 1961-71, 1971-81 and 1981-91.



¹⁶ Note = As 1991 data for NIC Divisions are not available till now, one can convert the workforce categories of census to NIC Divisions some extent.



- i) Yield of cereals per hectare in kilogram.
- ii) Net cropped area per rural agricultural worker.
- iii) Percentage of area under non-food crops to net cropped area.
- iv) Percentage of gross irrigated area to gross cropped area.
- v) Percentage of workers in non-household manufacturing
- vi) Percentage of workers in other services.
- vii) Percentage of urban population.
- viii) Number of registered vehicles per lakh population.
- ix) Surfaced road length per 100 sq kilometres.
- x) Rural density.
- xi) Number of commercial banks per lakh population.
- xii) Percentage of villages electrified.
- xiii) Hospital beds per 10,000 population.
- (A) Number of rural agricultural labourers in relation to rural cultivators.
- (B) Density of population in rural areas.
- (c) Percentage of urban population in Class I cities.

Indicators V, VI, VII, X, A, B and C are from Census of India. Rest of the indicators are from Statistical Abstract of the three States of Maharashtra, Rajasthan and Orissa; published by Directorate of Economics and Statistics. Data are for the years 1960-61, 1970-71 and 1980-81.

Table - 1.5

Correspondence between the Workforce Categories of the
Census and the NIC Divisions

Workforce Categories	Coverage as per NIC
I Cultivators	These two categories are not part of the NIC
II Agricultural Labourers	
III Livestock, Forestry, Fishing Hunting, Orchards and Allied Activities	Division 0
IV Mining and Quarrying	Division 1
V Manufacturing, Processing Servicing and Repairs (a) Household Industry (b) Non-household Industry	Division 2 & 3
VI Construction	Division 5
VII Trade and Commerce	Division 6 & 8
VIII Transport Storage and Communication	Division 7
IX Other Services	Division 4, 9 & X
	# From Kundu (1985)

Rationality for Choosing Indicators

The agriculture led growth model suggest that a sustained size in farm output and incomes can act as a prime mover in initiating the development of non agriculture employment (Bhalla

1990).¹⁷ Such diversification of economic activities in rural areas, can succeed in discouraging migration to urban areas. On the other hand distress condition of rural areas, can push people to urban area. So, it is worthwhile to see the processes of urban growth, as well as non-agricultural growth, in relation to changes in agriculture.

Net cropped area per rural agricultural worker, acts as a preventive, as well as push factor for movement of people to urban areas. Low land population ratio arising from rapid population growth in relation to agricultural resources, act as a significant push factor of rural population to urban areas in many developing nations.

The area under commercial crops to gross cropped area, can indicate the market orientation of agriculture. Commercialization expected to encourage rural industrial activity by supplying raw materials, creating greater demand for inputs and allied services and raising demand for consumption goods. consequently the composition of workforce is likely to shift steadily in favour of non-agriculture.

Gross irrigated area as a percentage of gross cultivated area 'reflects an aspect of the development of modern cultivation as gross irrigated area is multi-collinear with the application

¹⁷ Bhalla, S. (1990), 'Jobs for Rural People', Paper Presented at the All India Seminar on Agro-Climatic Regional Planning, Ahmedabad, March, 5-6.

of fertilizers, HYV seeds and other modern inputs' (Kundu, 1980).¹⁸ It in turn requires the services of towns, notably of Small towns, to supply these inputs to the rural people.

Urban growth, without a corresponding growth in industrial sector, cannot be taken as a healthy symptom, (UNESCO 1957).¹⁹ Workers in non-household manufacturing reflects the industrial base of an area.

Workers in other services reflects, services and administrative activities of towns, and so it is taken as a variable for explaining urban growth. This category does not include petty activities of urban centres.

It is assumed that urban growth occurs, with a strong urban base. So, percentage of urban population to total population has taken as a explanatory variable.

Indicators (viii) Number of registered vehicles per lakh population, (ix) surfaced road length per 100 Km², (xi) Number of Commercial bank per lakh population and (xiii) percentage of villages electrified are taken as economic infrastructural base of the districts. "Factor contributing to rapid urbanization is

¹⁸ Kundu, A. (1980), *Measurement of Urban Processes*, Popular Prakashan, Bombay, p. 46, Chapter IV.

¹⁹ UNESCO (1957), *Urbanization in Asia and Far East : Proceeding of the Joint UN/UNESCO Seminar, Research Centre on the Social Implications of Industrialization in Southern Asia, Calcutta*, as quoted in A. Kundu, (1980), *op. cit*, p. 41.

the widespread diffusion of modern communication and transportation which encourages population movement by providing information concerning urban opportunities and reduces the cost of migration (Beier, 1976).²⁰ These indicators show urban phenomena as infrastructure and urbanization occur simultaneously. These also helps grow the non-agriculture sector.

Illiteracy is often advanced as a factor that discourages the mobility of people from labour-surplus areas to labour - deficit areas, and from rural to urban areas. Lack of literacy hinders effective job market information and adversely affects the confidence of rural people, when they go to cities in search of works. A positive association between literacy and urbanization may be expected.

Hospital beds, though directly cannot explain urban growth, they give a convergence toward urban phenomena. Urbanization, leads to an increased availability of medical facilities.

All the thirteen indicators are composited to show development of districts under study.

Indicator (A) number of rural agriculture labourers in relation to rural cultivators is taken to show agrarian relation in the districts. A high proportion of agriculture labourers can

²⁰ Beier, G.J. (1976), "Can Third World Cities Cope ?" in P.K. Ghose (ed) (1984), *Urban Development in the 3rd World*, Greenwood Press, Connecticut, p. 58.

lead to the emergence of 'push' factor, to urban areas for job. Likewise (B) high rural density can explain the same phenomenon.

Indicator (C) a high percentage of urban population in class I cities in the districts can prevent the growth of Small towns, by attracting rural migrants to big cities.

1.6 Methodology

Analysis of structural changes and urbanization processes of Small towns is based on compound rate of growth.²¹ The compound growth rate has an advantage over simple growth rate. Simple growth rate takes into account only the terminal years. This leads to over estimation of the growth rates. If the time period taken is Small (say one year) simple growth can be used as there will be no distortion in the growth rate. But if the time period is large (say 10 years) compound growth rate will be an appropriate method as it takes into considerations the sub-periods apart the terminal years (all the ten years). For example, if growth rate is calculated for a particular sector between 1981 on 1991, simple growth rate takes into account only the values of two terminal years. But in compound growth rate the

²¹

Formula for compound growth rate =

$$pt = po (100 + r/100)^t$$

where pt = current value
po = base year value
t = time period
r = growth rate

growth of first year is added with the initial year and then the growth for second year is calculated. The process is repeated for second year, then for third upto tenth year. The final growth rate thus obtained gives a better picture of growth.

Annual compound growth rates for workforce categories of NIC is calculated for Divisions and Major Groups, for the year 1961-71, 1971-87 and for 1981-91.

Urban growth is calculated at the town level for different size classes, as well as for the district urban by clubbing a particular size class of towns in that district.

Principal component analysis has been done using 13 development indicators to show development of districts in the three States for the year 1961, 1971 and for 1981. Here we have used modified principle component analysis (see appendix 1) to show development indices. As no development variables should show negative weights in the indices.

Correlation²² is calculated between factor score and growth

²² Correlation is worked out according to the following formal :

$$r = \frac{n \cdot \sum xy - \sum x \cdot \sum y}{\sqrt{n \cdot \sum x^2 - (\sum x)^2} \cdot \sqrt{n \cdot \sum y^2 - (\sum y)^2}}$$

where r = correlation coefficient
n = number of diservations

x = (x - \bar{x}) where x is the one variable and \bar{x} mean of it

(continued...)

rates of towns in districts, for all the time periods and different size classes separately. This is done to show whether urbanization processes is related to development or not.

In order to show the linkages between non-agricultural employment and urbanization process a correlation exercise is conducted between growth in NIC divisions and growth of towns.

Correlation exercise is also done between urban and rural non-agricultural employment growth, to show the rural-urban linkages in the three states.

Stepwise²³ regression has been conducted between growth of towns as dependent variable and the 16 indicators as independent variables, to show the influence of these variables on the growth of different size class towns. In an analysis we assume urbanization as a dependent variable, and see how it is explained by a set of independent variables.

²²(...continued)

$$y = (y - \bar{y}) \text{ where } y \text{ is the other variable and } \bar{y} \text{ is the mean of it.}$$

²³ Stepwise regression tells us the contribution of an added variable in explaining the dependent variable. We can know it from the changes in R^2 .

It also helps up to see whether the new variable is worth being included in the model or not.

It also helps up in keeping a watch over the changes in the values of regression coefficients and their Standard Errors.

1.7 An Overview of Literature

We have divided the available literature into two parts. One deals with Small towns' role in urbanisation process and other part is related to non-agricultural activities.

(a) Literature related to urbanization of Small towns

This part covers various theoretical arguments favouring Small towns and results of case studies conducted by various researchers.

In E.F. Schumacher's (1973)²⁴ much acclaimed book 'Small is Beautiful' we get the idea about the role of Small towns in restricting the rural exodus, who flee because of their depressed economic conditions. "One of the unhealthy and disruptive tendencies in virtually all the developing countries is the emergence of the 'dual economy'²⁵ In the dual economy of a

²⁴ Schumacher, E.F. (1973), *Small is Beautiful*, Rupa and CO., India, 1990, p. 136, Chap. II.

²⁵ The concept of dualism has evolved over time, the parameters used for its identification have not remained consistent. Dualism indeed, is a feature which characterises development. This however, gets accumulated by the forces of change and prevents necessary integration, MIT school introduced dualism in the terms of 'modern' and 'traditional'. Dualism therefore came to be reflected in terms of the level of technology, productivity and income between the modern and traditional sectors. Kelly et. al., extended the idea of dualism to correspond to rural-urban dichotomy in space. Therefore, the 'traditional' sector corresponded with 'rural' whereas 'modern' with 'urban'. According to them, empirical literature
(continued...)

typical developing country we may find few percent of the population in the modern sector, mainly confined to one or two big cities, and the majority of people exists in the rural areas and in Small towns. Most of the development effort goes into the big cities, which means large proportion of the population are bypassed. Leads to twin evils of mass unemployment and migration into cities" (Schumacher 1973 : 136), Lipton's (1977)²⁶ thesis posits the view that resource allocations between rural and urban areas have been biased away from that which is most efficient and equitable towards urban priorities. "It is necessary therefore, that at least important part of development effort should bypass the big cities and be directly concerned with the creation of an 'agro-industrial structure' in the rural and Small towns areas" (Schumacher, 1973 : 145).

Urbanization concentrated in few places, because urban locations are most likely to be preferred by firms and enterprises. The large cities provide significant market and at

²⁵(...continued)

supports the existence of a rural-urban differences in consumer behaviour, demographic behaviour and production conditions. All these three aspects of sectoral behaviour taken together were said to provide an empirical basis for the rural-urban dichotomy and provide a geographic specific interpretation of dualism.

Kumar M. Satish (1991), *op. cit.*, p. 84.

²⁶ Lipton, M. (1977), *Why Poor People Stay Poor : A Study of Urban Bias in World Development*, London, Maurich Temple Smith.

the same time also have higher order of services and transportation linked with national market. Mera (1973)²⁷ finds that there is a positive correlations between growth of the largest cities and economic development. Mera concludes that the large cities are more productive and that the largest cities are likely to be particularly productive relative to other cities. "Such 'urbanization economics' also make the large centres more attractive and profitable for footloose industries" Mehta (1984).²⁸

This urban-industrial variant is also termed as Growth Pole Strategy. Researchers namely Perrouk (1950),²⁹ Hirschman (1958),³⁰ Myrdal (1957),³¹ Williamson (1965)³² have argued that, concentration of growth does not proceed indefinitely. Once

²⁷ Mera, K. (1973), "On the Urban Agglomeration and Economic Efficiency", *Economic Development and Cultural Change*, Vol. 21(2), pp. 309-324.

²⁸ Mehta, D. (1984), "Industrialization and Urban Development - A Review of Trends in India and in Gujarat. Paper presented at National Seminar on 'Urbanization in India' CSRD, JNU.

²⁹ Perrouk, (1950), *Economic Space : Theory and Application*, *Quarterly Journal of Economics*.

³⁰ Hirschman, A.O. (1958), *The Strategy of Economic Development*, New Haven, Yale University Press.

³¹ Myrdal, G. (1957), *Economic Theory and Underdeveloped Regions*, London, Duckworth.

³² Williamson, J.G. (1965), "Regional Inequality and Process of National Development, A description of the pattern", *Economic Development and Cultural Change*, Vol. 13, pp. 3-45.

growth takes a firm hold in one part of the national territory, it obviously sets in motion forces that out on the remaining part (Gore 1984 : 96).³³ Similar processes of dispersion appear in case of urbanization processes as well.

Jean Fourastie's (1971)³⁴ scheme of three stages of urbanization is based on the state of industrial development and its job generation capacity. The three stages are the take-off stage during which industrial job generation is great. This increases the total share of the economically active population in the secondary sector from less than 10 percent to about 35 percent. This stage is followed by one of industrial expansion characterized by fast technological progress and continued increase in the share of secondary sector, in the industrial origin on the gross domestic product. However, technological progress begins to reduce the job generating capacity of this sector, keeping its share relatively constant between 35 to 40 percent. The third stage is one of industrial consolidation marked by decline in the sector's role as a generator of employment and a dominance of the tertiary sector.

³³ Gore, C. (1984), *Regions in Question, Space, Development Theory and Regional Policy*, Methuen, New York.

³⁴ Fourastie quoted in Leo Jakobson and Ved Prakash, (1971), *Urbanization and National Development*, Sage, Beverly Hills, p. 25.

Jakolson and Ved Prakash's (1971)³⁵ concept can be related to Foursties model, that urbanization follows a rising S - curve from a level of 10 percent or less to about 80 percent, and that urbanization closely follows the tertiary sector curve. During and after the expansion stage of industrial development, urbanization will be sustained by continuing relative growth of tertiary sector and then at a slower rate during the period of achievement. "In terms of urban planning practice, this suggests that many traditional economic-base and situs principle will have to be supplanted with new concepts centring around services and institutions as the predominant element in urban structure", (Jakolson and Ved Prakash, 1971 : 26).

Lo and Salih (1976)³⁶ have argued along the similar lines based on the nations of city size and efficiency. They hypothesize that the curve relating manufacturing efficiency to city is an inverted - U shape with a minimum threshold size.

El - Shakhs (1972)³⁷ argued that urban primary increases initially and then decreases in the process of development.

Several other writings advocate Small towns as opposed to

³⁵ Jakobson, L. and Ved Prakash, (1971), *Urbanization and National Development*, Sage, Beverly Hills.

³⁶ Lo and Salih (1976), Quoted in Dinesh Mehta, (1984), *op. cit*, p. 8

³⁷ El - Shakhs (1972), "Development Primary and System of Cities" *Journal of Developing Areas*, Vol. 7.

concentration of population in large urban centres.

To Lahiri (1966)³⁸ industrial concentration in large cities is bad and in the process of urbanization, mutation of villages will have an important contribution. He point out that transformation of villages into urban units through development planning will be more successful and less costly if the villages are selected on the basis of their urbanization potential. Lahini in his study assumes that size of a rural settlement is related to the availability of civic amenities and services. If this relationship is established, then the size of a rural settlement may be taken as general indicator for its place on the ladder to urbanization. He takes 22 indicators of various civic and basic amenities. Rate of scoring was decided in proportion to the relative frequency of occurrence of a particular item. From correlation analysis he finds out a fair relationship between size of a settlement and the quality of the amenities.

The UN Department of Economic and Social Affairs (1970)³⁹ also suggests the expediency of paying greater attention to regional planning and development as a means of deflecting growth potentials away from the primary city, and promoting new growth

³⁸ Lahiri, T.B. (1966), "Urbanization Potential of Villages An Approach Towards Evaluation" *Geographical Review of India*, Jan. pp. 29-34.

³⁹ UN Department of Economic and Social Affairs (1970), "Developing a Strategy for Urbanization" in P.K. Ghose (1984), *Urban Development in the Third World*, pp. 109-121, Greenwood Press, Westpoint, Connecticut.

centres. These can contribute to national development and disperse the benefits more fully. The creation of new towns is necessary to rebuild the saturated urban market, (middle class) concentrated in large cities. These markets show shrinking sign of demand and also in the process of substituting local manufacturing for imported consumer goods.

Report of Organization for Economic Cooperation and Development (1973)⁴⁰ points out that there is no intrinsic necessity, linking industrialization with urbanization. It would seem perfectly reasonable to develop certain industries in rural areas, especially if the relative cost of creating jobs and providing infrastructure and services is shown to be lower in a rural than in an urban environment. One reason being that the rural population will accept a lower standard of living. Finally higher income in rural areas would both be a means of narrowing the gap between town and country incomes, thereby checking the drift from the land, and increasing the purchasing power of rural population, thereby creating a market for the town products. To create a link between town and country it is desirable to create small towns.

Khorev (1974)⁴¹ says that any large region that has been

⁴⁰ Organization for Economic Cooperation and Development (1973), "The Search for a Rural-Urban Balance" in P.K. Ghose (1984), *op cit*, p. 199.

⁴¹ Khorev, B.S. (1974), *op. cit*, p. 263.

economically developed , or is in process of development requires a certain optimal combination of cities of various sizes and types. The stability of small city derives from the fact that economically efficient production units of various branches of industry requires different patterns of settlement, with some favouring small form of settlement. The improved situation in agriculture offers a sound basis for greater economic activity in a whole series of urban centres in the countryside, and this in turn requires, improvement of the entire system of rural service centres, notably of Small towns.

Todaro (1979)⁴² also admits that urbanization may be a necessary condition of modernization and economic development, it is by no means a sufficient condition. The ultimate solution to urban development lies paradoxically in rural development. The dual dilemma faced by many underdeveloped countries, rapid urbanization fueled by a high rural population growth and this in turn is an indirect response to urban biased development strategies, that serve to impoverish rural families. Todaro advocates, development of market towns, as a measures of rural development.

⁴² Todaro, M.P. (1979), "Urbanization in Developing Nations : Trends Prospects and Policies" in P.K. Ghose (ed) *op. cit*, pp. 7-26.

Johnson (1970)⁴³ also sees the need to bridge the void between the ubiquitous villages and parasitic great cities by building a 'proper' Loschian hierarchy of urban centres which ranges from Small towns to intermediate cities and national metropolis. Development requires agrarian commercialization, which in turn requires the creation of a network of small market towns.

Rondinelli (1980)⁴⁴ admits that a decentralized urbanization policy could help change the population growth and migration pattern in Asia. Without a system of intermediate and Small towns geographically dispersed rural migrants have no where to go, but to big city. Creation of Small towns could allow migrants to move progressively from smaller towns and medium to large metro areas, and the smaller towns might absorb large number of the migrants permanently.

Anderson and Leiserson's (1980)⁴⁵ study shows how agricultural development can help in the growth of towns. Non-farm activities in agricultural regions expands quite rapidly in

⁴³ Johnson, E.A.J. (1970), *The Organization of Space in Developing Countries*, Cambridge, Harvard University Press.

⁴⁴ Rondinelli, D.A. (1980), "Balanced Urbanization, Regional Integration and Development in Asia" *EKISTICS*, Vol. 284, Sept-Oct. pp. 331-339.

⁴⁵ Anderson, D. and Leiserson, M.W. (1980), "Rural Non-Farm Employment in Developing Countries", *Economic Developing and Cultural Change*, Vol. 28(2), January, pp. 227-248.

response to agriculture development. Concentration and growth of non-farm activities in rural towns localizes employment opportunities for people who leave agriculture and acts to stimulate a degree of decentralization of urban growth. Expansion of the towns in which concentration takes place can be quite fast because of high elasticities of demand for non-food goods and services with respect to increasing agriculture output and income.

They assessed, like extent and importance of non-farm activities in rural areas and towns from the viewpoint of their contribution to the output, employment and earning of rural labour force.

Some other writers, Osborn (1974)⁴⁶, Oscar (1976)⁴⁷ and Ward (1976), have also favoured the development of small and medium towns as a antidote to the pull of big cities.

Chandrasekhara (1983)⁴⁸ admits that, urbanization in the past has always been in response to the needs of society. This

⁴⁶ Osborn James, (1974), *Area Development Policy and the Middle City in Malaysia*; University of Chicago Press.

⁴⁷ Oscar, B.R. (1976), '*Policy and Institutional Aspects of Rural Development*' Town and Country Planning Sumen School, Nothngham University.

⁴⁸ Chandrasekhara, C.S. (1983), "The Challenge of Urbanization and the Response" in Alfred De Souza (ed) *Urban Growth and Urban Planning, Political Context and People Participation*, Indian Social Institute, New Delhi.

by itself didnot pose much of a challenge to the society until the advent of industrial revolution, when cities come into being in response to the needs of a section of the population, namely the industrial worker. "The form and the structure of the city revealed the manner in which the challenges posed by growth demands of the society at each stage, and how the city was made to serve the economic social, cultural and political interest of the society. The agrarian society demanded that the city or town to serve as a market place, a cultural centre and a centre of the power structure etc. (Chandrasekhara 1983 : 1).

Mellor (1991)⁴⁹ deals with agriculture based high employment strategy as growth strategy, and the implication to the pattern of urbanization. The faster the growth of the agriculture sector the faster its relative size in the economy declines. Theoretically it derives from Engel's law and the nature of rural consumption patterns. Thus an emphasis on agriculture will not slow down the pace of urbanization. To Mellor it is not the pace of urbanization which is a problematic, rather it is the concentration in a few metro centres, and the incidence of urban poverty. Rapid rural growth can be expected to reduce urban poverty.

⁴⁹ Mellor, J.W. (1991), *op. cit*, pp. 439-451.

Papola (1992)⁵⁰ points out that casualization of workforce away from agriculture in rural areas is a positive process, which is likely to raise income for a rural household. Though it reflects deterioration in the quality of employment in urban areas.

Considering the role of Small towns in the rural hinterland, in the employment of rural workers and in promoting non-farm employment in rural areas, Papola's proposition is that, economics of size techniques, infrastructure and linkages are tending to lead to a shift of certain rural enterprises from villages to Small towns. Though it seems to affect rural employment, in fact it is necessary for enhancing the productivity and sustainability of employment in rural areas.

To Pathak (1993)⁵¹, spatial pattern of urbanization is an imbalanced one. The economically backward districts have not been able to participate effectively in national urbanization processes. The urbanization process is induced by social and economic deprivation in the rural areas, rather than effective pull generated by the cities. He comments that if urbanization has to be slowed down, rural people have to be contained where

⁵⁰ Papola, J.S. (1992), "Rural Non-Farm Employment : An Assessment of Recent Trends", *Indian Journal of Labour Economics*, Vol. 35, No. 3, p. 238.

⁵¹ Pathak, C.R. (1993), "Urbanization and Spatial Planning in India : Policy Issues", *Indian Journal of Regional Science*, Vol. XXV, No. 2.

they belongs with reasonable level of livings. Non-agricultural activities have to be brought to them rather than bring the people to the jobs in urban areas. This will bring structural change in the rural settlements in themselves. The rural development should be the basis for urbanization policy.

Huges (1971)⁵² does not agree that rural centres can be made as attractive to labour and management as large cities. Though in Small towns there are few urban problems, there is little scope for employment creation. This is because there is insufficient concentration to create a demand for urban facilities and services.

On the creation of new towns Sivaramakrishana (1977)⁵³ remarks that the location of new towns were influenced by industrial consideration, not by social, economic requirement of the population. The new townships, which are emerged in association with public sector industries were planned as industrial enclaves, in isolation from the rural hinterland and their all facilities are for employees and their dependence only.

⁵² Huges, H. (1971), "Industrialization, Employment and Urbanization in P.K. Ghose (1984), *op. cit*, p. 149.

⁵³ Sivaramkrishnan, K.C. (1977), "Metro Cities and New Towns". in C. Dube (ed) *India Since Independence*, Vikas, New Delhi.

Hazel Moir (1976)⁵⁴ study on urbanization and labour force data of 76 countries, finds that relationship between urbanization level and the tertiary share of the labour force among least developed countries is stronger than the relationship between urbanization level and the secondary share of labour force among these same countries.

Pandey (1977)⁵⁵ examines the role of some important socio economic variables in the determination of the rate of urbanization in the developing Indian Economy. He selects explanatory variables, man-land ratio, industrialization, intensity of cropping, per worker income, literacy rate, growth rate of urban population. Results shows man-land ratio have negative association, whereas non-agriculture activity show positive association with urbanization, suggesting that the development of agriculture sector tends to prevent rural-urban migration. Per capita income and literacy show very weak negative and positive association.

⁵⁴ Moir Hazel, (1976), "Relationship between Urbanization Levels and The Industrial Structure of the Labour Force, *Ecnomic Development and Cultural Change*, Vol. 25(1), pp. 123-36.

⁵⁵ Pandey, S.M. (1977), "Nature and Determinants of Urbanization in a Developing Economy : The Case of India *Economic Development and Cultural Change*, Vol. 25, No. 2, pp. 265-78.

Mehta (1984)⁵⁶ studied the determinants of urbanization in Gujarat from five variables namely industrial employment, non-agricultural activity, irrigation, non-food crops and electrified villages. His results show that the variable non-agriculture workers is positively related with urbanization. Its importance however decreases substantially if the class I towns are excluded. In the case of factory employment, though it is positively associated with urbanization it becomes negative, if class I towns are excluded. This indicates that industrial employment in Gujarat are concentrated with class I towns. Though various literature emphasises concentration in the initial phases of development, is followed by dispersion in industrial and urban development. But Mehta's study shows, industrialization is still concentrated in few centres.

Kailash's (1988)⁵⁷ study on Jharkhand shows a jump in urban population with the opening of mining field. This region also experiencing like other parts of the country high growth of big cities (Dhanbad, Sundergarh) and stagnation with Small towns.

⁵⁶ Mehta, Dinesh (1984), "Industrialization and Urban Development - A Review of Trends in India and in Gujarat" Paper Presented at National Seminar on 'Urbanization in India' CSRD, JNU.

⁵⁷ Kailash (1988), Growing Industrialization and Structural Changes in Urbanization in Jharkhand, *Social Science Probings* Vol. 5, No. 14, March-Dec., pp. 56-66.

Bhalla (1992)⁵⁸ evaluates the role of small and intermediate towns in the process of its economic development. Bhalla studied the growth rates of towns and cities by size classes. Agriculture growth in the past independence period has led to the emergence of many small sized market towns, with linkages with their catchment area. He finds that the share of urban population in rural towns are not growing rapidly. It appears that because of low rate of sectoral diversification, the dynamics of development operating at the higher category of urban settlements has not tricked down to rural segment. One reason for slowing down of urban growth could be increasing capital intensity of manufacturing⁵⁹, which failed to generate

⁵⁸ Bhalla, G.S. (1992), 'The Role of Small and Intermediate Towns in Regional Development of India' Paper Presented at Indian Institute of Advanced Studies, Shimla or Seminar on the Small Towns in India and the Rural-Urban Networks, ISID, New Delhi.

⁵⁹ In increasing capital intensity of manufacturing Satish Kumar (1991) discusses the empirical evidence of this.

Table : Inter Industry Transaction 1978-79
(percentages)

	Primary	Secondary	Tertiary
Primary	43.10	50.30	6.60
Secondary	10.90	52.30	36.80
Trade & Transport	19.90	52.30	36.80
Other Services	5.50	45.60	48.90
Financial Service			
Total Inputs	19.30	60.30	20.40

Source : Input - Output Transactions Tables CSO, reproduced in M. Satish Kumar (1991 : 120).

(continued...)

⁵⁹(...continued)

Based on this table Satish Kumar comments that,

- (1) Services are the most interdependent sector in the economy, generating much of intermediate demand;
- (2) Dependence of the secondary sector on the tertiary sector inputs is substantial;
- (3) As urbanization and industrialization accelerate the service sector tends to grow faster than the secondary sector due to increased inter-industry transactions.

Thus services are the major intermediate input in many production processes. Therefore increases demand for services through inter-industry transactions and income expansion has allowed for greater absorption of labour in the tertiary sector.

Satish Kumar (1991) uses another table to show capital intensity of manufacturing sector.

Table : Performance of Manufacturing and Services Enterprises
1978-79 to 1985-86

	Manufacturing and production growth rate	Services growth rate
No. of Enterprises	5.65	1.30
Investments	9.99	14.18
Capital Employed	19.80	13.60
Employment	3.18	-53.34
Value added	25.78	50.89

Source : Public Enterprises Survey, Ministry of Finance, reproduced in M. Satish Kumar, 1991, New Delhi.

The main conclusions derived from the table is that :

- (i) Service enterprises account for a higher rate of growth in investment between 1978-79 and 1985-86, as compared to manufacturing enterprises. This clearly indicates that public sector investments have increased in service enterprises.
 - (ii) The rate of growth of capital employed is higher in manufacturing and production enterprises and labour
- (continued...)

much employment in urban sector. Bhalla emphasizes, the small and inter-mediate towns should play important role in the process of socio economic development in the country. These settlements are expected to serve the countryside as marketing and supply administrative and service centres.

Satish Kumar (1991 : 125) in his study also finds that capital intensity is more in manufacturing sector than the service sector.

To Kundu (1983)⁶⁰, third world cities possesses colonial heritage, a large proportion of population live in few metro cities. These cities are generally not rooted in the regional economy and consequently their growth depends on factors exogenous to the region. Growth of lower order towns are determined by the regional economy. Kundu, here analyses the spatial structure of urbanization in India and the regional variation in the growth rates of cities and towns in different size categories, to see if there exists any relationship between size class and growth rate of towns. There is definite evidence

⁵⁹(...continued)
intensity of the service enterprises.

So, we can comment on Bhallas (1992) premises that slowing down of urban growth in due to increasing capital intensity of manufacturing sector. But urban growth can also explained by the growth of service sector.

⁶⁰ Kundu, A. (1983), "Theories of City Size Distribution and Indian Urban Structure, A Reappraisal", *Economic and Political Weekly*, 18(31), pp. 1361-68.

of developmental dynamism at the higher end of settlement hierarchy, which is leading to high population growth in the cities. This process is absent in lower order towns.

In a similar study Kundu (1994), investigates, a complex manifestations of the development dynamics in the eighties, that is slowing down of urbanization and that of rural urban migration in the face of rapid industrial and income growth. Kundu finds disparity in growth is much higher in Small towns, due to the fact that many small and medium towns exhibit growth rates that are highly unstable. He notices negative correlation between level of development and urban growth. Kundu also sees in developed states most of the new towns are in close proximity of metro cities. A process of urban-industrial dispersal is clearly discernible around the metro cities. He proposes two view points in explaining the decline in the pace of urbanisation during eighties. Growth in agriculture has created employment opportunities in rural areas, both within and outside agriculture, so reduced movement of people to urban areas on the other hand, due to lesser employment and income opportunities in urban areas, rural-urban migration has been reduced.

The decline in the long distance Rural-Urban migration and a lower rate of population absorption in metro cities have resulted in movement towards small and medium towns, particularly in a less developed state. Many fast growing Small towns do not have much strength to absorb the migrants physically or

economically. They also do not possess the ability to cater to the urban needs of the rural population in the hinterland. The dysfunctional growth of these towns therefore, cannot be taken to reflect a process of regional development and growth of positive rural-urban linkages (Kundu 1994 : 214).⁶¹

Kundu (1992)⁶², in his book also presents some phenomena of urbanization. The less developed states of India are experiencing high urban growth. But the work participation rate in these states are not increasing. This means that in backward states people are migrating to the towns, due to rural push factors and towns are not able to provide job to all rural exodus. One can possibly attribute to this phenomenon to striking poverty falling agricultural productivity, increasing population density in rural areas and some investment in infrastructure developed state have been largely confined to class I cities and in their peripheries. As opposed to this pattern, district and taluka headquarters, along with a small number of market towns, have played a major role in urbanization in backward states. The negative relationship between economic development and urban growth, suggests, the shift of workforce away from agriculture and fast pace of

⁶¹ Kundu, A. (1994), "Patterns of Urbanization with Special Reference to Small and Medium Towns in India", in G.K. Chadha *Sectoral Issues in Indian Economy*, Har-Anand Publications, New Delhi, pp. 193-215.

⁶² Kundu, A. (1992), "Patterns of Urbanization - A Regional Analysis" in A. Kundu (et. al) *Urban Development and Urban Research in India*, Khama Publishers, New Delhi.

urbanization in the backward states need not be taken as healthy trend. "It is important to note that the thirty-eight round of the National Sample Survey report a decline of 6.4 percentage point in the share of agriculture, hunting etc. during 1972-83, the increase in the manufacturing is only of one and a half percentage point. The rest of the workforce displaced from agriculture has been claimed by (a) construction, (b) wholesale and retail trade and (c) transport storage and communication. Undoubtedly these three categories have a high incidence of low productive informal employment, (Kundu 1992 : 14).

Most of the literature on Small towns, emphasizes the role of Small towns, to serve the rural hinterland as service centres. Large cities are productive, but importance given to them, would lead to urban bias, bypassing a large proportion of population living in rural areas or in Small towns. Attention should be to regional planning and development as a means of deflecting growth potential away from the primary city. Some literature deals with linkages of agriculture development and growth of Small towns. The improved situation in agriculture offers a basis for greater economic activity in the countryside, and this in turns requires the services of Small towns, for agricultural inputs and to meet the rising consumer demands arising from agricultural incomes. Literature also deals with regional variations in growth of different size classes of towns, analyses factors that explains urban growth. Some literature links urbanization with development

level.

Assuming the importance of Small towns, our study analyses the growth trend of Small towns in the districts. It also look into the growth of Small towns at individual level from its manufacturing and export base. Our study also looks at the growth of Small towns from some development variables, viz. agricultural, industrial, infrastructural, to what extent these explains the growth of Small towns. It also looks at whether these variables effects the growth of different size classes towns in a some manner. Our study is different from other study on the respect, that there we are trying to establish the linkages between non-agricultural employment growth (in different categories) and growth of Small towns.

Literature Related to Non-Agriculture Employment

Most of the literature available on non-agriculture employment, explains their role in the rural development scenario. They emphasize the role of agriculture growth in enhancing rural employment. Some writings advocates strategy to deal with rural unemployment. Whether non-agriculture employment growth is due to distress economic conditions prevalent in the rural areas.

Indeed concentration of a large percentage of population in the agriculture sector in the itself not a cause of poverty. The cause is the low productivity. Wherever the agricultural

population is poor, the non-agriculture population tends to be relatively small in size and also at a low level of living and vice versa, (Kuznetz⁶³ in Meier, 1971 : 6).⁶⁴

With the growing pressure of population on land farms become fragmented. Accordingly agricultural unemployment in rural areas take on two forms (i) underemployment due to small size of the farms and (2) disguised unemployment due to fragmentation of holding, (Nurkse⁶⁵ in Meier 1971 : 147).⁶⁶

A general hypothesis is that with the growth of agricultural sector, non-agriculture sector also develops. "Indicators like agricultural production per hectare, area under irrigation emerged as a strong proxies and showed positive relationships with the size of non-agricultural employment", (Shukla 1989 : 1993)⁶⁷

⁶³ Kuznets, S. (1953), *Economic Change*, New York, p. 2225.

⁶⁴ Meier, G.M. (1971), *Leading Issues in Economic Development*, Oxford University Press, Singapur, p. 6.

⁶⁵ Nurkse, R. (1957), "Excess Population and Capital Construction", *Malayan Economic Review*, p. 1.

⁶⁶ Meier, G.M. (1971), *op. cit*, p. 147.

⁶⁷ Shukla, T. (1983), "Rural Non-Agricultural Employment : A Report of the National Seminar on Non-Agricultural Employment in India *Economic and Political Weekly*, Sept. 2-9, pp. 1993-95.

Anderson and Leiserson (1980)⁶⁸ shows that non-farm activities in agricultural regions expand quite rapidly in response to agricultural development and merit special attention in the design of rural and also of urban development strategies. The level, composition and growth of non-agricultural employment in rural areas derived from three sources of demand for the products and services of rural non-farm activities, namely : (a) non-food goods and services for rural population, which rise with rural income levels; (b) inputs and services to agriculture, which rise with agricultural development and (c) manufactured and handicraft goods, steaming from external market in other regions or internationally (Anderson and Leiserson 1980 : 236).

The extent to which employment is generated in rural non-agricultural activities in response to agricultural output is a function of the nature and distributive impact of agriculture growth (Anderson and Leiserson, 1980). Quantitative information on this point is generally scarce, but from an examination of the kinds of non-food goods and services demanded by small and landless farms, it is reasonable to infer that they rely more extensively on the simple and labour intensive products of local enterprises. The large farms, turn more towards modern capital intensive inputs.

⁶⁸ Anderson, D. and Leiserson, M.W. (1980), "Rural Non-Farm Employment in Development Countries", *Economic Development and Cultural Change*, Vol. 28, No. 2, January, pp. 227-248.

Ho (1979)⁶⁹ advocates some factors, citing example from Taiwan, that lead to stable non-agricultural employment growth. Taiwan has allowed rural industry and agriculture to grow in a mutually reinforcing manner. Decentralized industrialization has created rural employment opportunities and enabled Taiwan's rural population to participate in industry without having to leave the countryside. This also reduced many urban problems.

Basing primarily on village level data from Several Asian Countries Islam (1984)⁷⁰ attempts to analyse issues regarding the expansion of employment through non-farm activities in Rural Asia. By using the approach of labour time allocation, attempts a quantification of the dependence of the rural labour on non-farm employment. The question that need to be asked, whether these activities are productive enough to ensure the rural poor a decent income and level of livings or are low productive activities of a residual nature, to whom people turn merely as a last resort, and whether they provide a sufficiently promising means of egalitarian growth in rural areas. Islam's study finds that, it is landless and the land poor who depend more on non-farm employment in rural Asia. A large part of such employment

⁶⁹ Ho, Samuel P.S. (1979), "Decentralized Industrialization and Rural Development : Evidence from Taiwan, *Economic Development and Cultural Change*, Oct. pp. 77-96.

⁷⁰ Islam, R. (1984), "Non-Farm Employment in Rural Asia, Dynamic Growth or Proletarianization ?" *Journal of Contemporary Asia*, pp. 306-324.

is wage employment. Though the extent of dependence on these low productive activities is not known, but it seems probable that they are residual in nature. On the question of injecting egalitarianism in the growth process in rural areas, Islam comments, there is the need for a transition from the odd job regime to a regime of more productive employment. In this regard promotional measures like policies for helping the location of modern industries in geographically dispersed rural towns, and a dispersal of modern services. But the more important preconditions for a sustained growth of non-agricultural activities capable of generating whether returns would be a dynamic and egalitarian agriculture sector. These two have to grow in a mutually reinforcing manner.

Vaidyanathan (1986)⁷¹ views non-agricultural activity as residual. Rural workers who are not absorbed in agriculture shift to non-agriculture activities. Vaidyanathan examined inter-state variation in the ratio of non-agricultural to total employment in rural areas with the help of four variables, (i) crop output per head of agriculture production, (ii) the gini index of concentration of operation holding, (iii) percentage of area under non-food crops and (iv) the rural unemployment rate. He finds a strong association between the NSS person day

⁷¹ Vaidyanathan, A. (1986), "Labour Use in Rural India, A Study of Spatial and Temporal Variations", *Economic and Political Weekly, Review of Agriculture*, Vol. XXI, No. 52, pp. A-130-146.

unemployment rate and percentage of rural non-agricultural workers.

In the same line to Vidyanathan, Ho (1986)⁷² remarks that increase in non-agriculture employment does not necessarily means that there is agricultural development. "It is to be expected that non-agricultural development is particularly important for small and landless farmers, since access to land is the most important determinant of on-farm employment. But increased involvement in non-farm activities may either be a sign of progress or distress. And it will depend very much on the types of non-agriculture employment available to farm household", (Ho, 1986 : 47).

Chadha (1986)⁷³ emphasizes, "a fast growing agriculture is capable of generating (i) high and rising level of on-farm employment and income, (ii) new expanding avenues for non-farm employment and income, for weaker sections of the rural society, (iii) rising demands for purchased inputs for technological change and demand for consumption of non-agricultural products,

⁷² Ho, Samuel P.S. (1986), "Rural Non-Agricultural Development in Asia : Experiences and Issues" in Yang-Boo Choe and Fu Chen Lo (ed), *Rural Industrialization and Non-Farm Activities*, Korea Rural Economic Institute, Seoul, p. 47.

⁷³ Chadha, G.K. (1986), "Agricultural Growth and Rural Non-Farm Activities : An Analysis of Indian Experiences" in Yang Boo Choe and Fu Chen Lo (ed) *Rural Industrialization and Non-Farm Activities*, Korea Rural Economics Institute, Seoul.

and (iv) a fair degree of industrial growth, heavily biased towards agro-industrialization and economic tertiarization". Chadha's study shows a higher quantum of both rural and urban wage employment is available to Punjab Households. The Bihar Households reports a larger number of mandays of employment in other pursuits including self employment. These other pursuits inject a lot of adhocism in the employment status in Bihar, and are partly responsible for mushrooming of low income tertiary pursuits.

Papola (1987)⁷⁴ argues that a fast growing agriculture, may create necessary impetus for rural industrialization at a rapid pace. However, the existing units may not be technologically and economically capable of meeting the new pattern of demand for inputs for agriculture and goods for consumption, at the higher level of incomes. Yet it is expected that agricultural growth would lead to spurt in rural industrial activities, by supplying more raw materials, creating greater demands for inputs and allied services, raising consumption demand and generating surplus for investment.

Basant and Kumar (1989)⁷⁵ explores the nature of rural non-

⁷⁴ Papola, T.S. (1987), "Rural Industrialization and Agricultural Growth : A Case Study on India" in Rizwanul Islam (ed) *Rural Industrialization and Employment in Asia*, ILO ARTEP, New Delhi, pp. 59-106.

⁷⁵ Basant, R. and B.L. Kumar (1989), "Rural Non-Agriculture Activities in India : A Review of (continued...)"

agricultural employment in India and the characteristics of the rural non-agricultural workers. "It is extremely difficult to draw conclusion about the dynamics of the rural non-agricultural sector on the basis of an analysis of all India estimates. There are bound to be regional variations, which remain to be studied. Yet in so far so a rising share of the secondary sector, reflects more positive and dynamic growing forces in the economy, than the rise in the share of service sector. The observed pattern of growth of rural non-agricultural sector suggests that the dynamic forces have been weak. It is possible, that the pattern of growth is affected by the aspirations towards a welfare state which lead to a faster growth rate of the tertiary sector" (Basant and Kumar 1989 : 63).

Mahendra Dev (1990)⁷⁶ considered rural non-agricultural employment is function of crop output per head of agricultural population, Gini coefficient of the concentration of rural assets and person days unemployment rate. His study finds that unemployment rate and land productivity are positively and strongly related to non-agricultural employment. Dev's result at the regional level support Vaidyanathan's state level estimates regarding the relationship of unemployment and inequalities in

⁷⁵(...continued)

Available Evidence" *Social Scientist* Vol. 17(1-2), pp. 13-71.

⁷⁶ Mahendra Dev, (1990), "Non-Agricultural Employment in Rural India : Evidence at a Desegregate Level" *EPW*, (XXV) 28th July, pp. 1526-.36.

rural areas with non-agricultural employment. However, the regional level results show that output per hectare rather than crop output per head of agriculture population seems to have significant positive impact on non-agricultural employment in Punjab and Kerala. But to Dev it is difficult to indicate to generalize a distress situation from unemployment rate, given the fact that unemployment rates are positively and significantly correlated with land productivity.

Mellor (1991)⁷⁷ deals with employment-poverty relief aspect, of an agriculture based high employment strategy of growth. A low income country with a large agriculture sector, generally have large low productive or unproductive labour force. The optimal development strategy here would be growth in the existing agriculture sector and transforms that growth into accelerated growth in productive non-agriculture sector. Western economist relies heavily on factor productivity, technological change as the basic engine of economic growth. But developing countries are largely agricultural. Increased technological change in agriculture sector have to take place for economic growth in the developing countries. The other distinguishing of feature of an agriculture based, high employment strategy is the reliance on consumer goods expenditure as a stimulus to growth.

⁷⁷ Mellor, J.W. (1991), "Agricultural Links to Non-Agricultural Growth : Urbanization, Employment, Poverty" *The Pakistan Development Review*, 30(4), pp. 439-451.

Agriculture multiplier effects on their sectors are weak if agricultural incomes are highly concentrated in plantations and other types of large scale farming. It is the expenditure pattern of small farmers that provide the local labour intensive goods and service stimulus.

Kundu (1991),⁷⁸ attributes the growth of non-agricultural activities either to the expansion of low productive job opportunities or to the government sponsored minimum needs or other programme. Kundu obtains a positive correlation between urban and rural indicators for the level of non-agricultural activities at the state level and a negative correlations between there indicators at a lower level. This suggests, high non-agriculture employment in urban areas may bring in similar developments in rural areas at the aggregate level, of the state, but not for the lower level. Thus non-agricultural employment growth in rural areas restricted to certain peripheral regions only. A process of limited industrial dispersal has been initiated around metro cities in recent times, attributed partly to diseconomies of agglomeration, non-availability of land, to relieve congestion and population.

According to Saith (1992)⁷⁹, from the viewpoint of

⁷⁸ Kundu, A. (199), "Growth of Non-Agricultural Employment - A Hypothesis on Rural - Urban Linkages, *IASSI Quarterly*, Vol. 10, No. 2, pp. 1-20.

⁷⁹ Saith, Aswini (1992), Review of the Rural Non-Farm Economy G.K. Chadha in *The Journal of Development Studies* 1994, Vol. 30, No. 2, pp. 507-510.

location, the prospect of the benefits accruing to rural residents; non-farm activities can fall into four location-linkages combines : rural located, rural linked; rural located, urban linked; urban located, rural linked and urban located, urban linked. Saith relies on a linkage criterion and adopts a wider working definition under which all types of non-farm employment are considered for the rural households, irrespective of their location.

Papola (1992)⁸⁰ wants to compare the level and trends in agriculture and non-agricultural earnings. It is to know, whether the recent trend in shift to non-agricultural employment, been demand induced or simply a fall out of the inability of agriculture to hold any more workers. To Papola consualization in workforce in urban areas reflects an overall deterioration in the quality of employment. But in rural areas it provides 'a safety net' for those rural household, whose individual earning from family farming is small. If they more away from self employment in agriculture, it likely to raise his income.

Baliscan (1993)⁸¹ from Philippine evidence argues that rapid agriculture growth is not enough to pull the rural people

⁸⁰ Papola, T.S. (1992), "Rural Non-Farm Employment : An Assessment of Recent Trends", *Indian Journal of Labour Economics*, Vol. 35(3) pp. 238-245.

⁸¹ Baliscan, A.M. (1993), "Agricultural Growth, Landlessness, Off-Farm Employment and Rural Poverty in Philippines" *Economic Development and Cultural Change*, Vol. 41(2), April, pp. 533-62.

out of poverty, as well as to sustain overall economic growth. Economic structure and economic policy environment have to be conducive to the rapid growth of employment opportunities for the fast growing labour force, particularly in non-agriculture sector. Otherwise income likely to be concentrated among large farmers.

Alok Kumar's (1993)⁸² paper looks at the factors which account for the level as well as the change in rural non-farm employment. His study result shows significant association with the change in rural non-farm male employment between 1977-78 and 1987-88 [NSS Data]. But agricultural growth rate and change in urbanization level are significant only at ten percent level of confidence. Change in current daily unemployment level is significant at 1 percent level. On the whole, the non-linear function shows that only change in current daily unemployment level is significant at one percent level. Looking at the result obtained, it strengthens the residual sector hypothesis. But to Alok Kumar, arriving at such a conclusion will possibly be too harsh. "Agriculture led development model is concerned with agriculture and non-agriculture sectors for rural as well for urban. The weak demand and production interlinkages between agriculture and rural non-agriculture sectors does not indicate

⁸² Alok Kumar, (1993), Rural Non-Farm Employment : A Static and Dynamic Study of Inter-State Variations, *Indian Journal of Labour Economics*, 36(3), pp. 440-454.

weakened interlinkages between agriculture and urban non-farm sector too.

Most of the literature available on non-agricultural employment, explains their role in the rural development scenario. They emphasize the role of agriculture development in enhancing rural employment. Some writings advocates strategy to deal with rural unemployment. Whether non-agriculture employment growth is due to distress economic condition prevalent in the rural areas. However, some writings tries to show relationship between rural and urban non-agricultural employment.

Our study tries to explain growth of non-agriculture activities, from agriculture development indicators like, productivity, commercialization and irrigation. It also tries to see whether non-agriculture employment growth is due to distress situation. We also study the relationship between urban and rural non-agricultural employment growth to show their linkages and probable explanations. Unlike most of the studies our study tries to link non-agriculture employment with growth of Small towns.

1.8 Organization of the Study

The first chapter hint at the issue, explains the choice of study area, objectives, hypotheses, discusses the data base, methodology, and gives an overview of the related literature.

The second chapter discusses the trend in growth of towns

at the individual as well as the district level, for the time period 1961-91. It also looks at the growth of the towns from their manufacturing and export base.

The third chapter studies the relationship between level of development and urban growth. It also analyses, various development variables, that explain urban growth.

The fourth chapter analyses district level growth trend of non-agricultural activities at two digit level both for urban and rural areas. It also studies the correlates of non-agricultural employment growth and linkages of rural and urban non-agricultural activities.

Fifth chapter studies the linkages between urbanization and non-agricultural employment growth.

The sixth chapter summarises the results, obtained from the study and discusses the policy implications.

CHAPTER II

GROWTH TREND OF SMALL TOWNS AND THEIR ECONOMIC BASE

2.1 INTRODUCTION

As opposed to earlier decades, 1981-91, shows slowing down of urban growth in India. The worst affected were the Small towns of India.

This chapter discusses the growth trend of Small towns. This analysis is being done at the town level and also we are taking a look at districts, where different size category of towns exist. We have calculated compound growth rate of the towns.

At one level analyses is confined to

- i) Each districts' distribution of IV, V and VIth category of towns and how they have varied in between 1961-91, for three States.
- ii) Look at those towns having low male and high female growth scenario.
- iii) Towns that have negative growth rate and were declassified.
- iv) Economic base and its relationship to the growth of towns.

As a explanatory factor we look at export base and

manufacturing base of these towns. Which can help us to look at their differential pattern of growth.

Generally we can expect high growth rate of male population in towns than female population growth. People used to come to towns in search of job, leaving behind their families at their villages. It is more unlikely that female comes in large numbers, than their male counterpart. Question arises, whether the male population of these town, migrated to higher order towns or cities, in search of better job opportunities, leaving behind their families. This trend certainly, show a declining economic base of Small towns.

In the same way negative growth rate of towns and declassification of towns means that they are loosing their economic base, and not playing their role to serve the rural hinterland, as a service centre and manufacturing base. As opposed to these cases in the high growth of Small towns which can be considered as a positive phenomenon.

Here in our analysis we proposed on hypothesis that, higher the growth of Small town, better is its economic base.

2.2 Growth Trend in Districts, Population in Different Categories of Towns :

Growth Trend in Class IV Category towns, Districts :

Maharashtra: An inspection of growth trends in class IV category towns in the districts of Maharashtra during the time periods

1961-71, 1971-81 and 1981-91 (Table 2.1) reveals a slowing down of growth in 1971-81, compared to 1961-71. Growth further declined during 1981-91, with the exception of few Districts. Table 2.1 is self explanatory in this regard. Compared to 1961-71, only 5 districts have shown an increasing trend of population growth during 1971-81,. These districts were Raigarh, Ratnagiri, Jalgaon, Pune and Aurangabad. Growth rate for 1981-91 also showed a declining trend, in class IV category of towns; in more than half of the districts of Maharashtra. Thana, Ratnagiri, Pune, Satara, Solapur, Parbani, Osmanabad. Akola, Nagpur, Bhandara and Chandrapur showed rising trend in population growth in class IV category. There are wide fluctuations in the ranks of the districts in terms of the growth rate. Ranks of some of the districts during the three time periods were : Thana (1,14,1), Jalgaon (22,16,19), Ahmadnagar (4, -, 24), Pune (16,9,3), Satara (13,20,15), Solapur (23,19,16), Kolhapur (8,7,13) Aurangabad (20,2,7), Bid (3,1,5), Buldana (10,4,9), Chandrapur (2,5,2).

Rajasthan: But the growth trend is different for Rajasthan. As compared to 1961-71 growth rate of population in class IV towns, for 1971-81 period showed an increasing trend. But like Maharashtra, the rate has declined during 1981-91. Three districts Churu, Bundi and Jhalawar showed constantly increasing trend in growth over the three decades. Tonk and Jaisalmer showed increasing growth rate during 1981-91. Here too the Districts reflected wide variations in their growth ranks. Notable among

them being Bikaner (11,1,18), Alwar (21,12,2), Tonk (9,24,4) Nagaur (10,13,20), Barmer (2,3,23), Jalor (16,2,4), Sirohi(5,18,21), Udaipur (8,4,19), Dungarpur (1,9,8) and Jhalawar (6,8,1) (Table 2.1).

Orissa: Like Rajasthan, growth trend of class IV towns in the same for Orissa. But Baleswar and Dhenkanal districts which showed negative growth during 1961-71, showed positive growth in the latter decades. During 1971-81 except for the districts of Keonjhar and Dhenkanal, all other districts presented a slowing down in the growth rate than in the previous decade. The growth rate for class IV category town, further declined for all districts of Orissa during 1981-91 (Table 2.1, Orissa). Regarding the ranks of the districts in terms of the growth rate, Bolangir ranked one during 1961-71. But during the later two decades first rank was occupied by Phulbani, considered to be as one of the least developed districts of Orissa.

Growth trend in class V Category Town in Districts :

Maharashtra: Like the class IV category town class V category town also showed declining trend in growth rate during the time periods. We can divide the trend into four parts. Some districts of Maharashtra showed a consistently declining trend in growth during the periods 1961-71, 1971-81 and 1981-91. These districts are Thana, Ahmadnagar, Kolhapur, Aurangabad, Buldana, Akola, Amravati, Yavatmal and Wardha (Table 2.2, Maharashtra), Some

districts namely: Raigarh, Pune, Satara Nanded showed an increase in the growth rate during 1971-81, However during 1981-91 they showed a slump. Growth rate tends to pick up during 1981-91 in the districts of Ratnagiri, Nasik, Bid and in Osmanabad. Solapur and Nagpur showed a constantly increasing trend in growth rate over the time periods. It was Nasik which had the highest growth rate in class V category of town during 1961-71. This was replaced by Jalgaon during 1971-81 and by Bhandara during 1981-91.

Rajasthan: In Rajasthan most of the districts which showed an increasing trend in growth rate during 1971-81, reflected a slump during 1981-91 (Table 2.2 Rajasthan). Districts that showed increasing growth rate during 1981-91 were Tonk and Kota. Jaisalmer and Jhalawar showed a declining trend in the growth rate. Nagaur and Banaswara showed a constantly increasing trend in growth rate.

Orissa : In Orissa the general trend of growth of class V town is, high during 1971-81 and declining trend during 1981-91. Sambalpur, Keonjhar Phulbani, Bolangir and Ganjam showed constantly declining trend in the growth of population in the class V towns. (Table 2.2, Orissa).

Growth Trend in Class VI Category Town, in Districts:

There are very few Districts, which have population, residing in class VI category of town. Besides it is not for all

time periods in Maharashtra. Same is true for Rajasthan and Orissa. Raigarh, Kolhapur and Amravati districts showed population residing in class VI category towns for all the three decades. In Raigarh there was increased growth during 1971-81, which showed down during 1981-91. Kolhapur and Amravati showed slowing down of growth rate during 1971-81 and a marginal increase during 1981-91 (Table 2.3, Maharashtra).

In Rajasthan only Kota district has population in the class VI category towns for all time periods. It showed very high growth rate of population during 1971-81, but previous and past decade showed very low growth rate of population. From Table 2.3 for Rajasthan we can see that class VI category towns vanished drastically in the last two decades.

In Orissa only Ganjam district had population in class VI category town in all three decades. Its growth rate showed declining trend during the three decades (Table 2.3 Orissa) But three districts had population in class VI towns as compared to two during 1971-81 and one during 1961-71.

If we look at the different size classes towns in each district during the time periods 1961-91, we see that in terms of number they have varied widely. Table 2.9 in the appendix shows the number of particular class size towns in each time period in the districts.

2.3 District where Total Population growth is more than Male Population growth for the IV, V and VI category of Town:

This part focuses those districts where total population growth is more than male population growth during the period 1961-71, 1971-81 and 1981-91 in the different size classes of towns. Generally in town those who are first come to stay are the male members of a family, so we expect growth of male population more than its female counterpart. It would be interesting to find out those towns and districts, where female population are showing high growth.

Districts where total population growth is more than male population growth in class IV category of towns.

We find out that during 1961-71 four districts of Maharashtra showed low growth of male population in class IV category of towns. But the number of district drastically increased to eighteen during 1971-81, though it declined to ten during 1981-91.

In Rajasthan increasing number of districts are showing low growth of male population in class IV category of towns, during the three time periods. During 1961-71 there were nine districts which had male population growth lower than the total. It increased to eleven during 1971-81 and to thirteen during 1981-91.

In case of Orissa during 1961-71 six districts had low male population growth than total. During 1971-81 there were only five

districts; which increased to nine during 1981-91. This is particularly significant in view of the lower number of districts in Orissa. (Table 2.4).

Districts where total population growth is more than male population growth rate in class V category towns:-

Eight districts showed low growth of male population during 1961-71 in Maharashtra. This number increased to nine during 1971-81. But it reduced to only four districts in the last decade.

The picture for Rajasthan is the same as for Maharashtra. During 1961-71 seven districts had lower male population growth than the total. It increased to ten in 1971-81 and then was reduced to seven during 1981-91. Orissa had there, seven and six districts respectively, during 1961-71, 1971-81 and 1981-91 which had low growth of male population. (Table 5).

Districts where total population growth is more than male population growth in class VI category towns.

In all the three states very few districts had population in class VI town. In Maharashtra during 1961-71 three districts had low male population growth than total population. During 1971-81 and 1981-91 it was two and three respectively. In the case of Rajasthan seven districts had low male population growth during 1961-71, and then it was one in both the time periods 1971-81 and 1981-91. In Orissa the number of districts that had

low male population growth were one, one and two respectively in the three time periods. But interestingly almost all districts with population in class VI category towns showed low male population growth than total. (Table 2.6).

From this analysis we can submit that during the period 1971-81 there were a large number of districts that had high growth of female population than males, as compared to 1961-71 or 1981-91. One positive trend is that the number of such districts have declined during 1981-91. We call this trend as positive because, there is a likelihood of spurt in economic activities that pulls more migrants particularly male to these town.

We can relate such increasing number of districts with high female growth during 1971-81 to high growth of Small towns during the same period. It is possible that due to high female migration to the towns, these Small towns showed high growth rate during that period.

Another possible explanation is that statistically it shows high growth from a small base. Compared to small base of population of 1961, 1971-81 period likely to show a high growth rate. With the increased base of population it would slow down in the next decade. This is evident from our data. Related to this another explanation that in new Small towns there is a likelihood that initially male members settle down. After that

they bring their families. So this also raises the growth rate of towns, more specially the female growth rate. If we look at the population data of many newly created towns, it reveals such a phenomenon.

Before concluding from such a macro perspective it would be better if we look at the growth trends of the towns individually and also examine their economic base. In the next part of our analysis, we shall examine the economic base of Small towns, particularly for those which had low male population growth and negative growth rates. Here we shall look at those towns, where growth differences are more, we are opting out towns with minor growth differences between total and male population.

2.4 Economic Base of Small Towns.

Here we look at the most important export items and most important manufactured items of the towns. We have taken this information from the town directory of the census of India.

The most important export and manufactured items are given against the towns in tables. (Appendix) Looking at the items we can categorise the exported items into agricultural products, mining products and manufactured products. We can divide the manufactured items, into agro-based, consumer goods, and to capital goods. From this classification we can infer whether the economic base of these towns are traditional or modern. The traditional sector corresponds with 'rural' whereas modern with

'urban'. "The modern-traditional dualism is normally related to non-agricultural occupations and therefore to advanced and backward sector", (Kumar 1991:89). So looking at the export and manufacturing items, we can say, whether the towns have a strong base (modern, non-agricul-tural), to attract people to these towns and consequently to raise their growth. We here infer that low male population growth means, towns don't have strong economic base.

Class IV towns with high growth of total population than male population:

Altogether 57 out of 90 class IV towns showed a low growth of male population during 1971-81 in Maharashtra. But, this number has drastically declined to 26 out of 91 during the period 1981-91. Their export and manufactured items showed that mostly they are exporting agricultural products. Their manufactured items are also agriculture based. (Table Appendix 2.1(a) Maharashtra). In 1971 there were very few towns which had manufactured and exported items other than agro-based. For example Malyan (Thane) had rice mill machinery as most important manufactured items, Bhayander (Thana) had plastic footwear; Uran (Raigarh) had grinding wheels as most important export; and manufactured item ; Satara had diesel engines both as export and manufactured; Kurunndvad (Kolhapur) had powerloom dhoti; Delgan Raja (Buldana) had powerloom clothes as manufactured items; Khapa (Nagpur) had manganese ore as exported item. Same trend was seen

for 1981 also. Few towns had manufactured and exported items other than agro-based items. Vadgaon Sheri (Pune) Fans, Ganinglaj (Kolhapur) manufactures plastic bags; Sundurjana (Amravati) bricks, Deoli (Wadha) Ayurvedic medicine, and Kanhan (Nagpur) manufacture and exported steel pipes.

Though export items of Rajasthan's class IV towns in 1971 reflected mainly resource based agro-items, manufactured items, however, showed a different trend (Appendix Table 2.1 (B) Rajasthan). Taranagar (Churu) had automobile parts, Chiwara (Jhunjhunnu) leather shoes; Todabhim (Sawai Madhopur) and Jhalrapatan (Jhalawar) iron & steel goods; Kotputli (Jaipur) Ramgarh (Sikar) Nawai (Tonk) had agriculture tools, as manufactured items. In 1981 also like the previous decade few towns had non-traditional items as export and manufactured items. Deshok (Bikaner) had glass material as manufactured items; Gotha and Udaipurwani (both Jhunjhunnu) had copper and iron scissor respectively; Phulera (Jaipur) bulbs; Bassi (Jaipur) carpets; Sumerpur (Pali) had steel furniture; Pindwara (Sirohi) had medicine as manufactured items. Sheoganj (Sirohi) had electric conductors and engineering goods as exported and manufactured items respectively. In Rajasthan 32 towns out of 64, had high growth of female population during 1971-81 in 1981-91 there were 44 towns out of 98 which had a high growth of female population. In the Tables we have presented those towns, where total-male growth differences are substantial.

In Orissa, 11 towns out of 23 had high growth of female population during 1971-81. It had increased to 27 out of 39 towns during 1981-91. If we look at the towns of Orissa, their export and manufacturing base were either agro or mineral based. Example for 1971 can be cited from town Joda (Keonjhar) which had manganese ore as main exported items, Ferro-manganese as manufactured items; Jaipur Road had ferrocrome; Titlagarh and Patnagarh of Bolangir had purified graphite and graphite crucibles as manufactured items. Some towns that showed low growth of male population during 1981-91 seems to have strong export and manufacturing base. Deblagarh (Sambalpur) had asbestos as main exporting items and jute products as manufactured items; Bhanjanagar had cycle tyres and Nimpada (Puri) had iron furniture as manufactured items. If we look at the population of these towns, that female population starts from a low base, that's why so high growth rate than male (Appendix Table 2.1 (C)).

Class V towns, with high growth of total population than male population.

In Maharashtra, 20 towns out of 58 during 1971-81 showed high growth of female population than male. These towns hardly have any manufacturing base and their export items were mostly agro-based. During 1981-91, 14 towns out of 42 had high growth of female population. Tables shows that their export and manufactured base are too traditional. (Appx. Table 2.2 (A)).

In case of Rajasthan 19 out of 38 towns had high growth of female population than male during 1971-81. The number of towns were 11 out of 22 during 1981-91. Table (Appendix 2.2 (B)) for Rajasthan showed that these towns have either agricultural products or minerals as most important export and manufactured items. But Gajsingpur of Ganganagar district manufactures Railway parts.

In Orissa 16 towns out of 30 during 1971-81 and 11 towns out of 25 during 1981-91 had shown high growth of female population. Though these towns export and manufacture traditional agro-based articles; two towns among them, Talcher Thermal power Township and Fertilizer Corporation of India Township, were specially created for industrial development. High growth of female population in these two towns probably because of, the employees of these two towns brought their families after they settled down in their work. (Appendix table 2.2 (C)).

An inspection into Class VI towns :

In all these states show that though they have traditional export and manufacturing base, high growth of female population of the town is due to low female population base in the previous decade. (Appendix Table 2.3).

We can generalize our view as that most of the towns have agriculture or mineral products as the basis for export and form a part of the manufactured items. We don't have the quantitative

data, how much value these items work. It is difficult without knowing the monetary value of export and manufactured items, how sound the economy of these towns. But if we look at the population base of the towns (Appendix Table 2.1 to 2.3), we can see that it is mainly low female population in the base year, that gives high female growth rate.

But there are some towns that have more female population than male, as well as high growth rate of female. Class IV towns that had more female population than males, in Maharashtra during 1961 were Murud (Rajgarh), in 1971 again Murud, Mhasvad and Rahimatpur (Satara) and Maindargi (Sholapur); in 1981 Shivardhan (Raigrh). They also had high growth rate of female population than male population.

For 1961, among the class IV towns those which had more female population as well as high growth rate in Rajasthan were, Dungarpur (Churu), and in 1971 Ramgarh (Sikar). Some towns of Rajasthan in 1971, namely, Mukundgarh (Jhunjhunun) and Bayana (Bharatpur), they had low female population than males in the base year. Their growth was so high that they had surpassed the male population in 1981.

In Orissa, among the class IV towns only Polasana (Ganjam) in 1981 had stabler female population base as well as higher growth rate.

In Maharashtra, class V towns that had more female population as well as higher growth rate in 1971, were Dubhol (Ratnagiri) and in 1981 Rajapur (Ratnagiri). In Rajasthan, during 1961, Deshnoke and Bhinasar (Bikaner), Chapar (Churu) and Sagwara (Dungarpur) had more female population as well as higher growth rate. In 1971, Sunel (Jhalawar), Mandawa (Junjhunun) had high female population as well as high growth rate. Salumber (Udaipur) in 1961, Bhindar (Udaipur) in 1971 and Asind (Bhilwara) in 1981, though they had low female population than males; their growth rate had been very high that they had surpassed the male population in the respective next decades. In Orissa, for 1971 Tarbha (Bolangir) , Junagarh (Kalahandi); Surda, Bellunguntha, Rambha, Buguda (Ganjam) had high female population as well as high growth rate than male population. In 1981 only Rambha had high female population and high growth rate.

Two important facts come out from analysing towns with high female population growth. Firstly, initially males shift to towns in search of jobs or to join some job, later their families shift to live with them. This lead to show high female population growth rate in the next decade. But in most cases total female population show less than male population. It is unlikely that all working male shift their families to towns, because of housing and cost of living problems. secondly, some towns that show more female population than male also reflect a high growth rate. This means that male members are migrated to other towns

or cities, in search of better job there. It may also mean lack of job opportunities in Small towns. Whether these towns are loosing their economic base or not, we can only know from the economic status of female population; their workforce participation rate and their occupational distribution.

Let us now look at the economic base of towns with negative growth and as also of declassified towns.

Very few towns had negative growth in Orissa and Rajasthan. No towns had negative growth rate in Orissa during 1971-81. (Appendix Table 2.4 to 2.6). But in Maharashtra quite a large number of towns had negative growth in the three time periods. Most of the towns that had negative growth rate during 1971-81 in Maharashtra had no Manufacturing base (Table Appendix 2.4). Interestingly Satara Road, which manufactures and exports non-traditional items like Diesel Engines showed negative growth during 1981-91.

In Orissa and Rajasthan very few towns were declassified during 1961 to 1991. During 1961-71 one class IV town and one class VI town was declassified on Orissa. In Rajasthan during 1981-91 one class IV a one class V town was declassified. But in Maharashtra a large number of towns in category V and VI were declassified during the three decades. These towns did not possess a stable manufacturing base (Table Appendix 2.7).

2.5 Conclusion

We can submit one point that most of the Small towns whether they have high or low growth rate, positive or negative growth rate, or declassified towns; show same traditional export and manufacturing base. So such descriptive analysis of economic base, without quantitative data cannot help us to infer or explain the reasons behind the growth trend of towns. With same traditional resource base some towns are growing very fast and some are declining.

This chapter was rather a theoretical, tried to hint at whether can we classify towns according to their export and manufacturing base. The quantitative data for such studies can be available from field studies.

Ashok Mitra (1961) classified Indian towns according to their functional characteristics. He used census workforce data of nine industrial categories for each town for functional classification of urban areas. He used factor analysis for delineating the underlying common dimensions of functional character of towns. Schwartzberg's (1961) study based on a detail cartographic analysis of the occupational data of the 1951 census and his field investigations in 1958-59 in 198 villages in twelve widely scatted and widely diffused regions, to know the occupational structure.

Our study didn't follow them, as such functional classification is a quite lengthy process and are intention of this study to view the growth of Small towns from non-agricultural employment growth. Moreover in the next chapter we shall study the determinants of growth of Small towns. There we have selected sixteen development indicators to explain the growth of Small towns.

Table - 2.1

Annual Compound Growth Rate of Class IV Towns (Districtwise)
and Their Ranks

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
MAHARASHTRA :			
Thana	6.40 (1)	2.20 (14)	5.47 (1)
Raigarh	1.76 (21)	2.42 (10)	1.54 (18)
Ratnagiri	-0.58 (24)	0.44 (22)	0.70 (23)
Nasik	1.88 (19)	1.74 (18)	0.85 (22)
Dhule	2.54 (12)	2.40 (11)	2.23 (12)
Jalgoan	1.70 (22)	1.87 (16)	1.47 (19)
Ahmadnagar	4.35 (4)		-2.90 (24)
Pune	2.29 (16)	2.44 (9)	3.96 (3)
Satara	2.50 (13)	1.12 (20)	1.78 (15)
Sangli	2.73 (11)	2.19 (15)	
Solapur	1.62 (23)	1.36 (19)	1.75 (16)
Kolhapur	3.36 (8)	2.53 (7)	2.05 (13)
Aurangabad	1.84 (20)	3.41 (2)	3.01 (7)
Parbhani	3.47 (7)	2.52 (8)	3.08 (6)
Bid	4.63 (3)	3.90 (1)	3.52 (5)
Nanded	4.04 (5)	3.14 (3)	2.82 (8)
Osmanabad	3.87 (6)	2.69 (6)	3.54 (4)
Buldana	2.99 (10)	2.99 (4)	2.55 (9)
Akola	2.47 (15)	2.24 (13)	2.40 (11)
Amravati	2.48 (14)	2.25 (12)	1.14 (20)

Contd...

District	1961-71	Rank	1971-81	Rank	1981-91	Rank
Yavatmal	3.32	(9)	2.69	(6)	2.06	(14)
Wardha					1.74	(17)
Nagpur	2.21	(17)	1.86	(17)	2.46	(10)
Bhandara	2.02	(18)	1.08	(21)	1.13	(21)
Chandra	6.01	(2)	2.78	(5)	4.44	(2)
RAJASTHAN						
Ganganagar	3.12	(7)	4.15	(5)	3.06	(7)
Bikaner	2.51	(11)	7.95	(1)	2.04	(18)
Churu	2.31	(13)	2.78	(19)	2.85	(12)
Jhunjhunu	1.47	(17)	2.74	(20)	2.57	(14)
Alwar	-0.88	(21)	3.34	(12)	3.24	(2)
Bharatpyur	2.51	(11)	2.95	(16)	2.76	(13)
SawaiMadhopur			2.41	(21)	2.34	(16)
Jaipur	1.22	(18)	3.03	(15)	2.49	(15)
Sikar	0.91	(19)	3.39	(10)	2.98	(9)
Ajmer	1.92	(15)	3.12	(14)	3.09	(6)
Tonk	2.78	(9)	2.23	(24)	3.20	(4)
Jaisalmer			2.89	(17)	3.16	(5)
Jodhpur	2.27	(14)	3.80	(6)		
Nagaur	2.59	(10)	3.17	(13)	1.94	(20)
Pali	0.71	(20)	3.03	(15)	1.89	(22)
Barmer	3.81	(2)	4.78	(3)	0.80	(23)
Jalor	1.79	(16)	5.07	(2)	3.20	(4)

Contd...

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
Sirohi	3.20 (5)	2.81 (18)	1.92 (21)
Bhilwara	2.34 (12)	2.34 (23)	2.27 (17)
Udaipur	2.79 (8)	4.68 (4)	1.99 (19)
Chittorgarh	3.33 (4)	3.70 (7)	2.88 (11)
Dungarpur	4.48 (1)	3.50 (9)	2.99 (8)
Banaswara	3.41 (3)		
Bundi	-7.00 (22)	2.36 (22)	2.96 (10)
Kota		3.24 (11)	3.22 (3)
Jhalawar	3.18 (6)	3.68 (8)	4.27 (1)
ORISSA			
Sambalpur	4.52 (3)		2.18 (5)
Sundargarh	4.50 (4)	3.23 (7)	
Keonjhar	3.17 (8)	4.00 (3)	
Mayurbhanj		3.28 (6)	1.60 (10)
Baleshwar	-4.10 (10)		2.21 (4)
Cuttack	3.54 (7)	3.51 (4)	1.69 (9)
Dhenkanal	-0.27 (9)	4.55 (2)	2.54 (2)
Phulbani		5.72 (1)	3.26 (1)
Bolangir	6.71 (1)	3.20 (8)	2.04 (6)
Kalahandi	4.78 (2)		2.30 (3)
Koraput	3.91 (5)	3.07 (9)	1.88 (8)
Ganjam		2.35 (10)	1.93 (7)
Puri	3.68 (6)	3.50 (5)	1.56 (11)

Table - 2.2

Annual Compound Growth Rate of Class V Towns (Districtwise)
and Their Ranks

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
MAHARASHTRA :			
Thana	3.09 (7)	2.91 (6)	1.71 (12)
Raigarh	1.95 (17)	2.30 (10)	0.55 (5)
Ratnagiri	1.19 (19)	-0.12 (21)	1.39 (14)
Nasik	4.80 (1)	1.83 (16)	2.56 (8)
Dhule			
Jalgoan		12.50 (1)	
Ahmadnagar	2.90 (9)	1.12 (20)	
Pune	2.44 (12)	3.18 (4)	3.00 (6)
Satara	1.97 (16)	2.20 (13)	1.78 (11)
Sangli			
Solapur	1.15 (20)	2.12 (14)	2.45 (10)
Kolhapur	2.27 (14)	1.41 (9)	-0.02 (16)
Aurangabad	4.14 (2)	2.64 (7)	2.53 (9)
Parbhani	3.77 (4)	1.82 (17)	3.04 (4)
Bid	3.98 (3)	2.21 (12)	3.20 (2)
Nanded	2.91 (8)	3.15 (5)	3.01 (5)
Osmanabad	3.58 (6)	2.54 (8)	2.77 (7)
Buldana	2.72 (10)		
Akola	2.34 (13)	1.71 (18)	
Amravati	2.60 (11)	2.22 (11)	

Contd...

District	1961-71	Rank	1971-81	Rank	1981-91	Rank
Yavatmal	3.60	(5)	3.24	(3)		
Wardha	2.11	(15)	1.87	(15)	1.51	(13)
Nagpur	1.66	(8)	2.50	(9)	3.19	(3)
Bhandara					4.14	(1)
Chandra			4.85	(2)	-1.19	(17)
RAJASTHAN						
Ganganagar	4.02	(2)	5.26	(1)	1.87	(11)
Bikaner	2.72	(8)	3.16	(7)		
Churu	2.32	(10)	2.53	(12)	2.04	(9)
Jhunjhunu	1.56	(16)	3.49	(4)		
Alwar					4.31	(1)
Bharatpyur	2.88	(6)	3.07	(9)		
SawaiMadhopur	1.90	(13)			-3.22	(14)
Jaipur	1.65	(15)	3.17	(6)	2.54	(5)
Sikar						
Ajmer	2.37	(9)	3.66	(2)	2.51	(7)
Tonk	3.96	(3)	1.79	(18)	2.52	(6)
Jaisalmer	5.96	(1)	3.43	(5)		
Jodhpur						
Nagaur	0.31	(20)	2.37	(14)	3.46	(3)
Pali	1.83	(14)	3.14	(8)	2.20	(8)
Barmer						
Jalor						

Contd...

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
Sirohi	2.14 (11)	2.49 (3)	
Bhilwara	2.04 (2)	2.36 (15)	1.59 (12)
Udaipur	1.49 (17)	2.91 (10)	1.59 (12)
Chittorgarh	1.90 (13)	2.65 (11)	
Dungarpur	2.86 (7)		
Banaswara	1.04 (9)	2.00 (7)	2.75 (4)
Bundi	1.37 (18)	3.53 (3)	1.96 (10)
Kota	3.81 (4)	2.12 (16)	3.74 (2)
Jhalawar	3.24 (5)	1.67 (19)	1.51 (13)
ORISSA			
Sambalpur	4.49 (2)	3.85 (7)	2.62 (2)
Sundargarh			
Keonjhar		14.57 (1)	1.80 (5)
Mayurbhanj	3.29 (6)		4.68 (1)
Baleshwar	-3.31 (11)	4.55 (4)	0.47 (9)
Cuttack	4.23 (3)	8.56 (2)	
Dhenkanal	2.76 (7)	7.15 (3)	4.68 (1)
Phulbani	3.86 (4)	3.54 (8)	2.17 (4)
Bolangir	3.37 (5)	1.82 (11)	0.75 (8)
Kalahandi	1.68 (9)	2.52 (9)	1.67 (7)
Koraput	8.53 (1)	4.32 (5)	-0.10 (10)
Ganjam	2.54 (8)	2.16 (10)	1.79 (6)
Puri	-1.09 (10)	4.07 (6)	2.22 (3)

Table - 2.3

Annual Compound Growth Rate of Class VI Towns (Districtwise)
and Their Ranks

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
MAHARASHTRA :			
Thana	2.59 (6)		2.06 (1)
Raigarh	1.80 (7)	3.40 (2)	1.84 (2)
Ratnagiri		-0.24 (5)	1.69 (3)
Nasik	1.33 (9)		
Dhule			
Jalgoan			
Ahmadnagar			
Pune	2.93 (4)	3.50 (1)	
Satara			
Sangli			
Solapur			
Kolhapur	1.32 (10)	0.87 (3)	1.05 (4)
Aurangabad	4.46 (2)		
Parbhani			
Bid	1.64 (8)		
Nanded	2.68 (5)		
Osmanabad	4.36 (3)		
Buldana			
Akola			
Amravati	6.40 (1)	0.52 (4)	0.63 (5)

Contd...

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
Yavatmal			
Wardha			
Nagpur			
Bhandara			
Chandra	-4.99 (11)		
RAJASTHAN			
Ganganagar	2.63 (4)	8.02 (1)	
Bikaner			
Churu	2.14 (5)		
Jhunjhunu	7.22 (1)		
Alwar	4.34 (3)	5.31 (2)	
Bharatpyur			
SawaiMadhopur			
Jaipur	2.01 (6)		
Sikar			
Ajmer			
Tonk			
Jaisalmer			
Jodhpur			
Nagaur			
Pali	1.30 (7)		
Barmer			
Jalor			

Contd...

District	1961-71 Rank	1971-81 Rank	1981-91 Rank
Sirohi			
Bhilwara			
Udaipur			
Chittorgarh			
Dungarpur			
Banaswara			
Bundi	4.54 (2)		
Kota	0.18 (8)	4.59 (3)	0.88 (1)
Jhalawar			
ORISSA			
Sambalpur			
Sundargarh			
Keonjhar			-0.88 (3)
Mayurbhanj			
Baleshwar			
Cuttack			
Dhenkanal			11.39 (1)
Phulbani			
Bolangir			
Kalahandi			
Koraput		1.78 (2)	
Ganjam	4.05 (1)	2.31 (1)	1.83 (2)
Puri			

Table 2.4

**Districts having High Total Population Growth
than Male Population Growth (Class IV Towns)**

Districts	Growth Rates	
	Total	Male
MAHARASHTRA		
1961-71		
Amravati	2.48	2.32
Akola	2.02	1.96
1971-81		
Thana	2.20	2.02
Satara	1.12	0.92
Sangli	2.19	2.01
Aurangabad	3.41	3.15
Osmanabad	2.62	2.54
Buldana	2.99	2.81
Chandrapur	2.78	2.50
1981-91		
Nasik	0.85	0.72
Wardha	1.74	1.62
RAJASTHAN		
1961-71		
Ganganagar	3.12	2.94
Jhunjhunun	1.47	1.34
Udaipur	2.79	2.60
1971-81		
Bharatpur	2.95	2.74
Swai Madhopu	2.41	2.28
Jaisalmer	2.89	2.70
Nagaur	3.17	3.05
Jhalawar	3.68	3.51
1981-91		
Ganganagar	3.07	2.70
Alwar	3.24	2.49

Contd.....

Districts	Growth Rates	
	Total	Male
Jaipur	2.49	2.37
Ajmer	3.09	2.89
Jaisalmer	3.16	2.92
Jalor	3.20	2.97
Sirohi	1.92	1.77
Bundi	2.96	2.83
ORISSA		
1961-71		
Sambalpur	4.52	4.21
Sundergarh	4.50	4.18
Keonjhar	3.17	2.91
1981-91		
Mayurbhanj	1.60	1.40
Balasore	2.21	2.03
Dhenkanal	2.54	2.26
Koraput	1.88	1.75

Table 2.5

Districts having High Total Population Growth
than Male Population Growth (Class V Towns)

Districts	Growth Rates	
	Total	Male
MAHARASHTRA		
1961-71		
Nasik	4.80	4.48
Akola	2.34	2.14
1971-81		
Jalgaon	12.50	11.97
Ahmadnagar	1.12	0.89
Chandrapur	4.85	4.62
1981-91		
Raigarh	0.55	0.25
RAJASTHAN		
1961-71		
Ganganagar	4.02	3.78
Jaipur	1.65	1.50
Sirohi	2.14	2.00
Udaipur	1.49	1.34
1971-81		
Nagaur	2.37	2.22
Pali	3.14	2.27
Bhilwara	2.36	2.17
1981-91		
Ganganagar	1.87	1.70
Ajmer	2.51	2.38
Pali	2.20	1.89
Bhilwara	1.59	1.38
Banswara	2.75	2.55

Contd.....

Districts	Growth Rates	
	Total	Male
ORISSA		
1961-71		
Sambalpur	4.49	3.92
Mayurbhanj	3.29	2.81
Koraput	8.53	8.25
1971-81		
Keonjhar	14.57	14.44
Dhenkanal	7.15	6.56
1981-91		
Sambalpur	2.62	2.36
Mayurbhanj	4.68	4.47
Balasore	0.47	0.05
Dhenkanal	4.68	3.88
Phulabani	2.17	1.76
Puri	2.22	2.08

Table 2.6

**Districts having High Total Population Growth
than Male Population Growth (Class V Towns)**

Districts	Growth Rates	
	Total	Male
MAHARASHTRA		
1961-71		
Thana	2.59	2.38
1971-81		
Raigarh	3.40	3.07
Amravati	0.52	-0.55
1981-91		
Amravati	0.63	0.19
RAJASTHAN		
1961-71		
Ganganagar	2.63	2.35
Jhunjhunu	7.22	7.09
Alwar	4.34	3.98
Jaipur	2.01	1.65
Kota	0.18	-0.11
1981-91		
Alwar	5.31	5.06
Kota	0.88	0.68
ORISSA		
1981-91		
Dhenkanal	11.39	11.14
Ganjam	1.83	1.80

DETERMINANTS OF SMALL TOWN GROWTH

3.1 Introduction

General proposition is that economic development initiates urban population growth. (Mera 1973,¹ Todaro 1979² etc.). Development of rural areas initiates income and consequently demand for many consumer goods and agricultural inputs. (Papola 1987,³ Chandrashekhar 1993⁴). And Agricultural development initiates the requirement of some towns that can serve the rural areas as service centres (Khorev 1974⁵). This leads to many service and manufacturing activities in these urban centres and also creates employment opportunities for those who leave

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- ¹ Mera, K. (1973), "On the Urban Agglomeration and Economic Efficiency, *Economic Development and Cultural Change*, Vol. 21.
 - ² Todaro, M.P. (1979), "Urbanization in Developing Nations : Trends Prospects and Policies" in P.K. Ghose (ed) (1984), *Urban Development in the Third World*, Greenwood Press, West port Connecticut, p.7.
 - ³ Papola, T.S. (1987), "Rural Industrialization and Agricultural Growth A Case Study on India in Rizwanul Islam (ed) *Rural Industrialization and Employment in Asia*, ILO ARTEP, New Delhi, Ch. 3.
 - ⁴ Chandrasekhara, C.S. (1983), "The Challenge of Urbanization and the Response" in Alfred De Souza (ed) *Urban Growth and Urban Planning; Political Context and People's Participation*, Indian Social Institute, New Delhi, 1983.
 - ⁵ Khorev, B.S. (1974), "The Problem of Small Cities and the Policy for Stimulating Small City Growth", *Soviet Geography*, Vol. 15, p. 263.

agriculture. This also act to stimulate a degree of decentralization of urban growth. Expansion of these towns can be very fast because of high elasticities of demand for non-food goods and services, with respect to increasing agricultural output and income of rural hinterland (Anderson and Leiserson 1980).⁶

But some (Schumacher 1973,⁷ Sovani 1964,⁸ Mera 1973⁹ and Smith 1987)¹⁰ argues that even without the development of rural areas, there is high strut in urban growth. The urbanization¹¹ process in developing countries is induced by social and economic deprivation in rural areas rather than effective pull generated by the towns. "The over urbanization is supposed to have come about because rural migrants have been 'pushed' rather than

⁶ Anderson, D. Leiserson, M.K. (1980), "Rural Non-Farm Employment in Developing Countries" *Economic Development and Cultural Change*, Jan. Vol. 28(2), pp.227-248.

⁷ Schumacher, E.F. (1973), *op. cit.*

⁸ Sovani N.V. (1964), 'The Analysis of "Over-Urbanization' *Economic Development and Cultural Change*, Vol. 12(2), pp. 113-122.

⁹ Mera, K. (1973), *op. cit.*

¹⁰ Smith, David, D. (1987), *The Third World City*, Methuen, New York, p. 8, Chapter 1.

¹¹ It means "at comparable levels of urbanization. The developed countries of today had a correspondingly greater proportion of their labour force engaged in non-agricultural activities" *Urbanization in Asia and in the Far East, Proceedings of the Joint UN/UNESCO Seminar Bangkok, 8-18 August 1956.*

"pulled" into the urban areas in developing countries, as a result of great and mounting population pressure in the rural areas" (Proceedings of the joint UN/UNESCO Seminar 1956). Due to this fact less developed districts in India are experiencing high urban growth. Kundu (1987)¹² finds that in majority of the less developed states, the high urban growth rate has been associated with a high growth rate of population in the towns belonging to the Vth and VIth order size categories. "It is unlikely that the growth of these towns has been supported by a rapid economic growth or a widespread dispersal of industrial activities in backward states of India. On the other hand, it is observed that the Small towns in these states have predominantly rural economic base, a substantial segment of its workforce being in agriculture. It would, however be, difficult to substantiate the proposition that fast growth of agriculture has lent support to the demographic expansion of these settlements. One can possibly attribute this phenomenon to striking poverty, falling agricultural productivity, increasing population density in rural areas and some investment in infrastructure and public amenities, particularly at district and taluka headquarters" (Kundu 1992:7).

On the basis of propositions discussed above, we proposed some hypotheses regarding the determinants of Small town growth.

¹² Kundu, A. (1987) "Urbanization and Organization of Space" in Alam, S. Manzoor and Ali Khan F. (eds) *perspectives on Urbanization and Migration : India and USSR*, Allied, New Delhi.

3.2 Hypotheses

- i) There is positive association between economic development and urban growth.
- ii) Agriculturally developed districts reflect rapid growth of Small towns than agriculturally backward districts.
- iii) Higher the rural density faster will be the growth of urban areas.
- iv) Proximity to large cities, hinders, the growth of Small towns.

We have chosen some development indicators, that can explain urban growth. In the first chapter we had explained rationality for choosing these indicators. We have composited these indicators to show levels of development for districts of Maharashtra, Rajasthan and Orissa, separately. In this chapter we shall see the relationship between level of development and urban growth of IV, V and VIth size class of towns. To know the explanatory power of each indicators, in explaining urban growth of IV, V and VIth size class of towns, we shall take recourse to stepwise regression analysis.¹³

3.3 Levels of Development in Districts

Tables 3.1, 3.2 and 3.3 show levels of development of the district of the three states, Maharashtra, Rajasthan and Orissa

¹³ See page 30 in Chapter 1.

for the period 1961, 1971 and 1981 separately. Levels of development is shown based on first factor score of Modified Principal Component Analysis.¹⁴

In Maharashtra ranking of Most districts remain more or less the same over the three time period. However some districts shows improvement in their ranks. Raigarh showed improvement of its rank from 20th in 1961 to 13th in 1971 and to 11th in the 1981. Satara on the other hand showed deterioration of ranks (7, 5, 10). Some districts Akola (14, 7, 17), Amravati (6, 11, 6), Wardha (9, 15, 9) showed wide fluctuations in the ranks (Table 3.1).

Likewise in Rajasthan, rank of the districts remain the same over the three time periods. (Table 3.2) Alwar (13, 11, 7) and Kota (12, 9, 4) showed improvement in their ranks. Jhunjhunun (18, 6, 10) and Sirohi (6, 13, 8) showed maximum fluctuations. In Orissa ranks of the districts reflected slight variations over the periods (Table 3.3).

If we look at the top ranking districts in each state (Table 3.4) almost the same districts have shared the top ranks during the three time periods. Rajasthan being the only exception. Sirohi, Jhunjhunun and Kota have acquired high ranks, during 1961, 1971 and 1981 respectively.

¹⁴ See Appendix 1.1.

Table 3.1

MAHARASHTRA LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)

	1961		1971		1981	
THANE	5.34	(3)	5.65	(2)	5.06	(3)
RAIGARH	2.53	(20)	3.35	(13)	3.55	(11)
RATNAGIRI	3.12	(15)	3.30	(14)	3.44	(13)
NASIK	3.66	(10)	3.95	(7)	3.82	(8)
DHULE	2.72	(17)	2.98	(18)	2.93	(18)
JALGAON	3.60	(11)	3.78	(10)	3.44	(14)
AHMADANAGAR	3.44	(13)	3.86	(8)	3.53	(12)
PUNE	7.09	(1)	6.94	(1)	6.38	(1)
SATARA	4.28	(7)	4.36	(5)	3.60	(10)
SANGLI	4.63	(5)	4.32	(6)	4.26	(5)
SOLAPUR	3.98	(8)	3.85	(9)	3.84	(7)
KOLHAPUR	4.98	(4)	4.79	(4)	4.85	(5)
AURANGABAD	2.66	(18)	3.10	(16)	3.33	(15)
PARBHANI	1.90	(25)	2.08	(25)	2.53	(25)
BID	2.10	(22)	2.35	(24)	2.72	(21)
NANDEED	2.00	(23)	2.50	(20)	2.80	(20)
OSMANABAD	1.99	(24)	2.42	(21)	2.69	(22)
BULDANA	3.00	(16)	2.81	(19)	2.82	(19)
AKOLA	3.33	(14)	3.03	(7)	3.11	(17)
AMRAVATI	4.35	(6)	3.55	(11)	3.86	(6)
YAVATMAL	2.55	(19)	2.39	(22)	2.69	(23)
WARDHA	3.77	(2)	3.25	(15)	3.75	(9)
NAGPUR	6.80	(2)	5.49	(3)	5.15	(2)
BHANDARA	3.44	(12)	3.43	(12)	3.26	(16)
CHANDRAPUR	2.48	(21)	2.38	(23)	2.61	(24)

Table 3.2

RAJASTHAN LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)						
	1961		1971		1981	
GANGANAGAR	4.78	(5)	5.06	(3)	4.60	(5)
BIKANER	5.96	(1)	4.98	(4)	5.25	(2)
CHURU	3.94	(11)	3.96	(7)	3.69	(12)
JHUNJHUNU	3.03	(18)	3.97	(6)	3.92	(10)
ALWAR	3.58	(13)	3.64	(11)	4.09	(7)
BHARATPUR	4.09	(7)	3.88	(8)	3.97	(9)
S. MADHOPUR	2.86	(19)	2.88	(20)	2.89	(20)
JAIPUR	5.73	(3)	8.71	(1)	6.03	(1)
SIKAR	3.04	(17)	3.25	(16)	3.39	(17)
AJMER	5.88	(2)	5.45	(2)	5.12	(3)
TONK	3.16	(16)	3.03	(19)	2.92	(19)
JAISALMER	2.22	(24)	1.73	(25)	2.37	(24)
JODHPUR	4.81	(4)	4.67	(5)	4.55	(6)
NAGAU	2.31	(23)	2.16	(23)	2.46	(23)
PALI	4.01	(10)	3.59	(12)	3.73	(11)
BARMER	1.80	(26)	1.47	(26)	2.35	(26)
JALOR	2.11	(25)	1.83	(24)	2.59	(22)
SIROHI	4.16	(6)	3.57	(13)	3.97	(8)
BHILWAR	4.08	(8)	3.48	(14)	3.42	(15)
UDAIPUR	4.04	(9)	3.75	(10)	3.59	(13)
CHITTAURGARH	3.19	(15)	3.21	(17)	3.11	(18)
DUNGARPUR	2.54	(21)	2.19	(22)	2.38	(16)
BANASWARA	2.45	(22)	2.57	(21)	2.37	(25)
BUNDI	3.39	(14)	3.34	(15)	3.45	(14)
KOTA	3.94	(12)	3.76	(9)	4.79	(4)
JHALAWAR	2.75	(20)	3.09	(18)	2.65	(21)

Table 3.3

ORISSA LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)

	1961		1971		1981	
SAMBALPUR	3.59	(6)	4.24	(4)	4.11	(5)
SUNDERGARH	6.34	(1)	6.84	(1)	5.30	(2)
KEONJHAR	2.61	(11)	3.20	(7)	3.03	(9)
MAYURBHANG	2.00	(13)	2.18	(13)	2.70	(11)
BALESHWAR	3.47	(7)	3.05	(8)	3.27	(6)
CUTTACK	5.00	(2)	4.75	(2)	5.33	(1)
DHENKANAL	4.02	(5)	3.33	(6)	3.18	(7)
PHULBANI	2.67	(10)	2.67	(12)	2.79	(10)
BOLANGIR	3.21	(8)	2.88	(9)	3.14	(8)
KALAHANDI	2.57	(12)	2.66	(10)	2.31	(13)
KORAPUT	2.86	(9)	2.65	(11)	2.68	(12)
GANGAM	4.24	(3)	4.37	(3)	4.19	(4)
PURI	4.07	(4)	3.92	(5)	4.73	(3)

Regarding the bottom ranking districts in terms of development (Table 3.5), lowest ranks was shared by almost the same districts over the three periods in Maharashtra and Rajasthan. In case of Orissa there are changes in the ranks. Keonjhar is no longer the least developed districts. Districts such as Phulbani (1971) and Koraput (1971 and in 1981) emerge as least developed districts.

Table 3.4

LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)
(Top Ranking Districts)

1961		1971		1981	
MAHARASHTRA					
PUNE	7.09	PUNE	6.94	PUNE	6.38
NAGPUR	6.80	THANE	5.65	NAGPUR	5.15
THANE	5.34	NAGPUR	5.49	THANE	5.06
KOLHAPUR	4.98	KOLHAPUR	4.79	KOLHAPUR	4.85
SANGLI	4.63	SATARA	4.36	SANGLI	4.26
AMRAVATI	4.35	SANGLI	4.32	AMRAVATI	3.86
RAJASTHAN					
BIKANER	5.96	JAIPUR	8.71	JAIPUR	6.03
AJMAR	5.88	AJMER	5.45	BIKANER	5.25
JAIPUR	5.73	GANGANAGAR	5.06	AJMER	5.12
JOSHUPUR	4.81	BIKANER	4.98	KOTA	4.79
GANGANAGAR	4.78	JODHPUR	4.67	GANGANAGAR	4.60
SIROHI	4.16	JHUJHUNU	3.97	JODHPUR	4.55
ORISSA					
SUNDERGARH	6.34	SUNDERGARH	6.84	CUTTACK	5.33
CUTTACK	5.00	CUTTACK	4.75	SUNDERGARH	5.30
GANGAM	4.24	GANGAM	4.37	PURI	4.73

Table 3.5

LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)
(Bottom Ranking Districts)

1961		1971		1981	
MAHARASHTRA					
PARBANI	1.90	PARBANI	2.08	PARBANI	2.53
OSMANABAD	1.99	BID	2.35	CHANDRA	2.61
NANDED	2.00	CHANDRA	2.38	YAVATMAL	2.69
BID	2.10	YAVATMAL	2.39	OSMANABAD	2.69
CHANDRA	2.48	OSMANABAD	2.42	BID	2.72
RAIGARH	2.53	NANDED	2.50	NANDED	2.80
RAJASTHAN					
BARMER	1.80	BARMER	1.47	BARMER	2.35
JALOR	2.11	JAISALMER	1.73	BANASWARA	2.37
JAISALMER	2.22	JALOR	1.83	JAISALMER	2.37
NAGPUR	2.31	NAGPUR	2.16	NAGPUR	2.46
BANASWARA	2.45	DUNGARPUR	2.19	JALOR	2.59
DUNGARPUR	2.54	BANASWARA	2.57	JHALAWAR	2.56
ORISSA					
MAYURBHANG	2.00	MAYURBHANG	2.18	KALAHANDI	2.31
KALAHANDI	2.57	PHULBANI	2.57	KORAPUT	2.68
KEONJHAR	2.61	KORAPUT	2.65	MAYURBHANG	2.70

A more interesting scene is revealed by Table 3.6 and 3.7. Table 3.6 shows cumulative ranking of levels of development for

districts of all three states together. In 1961 among the first fifteen top ranking districts ten were from Maharashtra, five from Rajasthan and none were from Orissa. However in 1971 there were nine districts from Maharashtra and six from Rajasthan. In terms of their previous year ranking, four new districts have entered to occupy the top fifteen in 1971. They are Satara (previous year ranking 17), Ahmadnagar (27), Ganganagar (16) and Nasik (18). In 1981 among the top fifteen nine were from Maharashtra, three from Rajasthan and interestingly three were from Orissa. Cuttack which had the 30th rank in terms of development during 1971, emerged as the most developed districts in 1981. Other districts in the top fifteen were Sundargarh (previous year ranking 17) Sambalpur (41), Wardha (18), Amravati (16), Raigarh (19) and Solapur (17).

Table 3.7 depicts cumulative ranks of fifteen bottom ranking districts of the three states. In 1961 out of fifteen, seven were from Orissa, five from Maharashtra, and three from Rajasthan. In 1971, eight were from Orissa, six from Rajasthan and only one was from Maharashtra. Jaisalmer which had 12th rank and Dhenkanal 15th rank, in terms of development in 1961 emerged as least developed districts in 1971. In 1981 among the least developed districts, eight were from Orissa, seven from Rajasthan and none from Maharashtra.

Table 3.6

LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)
(CUMULATIVE)

1961		FIRST 15 DISTRICTS 1971		1981	
BIKANER	8.41	JAIPUR	12.23 (8)	CUTTACK	6.71 (30)
PUNE	7.96	PUNE	7.84 (2)	PUNE	6.53 (2)
NAGPUR	7.89	THANE	6.73 (5)	BIKANER	6.13 (7)
CHURU	6.86	NAGPUR	6.27 (3)	THANE	5.93 (3)
THANE	6.52	KOLHAPUR	5.71 (6)	SUNDERGARH	5.83 (17)
KOLHAPUR	5.57	CHURU	5.56 (4)	NAGPUR	5.60 (4)
AJMER	5.44	BIKANER	5.07 (1)	KOLHAPUR	5.49 (5)
JAIPUR	5.42	SATARA	4.90 (17)	JAIPUR	4.87 (1)
AMRAVATI	5.16	SANGLI	4.89 (11)	CHURU	4.87 (6)
JODHPUR	5.06	AJMER	4.76 (7)	SANGLI	4.78 (9)
SANGLI	4.75	AHMADNAGAR	4.61 (27)	WARDHA	4.57 (18)
JAISALMER	4.34	GANGANAGAR	4.57 (16)	AMRAVATI	4.54 (16)
WARDHA	4.33	NASIK	4.54 (18)	RAIGARH	4.40 (19)
SOLAPUR	4.32	JODHPUR	4.53 (10)	SOLAPUR	4.29 (17)
JALGAON	4.13	JALGAON	4.52 (10)	SAMBALPUR	4.25 (41)

Table 3.7

LEVELS OF DEVELOPMENT (FACTOR SCORE 1, MPCA)
(CUMULATIVE)

BOTTOM 15 DISTRICTS					
1961		1971		1981	

MAYURBHANG	1.47	MAYURBHANG	1.57(64)	KALAHANDI	1.76 (61)
KORAPUT	1.59	JAISALMER	1.64(12)	PHULBANI	1.97 (58)
KALAHANDI	1.66	BARMER	1.66(42)	BANASWARA	1.98 (51)
KEONJHAR	1.74	KORAPUT	1.72(63)	DUNGARPUR	1.98 (56)
PHULBANI	1.76	KALAHANDI	1.73(62)	JHALAWAR	2.14 (47)
PARBANI	2.02	JALOR	1.73(55)	MAYURBHANG	2.15 (64)
OSMANABAD	2.06	PHULBANI	1.89(60)	JALOR	2.15 (59)
BID	2.09	BOLANGIR	1.90(56)	KORAPUT	2.33 (61)
BOLANGIR	2.11	DUNGARPUR	1.95(51)	NAGPUR	2.40 (52)
JALOR	2.12	KEONJHAR	2.05(61)	BOLANGIR	2.40 (57)
NANDED	2.20	BALESWAR	2.05(50)	KEONJHAR	2.46 (55)
BANASWARA	2.23	DHENKANAL	2.13(35)	DHENKANAL	2.47 (53)
CHANDRA	2.31	NAGPUR	2.27(49)	BALESHWAR	2.50 (54)
DUNGARPUR	2.38	BANASWARA	2.23(53)	S.MADHOPUR	2.60 (46)
BALESWAR	2.44	CHANDRA	2.36(52)	TONK	2.64 (39)

From the analysis of these Tables, we can say that Maharashtra is the most developed state as the districts of this state occupied most of the ranks among the top fifteen developed districts during 1961, 1971 and 1981, and appeared least among the fifteen bottom ranking districts. Opposite is the case for Orissa, we consider this state as least developed, among the states, Maharashtra, Rajasthan and Orissa.

3.4 Correlation Analysis Between Levels of Development and Growth of IV, V and VI Class Size Towns

Table 3.8 depicts the correlation result of development and growth of different size classes of Small towns, for the time periods 1961-71, 1971-81 and for 1981-91.

Table 3.8

Correlation between levels of development and growth of different size classes of Small towns			
	Maharashtra	Rajasthan	Orissa
Levels of Development 1961 and growth of class IV towns in 1961-71 in districts	-0.1166	-0.0894	0.0184
Levels of Development 1961 and growth of class V towns in 1961-71 in districts	-0.4102	-0.0414	-0.1614
Levels of Development 1961 and growth of class VI towns in 1961-71 in districts	0.1677	-0.5682	-
Levels of Development 1971 and growth of class IV towns in 1971-81 in districts	-0.3288	0.0402	-0.3180
Levels of Development 1971 and growth of class V towns in 1971-81 in districts	0.0136	0.3856	0.1330
Levels of Development 1971 and growth of class VI towns in 1971-81 in districts	0.5206	0.9611	-
Levels of Development 1981 and growth of class IV towns in 1981-91 in districts	-0.1484	-0.0170	-0.4487
Levels of Development 1981 and growth of class V towns in 1981-91 in districts	-0.3154	0.2564	-0.0487
Levels of Development 1981 and growth of class VI towns in 1981-91 in districts	0.7317	-	-0.1942

Correlation results show that the relationship is insignificant for all size classes of towns, for all time periods, and for all states.

In 1961, Maharashtra and Rajasthan showed negative relationships, which were very weak and Orissa showed very low positive relationships for class IV towns. However for 1971 though Maharashtra and Orissa showed insignificant negative relationships, their value increased compared to 1961. But inversely, Rajasthan showed very weak positive relationship as compared to 1961. In 1981 all the three states showed negative correlations, but correlations value is much higher for Orissa.

Regarding the class V towns in 1961, all three states showed negative correlations, between levels of development and growth of class V towns. Though insignificant, Maharashtra showed relatively strong negative correlations, than other two states. Opposite is the case in 1971, when all three states showed positive insignificant correlations. But Rajasthan showed relatively strong positive correlation value. In 1981 Maharashtra and Orissa showed negative correlations, but Rajasthan showed weak positive correlation. Negative correlation is much stronger in case of Maharashtra than Orissa.

As very few districts had population in class VI towns, we cannot expect good correlation result from associating growth of

class VI towns with development. However, results showed that in 1961 Maharashtra had weak positive correlation, Rajasthan had strong negative but insignificant correlation. In 1971 both Maharashtra and Rajasthan showed positive correlations. In 1981 Maharashtra again showed positive correlation, but Orissa showed weak negative correlation between development and growth of Small towns.

From these correlation results, we can say that there is no significant relationship between levels of development and growth of Small towns. However, to some extent high negative correlation between levels of development and growth of class IV towns in Orissa during 1971 and 1981 reveals that in this state, backwards districts are taking part in urbanization processes of class IV towns.

No clearcut relationship can be established in case of class V towns, as the trend of correlation result is different for different time periods. However Maharashtra (-0.41) in 1961 and (-0.31) in 1971 showed negative relationship that means inverse relationship between development of districts and urban growth. But in case of Rajasthan (0.38) in 1971 and (0.25) in 1981 revealed that there developed districts are showing growth of class V towns. Probably it may imply that the regional characteristics (development) that explain growth of Small towns are different in this state. The growth of these towns are linked with the rural hinterland. Or it may also imply that due to

government investment the class V towns are growing, without having any linkages with rural hinterland.

Correlation value though insignificant for class VI towns, positive values for Maharashtra particularly during 1971 and 1981 showed that growth of class VI towns was associated with levels of development. Same can be explained for Rajasthan in 1971. But for Rajasthan in 1961 it showed the growth of class VI towns associated with least developed districts.

So, in general we can reject our hypothesis that there is positive association between economic development and urban growth, particularly for class IV and V towns. But to some extent we can accept this hypothesis for class VI towns. The vitality of class VI towns more or less depends upon its economic base than its population. In most cases these towns are created by government to functions as a industrial towns.

It can be more fruitful if we explain growth of Small towns by taking different variables separately. In the next part of this chapter we shall see the explanatory power of these variables in relation to Small towns growth.

3.5 Determinants of Small Town Growth

The growth of Small Towns of the districts of Maharashtra, Rajasthan and Orissa can be explained on the basis of the following variables :

- I-1 Yield of cereals per acre in kilograms, 1961, 1971 and 1981
- I-2 Net cropped area per rural agriculture worker (acre), 1961, 1971 and 1981
- I-3 Percentage of area under commercial crops to total cropped area, 1961, 1971 and 1981
- I-4 Percentage of irrigated area to total cropped area (gross)
- I-5 Percentage of workers in non-household manufacturing, 1961, 1971 and 1981
- I-6 Percentage of workers in other services, 1961, 1971 and 1981
- I-7 Percentage of urban population, 1961, 1971 and 1981
- I-8 Number of Registered Vehicles per lakh population, 1961, 1971 and 1981
- I-9 Surfaced Road length per 100 km², 1961, 1971 and 1981
- I-10 Rural Literacy, 1961, 1971 and 1981
- I-11 Number of commercial bank per lakh population, 1961, 1971 and 1981
- I-12 Hospital beds per 10,000 population, 1961, 1971 and 1981
- I-13 Percentage of villages electrified, 1961, 1971 and 1981
- I-A Number of agriculture labourers in relation to cultivators
- I-B Density of population in rural areas per square km
- I-C Percentage of urban population in class I cities.

In the first chapter we have discussed the nationality of choosing these indicators in explaining urban growth.¹⁵

¹⁵ See page 22, Chapter 1.

Class IV Towns

In Maharashtra during 1961-71 none of the variables could explain, the significant proportion of variations in the growth of class IV towns. The value of F ratio is nowhere significant. However during 1971-81, results show that rural literacy explained maximum proportion of variation in the growth of class IV towns, followed by commercial banks, class I cities, surface road length, proportion of agricultural labourers and percentage of urban population. Though later variables cause marginal increase in R^2 value, we take step 4 as the optimal fit relation. The F value is significant at step 4 at 1 per cent

Variables	B	SE	t	Signif. t	R^2	F	Signif. f
I-10	-.017	9.342	-1.873				
I-9	-.171	.040	-4.175	.001			
I-11	.681	.156	4.347	.000	.723	11.80	.0001
I-C	-.010	3.978	-2.554	.019			

of significance. Here indicators of rural literacy, surfaced road and percentage of population in class I cities have negative effect on growth of class IV towns. Indicator such as commercial banks showed positive effect on growth of class IV towns. Results during 1981-91 showed that percentage of villages electrified explained maximum proportion of variation in the growth of class IV towns. We take step 2 as the optimal fit, as after that the value of R^2 is not strong enough to counterbalance the reverse effect on the explanatory power of the model due to increase in n degree of freedom. The value of F ratio is significant at

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-13	-.074	.023	-3.104		.328	4.89	.018
I-C	.012	9.856	1.224				

step 2 at 5 percent level of significance. Here indicator percentage of village electrified is negatively associated with growth of class IV towns and t value of regression coefficient is significant at 1 percent level. Though percentage of urban population in class I cities was positively associated with growth of class IV towns regression coefficient of this indicator was not significant. Contrary to our hypotheses, that class I towns hinders growth of Small towns; in Maharashtra probably dispersion is taking place from class I towns, helping the growth of Small towns.

In Rajasthan, during 1961-71, relationship given at step 4 identified an optimal fit. Here percentage of worker in non-household manufacturing was negatively associated with growth

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-5	-2.790	.803	-3.475				
I-8	6.867	4.519	1.519		.405	3.07	.043
I-7	.143	.068	2.098				
I-4	.066	.039	1.690				

of class IV towns. A one percent increase in Non-Household worker caused -2.7 percent change in growth of class IV towns. The regression coefficient value of this indicator is also significant at 1 percent level. However other indicators namely

Registered vehicles, percentage of urban population, irrigated areas were positively associated with growth of class IV towns. But t value was significant only for indicator of urban population. These results may imply that class IV towns in Rajasthan during 1961-71 had no strong economic base. It was only the urban population base that was attracting people to urban areas.

During 1971-81 Hospital beds explains maximum proportion of variation in the growth of class IV towns in Rajasthan. Though directly, Hospital beds cannot explain urban growth. Its give a convergence toward urban phenomena. Urbanization leads to an increased availability of medical facilities. During this period we can identify step 11 as an optimal fit. Together all indicators explains 92 percent of variation in

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-12	.448	.048	9.190	.000			
I-9	-.021	.059	-3.65	.721			
I-7	-.169	.031	-5.348	.000			
I-1	1.025	3.044	3.370	.005			
I-3	-.066	.019	-3.431	.004	.927	12.78	.000
I-6	-.128	.052	-2.476	.027			
I-A	.628	1.090	.576	.574			
I-10	.158	.065	2.401	.032			
I-B	-.020	8.153	-2.508	.026			
I-2	1.634	1.033	1.581	.137			
I-11	.240	.220	1.090	.295			

the growth of class IV towns. The F value was significant at 1 percent level of significance. Indicators namely Hospital beds,

surfaced road, yield of cereals number of agriculture labour, rural literacy, net cropped area per rural agriculture workers were positively associated with urban growth. However, percentage of urban population, commercial crops, workers in other services, density of rural population have negative effect on the growth of class IV towns. But regression coefficient values are not significant for indicators of surfaced road, agricultural labourers, commercial banks and for net cropped area per agricultural workers.

During 1981-91 none of the variables explained significant proportion of variations in the growth of class towns in Rajasthan. The F value was nowhere significant.

In Orissa during 1961-71 indicator such as net cropped areas per agricultural worker explained 39 percent of the variations in the growth of class IV towns. Here step 7 we consider as a optimal fit relation. These seven indicators explained 99 percent of variation in the growth of class IV towns. Here F value is significant at 1 percent level and regression coefficient values are also significant. Indicators such as net cropped area per

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-2	-.083	.018	-4.458	.046			
I-10	-.579	8.024	-72.222	.000			
I-12	10.201	.371	27.461	.001	.999	1338.18	.0007
I-6	-1.417	.070	-20.071	.002			
I-9	.240	.040	5.943	.027			
I-1	-6.256	6.459	-9.686	.010			
I-7	.069	.011	6.304	.024			

agricultural workers, rural literacy, other services workers and agriculture yield showed negative effect on the growth of class IV towns. Indicator such as agricultural yield showed that a single unit increase in productivity leads to a 6.25 percent decline in the growth of class IV towns. This means that due to availability of high per capita land per agriculture workers and agriculture productivity discouraging migration to urban areas in Orissa. However Hospital beds, surfaced roads and percentage of urban population have had a positive effect on the growth of class IV towns. Specially B value is quite high (10.201) for indicator Hospital beds.

During 1971-71, in Orissa we consider step 7 as an optimal fit. These seven indicators explains 99.6 percent of variation in class IV towns growth. Here F value is significant at 1 percent level. Indicator on commercial banks explained maximum proportion of variation (26.7 percent). Probably it means that greater capital investment is required to generate more towns. It also indicate infrastructural base of the districts and improvement in infrastructure and urbanization, often occur simultaneously. Indicators such as commercial banks, rural literacy and commercial crops were positively effecting growth of class IV towns. But regression coefficient of commercial crops was not found significant. Indicators of irrigated area net cropped area per agricultural workers, number of agricultural labourers in relation to cultivators and yield of cereals

negatively effected growth of class IV town in Orissa during 1971-81.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-11	1.883	.430	4.374	.048			
I-4	-.058	7.920	-7.364	.017			
I-2	-.254	.024	-10.498	.009	.996	80.798	.012
I-A	-2.327	.472	-4.926	.038			
I-1	-3.699	5.108	-7.242	.018			
I-10	.101	.014	7.247	.145			
I-3	.079	.034	2.328	.011			

In Orissa, during 1981-91, results showed that indicator on commercial crops explained maximum (42.7 percent) variation in the growth of class IV towns. Relationship given in step 8,

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-3	.133	3.353	39.760	.000			
I-8	-7.935	3.165	-25.068	.001			
I-10	.056	2.468	22.917	.001			
I-5	.189	.013	14.37	.005	.999	351.69	.002
I-C	.016	1.182	14.335	.004			
I-6	-.200	.013	-15.045	.004			
I-12	-.080	.011	-6.987	.019			
I-9	-.013	8.054	-1.728	.226			

we consider it as an optimal fit relation. Here F value is significant at 1 percent level of significance. Indicators of commercial crops, rural literacy, non-household manufacturing workers, percentage of urban population in class I cities, have a positive effect on the growth of class IV towns. However, registered vehicles, other services workers, hospital beds, surface road showed a negative effect on the growth of class IV towns.

Class V Towns

In Maharashtra during 1961-71, indicator of surfaced road explained maximum variation in the growth of class V towns. We considered relationship given in step 8 as an optimal fit. Value of F becomes less significant in the subsequent step. There eight indicator together explained 77.8 percent of the variation in the growth of class V towns. Indicators of surface roads, workers in other services, density of population in rural areas,

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-9	-.018	.058	-.324	.752			
I-13	9.389	.082	.114	.911			
I-8	5.763	1.403	4.107	.001			
I-6	-.390	.174	-2.237	.047	.775	4.739	.010
I-B	-.048	.014	-3.315	.006			
I-A	-2.471	.785	-3.145	.009			
I-4	-.161	.069	-2.309	.041			
I-12	-.085	.061	-1.399	.189			

agricultural labourers, percentage of irrigated areas and hospital beds do not have a positive effect on the growth of class V towns in Maharashtra. Indicators such as percentage of villages electrified and registered vehicles had a positive effect on the growth of class V towns. Regression coefficient of indicator, registered vehicles 5.76 in significant at 1 percent level of significance.

During 1971-81, relationship given in step 10 was considered as an optimal fit to explain variation in the growth of class V

towns in Maharashtra. Here F value is significant at 5 percent level of significance. Indicators such as net cropped area per

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-2	.490	.387	1.266	.234			
I-4	.882	.210	4.196	.001			
I-3	.146	.072	2.020	.070			
I-9	-.285	.185	-1.538	.155	.745	2.927	.052
I-11	3.210	.929	3.454	.006			
I-8	-.013	4.018	-3.416	.006			
I-12	.469	.167	2.803	.018			
I-A	8.021	3.068	2.614	.025			
I-1	8.714	3.783	2.303	.044			
I-10	-.136	.073	-1.849	.094			

agricultural worker, percentage of irrigated area, commercial crops, commercial banks, hospital beds, agricultural labourers in relation to cultivators, yield of cereals have had a positive effect on the growth of class V towns. Among these indicators, agricultural labourers, yield of cereals and commercial banks showed highly significant regression coefficient. This means that because of high proportion of agricultural labourers in rural areas, push them to urban areas in search of jobs. High agricultural productivity probably initiates greater demand for inputs and allied services and so improvement of service base of class V towns in Maharashtra. However, registered vehicles and surfaced roads were negatively associated with growth of class V towns in Maharashtra. It probably means that due to improved communication, people preferred to commute to urban areas for work, rather than to stay there.

However during 1981-91 none of the variables could significant proportion of variations in the growth of class V towns in Maharashtra.

In Rajasthan during 1961-71 none of the variables could explain significant proportion of variation in the growth of class V towns.

During 1971-81 results show that indicator of registered vehicles explained maximum proportion of variation (45.3) in the growth of class V towns in Rajasthan. Here we identified step 8

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-8	2.524	6.612	3.818	.003			
I-2	-2.978	1.176	-2.533	.029			
I-11	.016	.319	.052	.959			
I-4	.029	.012	2.283	.045	.808	5.275	.008
I-13	.049	.028	1.747	.111			
I-3	-.056	.032	-1.748	.111			
I-A	-1.636	1.246	-1.313	.218			
I-C	-6.172	5.566	-1.109	.293			

as an optimal fit as after that significance level of F value increases. These 8 indicator together explains 80.8 percent of variation. Among them registered vehicles, commercial banks, irrigated area, villages electrified were positively effecting the growth of class V towns. However, only indicators of registered vehicles and irrigated area showed significant regression coefficient. Indicators of net cropped area per agricultural workers, commercial crops, agricultural labourers

per cultivator and percentage of urban population in class I cities have had a negative effect on the growth of class V towns.

During 1981-91 we consider step 10 as an optimal fit. These 10 indicators together explains 95.6 percent of variation in the growth of class V towns in Rajasthan. Here F value was significant at 5 percent level of significance. Indicators, such as registered vehicles, net cropped area per agricultural workers, rural literacy, surfaced road and workers in non-household manufacturing had a positive effect on the growth of

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-6	-.020	.010	-2.069	.107			
I-8	4.322	7.256	5.743	.004			
I-7	-.356	.079	-4.499	.010			
I-2	.011	3.929	2.978	.040	.956	8.734	.025
I-10	.408	.116	3.507	.024			
I-13	-.414	.097	-4.258	.013			
I-9	.526	.102	5.129	.006			
I-6	-2.133	.402	-5.297	.006			
I-5	2.385	.533	4.468	.011			
I-3	-.453	.103	-4.401	.011			

class V towns in Rajasthan. All these regression coefficient are significant. But indicators such as percentage of urban population, villages electrified, workers in other services, and commercial crops have had a negative effect on the growth of class V towns.

In Orissa, during 1961-71, results show that rural literacy explains maximum proportion of variations (36.7) in the growth of class V towns. Step 7 is considered as optimal fit relations.

These 7 indicators together explains 99.8 percent of variation in the growth of class V towns in Orissa.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-10	-.297	.015	-18.787	.0003			
I-6	.114	.035	3.175	.0503			
I-B	.049	3.610	13.838	.0008	.998	252.68	.0004
I-12	2.111	.139	15.180	.0006			
I-11	11.687	.781	14.957	.0006			
I-9	-.466	.069	-6.722	.0067			
I-C	.016	4.464	3.639	.035			

Indicators namely percentage of workers in other services, registered vehicles, hospital beds, commercial banks, urban population in class I towns have a positive effect on the growth of class V towns. Whether rural literacy and surface road have had a negative effect on the growth of class V towns. But we expect a positive association between literacy and urbanization, because literacy help to acquire job market information of urban areas. But we can expect a negative association between surface road and urbanization, because it helps rural people to commute with urban work places, rather than to stay there.

Results showed that during 1971-81, two variables namely registered vehicles and non-household workers, together explain 77.3 percent of the variation in the growth of class V towns in Orissa. But as we add more variables R² value goes on increasing. We choose step 8 as an optimal fit. These 8 variables altogether explain 99.9 percent of variation. F value is significant at 1 percent level. Indicators such as registered vehicles, rural

literacy, other services workers, commercial crops, positively effect the growth of class V towns. Whether indicators such as non-household manufacturing workers, population in class I cities, villages electrified, hospital beds have had negative effect on the growth of class V towns. Regression coefficient of non-household manufacturing workers and hospital beds are not significant. Population in class I cities in a districts may hinders the growth of Small towns in that districts, by attracting rural people to such cities. Likewise electrification of villages can facilitate agricultural as well as non-agricultural activities, and this can discourage migration to urban areas. So we can expect negative effect from these two indicators on the growth of Small towns.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-B	.061	3.049	20.100	.002			
I-5	-1.197	.312	-3.826	.062			
I-10	.289	.028	10.041	.009			
I-C	-.178	.017	-9.940	.010	.999	282.35	.0035
I-6	1.915	.112	16.960	.003			
I-3	.623	.099	6.276	.024			
I-13	-.632	.137	-4.604	.044			
I-12	-1.024	.288	-3.554	.070			

During 1981-91, step 7 is considered as an optimal fit relations. Here all 7 indicators explained 98.6 percent of the variation in the growth of class V towns in Orissa. The value of F is significant at 1 percent level of significance. Indicators namely surface road length, rural literacy, percentage of urban population have showed negative effects on the growth of class

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-9	-1.013	.120	-8.446	.003			
I-10	-.025	.029	-.873	.447			
I-7	-.621	.073	-8.479	.003	.986	30.566	.0087
I-12	.454	.107	4.212	.024			
I-6	.594	.122	4.848	.016			
I-5	.527	.165	3.182	.050			
I-4	.090	.030	3.005	.057			

V towns. Regression coefficient for indicators of road length and urban population were significant at 1 percent level of significance. This means that urban population base in the districts of Orissa is helping in the growth of Small towns (class V). Whether indicators hospital beds, other services workers, non-household manufacturing workers, irrigation have had positive effect on the growth of class V towns. Regression coefficient for indicators on irrigation was not significant, but others were significant at 5 percent level. It means that during 1981-91 class V towns of Orissa had service, manufacturing and infrastructural base.

Class VI Towns

In Maharashtra during 1961-71, indicator such as irrigated area explained 53.1 percent in the variation in the growth of class VI towns. The relationship given in the step 5, identified as an optimal fit. These 5 variables together explained 94.4 percent of variation in the growth of class VI towns, indicators such as irrigation and workers in other services, negatively

effected the growth of class VI towns. Whether indicators such as net cropped area per agricultural workers, commercial crops,

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-4	-.528	.098	-5.365	.003			
I-2	.412	.093	4.435	.006			
I-3	.120	.035	3.379	.019	.944	16.989	.003
I-6	-.539	.248	-2.174	.081			
I-10	.412	.226	1.817	.128			

rural literacy, have had a positive effect on the growth of class VI towns. Regression coefficient for indicators of net cropped area was significant at 1 percent level and of commercial crops at 5 percent level. This means that during 1961-71 in Maharashtra agricultural development indicators helped in the growth of class VI towns.

During 1971-81 three variables (step 3) accounts for 99.9 percent of variation in the growth of class Vi towns in Maharashtra. Indicators such as commercial banks and non-household manufacturing workers positively effects the growth of class VI towns. Whether irrigated area had negative effect

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-11	1.451	6.990	207.668	.003			
I-4	-.465	1.450	-320.674	.002	.999	59593.09	.003
I-5	.137	2.288	60.241	.010			

on the growth of class VI towns. It means that class VI towns during this period in Maharashtra grown due to infrastructural and economic base.

During 1981-91 number of agricultural labourers in relation to cultivators explain 92.1 percent of variation on the growth of class VI towns in Maharashtra. But negative regression coefficient of this indicator means that a large number of agricultural labours which supposed to work as a push factor in the urban growth had not worked here. This indicator and commercial crops together explains 99.7 percent of variations.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-A	-1.082	.057	-18.714	.034	.997	224.190	.047
I_B	.015	2.571	5.864	.107			

In Rajasthan, during 1961-71, indicator such as other services workers and rural density together explained 71.9 percent of the variation. Negative regression coefficient of indicator other services means that class VI towns in Rajasthan during that period had not worked as service centres, but was a product of rural push factor.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-6	-.467	.159	-2.929	.032	.719	6.422	.041
I-B	.037	.016	2.345	.066			

In Orissa during 1961-71, indicator other services workers explains 99.7 percent of variation in the growth of class VI towns. The regression coefficient of this indicator is positive and significant at 5 percent level. This means that class VI towns in Orissa during that period had worked as service centres.

Variables	B	SE	t	Signif. t	R ²	F	Signif. f
I-6	8.288	.403	20.550	.031	.997	422.29	.031

The contribution of an added variable in explaining the growth of Small towns can be known from the changes in the value of R². Here we have directly analyzed the relationship given in the optimal fit step, without going into details of each steps. Tables given in the appendix are self explanatory in this regard.

In the next part we shall present a summary and identify those indicators which explain or have a positive or negative effect on the growth of Small towns, and we shall test those hypotheses discussed in the earlier part of this chapter. We here build some hypotheses, of possible effect on the growth of Small towns.

3.6 CONCLUSION AND IMPLICATIONS

Agricultural development indicators (indicators I-1 to I-4) can initiate development of non-agricultural employment either in towns or in rural areas itself, by creating demands for many consumer goods and services. We can expect twin effect (a) it can explain growth of towns or (b) it can discourage migration to urban areas. But distressed agricultural development is likely to push people to urban areas. This is reflected in the growth of towns.

Employment in non-household manufacturing (I-5) and in other

services (I-6), reflects economic base of towns and services and administrative activities. So, growth of these two indicators will be reflected in urban growth. With a high urban base (I-7) it is assumed to experience high urban growth.

Surfaced roads and registered vehicles (I-8 and I-9) can encourage population movement by providing information concerning urban opportunities. This too, can help in urban growth. But with, improved transport facilities rural people can communicate to urban work places, without residing there, so, it can discourage urban growth also. Likewise a positive association between literacy (I-10) and urbanization can be expected, as it can help to acquire labour market information.

Indicators such as commercial banks (I-11), hospital beds (I-12), show urban phenomena and social and economic infrastructural base of the districts. So they can influence urban growth. On the other hand percentage of villages electrified (I-13), showed an urban phenomenon and was expected to strengthen the economic base of rural areas. This can negatively effect urban growth.

A high proportion of agricultural labourers in relation to cultivator (I-A) and high rural density (I-B) can push people out of villages to urban areas. High proportion of urban population in large cities (I-C) can pull people to these mega cities and thereby hinder the growth of Small towns.

But our analysis show that, against the expected effect of indicators on the growth of Small towns, indicators during different time periods and in different states, sometimes showed positive effects and sometimes negative effects (Tables 3.9 to 3.11).

In case of class IV towns over the three time periods, in the three states, only indicator namely commercial banks per lakh population positively explains the growth of class IV towns. On the other hand indicators such as villages electrified and rural density in all cases had a negative association with urban growth (Table 3.9). It implies that commercial banks which can be taken as economic infrastructural base of a district, in required, or greater capital investments is required to generate the growth of Small towns (class IV towns). On the other hand electrification of villages, probably creating economic opportunities in rural areas, to discourage migration to urban areas. Rural density also negatively effecting growth of Small towns means that, pressure on land probably counterbalanced by high agricultural productivity.

In the case of class V towns, indicators such as non-household manufacturing workers, commercial bank and hospital beds in all cases and in all time periods have had a positive effect on the growth of class V towns. But the regression coefficient value of non-household manufacturing and hospital beds were not significant. On the other hand percentage of urban

Table 3.9

Summarised Table of Determinants of Class IV Town Growth

Maharashtra

1961-71 =

1971-81 = N (I-9**, I-C*, I-10); P (I-11**)

1981-91 = N (I-13**); P (I-C)

Rajasthan

1961-71 = N (I-5**); P (I-7*, I-8, I-4)

1971-81 = N (I-3**, I-7**, I-6*, I-B*);
P (I-12**, I-1**, I-10*, I-2, I-9, I-11, I-A)

1981-91 =

Orissa

1961-71 = N (I-1**, I-6**, I-10**, I-2); P (I-7*, I-9*, I-12**)

1971-81 = N (I-1*, I-2**, I-4*, I-A*); P (I-10*, I-11*, I-3)

1981-91 = N (I-6**, I-8*, I-12*, I-13);
P (I-3**, I-5**, I-10**, I-C**)

Note:

N = Indicators have negative effect on growth of class IV towns

P = Indicators have positive effect on growth of class IV towns

** = Regression coefficient of indicator significant at 1 per cent level

* = Regression coefficient of indicator significant at 5 per cent level

Table 3.10

Summarised Table of Determinants of Class V Town Growth

Maharashtra

1961-71 = N (I-4*, I-6*, I-A**, I-B**, I-9, I-12);
 P (I-8**, I-13)

1971-81 = N (I-8**, I-9, I-10);
 P (I-1*, I-4**, I-11**, I-12**, I-A*, I-2, I-3)

1981-91 =

Rajasthan

1961-71 =

1971-81 = N (I-2*, I-3, I-C, I-A); P (I-4*, I-8**, I-11, I-13)

1981-91 = N (I-3**, I-6**, I-7**, I-13**, I-C);
 P (I-2*, I-5**, I-8**, I-9**, I-2*)

Orissa

1961-71 = N (I-9**, I-10*); P (I-6*, I-8**, I-11**, I-12**, I-C*)

1971-81 = N (I-13*, I-C**, I-5, I-12);
 P (I-3*, I-6**, I-8**, I-10**)

1981-91 = N (I-7**, I-9**, I-10); P (I-5*, I-6*, I-12*, I-4)

Note:

N = Indicators have negative effect on growth of class IV towns

P = Indicators have positive effect on growth of class IV towns

** = Regression coefficient of indicator significant at 1 per cent level

* = Regression coefficient of indicator significant at 5 per cent level

Table 3.11

Summarised Table of Determinants of Class VI Town Growth

Maharashtra

1961-71 = N (I-4**, I-6); P (I-2**, I-3*, I-10)

1971-81 = N (I-4**); P (I-5**, I-11**)

1981-91 = N (I-A*); P (I-3)

Rajasthan

1961-71 = N (I-6*); P (I-B)

1971-81 =

1981-91 =

Orissa

1961-71 =

1971-81 =

1981-91 = P (I-6*)

Note:

N = Indicators have negative effect on growth of class IV towns

P = Indicators have positive effect on growth of class IV towns

** = Regression coefficient of indicator significant at 1 per cent level

* = Regression coefficient of indicator significant at 5 per cent level

population, rural density and villages electrified in all cases showed a negative effect on the growth of class V towns (Table 3.10). This means that class V towns with a proper economic base taking shape and with additional diversification of economic activities which can come about only by locating more investment which can tap non-agricultural workers and expand their base and by providing sufficient infrastructure to attracts people from rural and other urban areas can lead to a development class V towns.

In the case of class VI towns, indicators such as irrigated area, other services workers and proportion of agricultural labourers in relation to cultivator showed negative effect in all cases. On the otherhand net cropped area per agricultural workers, commercial crops, non-household manufacturing workers and commercial banks showed positive effect on the growth of class VI towns. Rural density and rural literacy also showed positive effect but regression coefficients were insignificant (Table 3.11). This means that class VI towns are growing with a proper economic base, which is facilitated by commercial banks, (we infer greater capital investment). On the other hand unavailability of agricultural labours, probably attracting workers to manufacturing activities, which is stimulated by investments (commercial banks). Positive regression coefficient of commercialization of cropping pattern means that class VI towns are growing also as a market town.

We can therefore come to a conclusion that indicator such as commercial banks per lakh population have had a positive effect on urban growth of Small towns. Whether village electrification and rural density have had a negative effect on the growth of Small towns. Effect of indicator such as commercial banks and villages electrified prove our hypotheses. It means that bank loans helping more economic activity in the towns. On the other hand it also means that greater investment in infrastructure (eg. electricity) leads to a diversification of activities in rural areas from agricultural to non-agricultural. National Sample Survey data shows that during the period 32nd round (1977-78) to 43rd round (1987-88) there were decline in agricultural activities in the states of Maharashtra by (-.68),¹⁶ Rajasthan (-2.30) and Orissa (-1.25). Whether rural non-agricultural activities increases in these three states; Maharashtra (2.13), Rajasthan (6.78) and Orissa (4.93). So it (infrastructure investment) might reflects in the diversification and workforce participation rate in the rural areas of this three states.

But there is insufficient appreciation of the infrastructural investment in the 1994-95 budget. The data for commercial banks show that much of the bank credit growth has been for food credit. Food credit by scheduled commercial banks has grown over 64 percent during 1993-94 compared to less than

¹⁶ Annual compound growth for rural male workers.

18 percent during the corresponding period of 1992-93. The growth rate of non-food credit has fallen dramatically from 17 percent during 1992-93 to less than 3 percent during 1993-94 (Economic Survey Report 1993-94 : 7). We can infer that slowing down of India's infrastructural investment likely to have repercussion on the growth of Small towns. As we have seen from our analysis that it is commercial banks investments and infrastuctural investment (eg. electricity) that explain maximum proportion of variation in the growth of Small towns.

We cannot rely on the other indicators as their explanations differ in the three states over the three time periods. It is probable that different socio-economic base of the three states of Maharashtra, Orissa and Rajasthan and also separate economic base of different size class towns, are causes for such variations.

CHAPTER IV

GROWTH OF NON-AGRICULTURAL SECTORS IN DISTRICTS AND THEIR CORRELATES

4.1 Introduction

In the third chapter we have discussed the determinants of Small towns growth. In this chapter we shall look at the district level growth of non-agricultural activities at one and two digit level both for urban and rural areas. We shall also correlate the diversification of non-agricultural activities, with some developmental variables. The processes which encourage or prevent diversification of non-agricultural activities in any area are diverse and difficult to analyse, Broadly, two types of phenomena contribute to the growth of non-agricultural sector (Rakesh Basant);¹ those representing development and captured by variables such as agriculture productivity, commercialization, urban-ization etc. and others relating to distress such as unemployment and poverty. In this chapter we shall correlate the growth of non-agriculture activities with agriculture yield (foodgrains), commercialization (percentage of area under commercial crops to total cropped area), urbanization and with rural density. All the indicators are at distinct level. The last one has taken as a proxy to unemployment, as districtwise unemployment data are not available.

¹ Rakesh Basant (1993), Diversification of Economic Activities in Rural Gujarat: Key Results of a Primary Survey Indian Journal of Labour Economic Vol 36 (3).

The agriculture led growth model suggest that a sustained rise in farm output and income can act as a prime mover in initiating the development of non-agriculture employment. (Bhalla 1990).² Papola (1987)³ found that the performance of rural industrial sector in different states was broadly related with the levels of agricultural productivity and more closely with the growth rate of agriculture output.

Predominance of non-food crops in the cropping pattern can facilitate non-agriculture employment. This can have a direct impact on non-agricultural activity by supplying raw materials for processing , creating greater demand for inputs and allied services, raising demand for consumption goods and generating surplus for investment. Consequently the composition of economic activities is likely to shift steadily in favour of non-agriculture (Rakesh Basant 1993)⁴.

Improvement in infrastructural facilities and urbanization, often goes hand in hand (Rakesh Basant 1993). Urbanization and the associated improvements in infrastructure may render some non-agricultural activities to develop. Urbanization can effect the rural labour market in two ways: The rural areas may cater to the demand for non-agriculture products or services in the

² Bhalla S.(1990)' *Op. cit.*'

³ Papola J.S. (1987), *Op. cit.*

⁴ Rakesh Basant, (1991). *Op. Cit.*

nearly urban areas; and some rural resident may communicate to the urban work place.

A variety of non-agricultural activities, are visible in densely populated area. High population pressure on land may limit the number of household able to survive from agriculture alone, and force some people to undertake non-agricultural activities.

Vaidyanathan (1986)⁵ has examined inter-state variation in the ratio of non-agricultural employment to total employment in rural areas, with the help of four variables, (i) Crop output per head of agricultural population (ii) the gini index of concentration of operational holding, (iii) the percentage of cropped area devoted to non-foodgrain crops and (iv) unemployment rate in rural areas. Though vaidynathan found significant relations between these four indicators and non-agricultural employment growth, the indicator unemployment rate has shown strong relation than other three indicators.

A study by Mahendra Dev (1990)⁶ also found that unemployment rate and productivity are positively and strongly related to non-agricultural employment.

⁵ Vaidyanathan, A, (1996), Op. Cit.

⁶ Dev S.M. (1990, Op. Cit.

To Unni (1991)⁷ it was difficult to decipher to what extent the above relationships may actually be capturing distress diversification. Both high levels of agriculture production and land concentration can lead to spillover of excess labour into unproductive non-agriculture jobs. A positive association between unemployment rate and percentage of non-agriculture worker, cannot be taken as a confirmation of the distress diversification. For example, in some regions with a higher proportion of population below poverty, the proportion of male workers in non-agricultural sector may be low. This would imply that distress conditions don't necessarily lead to the growth of non-agricultural activities. It is perhaps due to lack of demand for non-agricultural goods in such regions.

Before going on to correlate the growth of non-agricultural activities with the four variables, let us have a look at the growth of non-agriculture divisions in the districts of the three States, Maharashtra, Rajasthan and Orissa. We analysed the growth trend in National industrial Classification, divisionwise as well as for major groups (two digit). Since NIC classification for 1991 census was not available, as yet, we have converted workforce categories of census into some NIC divisions. Methodology, regarding this has been indicated in the first chapter.

⁷ Unni, Jeemol. (1991), "Regional variations in Rural Non-Agricultural Employment: An Explanatory Analysis", *Economic and Political Weekly*, Jan 19.

4.2 Growth Trend of Non-Agricultural Divisions in Maharashtra, Rajasthan and Orissa, during 1961-91:

Let us first look at the growth of rural non-agricultural divisions in the districts of the three states. Here we shall summarize some important findings as depicted in the tables 4.1 and 4.2. Details of the growth trend of non-agricultural sectors are given in the Appendix. All the growth rates in figures are annual compound growth rates.

Growth of Rural Non-Agricultural Division in Maharashtra.

In Mining and Quarrying most of the districts of Maharashtra showed a negative growth rate during 1961-71. However some of them showed a high growth rate during 1971-81 and some during 1981-91. Amravati (32.81), Buldana (25.59), Nasik (23.97), Bidar (18.33) Pune (17.70) are among the districts that showed high growth rate during 1981-91, while Raigarh (25.18) Dhule (15.55), Yavatmal (14.27), Ratnagiri (13.60) and Nagpur (7.42) showed high growth rate during 1971-81.

In the case of the Manufacturing sector the general trend is that, they showed a high growth during 1971-81 and subsequently slowed down during 1981-91. Only Satara showed a rising trend during 1981-91. Whereas Bhandara showed a negative trend both during 1971-91 and 1981-91. Raigarh (6.82), Satara (4.12), Pune (3.22), Kolhapur (3.26) Osmanabad (2.38) showed high growth during 1987-91. While Thana (8.07), Raigarh (7.22), Akola

(5.97) Aurangabad (5.50), Nasik (5.25) showed high growth during 1971-81.

Rural Utility sector, showed a declining trend in growth rate during 1971-81 in most of the Maharashtra districts. Only Raigarh, Solapur, Osmanabad, Akola, Wardha, Nagpur and Chandrapur showed a high growth rate during 1971-81, than in 1961-71. Bid (87.60), Nanded (84.30), Aurangabad, (70.70), Ahmadnagar (45.18), Nasik (41.92) showed very high growth rate during 1961-71. While Wardha (25.33), Osmanabad (20.68), Aurangabad (17.53), Bid (16.64, and Jalgaon (15.36) showed high growth during 1971-81.

Construction sector in rural Maharashtra showed in general a rising trend in most of the districts during 1971-81, which then declined during 1981-91. Pune showed a constantly increasing trend in the three decades. Wardha, Osmanabad and Amravati showed a high growth rate during 1981-91, whereas Thana, Bhandara and Chandrapur showed a constantly declining trend during the three decades. Nagpur (18.45), Bid (15.97), Satara (12.50), Sangli (10.81), Raigarh (10.58), showed high growth during 1971-81; and Chandrapur (10.81), Bhandara (10.12) and Thana (8.69) during 1961-71, showed high growth rate.

During 1971-81, wholesale and Retail Trade division showed a rising trend in all districts of Maharashtra except in case of Nagpur. Nagpur showed a very high negative growth rate (-23.19) during 1971-81, Buldana (6.95) Nanded (6.42), Nasik (6.32), Akola

(5.52) and Osmanabad (4.91) showed high growth rate during 1971-81 whereas Aurangabad (2.51) Thana (2.04), Solapur (1.61) showed high growth rate among the districts in Maharashtra.

In Transport and Communication Division most of the districts in rural Maharashtra showed a rising trend in growth rate during 1971-81. These districts showed a decline during 1981-91. Constantly rising trend in growth can be seen in case of Jalgaon, Kolhapur, Yavatmal, Nagpur and in Bhandara. Satara and Parbani had a slowing down in their growth during 1971-81 but it picked up during 1981-91. Bid (8.93), Osmanabad (8.43), Aurangabad (8.30), Kolhapur (8.04) and Yavatmal (7.38) were the top ranking districts that showed high growth rate.

Regarding the case of Financing, Insurance, Real Estate and Business Service, most of the districts showed a high growth rate during 1971-81. Among them notables were Yavatmal (14.73), Bhandara (13.68), Wardha (13.60), Nagpur (12.69) and Thana (10.53).

Growth of Community, Social and Personal Services was not impressive in rural Maharashtra. Half of the districts showed declining growth rate during 1971-81. Districts that showed a high growth rate, notables among them were Pune (10.75) and Thana (7.85).

Opposite to general urban trend, Utility sector. Financing and Business Services and Community, Social and personal Services

showed a declining trend in growth rate, which were quite beyond the expectation of tertiaryization of the economy.

Growth of Rural Non-Agricultural Division in Rajasthan

Mining and Quarrying activities in all the districts of Rajasthan, except that of Churu and Jaisalmer showed a high growth rate during 1971-81, as compared to 1961-71. It slowed down even to a negative growth rate during 1981-91. Jaisalmer (36.83) and Churu (24.21) showed very high growth rate during 1981-91.

Manufacturing sector in the all districts of rural Rajasthan showed a high growth rate in during 1971-81, but slowed down during 1981-91. Only exceptional case being Ajmer which showed a negative growth trend during 1971-81. Udaipur (2.24), Bhilwara (1.87), jaisalmer (1.93) were the top ranking districts that showed high growth during 1981-91. Whereas, Bikaner (15.22), Churu (8.71), Barmer (8.39), Jodhpur (7.75), Ganganagar were among top ranking districts, showing high growth of rural Manufacturing.

In most of the districts of rural Rajasthan, Utility sector showed a rising trend in growth during 1971-81. Notable among them were Sikar (72.30), Bharatpur (55.90), Jaipur (39.54), Jhunjhunun (36.90) and Sirohi (36.25). Declining trend was visible in case of Jodhpur, Udaipur, Dungarpur, Ganganagar, Bikaner and Jaisalmer.

Regarding the construction sector in rural Rajasthan, four different trends in growth rate can be observed. Most of the districts (sixteen) showed a high growth rate during 1971-81. They showed down during 1981-91. Bikaner, Jaisalmer and Bundi showed a constantly declining trend in growth. Growth rate of Jhunjhunun revived during 1981-91, as compared to 1971-81. Jaipur, Ajmer, Barmer, Jalor, Sirohi and Jhalawar showed a constantly rising trend during all three decades.

All the districts in rural Rajasthan showed a rising trend in the growth of Wholesale and Retail Trade sector during 1971-81, as compared to 1961-71. Districts that showed a high growth rate were, Churu (11.10), Bikaner (7.21), Jhunjhunun (7.14), Bundi (7.00) and Nagaur (6.42).

Transport and communication division in the districts of rural Rajasthan showed different patterns of growth. Eleven districts during 1971-81 showed a high growth rate as compared to 1961-71. They then slowed down - during 1981-91. Ten districts showed a constantly declining trend in growth rate over the three decades. While only Ajmer (-2.55, 5.58, 9.31) showed a constantly increasing growth trend. Sirohi, Udaipur and Bundi showed a high growth rate during 1981-91, as compared to 1971-81.

Financing and Business services in the districts of rural Rajasthan, showed high growth rate during 1971-81. Among them notable were Churu (23.38), Banaswara (21.48), Bhilwara (21.41),

Bharatpur (21.38) and Jhunjhunun (19.62). In nine districts growth rate had declined during 1971-81.

The general scenario of Community, Social and Personal Services is not very good. Ten districts showed a declining trend in growth. Districts that showed high growth rate during 1971-81 were, Bikaner (7.26), Ganganagar (6.23), Banaswara (5.92), Barmer (3.74) and Jaisalmer (3.71).

We can say from the above analysis that most of the rural non-agricultural sectors in Rajasthan showed rising trend in growth during 1971-81. While some of the sectors, whatsoever data available, showed a declining trend during 1981-91. The only exception being that of the Community, Social and Personal Services sector which seemed to reflect a high growth trend in rural Rajasthan, than other two States.

Growth of Rural Non-Agricultural Division in Orissa

Growth of Mining sector is not uniform in rural Orissa. While Puri (27.74), Ganjam (26.19), Bolangir (17.86), Cuttack (12.78) showed a high growth rate during 1971-81 as compared to 1961-71; Balasore (38.46), Kalahandi (22.02), Koraput (11.14), Sambalpur (5.14) showed high growth during 1981-91. Continuously declining trend in growth rate could be seen in Dhenkanal, Phulbani and Bolangir.

In the manufacturing sector, all district except that of

Bolangir, Ganjam and Puri showed a continuously increasing trend in growth rate during 1971-81, as compared to 1961-71. It declined during 1981-91. Districts that showed high growth during 1981-91 were Dhenkanal (3.15), Kalahandi (2.64) Balasore (2.50) and Puri (2.42).

Utility sector, which had a very high growth rate during 1961-71, had a low growth rate during 1971-81 in most of the districts. During 1971-81, Kalahandi (19.26), Balasore (16.35), Bolangir (13.26) and Phulbani (11.19) showed high growth among the districts in rural utility sector.

Regarding the case of rural Construction sector, six districts showed a declining trend in the growth rate during the three decades. They were Sambalpur, Balasore, Dhenkanal, Koraput, Ganjam and Puri. While another six districts showed an increasing trend during 1971-81 and a subsequent slow down. These districts were, Sundergarh, Keonjhor, Mayurbhanj, Phulbani and Kalahandi. Only district Bolangir showed a continuously increasing trend in the growth of the Construction sector. Bolangir (4.88), Cuttack (4.80), Koraput (3.21) and Ganjam (3.20) showed high growth among the districts, during 1981-91.

All districts of Orissa showed an increasing trend in the rural sector of Wholesale and Retail Trade. Districts that showed high growth rate during 1971-81, Balasore (8.28), Dhenkanal (7.40), Mayurbhanj (7.09), Sambalpur (6.94) among the notables.

Table - 4.1 (A)

Maharashtra Top Ranking District with High Growth Rate

	1961-71		1971-81		1981-91
Rural Mining Division					
Wardha	(7.18)	Raigarh	(25.18)	Amravati	(32.81)
Satara	(5.76)	Dhule	(15.55)	Buldana	(25.59)
Solapur	(4.14)	Yavatmal	(14.27)	Nasik	(23.97)
Kolhapur	(3.97)	Ratnagiri	(13.60)	Bid	(18.33)
Jalgaon	(.97)	Nagpur	(7.42)	Pune	(17.70)
Rural Manufacturing Division					
Thana	(6.31)	Thane	(8.07)	Raigarh	(6.82)
Aurangabad	(1.80)	Raigarh	(7.22)	Satara	(4.12)
Bhandara	(1.47)	Akola	(5.97)	Pune	(3.22)
Raigarh	(1.21)	Aurangabad	(5.50)	Kolhapur	(3.26)
Dhule	(.97)	Nasik	(5.25)	Osmanabad	(2.38)
Rural Utility Services Division					
Bid	(87.60)	Wardha	(25.33)		
Nanded	(84.30)	Osmanabad	(20.68)		
Aurangabad	(70.70)	Aurangabad	(17.53)		
Ahmadnagar	(45.18)	Bid	(16.64)		
Nasik	(41.92)	Jalgaon	(15.36)		
Rural Construction Division					
Chandrapur	(10.81)	Nagpur	(18.45)	Wardha	(5.36)
Bhandara	(10.12)	Bid	(15.97)	Osmanabad	(5.15)

contd.....

1961-71		1971-81		1981-91	
Thana	(8.69)	Satara	(12.50)	Amravati	(5.07)
Raigarh	(8.21)	Sangli	(10.81)	Pune	(4.56)
Nagpur	(8.20)	Raigarh	(10.58)	Kolhapur	(4.29)
Rural Wholesale and Retail Trade Division					
Aurangabad	(2.51)	Buldana	(6.95)		
Thana	(2.04)	Nanded	(6.42)		
Solapur	(1.61)	Nasik	(6.32)		
Pune	(1.34)	Akola	(5.52)		
Ahmadnagar	(1.21)	Osmanabad	(4.91)		
Rural Transport and Communication Division					
Satara	(8.72)	Nanded	(11.06)	Bid	(8.93)
Kolhapur	(6.54)	Akola	(10.34)	Osmanabad	(8.43)
Pune	(6.11)	Chandrapur	(10.23)	Aurangabad	(8.30)
Parbani	(4.05)	Wardha	(9.85)	Kolhapur	(8.04)
Bid	(3.98)	Osmanabad	(9.57)	Yavatmal	(7.38)
Rural Finance, Real Estate and Business Services					
Jalgaon	(18.43)	Yavatmal	(14.73)		
Solapur	(17.53)	Bhandara	(13.68)		
Dhule	(17.07)	Wardha	(13.60)		
Nasik	(15.01)	Nagpur	(12.69)		
Ahmadnagar	(12.96)	Thana	(10.53)		

contd.....

1961-71		1971-81		1981-91	
Rural Social, Personal and Community Services					
Aurangabad	(5.86)	Pune	(10.75)		
Nanded	(4.60)	Thana	(7.85)		
Nagpur	(3.97)	Raigarh	(3.87)		
Bid	(3.80)	Kolhapur	(3.71)		
Osmanabad	(3.13)	Chandrapur	(3.45)		

Table - 4.1 (B)

Rajasthan Top Ranking District with High Growth Rate

1961-71		1971-81		1981-91	
Rural Mining Division					
Jhunjhunun	(18.83)	Dungarpur	(37.59)	Jaisalmer	(36.83)
Jalor	(18.69)	Ganganagar	(32.75)	Churu	(24.21)
Bundi	(15.28)	Jodhpur	(20.65)	S. Madhopur	(12.46)
S. Madhopur	(13.88)	Jhalawar	(20.26)	Jodhpur	(9.77)
Dungarpur	(11.35)	Sirohi	(18.63)	Chittaurgarh	(8.64)
Rural Manufacturing Division					
Jodhpur	(21.82)	Bikaner	(15.22)	Udaipur	(2.24)
Ajmer	(15.81)	Churu	(8.71)	Bhilwara	(1.87)
Jalor	(2.88)	Barmer	(8.39)	Jaisalmer	(1.93)
Nagaur	(2.55)	Jodhpur	(7.75)	Churu	(1.83)
S. Madhopur	(2.24)	Ganganagar	(7.74)	Ganganagar	(1.43)
Rural Utility Service Division					
Bikaner	(37.16)	Sikar	(72.30)		
Dungarpur	(35.15)	Bharatpur	(55.90)		
Jaisalmer	(34.93)	Jaipur	(39.54)		
Udaipur	(32.47)	Jhunjhunun	(36.90)		
Ganganagar	(26.32)	Sirohi	(36.25)		
Rural Construction Division					
Jaisalmer	(19.25)	Banaswara	(41.83)	Barmer	(13.09)
Bikaner	(18.94)	Jodhpur	(20.17)	Jaipur	(9.44)

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	1961-71		1971-81		1981-91
Bundi	(9.47)	Chittaurgarh	(17.45)	Ajmer	(9.31)
Bhartpur	(7.30)	Churu	(13.61)	Churu	(9.29)
Jhunjhunun	(6.55)	Dungarpur	(13.24)	Jaisalmer	(9.23)
Rural Wholesale and Retail Trade Division					
Tonk	(3.22)	Churu	(11.10)		
Udaipur	(1.79)	Bikaner	(7.21)		
Banaswara	(1.68)	Bundi	(7.00)		
Dungarpur	(1.39)	Jhunjhunun	(7.14)		
Bhartpur	(1.09)	Nagaur	(6.42)		
Rural Transport and Communication Division					
Jaisalmer	(24.16)	Banaswara	(16.13)	Dungarpur	(8.20)
Dungarpur	(13.66)	Chittaurgarh	(14.32)	Jaisalmer	(7.59)
Jaipur	(12.33)	Jhunjhunun	(12.95)	Ajmer	(7.07)
Banaswara	(11.07)	Tonk	(11.26)	Udaipur	(6.81)
Bharatpur	(10.46)	Bhilwara	(10.52)	Alwar	(6.64)
Rural Finance, Real Estate and Business Services					
Sirohi	(23.27)	Churu	(23.42)		
Tonk	(19.29)	Banaswara	(21.48)		
Bundi	(18.03)	Bhilwara	(21.41)		
Kota	(12.18)	Bharatpur	(21.38)		
Bikaner	(8.52)	Jhunjhunun	(19.62)		

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Table - 4.1 (C)

Orissa Top Ranking District with High Growth Rate

1961-71		1971-81		1981-91	
Rural Mining Division					
Balasore	(75.16)	Puri	(27.74)	Balasore	(38.46)
Koraput	(21.93)	Ganjam	(26.19)	Kalahandi	(22.02)
Bolangir	(21.06)	Bolangir	(17.86)	Koraput	(11.14)
Sundargarh	(20.34)	Cuttack	(12.78)	Sambalpur	(5.14)
Rural Manufacturing Division					
Sundargarh	(4.07)	Balasore	(5.22)	Dhenkanal	(3.15)
		Mayurbhanj	(4.45)	Kalahandi	(2.64)
		Cuttack	(4.17)	Balasore	(2.50)
		Dhenkanal	(4.10)	Puri	(2.42)
		Sundargarh	(3.64)		
Rural Utility Services Division					
Dhenkanal	(82.61)	Kalahandi	(19.26)		
Keonjhar	(49.86)	Balasore	(16.35)		
Koraput	(43.01)	Bolangir	(13.26)		
Kalahandi	(40.51)	Phulbani	(11.19)		
Rural Construction Division					
Koraput	(17.84)	Kalahandi	(21.44)	Bolangir	(4.88)
Sambalpur	(16.54)	Keonjhar	(21.33)	Cuttack	(4.80)
Dhenkanal	(16.37)	Mayurbhanj	(14.70)	Koraput	(3.21)
Balasore	(13.12)	Phulbani	(13.86)	Ganjam	(3.20)

contd.....

1961-71	1971-81	1981-91
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Rural Wholesale and Retail Trade Division

Koraput	(3.36)	Balasore	(8.28)
Sundargarh	(3.29)	Dhenkanal	(7.40)
Dhenkanal	(3.27)	Mayurbhanj	(7.09)
Keonjhar	(2.13)	Sambalpur	(6.94)

Rural Transport and Communication Division

Dhenkanal	(25.09)	Dhenkanal	(6.41)	Keonjhar	(5.08)
Sambalpur	(20.42)	Koraput	(5.49)	Puri	(5.04)
Bolangir	(13.83)	Keonjhar	(5.18)	Kalahandi	(4.86)
Phulabani	(11.57)	Kalahandi	(5.09)	Mayurbhanj	(4.53)

Rural Finance, Real Estate and Business Services

Puri	(19.81)	Ganjam	(21.00)
Cuttack	(10.76)	Dhenkanal	(10.82)
Koraput	(9.09)	Mayurbhanj	(7.62)
Phulbani	(6.86)	Kalahandi	(6.86)

Rural Community, Personal and Social Services

Balasore	(3.45)
Cuttack	(2.83)
Keonjhar	(2.21)
Dhenkanal	(1.72)

In Transport and Communication sector, seven districts in rural Orissa showed a declining trend in the growth rate. Keonjhar and Cuttack showed an increasing trend during 1971-81, but slowed down during 1981-91. Mayurbhanj, Balasore, Ganjam and Puri showed a rising trend during 1981-91, as compared to 1971-81. Keonjhar (5.08), Puri (5.04), Kalahandi (4.86) and Mayurbhanj (4.53) showed high growth rate among the districts in rural Orissa.

In Financing, Insurance, Real Estate and Business Services six districts showed a high growth rate during 1971-81, as compared to 1961-71. Whereas in other seven districts growth rate was slowed down. Districts that showed high growth during 1971-81 in rural Orissa were Ganjam (21.00), Dhenkanal (10.82), Mayurbhanj (7.62) and Kalahandi (6.86).

In Community, Personal and Social Services sector all districts in rural Orissa showed negative growth rate during 1961-71. But ten districts showed positive growth rate during 1971-81. Among them notables were Balasore (3.45), Cuttack (2.83), Keonjhar (2.21) and Dhenkanal (1.72).

Growth Trend Urban Non-Agricultural Division in Maharashtra

In urban Mining division in Maharashtra growth rate of most of the districts (sixteen) slowed down during 1971-81 as compared to 1961-71. Then they showed an increasing trend during 1981-91. Four districts in urban Maharashtra showed continuously an

increasing trend during the three decades. Districts that showed high growth rate during 1981-91, notable among them were, Osmanabad (43.32), Yavatmal (43.21), Wardha (44.25), Buldana (49.93) and Dhule (42.90).

In the Manufacturing sector in urban maharashtra twenty districts shown high growth rate during 1971-81, as compared to 1961-71. But they slowed down in their growth rate during 1981-91. Three districts namely Greater Bombay, Raigarh and Pune showed continuously declining trend during the three decades. Whereas Bid and Chandrapur showed continuously increasing trend in the growth rate. Thana (8.10), Raigarh (4.92), Aurangabad (5.95), Chandrapur (4.91) and Ahmadnagar (3.29) showed high growth rate during 1981-91 in manufacturing employment.

Regarding the case of urban Utility service sector fourteen districts in rural Maharashtra showed an increase in growth during 1971-81 as compared to 1961-71. Whereas twelve districts showed decline in growth during 1971-81 Bid (15.48), Chandrapur (13.91), Wardha (13.28), Osmanabad (12.67), Nasik (11.37) showed high growth among the districts during 1971-81.

In the case of construction sector nine districts in urban Maharashtra showed continuously increasing trend in growth rate during the three decades. Whereas two districts Aurangabad and Bhandara showed continuously declining trend in growth . Five districts showed increase in growth rate during 1971-81, as

compared to 1961-71 and then they slowed down during 1981-91. Whereas ten districts showed slowing down in growth rate during 1971-81, as compared to 1961-71 and then tend to increase during 1981-91. Thana (18.44), Chandrapur (14.15), Osmanabad (13.77), Nanded (12.72) and Nagpur (12.19) showed high growth during 1981-91.

Urban Wholesale and Retail Trade division showed high growth rate during 1971-81, as compared to 1961-71 in all the districts of urban Maharashtra, except in Nagpur. Districts that high growth rate during 1971-81 were Parbani (5.57), Thana (5.34), Osmanabad (5.07), Bid (4.87) and Buldana (4.75).

Regarding the case of urban Transport and Communication division, only two districts Thane and Amravati showed continuously increasing trend in growth during the three decades. Whereas three districts, Nasik, Sangli and Kolhapur, slowed down in the their growth in every subsequent decades. Thirteen districts showed high growth during 1971-81, compared to 1961-71, and they slowed down during 1981-91. Whereas eight districts showed slowing down of growth during 1971-81 and tends to increase during 1981-91. During 1981-91, among the districts that showed high growth were, Thana (8.74), Chandrapur (8.02) Aurangabad (5.80), Bid (5.05) and Nanded (4.91).

Urban Financing and Business Services sector of the districts showed that eighteen districts slowed their growth

during 1971-81, as compared to 1961-71. Whereas eight districts showed increasing trend in growth during 1971-81. Thana (15.58), Pune (8.39), Ahmadnagar (7.65), Osmanabad (6.48) and Aurangabad (6.40) among the districts that showed high growth rate during 1971-81.

In urban Community, Social and Personal Services sector most of the districts (twenty two) showed high growth rate during 1971-81, as compared to 1961-71. But four districts, Ahmadnagar, Aurangabad, Nagpur and Chandrapur during 1971-81 slowed down their growth. Thana (8.89), Bid (5.08), Kolhapur (4.54), Sangli (3.71) and Greater Bombay (3.55) showed high growth rate in this sector during 1971-81.

We can summarise the general trend is that, manufacturing sectors showed a rising trend during 1971-81. It slows down during 1981-91 in most of the districts. It was the Community, Social and Personal services sector, along with Utility and Construction sectors that showed a very high growth trend. Trade, Transport and Communication sectors also showed a rising trend. But urban Financing and Business Services observed a slowing down in their growth during 1971-81 in eighteen districts.

Growth Trend of Urban Non-Agricultural Sectors in Rajasthan

Mining and Quarrying division in the districts of urban Rajasthan is not showing a uniform trend in growth, over the three decades. Most of the districts (sixteen) showed a high

growth rate during 1971-81, than in the previous decades. While growth rate of Mining sector during 1981-91 as compared to previous decade was high in six districts namely Churu, Jaipur, Jaisalmer, Pali, Chittaurgarh and in Jhalawar. While Ganganagar Ajmer, Sikar and Dungarpur had high growth rate during 1961-71. Most of the districts had negative growth in Mining and Quarrying during 1961-71.

Regarding the case of Manufacturing sector all districts, except Bhilwara, Kota and Jhalawar, showed high growth during 1971-81. It then slowed down during 1981-91. Kota and Jhalawar showed continuously declining trend in growth of manufacturing sector. Districts that showed high growth rate during 1981-91, notable among them were Alwar (6.86), Bhilwara (6.74), Jhalawar (3.69) Udaipur (3.64) and Chittaurgarh (3.44).

Utility sector showed a high growth rate during 1971-81 as compared to 1961-71, in all districts except in Pali and Banaswara. While Bikaner, Churu, Ajmer, Nagaur, Barmer, Bhilwara and Dungarpur had negative growth rate in this sector during 1961-71. Barmer (32.36), Chittaurgarh (32.13), Jaisalmer (28.94), Nagaur (23.39) Jalor (21.10) showed very high growth rate during 1971-8.

In the case of Construction sector, districts like Ganganagar, Bikaner (18.22), Jaipur, Tonk, Jaisalmer (18.11), Sirohi, Dungarpur, (18.22) and Jhalawar (12.20) showed a high

growth rate during 1981-91, than in previous decade. Rest of the districts showed high growth rate during 1971-81. While most of the districts (seventeen) showed negative growth during the period 1961-71.

Except in Bhilwara urban wholesale and Retail trade division showed high growth rate during 1971-81, as compared to 1961-71. Jalor (8.80), Ganganagar (7.51), Pali (7.40), Tonk (7.38) and Alwar (6.14) among the top ranking districts that showed high growth rate of trade.

Most of the districts in urban Transport and Communication division showed high growth rate during 1971-81 and then they slowed down during 1981-91. Ajmer showed negative rate of growth during 1961-71 and in 1981-91. Consistently increasing trend can be seen for Jaipur Nagaur, Udaipur, Bhilwara and Sikar districts. While Tonk and Kota showed a declining trend over the decades Bhilwara (6.85), Bundi (6.01), Jhalawar (5.83) Sikar (5.06), showed high growth rate of the Transportation sector during 1981-91.

In the case of Financing, and Business Services, all districts, except, Bhilwara and Jaisalmer reflected a slowing down in the growth rate during 1971-81.

Regarding the case of, Community, Social and Personal Services, districts, Tonk, Jaisalmer, Nagaur, Barmer, Bhilwara and Dungarpur were showing a slowing down in their growth rate

during 1971-81. All other districts showed a rising trend in their growth rate. Districts that showed high growth rate, notables among them were, Kota (5.69), Jalor (5.50), Banaswara (5.10), Pali (5.09) and Jaipur (4.91).

We can summarize the general trend in urban non-agricultural growth in Rajasthan is that, Manufacturing, Construction, Transport and Communication, Financing and Business Services had a slower growth in recent times. While Utility sector, Wholesale and Retail Trade sector and Community, Social and Personal Services showed an increasing trend in growth rate.

Growth Trend of Urban Non-Agriculture Sectors in Orissa

In the case of Mining and Quarrying Sector just as in the other states of Rajasthan and Maharashtra, Orissa too did not have a uniform pattern in growth trend. Sambalpur, Keonjhar,, Koraput and Puri showed a declining trend in the growth rate over the time periods 1961-71, 1971-81 and 1981-91. While Balasore, Cuttack and Kalahandi showed an increasing trend. Sundergarh, Mayurbhanj and Bolangir had a slowing down during 1971-81 and then rising trend during 1981-91. Dhenkanal and Ganjam showed declining trend during 1981-91 as compared to 1971-81. Balasore (48.96) Cuttack (26.24) Kalahandi (21.16), Bolangir (21.84) Phulbani (14.87) showed very high growth rate during 1981-91.

Manufacturing sector reflected slowed down in growth rate during 1981-91 as compared to 1971-81. Most of the districts

during 1971-81 showed a higher growth rate in Manufacturing. Keonjhar and Phulbani show continuously declining trend in growth over the three decades kalahandi however, showed a high growth during 1981-91, as compared to 1971-81. Mayurbhanj (11.14) and Dhenkanal (11.25) showed a high growth rate during 1971-81.

Opposite to the observable trend in Maharashtra and Rajasthan, Utility sector showed a slow down in growth rate during 1971-81, in the districts of Orissa. Only districts of Cuttack, Dhenkanal, Koraput and puri showed a rising trend during 1971-81. Dhenkanal (29.30), Mayurbhanj (13.51) and Phulbani (12.00) showed high growth rate during 1971-81 in this sector.

Regarding the case of Construction sector, it showed an increasing trend during 1971-81. It then slowed down during 1981-91. Phulbani, Bolangir and Ganjam showed continuously declining trend in the growth of construction sector over the decades. Sundergarh (18.64) Dhenkanal (34.24) and Koraput (14.90) had very high growth rate during 1971-81. While during 1981-91, Puri (6.97), Cuttack (4.37), Balasore (3.33), Bolangir (3.02) showed high growth rate in Construction sector.

In case of Wholesale and Retail Trade sector, Sundergarh, Mayurbhanj, Balasore, Dhenkanal, Koraput an puri showed, high growth rate during 1971-81 as compared to 1961-71. Mayurbhanj (10.39) showed the highest growth rate during 1971-81. But opposite to the general trend in the growth of Trade sector,

districts Sambalpur, Keonjhar, Cuttack, Phulbani, Bolangir, Kalahandi and Ganjam reflected a slow down in the growth of this sector during 1971-81.

Growth trend of Transport and Communication sector suggests that it is continuously declining over the three decades. But in Cuttack, Dhenkanal and Bolangir, growth rate during 1981-91 had picked up again.

Regarding the case of Finance, Insurance and Business Services, most of the districts in Orissa in comparison to 1961-71 (when the growth rates were very high) had a low or even a negative growth rate during 1971-81. During 1971-81 Dhenkanal (5.62), Mayurbhanj (5.36), Phulbani (4.84), Puri (3.68) showed high growth rate in this sector.

In the case of Community, Social and Personal Services most of the districts showed a high growth rate during 1971-81, as compared to 1961-71. Growth rate slowed down during 1971-81 only in case of Phulbani and Ganjam, Dhenkanal (8.74), Koraput (7.43), Mayurbhanj (7.19) and Phulbani (6.19) showed high growth rates among the district in Orissa.

In summary we can say that, most of the non-agricultural sectors in Orissa showed a very fluctuating trend in growth rates. Growth of non-agricultural sectors slowed down in most of the districts during 1971-81. However, only Community, Social and Personal Service sector seemed to show a rising trend in growth.

Table - 4.2 (A)

Maharashtra Top Ranking District with High Growth Rate					
1961-71		1971-81		1981-91	
Urban Mining Division					
Kolhapur	(18.39)	Bid	(32.47)	Osmanabad	(43.32)
Yavatmal	(16.41)	Aurangabad	(23.97)	Yavatmal	(43.21)
Raigarh	(16.19)	Satara	(15.16)	Wardha	(44.25)
Parbani	(11.61)	Thana	(13.03)	Buldana	(49.93)
Pune	(9.59)	Solapur	(10.07)	Dhule	(42.90)
Urban Manufacturing Division					
Thana	(6.76)	Aurangabad	(9.89)	Thana	(8.10)
Raigarh	(6.26)	Osmanabad	(6.07)	Raigarh	(4.92)
Pune	(5.29)	Raigarh	(6.00)	Aurangabad	(5.95)
Chandrapur	(2.83)	Thana	(5.95)	Chandrapur	(4.91)
Sangli	(2.67)	Pune	(5.19)	Ahmadnagar	(3.29)
Urban Utility Services Division					
Bid	(29.04)	Bid	(15.48)		
Ratnagiri	(21.24)	Chandrapur	(13.91)		
Raigarh	(20.21)	Wardha	(13.28)		
Wardha	(16.68)	Osmanabad	(12.67)		
Nanded	(14.72)	Nasik	(11.37)		
Urban Construction Division					
Satara	(11.94)	Ahmadnagar	(10.82)	Thana	(18.44)
Nanded	(11.33)	Bid	(10.68)	Chandrapur	(14.15)

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1961-71		1971-81		1981-91	
Raigarh	(9.62)	Aurangabad	(8.04)	Osmanabad	(13.77)
Wardha	(9.61)	Pune	(7.95)	Nanded	(12.72)
Aurangabad	(9.06)	Thana	(6.72)	Nagpur	(12.19)

Urban Wholesale and Retail Trade Division

Kolhapur	(3.07)	Parbani	(5.57)
Chandrapur	(3.03)	Thana	(5.34)
Thana	(2.76)	Osmanabad	(5.07)
Sangli	(2.18)	Bid	(4.87)
Aurangabad	(2.14)	Buldana	(4.75)

Urban Transport and Communication Division

Sangli	(7.15)	Parbani	(7.73)	Thana	(8.74)
Bid	(6.82)	Osmanabad	(7.07)	Chandrapur	(8.02)
Nanded	(6.65)	Thana	(6.01)	Aurangabad	(5.80)
Kolhapur	(5.63)	Aurangabad	(5.82)	Bid	(5.05)
Wardha	(5.17)	Satara	(5.55)	Nanded	(4.91)

Urban Finance, Real Estate and Business Services

Bid	(12.05)	Thana	(15.58)
Raigarh	(11.58)	Pune	(8.39)
Solapur	(10.68)	Ahmadnagar	(7.65)
Osmanabad	(10.49)	Osmanabad	(6.48)
Parbani	(9.12)	Aurangabad	(6.40)

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1961-71		1971-81		1981-91	
Urban Community, Personal and Social Services					
Chandrapur	(3.99)	Thana	(8.89)		
Nagpur	(3.87)	Bid	(5.08)		
Thana	(2.90)	Kolhapur	(4.54)		
Aurangabad	(2.86)	Sangli	(3.71)		
Ahmadnagar	(2.60)	G. Bombay	(3.55)		

Table - 4.2 (B)

Rajasthan Top Ranking District with High Growth Rate

1961-71		1971-81		1981-91	
Urban Mining Division					
Ganganagar	(26.51)	Jalor	(32.03)	Jaisalmer	(14.28)
Jhunjhunun	(19.97)	Bundi	(28.87)	Jhalawar	(13.84)
Pali	(18.05)	Banaswara	(27.48)	Pali	(13.25)
Ajmer	(15.92)	Jhunjhunun	(25.38)	Ganganagar	(11.21)
Dhungarpur	(14.98)	Barmer	(25.11)	Jaipur	(10.45)
Urban Manufacturing Division					
Kota	(10.33)	Jalor	(10.74)	Alwar	(6.86)
Bhilwara	(6.51)	Barmer	(10.57)	Bhilwara	(6.74)
Jhalawar	(4.88)	Ganganagar	(7.86)	Jhalawara	(3.69)
Jodhpur	(4.11)	Alwar	(7.58)	Udaipur	(3.64)
Ganganagar	(3.44)	Banaswara	(7.52)	Chittaurgarh	(3.44)
Urban Utility Services Division					
Pali	(23.46)	Barmer	(32.36)		
Banaswara	(17.46)	Chittaurgarh	(32.13)		
Jalor	(11.61)	Jaisalmer	(28.94)		
Sikar	(11.38)	Nagaur	(23.39)		
Tonk	(11.03)	Jalor	(21.10)		
Urban Construction Division					
Sikar	(3.85)	Pali	(16.25)	Dungarpur	(18.22)
Jaisalmer	(2.59)	Barmer	(15.10)	Jaisalmer	(18.11)

contd.....

1961-71		1971-81		1981-91	
Banaswara	(2.11)	Banaswara	(14.75)	Bikaner	(12.63)
Ganganagar	(1.79)	Jalor	(12.70)	Jhalawar	(12.20)
Bhilwara	(1.73)	Jhunjhunun	(10.83)	Barmer	(10.74)
Urban Wholesale and Retail Trade Division					
Bhilwara	(4.39)	Jalor	(8.80)		
Kota	(3.13)	Ganganagar	(7.51)		
Alwar	(3.75)	Pali	(7.40)		
Jaipur	(2.80)	Tonk	(7.38)		
Jhalawar	(2.79)	Alwar	(6.14)		
Urban Transport and Communication Division					
Dungarpur	(8.00)	Jalor	(13.95)	Bhilwara	(6.85)
Tonk	(7.14)	Banaswara	(11.92)	Bundi	(6.01)
Jaisalmer	(6.21)	Pali	(10.18)	Jhalawar	(5.83)
Bhilwara	(5.30)	Dungarpur	(9.30)	Sikar	(5.61)
Chittaurgarh	(5.36)	Chittaurgarh	(9.16)	Udaipur	(5.06)
Urban Finance, Real Estate and Business Services					
Udaipur	(38.35)	Jaisalmer	(11.11)		
Alwar	(17.28)	Dungarpur	(7.81)		
Pali	(14.61)	Chittaurgarh	(7.75)		
Bundi	(13.60)	Pali	(7.74)		
S. Madhopur	(13.51)	Ganganagar	(7.19)		

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1961-71		1971-81		1981-91	
Urban Community, Personal and Social Services					
Jaisalmer	(7.95)	Kota	(5.69)		
Barmer	(6.51)	Jalor	(5.50)		
Bhilwara	(4.41)	Banaswara	(5.10)		
Jaipur	(3.26)	Pali	(5.09)		
Dungarpur	(3.19)	Jaipur	(4.91)		

Table - 4.2 (C)

Orissa Top Ranking District with High Growth Rate

1961-71		1971-81		1981-91	
Urban Mining Division					
Bolangir	(20.20)	Dhenkanal	(18.65)	Balasore	(48.96)
Sambalpur	(19.83)	Ganjam	(17.43)	Cuttack	(26.24)
Puri	(18.92)	Kalahandi	(13.87)	Bolangir	(21.84)
Mayurbhanj	(12.93)	Keonjhar	(8.43)	Kalahandi	(21.16)
Urban Manufacturing Division					
Keonjhar	(8.32)	Dhenkanal	(11.25)	Puri	(5.69)
Koraput	(6.19)	Mayurbhanj	(11.14)	Dhenkanal	(4.94)
Kalahandi	(5.61)	Puri	(8.43)	Koraput	(3.82)
Sambalpur	(3.25)	Sundergarh	(7.92)	Kalahandi	(2.82)
Urban Utility Services Division					
Keonjhar	(25.92)	Dhenkanal	(29.30)		
Phulbani	(24.06)	Mayurbhanj	(13.51)		
Kalanhandi	(18.34)	Phulbani	(12.00)		
Mayurbhanj	(18.08)	Kalahandi	(9.78)		
Urban Construction Division					
Phulbani	(15.21)	Dhenkanal	(34.24)	Puri	(6.97)
Keonjhar	(9.86)	Sundargarh	(18.64)	Cuttack	(4.37)
Koraput	(9.30)	Koraput	(14.90)	Balasore	(3.33)
Bolangir	(8.14)	Keonjhar	(13.80)	Bolangir	(3.02)

contd.....

1961-71	1971-81	1981-91
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Urban Wholesale and Retail Trade Division

Keonjhar	(12.08)	Mayurbhanj	(10.39)
Phulbani	(9.34)	Phulbani	(7.30)
Sambalpur	(6.99)	Dhenkanal	(7.22)
Kalahandi	(6.51)	Puri	(7.14)

Urban Transportation and Communication Division

Phulbani	(18.50)	Mayurbhanj	(6.68)	Dhenkanal	(7.25)
Kalahandi	(13.96)	Phulbani	(6.60)	Bolangir	(4.91)
Koraput	(13.62)	Puri	(5.61)	Mayurbhanj	(4.69)
Balasore	(8.83)	Balasore	(3.36)	Puri	(4.24)
		Sundargarh	(3.36)		

Urban Finance, Real Estate and Business Services

Bolangir	(31.33)	Dhenkanal	(5.62)
Sambalpur	(21.83)	Mayurbhanj	(5.36)
Sundargarh	(21.07)	Phulbani	(4.84)
Phulbani	(19.50)	Puri	(3.68)

Urban Community, Personal and Social Services

Phulbani	(9.55)	Dhenkanal	(8.74)
Puri	(3.02)	Koraput	(7.43)
Kalahandi	(.73)	Mayurbhanj	(7.19)
Bolangir	(.46)	Phulbani	(6.14)

Tables in the Appendix 4.3 provide growth of non-agricultural employment at two digit level, for rural and urban separately. There we have shown districtwise, growth of some major groups of National Industrial Classification, that had high growth rate during 1961-81. We have shown Manufacturing groups (divisions 2 and 3) and other non-agricultural groups (division 1 to 9 except 2 & 3) separately. These tables explain which particular components of the non-agricultural division are growing. As we have seen from the above analyses, that it is the Utility sector, Wholesale and Retail Trade, Transport and Communication, Community Personal and Social Services sector that are showing a high growth rate. But there is a great deal of regional variations in the three states under study.

4.3 Correlates of Non-Agricultural Employment Growth :

Relating Non-Agriculture Employment Growth With Agriculture Productivity :

We have formulated one hypothesis that agriculture productivity leads to non-agricultural employment growth.

Correlation result of Maharashtra showed that, agriculture productivity had significant positive relations with rural Manufacturing division during 1961-71. During this period agriculture productivity showed a negative correlation with all rural non-agricultural divisions, except Mining, Manufacturing and Construction. During 1971-81 none of the rural division showed significant correlation with agricultural productivity in

Maharashtra. In the case of urban non-agricultural divisions only Manufacturing showed significant relationship with agricultural productivity, during 1961-71 (Table 4.3 (A)). Other division showed either very low positive or negative correlations. During 1971-81 only urban division of Community, Social and Personal Services showed significant positive correlations with agriculture productivity. Though other division during this period showed very weak positive relationship, Utility and Construction sector showed negative association with agriculture productivity.

In Rajasthan, during 1961-71 none of the rural non-agricultural sector showed significant relationship with agriculture productivity. Same is the case for 1971-81 period. During this period rural division of Financing and Business Services showed relatively high but insignificant correlation with agriculture productivity. Like rural divisions, none of the urban divisions during 1961-71 showed significant relations with agriculture productivity. During 1971-81 also same was the case. but during this period all urban divisions except Mining and Social Community and Personal Services showed negative association with agriculture productivity (Table 4.3 (B)).

In Orissa, during 1961-71, none of the rural division showed significant relationship with agriculture productivity. Same was the case for 1971-81 period. But during this period Mining, Manufacturing and Social, Community and Personal Services showed

Table - 4.3 (A)
Relationship between Agricultural Productivity and
Non-Agricultural Employment Growth 1961-71, 1971-81

Maharashtra	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.083	.398
Manufacturing	.655**	.205
Electricity, Water and Gas	-.271	-.313
Construction	.435	.034
Wholesale and Retail Trade	-.036	.100
Transport & Communication	-.077	-.196
Financing & Business Services	-.084	.025
Community, Personal and Social Services	-.444	.347
Urban		
Mining	.015	.142
Manufacturing	.499*	.050
Electricity, Water and Gas	.047	-.414
Construction	.175	-.030
Wholesale and Retail Trade	.269	.101
Transport & Communication	-.069	.095
Financing & Business Services	-.168	.329
Community, Personal and Social Services	.126	.550*
Commercialization	-.039	-.162
Urbanization	-.086	-.086
Rural Density	.565*	.614*

Note : * Significant at 5% level of significance
 ** Significant at 1% level of significance

Table - 4.3 (B)
Relationship between Agricultural Productivity and
Non-Agricultural Employment Growth 1961-71, 1971-81

Rajasthan	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.151	.050
Manufacturing	.016	.276
Electricity, Water and Gas	-.150	.039
Construction	-.162	-.223
Wholesale and Retail Trade	.373	.305
Transport & Communication	.062	.290
Financing & Business Services	.085	.463
Community, Personal and Social Services	-.287	.056
Urban		
Mining	-.077	.170
Manufacturing	.269	-.262
Electricity, Water and Gas	-.049	-.390
Construction	.016	-.222
Wholesale and Retail Trade	.361	-.042
Transport & Communication	.440	-.001
Financing & Business Services	.132	-.220
Community, Personal and Social Services	-.053	.197
Commercialization	.722**	.191
Urbanization	-.336	.181
Rural Density	.467*	.259

Note : * Significant at 5% level of significance
 ** Significant at 1% level of significance

Table - 4.3 (C)
Relationship between Agricultural Productivity and
Non-Agricultural Employment Growth 1961-71, 1971-81

Orissa	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	-.061	.402
Manufacturing	.098	.509
Electricity, Water and Gas	.125	-.190
Construction	-.302	-.233
Wholesale and Retail Trade	.012	.259
Transport & Communication	.124	.283
Financing & Business Services	-.367	.120
Community, Personal and Social Services	.267	.501
Urban		
Mining	.173	.550
Manufacturing	-.424	.113
Electricity, Water and Gas	-.173	.100
Construction	-.340	-.055
Wholesale and Retail Trade	-.216	-.092
Transport & Communication	-.835**	.242
Financing & Business Services	-.115	.254
Community, Personal and Social Services	-.316	.181
Commercialization	-.337	-.232
Urbanization	.259	-.006
Rural Density	.437	.467

Note : ** Significant at 1% level of significance

relatively high but insignificant positive correlation with agriculture productivity. In the case of urban division, Transport and Communication division showed significant negative association with agriculture productivity, during 1961-71. During this period all non-agricultural division, except mining showed negative correlation with agriculture productivity. During 1971-81, opposite to the trend of 1961-71 all urban divisions, except Construction and Trade sectors, showed positive correlation with agriculture productivity. But all correlation values were insignificant, (Table 4.3 (C)).

Studying the cases of these three States, we can come to a conclusion that agriculture productivity is not leading to non-agricultural employment growth. Only in case of Maharashtra it explains to some extent the hypothesis of agriculture productivity and non-agricultural employment growth. While in Orissa significant negative association of urban Transport sector with agriculture productivity implies that, with low level of agriculture productivity, people are pushed to petty transportation jobs in urban areas.

Relating Non-Agricultural Employment Growth with Commercialization of Agriculture

In Maharashtra, no rural division showed significant relationships with commercialization during both time period 1961-71 and 1971-81. During 1961-71 in most cases, except Mining,

Manufacturing and Community and Social Services, it showed negative correlations. Contrary to this during the period 1971-81, with most cases commercialization showed very weak positive correlation value. In the case of urban non-agricultural divisions, commercialization, during 1961-71 showed negative association with all of them except Construction sector. During 1971-81 it also showed negative association with all non-agricultural sector except trade sector. But all correlation values were insignificant with urban divisions (Table 4.4 (A)).

Likewise for Rajasthan, no division had shown significant association with commercialization. During 1961-71 among the rural divisions only Manufacturing and Trade division showed a positive association. During 1971-81 Mining, Construction and Business Services showed positive association. In case of urban division, during 1961-71, except for Mining, Community, Personal and Social Services, other showed a positive association with commercialization. But during 1971-81, most of the urban division showed a negative association (Table 4.4 (B)).

The case of Orissa is different from Maharashtra and Rajasthan. During 1961-71, rural division of Wholesale and Retail Trade showed significant negative association with commercialization. Insignificant, but fairly high negative association were also shown by Manufacturing, Community Personal and Social Services division. but rest of the divisions during 1961-71 showed weak positive correlation. During 1971-81, rural

Manufacturing; Community, Personal and Social Services showed significant negative association with commercialization. Regarding the case of urban sector. Financing Insurance and Business Services showed significant positive association with commercialization, during 1961-71. Same was not the case during 1971-81. Other urban divisions during this two periods showed either very low positive or negative association.

So, as expected, commercialization of agriculture is not leading to non-agricultural employment growth in the three States. Only in case of Orissa during 1961-71 Urban Financing and Business Services division supported the hypothesis. Negative association of rural Manufacturing, Trade and Community and personal Services division, with commercialization in Orissa meant that, either these rural sectors were not keeping pace with commercialization, or these sectors were growing due to other factors. But first one is the likely case, as urban division of Business Services showed a positive association with commercialization. Our results imply that commercialization of agriculture which are expected to encourage rural industrial activity by supplying more raw materials, and creating great demand for inputs and allied services, and so consequently the growth of non-agricultural activities, are not helping such diversification in rural areas. Probably it is taking place in higher order towns and cities. It is likely to effect the growth of Small towns in a district.

Table - 4.4 (A)

Relationship between Commercialization of Agricultural
and Non-Agricultural Employment Growth 1961-71, 1971-81

Maharashtra	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.032	-.120
Manufacturing	.023	.191
Electricity, Water and Gas	-.061	.079
Construction	-.331	-.164
Wholesale and Retail Trade	-.203	.053
Transport & Communication	-.259	.069
Financing & Business Services	-.134	.126
Community, Personal and Social Services	.206	.062
Urban		
Mining	-.116	-.350
Manufacturing	-.260	-.100
Electricity, Water and Gas	-.171	-.075
Construction	.027	-.345
Wholesale and Retail Trade	-.360	.030
Transport & Communication	-.011	-.017
Financing & Business Services	-.371	-.219
Community, Personal and Social Services	-.394	-.029

Table - 4.4 (B)

Relationship between Commercialization of Agricultural
and Non-Agricultural Employment Growth 1961-71, 1971-81

Rajasthan	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	-.132	.268
Manufacturing	.123	-.364
Electricity, Water and Gas	-.269	-.167
Construction	-.259	.103
Wholesale and Retail Trade	.291	-.423
Transport & Communication	-.125	-.059
Financing & Business Services	.066	.142
Community, Personal and Social Services	-.222	-.247
Urban		
Mining	-.217	-.074
Manufacturing	.276	-.156
Electricity, Water and Gas	.205	-.236
Construction	.052	.123
Wholesale and Retail Trade	.364	-.164
Transport & Communication	.257	.285
Financing & Business Services	.174	-.022
Community, Personal and Social Services	-.245	.373

Table - 4.4 (C)

Relationship between Commercialization of Agricultural
and Non-Agricultural Employment Growth 1961-71, 1971-81

Orissa	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.299	-.264
Manufacturing	-.508	-.658*
Electricity, Water and Gas	.449	.429
Construction	.314	.132
Wholesale and Retail Trade	-.662*	-.441
Transport & Communication	.337	.120
Financing & Business Services	.219	.294
Community, Personal and Social Services	-.620	-.721*
Urban		
Mining	-.247	.213
Manufacturing	.208	-.411
Electricity, Water and Gas	.091	.249
Construction	.329	-.008
Wholesale and Retail Trade	-.001	-.094
Transport & Communication	.485	-.228
Financing & Business Services	.643*	.172
Community, Personal and Social Services	.288	.112

Note : * Significant at 5% level of significance

Relating Non-Agriculture Employment Growth with Urbanization

In Maharashtra during 1961-71 none of the rural non-agriculture division showed significant correlation with urbanization. But during 1971-81 wholesale and Retail Trade division showed significant negative association with urbanization. Other non-agriculture division showed either very low positive or negative correlation. Regarding the case of urban division none of the division showed significant correlation with urbanization during 1961-71. All division except Manufacturing and Social Community and Personal Services showed insignificant negative correlation with urbanization. During 1971-81 urban Wholesale and Retail Trade division showed significant negative correlation with urbanization. Other divisions except Mining and manufacturing showed very low positive correlation value with urbanization (Table 4.5 (A)).

In Rajasthan too, rural division of wholesale and retail Trade during 1961-71, and urban division of Transport and Communication for 1961-71 and 1971-81 showed significant negative association with urbanization (Table 4.5 (B)). It is also seen from the table that most of the division showed negative insignificant association with urbanization.

As par our hypothesis, in Orissa rural division of Manufacturing, during 1961-71 showed significant positive association with urbanization. During this period rural division of Financing

Table - 4.5 (A)

Relationship between Urbanization and
Non-Agricultural Employment Growth 1961-71, 1971-81

Maharashtra	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.180	-.117
Manufacturing	.120	.262
Electricity, Water and Gas	-.213	-.285
Construction	.047	.058
Wholesale and Retail Trade	.208	-.645**
Transport & Communication	-.079	-.081
Financing & Business Services	.205	.126
Community, Personal and Social Services	.295	.250
Urban		
Mining	-.046	-.002
Manufacturing	.068	-.016
Electricity, Water and Gas	-.352	.066
Construction	-.323	.128
Wholesale and Retail Trade	-.070	-.607**
Transport & Communication	-.252	.026
Financing & Business Services	-.010	.178
Community, Personal and Social Services	.190	.243

Note : ** Significant at 1% level of significance

Table - 4.5 (B)

Relationship between Urbanization and
Non-Agricultural Employment Growth 1961-71, 1971-81

Rajasthan	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	-.333	-.251
Manufacturing	-.106	-.001
Electricity, Water and Gas	.261	.104
Construction	.031	-.213
Wholesale and Retail Trade	-.505*	.310
Transport & Communication	-.385	-.159
Financing & Business Services	.237	-.015
Community, Personal and Social Services	-.098	.135
Urban		
Mining	.225	-.185
Manufacturing	.009	-.172
Electricity, Water and Gas	-.283	-.444
Construction	-.090	-.227
Wholesale and Retail Trade	-.053	-.131
Transport & Communication	-.551*	-.635**
Financing & Business Services	-.133	-.136
Community, Personal and Social Services	-.162	.018

Note : * Significant at 5% level of significance
** Significant at 1% level of significance

Table - 4.5 (C)

Relationship between Urbanization and
Non-Agricultural Employment Growth 1961-71, 1971-81

Orissa	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.391	.114
Manufacturing	.672*	-.084
Electricity, Water and Gas	-.100	-.178
Construction	-.054	-.281
Wholesale and Retail Trade	.329	-.027
Transport & Communication	.019	-.148
Financing & Business Services	-.631	-.029
Community, Personal and Social Services	.021	.027
Urban		
Mining	-.035	-.190
Manufacturing	-.226	.031
Electricity, Water and Gas	-.384	-.458
Construction	-.820**	.030
Wholesale and Retail Trade	-.487	-.311
Transport & Communication	-.556	-.157
Financing & Business Services	.090	-.833**
Community, Personal and Social Services	-.237	-.509

Note : * Significant at 5% level of significance
** Significant at 1% level of significance

and Business Services showed high negative correlation with urbanization. But the correlation value is insignificant because of less degrees of freedom. Other rural division showed either very low positive or negative correlation with urbanization. Same is the case for during 1971-81 period. Regarding the case of urban non-agricultural division. Only Construction sector showed significant correlation with urbanization during 1961-71. All other urban division except Financing and Business Services, showed negative association with urbanization during 1961-71. During 1971-81 urban Financing and Business Services showed significant negative correlation with urbanization. But other divisions, except Manufacturing and Construction (showed very low positive correlation value) showed insignificant negative correlation with urbanization (Table 4.5 (C)).

So, we can reject our hypothesis that urbanization except in some particular cases, cannot explain the growth of non-agricultural sector. This means non-agricultural activities is a precondition for urbanization to take place.

Among the indicators, Agriculture productivity commercialization and urbanization, only agriculture productivity and commercialization during 1961-71 showed significant positive association in Rajasthan. Though these three indicators are not related to each other, they are explaining the same pattern, that they are not explaining the growth of non-agriculture sector. The

indicator rural density which we have taken as a distress indicator, showed significant positive association with agriculture productivity in Maharashtra and Rajasthan. Orissa also showed fairly high positive correlations. In the next part we shall see how the indicator rural density explains the growth of non-agriculture sector.

Relating Non-Agriculture Employment Growth with Rural Density

In Maharashtra, during 1961-71 none of the rural division showed significant correlation with rural density. Same is the case of 1971-81 period. In the case of urban division also all sectors showed insignificant correlation with rural density during 1961-71. But during 1971-81, urban division of Utility sector showed significant negative correlation with rural density. Other urban division during this period except construction, showed very low positive correlation.

In Rajasthan, also rural density did not show significant correlations with the growth of non-agriculture sectors. But rural division of Utility, Financing and Business Services showed fairly high positive correlation with rural density during 1971-81. This does not imply that due to distress condition people are leaving agriculture and joining Utility and Financing and Business Services Sector. There is likelihood that people shall first move to petty trade and transport sector. It might imply that probably in high density areas government is providing electricity and

water services; and banking business also come into existence.

In Orissa only rural construction division showed significant negative correlations with rural density during 1961-71. Whether during 1971-81 none of the rural division showed significant correlation with rural density. But Manufacturing, Mining and Community, Social and Personal Services showed fairly high positive correlation value. This implies that due to high pressure on land in rural areas people are get engaged in easy entry sectors like Mining and rural Manufacturing, Whether it is due to government investment that can lead to growth of Community, Social and Personal Services sector. On the other hand all urban division during 1961-71 showed insignificant negative association with rural density. The trend is changed during 1971-81 as most of the non-agricultural sector except, Utility, Construction and Trade, showed positive insignificant association with rural density, (Table 4.6 (C)). It is probable, that despite high rural direly, rising agriculture productivity, preventing people to migrate to urban areas to take up non-agricultural jobs. in the third chapter we have also found that rural density is negatively effecting the growth of Small towns.

We have seen that these variables, either representing development or distress situation were not able to explain the growth of non-agriculture sectors. Probably some other factors were operating behind the scene. Insignificant relationship of non-agricultural sectors with agricultural productivity, commerc-

Table - 4.6 (A)

Relationship between Rural Density and
Non-Agricultural Employment Growth 1961-71, 1971-81

Maharashtra	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.226	.143
Manufacturing	.271	.024
Electricity, Water and Gas	-.100	-.298
Construction	-.156	-.036
Wholesale and Retail Trade	-.009	.214
Transport & Communication	.423	-.315
Financing & Business Services	.148	-.323
Community, Personal and Social Services	-.299	.342
Urban		
Mining	.199	.001
Manufacturing	.416	.021
Electricity, Water and Gas	.131	-.600**
Construction	.167	-.223
Wholesale and Retail Trade	.190	.175
Transport & Communication	-.008	.137
Financing & Business Services	.047	.146
Community, Personal and Social Services	-.116	.350

Note : ** Significant at 1% level of significance

Table - 4.6 (B)

Relationship between Rural Density and
Non-Agricultural Employment Growth 1961-71, 1971-81

Rajasthan	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	.205	.171
Manufacturing	.237	-.237
Electricity, Water and Gas	-.368	.406
Construction	-.045	.054
Wholesale and Retail Trade	.285	-.189
Transport & Communication	.128	.156
Financing & Business Services	-.281	.434
Community, Personal and Social Services	-.152	-.273
Urban		
Mining	.029	.105
Manufacturing	-.117	-.076
Electricity, Water and Gas	.061	-.342
Construction	-.066	-.128
Wholesale and Retail Trade	.352	-.322
Transport & Communication	.247	.180
Financing & Business Services	.158	-.286
Community, Personal and Social Services	-.328	.116

Table - 4.6 (C)

Relationship between Rural Density and
Non-Agricultural Employment Growth 1961-71, 1971-81

Maharashtra	Productivity Index 1961	Productivity Index 1971
Rural		
Mining	-.303	.487
Manufacturing	.163	.531
Electricity, Water and Gas	-.311	-.203
Construction	-.730*	-.365
Wholesale and Retail Trade	.095	-.068
Transport & Communication	-.404	-.197
Financing & Business Services	.301	.060
Community, Personal and Social Services	.374	.567
Urban		
Mining	-.189	.160
Manufacturing	-.427	.003
Electricity, Water and Gas	-.623	-.148
Construction	-.102	-.289
Wholesale and Retail Trade	-.289	-.231
Transport & Communication	-.493	.142
Financing & Business Services	-.568	.198
Community, Personal and Social Services	-.319	.029

Note : * Significant at 5% level of significance

ialization of agriculture and urbanization, strengthen the hypothesis forwarded by Vaidyanathan (1986). But failure of the indicator rural density to explain non-agriculture employment growth also questions the validity of residual sector hypothesis. so, it is very difficult to analyse the processes which encourage or prevent diversification of non-agriculture activities in developed as well as in backward states.

4.4 Linkages Between Rural and Urban Non-Agricultural Activities

Aswini Saith (1992) relies on a linkage criterion, where all types of non-agriculture employments are considered for rural households, irrespective of their location. His definition of location criterion stress on rural people rather than rural areas. Means that their is urban non-agricultural employment for rural people also. From the viewpoint of location, and the prospect of the benefits occurring to rural residents, non-agricultural activities can fall into four location-linkages combine : rural located, rural linked; rural located, urban linked; urban located, urban linked; and urban located, rural linked. In this part we shall just see the relationship between the growth of urban and rural non-agricultural employment. Positive result between the two could show two things, namely : there is favourable effect of urban located industries on rural areas. Rural people are getting jobs in urban areas, and they are commuter to urban areas. Moreover, urban industries, have

favourable spillover to rural industries, (trickle down effects). Secondly industries may be rural located, but their services are linked with urban areas, for certain part of services they are dependent on each other, and mutually growing. Negative association means, growth of urban located industries affecting the rural located ones, or, it may be the other way round also.

Table 4.7 (A) shows the correspondence between rural and urban non-agricultural growth, during 1961-71, 1971-81 and 1981-91 in Maharashtra. During 1961-71, NIC divisions, Electricity, Gas and Water Services, Wholesale and Retail Trade; Financing and Business Services showed positive significant relationship between rural and urban. Except for Mining, which showed negative association, other NIC divisions showed very weak positive correlations. during 1971-81; Wholesale and Retail Trade continued to show positive relationships, rather very strong rural-urban linkages. Manufacturing sector also showed significant positive correlations. But other NIC Divisions during this period did not show significant correlations. The few categories that we had adjusted for in the NIC division during 1981-91 did not show significant relationships.

In Rajasthan during 1961-71 except in Transport and Communication, other NIC divisions did not show significant correspondence between rural and urban non-agricultural activities. All were showing very low correlation values.

Table - 4.7 (A)

Correspondence between Rural Non-Agricultural
and Urban Non-Agricultural Employment Growth
during 1961-71, 1971-81 and 1981-91

MAHARASHTRA	1961-71	1971-81	1981-91
Rural Mining	-.181	-.046	.265
Urban Mining			
Rural Manufacturing	.203	.580*	-.018
Urban Manufacturing			
Rural Electricity, Water and Gas	.517*	.360	
Urban Electricity, Water and Gas			
Rural Construction	.044	-.123	.103
Urban Construction			
Rural Wholesale and Retail Trade	.554*	.969*	
Urban Wholesale and Retail Trade			
Rural Transport & Communication	.041	-.027	-.274
Urban Transport & Communication			
Rural Financing & Business Services	.606**	.178	
Urban Financing & Business Services			
Rural Community, Personal and Social Services	.112	.305	
Urban Community, Personal and Social Services			

Note : * Significant at 5% level of significance
** Significant at 1% level of significance

Table - 4.7 (B)

Correspondence between Rural Non-Agricultural
and Urban Non-Agricultural Employment Growth
during 1961-71, 1971-81 and 1981-91

RAJASTHAN	1961-71	1971-81	1981-91
Rural Mining	.128	-.090	.283
Urban Mining			
Rural Manufacturing	.309	-.007	.007
Urban Manufacturing			
Rural Electricity, Water and Gas	-.358	-.005	
Urban Electricity, Water and Gas			
Rural Construction	-.252	.120	.117
Urban Construction			
Rural Wholesale and Retail Trade	-.176	-.215	
Urban Wholesale and Retail Trade			
Rural Transport & Communication	.525*	.037	.073
Urban Transport & Communication			
Rural Financing & Business Services	.262	-.004	
Urban Financing & Business Services			
Rural Community, Personal and Social Services	.067	-.093	
Urban Community, Personal and Social Services			

Note : * Significant at 5% level of significance

Table - 4.7 (C)

Correspondence between Rural Non-Agricultural
and Urban Non-Agricultural Employment Growth
during 1961-71, 1971-81 and 1981-91

ORISSA	1961-71	1971-81	1981-91
Rural Mining	.611	.137	.519
Urban Mining			
Rural Manufacturing	-.325	.415	.334
Urban Manufacturing			
Rural Electricity, Water and Gas	.341	-.193	
Urban Electricity, Water and Gas			
Rural Construction	-.068	.405	.626
Urban Construction			
Rural Wholesale and Retail Trade	-.274	.635	
Urban Wholesale and Retail Trade			
Rural Transport & Communication	.173	-.137	.004
Urban Transport & Communication			
Rural Financing & Business Services	-.216	.011	
Urban Financing & Business Services			
Rural Community, Personal and Social Services	.185	.078	
Urban Community, Personal and Social Services			

In Orissa nowhere can we see significant correspondence between rural and urban non-agriculture employment growth. Still we can identify high positive relationship in Mining during 1961-71 and 1981-91; Manufacturing and Construction during 1971-81 and 1981-91; and in Wholesale and Retail Trade during 1971-81, (Table 4.7 (C)).

In general, we can comment that in the three states, there was no rural-urban linkages except to some extent in the case of Maharashtra. Rural and urban non-agricultural sectors are growing independent of each other. Implication of this on urbanization would be emergence of a dichotomous economy, whereby large towns having no linkages with its hinterland are growing faster. Absence of such linkage is likely to effect the growth of Small towns all the more. Cities particularly World Cities (Friedman, 1988) have their own dynamics of development unrelated to rural hinterland. On the otherhand Small towns are mainly affected by the processes of agricultural development.

4.5 Conclusion :

Making an indepth study of the three States of Maharashtra, Rajasthan and Orissa. We come to a conclusion that agricultural productivity is not leading to a non-agricultural employment growth. Only in the case of Maharshttra did it explain to some extent the hypothesis of agricultural productivity and non-agricultural employment growth.

Commercialization of agriculture is not leading to a growth of non-agricultural employment in the three States. Only in case of Orissa (during 1961-71), urban Financing and Business Services sector supported the hypothesis. Commercialization expected to encourage rural industrial activities by supplying more raw materials, creating greater demand for inputs and allied services. Such advantages seems to have gone to the urban sectors, probably in large towns.

Urbanization, (except in some particular cases) could not explain the growth of non-agricultural sectors. This suggest that non-agricultural activities are a precondition for urbanization to take place.

Rural density which we had taken as a proxy for rural unemployment, did not show significant correlations with growth of non-agricultural activities. In regression analysis also rural density showed negative effect on the growth of Small towns.

We have seen that these four variables, agricultural productivity, commercialization, urbanization and rural density representing either development of distress situation were not able to explain the growth of non-agricultural activities. Probably some other factors were operating behind the scene. Insignificant relationship of non-agricultural sectors with agricultural productivity, commercialization and urbanization, strengthens the hypothesis propounded by Vaidyanathan (1986). But

failure of the variable rural density to explain non-agricultural employment growth also questions the validity of residual sector hypothesis. So, it is very difficult to analyse the processes, which encourage or prevent diversification of non-agricultural activities in developed and backward States.

LINKAGE : NON-AGRICULTURAL EMPLOYMENT AND GROWTH OF SMALL TOWNS

5.1 Introduction

In this chapter we shall look at the growth of Small towns from non-agricultural employment growth. The expectation being that diversification of activities leads to growth of towns.

Agriculture growth initiate diversification, by supplying raw materials to industry and creates demands for inputs and allied Services. Rising agricultural income in rural areas creates demand for consumer goods. These in turn requires, improvement or creation of a system of Rural Service Centres, notably of Small Towns. Concentration and growth of non-agricultural activities in rural towns localizes employment opportunities for people who leaves agriculture. Expansion of these towns, where concentration of non-agriculture activities take place can be quite fast, because of high elasticities of demand for non-food goods and services with respect to increasing agriculture output and incomes.

In enplaning the growth of Small Towns, we propose one general hypothesis that growth of towns is positively associated with all non-agricultural divisions.

5.2 Relating Growth of Small Towns with Non-Agricultural Employment Growth

We take the cases of class IV, V and VI towns separately. Rationality for separating rural non-agriculture employment from urban, is to show rural linkages with urban areas. This analysis shall help us to explain the growth dynamics of Small towns.

Results of class IV towns in Maharashtra shows that, rural division of Transport and Communication showed significant positive correlation with class IV towns growth during 1971-81. Other rural divisions were not showing significant relations with class IV towns growth. In the case of urban divisions, Manufacturing, Electricity, Gas and Water Services and Construction activities showed positive significant associations with the growth of class IV towns, during 1971-81. During 1981-91, Transport and Communication showed significant relations with the class IV towns growth. Though insignificant most of the urban divisions are positively associated with growth of class IV towns, except Electricity, Gas and Water Services and Financing and Business Services during 1961-71 (Table 5.1 A).

Results of Rajasthan shows that, only rural division of Community, Social and Personal Services had significant positive correlations with the growth of class IV towns during 1971-81. Correlation results with urban divisions showed that during 1961-71, they were negatively related with growth of class IV towns

(except Manufacturing, Transport and Communication and Community, Social and Personal Services divisions). During 1971-81 they were insignificant but positively related (Table 5.1-B).

Class IV towns in Orissa, were also not showing significant relations with the rural non-agricultural sectors. But somewhat high positive correlation showed up with Mining and Quarrying during 1961-71. Construction, Transport and Communication reflected with high positive correlations during 1971-81. Wholesale and Retail Trade during 1961-71; Mining and Quarrying, Financing and Business Services during 1971-81; Construction and Transport and Communication during 1981-91, with them class IV towns show relatively high negative correlation.¹ Regarding the case of urban non-agricultural sectors, class IV towns showed, significant positive correlations with Community, Social and Personal Services during 1961-71. Though insignificant, class IV towns showed relatively high positive correlations with urban Manufacturing, Financing and Business Services during 1971-81. But during 1981-91, class IV towns showed relatively high negative association with Construction activity, (Table 5.1-C).

In general we can say that, to some extent, only in Maharashtra, class IV towns were positively associated with the growth of non-agricultural activities.

¹ It means correlation values are high, but as degrees of freedom are less, that fails to prove their significance.

In case of class V towns, in Maharashtra, during 1961-71, rural divisions of Electricity, Gas and Water Services, and Community Social and Personal Services showed significant positive relations with the growth of class V towns. Mining and Quarrying though insignificant showed quite high negative correlations. In the later two decades, class V towns showed either very low positive or negative correlations with all non-agricultural sectors. Regarding the case of urban non-agricultural sectors, class V towns showed quite insignificant relationships with them, (Table 5.2-A).

In Rajasthan, during 1961-71 class V towns, showed significant relationships only with urban division Community Personal and Social Services. Class V towns showed, relatively high positive correlations with rural divisions of Electricity, Gas and Water Services and with Transport and Communication during 1961-71. During this period, class V towns also showed positive but insignificant correlations with urban Transport and Communication division. During 1971-81, class V towns showed relatively high positive correlations with Financing and Business Services. With other divisions class V towns showed very weak negative or positive correlations, (Table 5.2-B).

In Orissa, class V towns were not showing significant relationships with non-agricultural sectors (Table 5.2-C). Class V towns showed relatively high positive correlation with rural divisions of construction during both 1961-71 and 1971-81 period,

with Financing and Business Services during 1961-71 and with community, Social and personal Services during 1971-81. Class V towns with rural Mining and Quarrying during 1981-91, Manufacturing during 1961-71, Financing and Business Services during 1971-81 and with Community, Social and Personal Services during 1961-71 show relatively high negative correlations. With urban division of Manufacturing, Wholesale and Retail Trade and Financing and Business Services, class V towns showed relatively high positive correlations during 1961-71. Again with Wholesale and Retail Trade during 1971-81, class V towns in Orissa showed high but insignificant positive correlations. With Transport and Communication it also showed relatively high correlations during 1981-91.

Regarding the class VI towns, since very few districts had population residing in class VI towns, during 1971 and 1981; we have shown its relationship with non-agricultural employment for the time period of 1961-71, for the two states, Maharashtra and Rajasthan. The correlation results were quite insignificant (Table 5.3). Particularly growth of class VI towns showed negative association with all urban divisions in both states. Contrary to this in Rajasthan class VI towns showed positive associations with all rural divisions except with Financing and Business Services. Correlation values are also quite high in case of Mining (0.718), Construction (0.738), Community, Social and

Personal Services (0.737), but insignificant.² While in Maharashtra correlation results are negative with Mining, Construction and with Transport and Communications Services. Other divisions though they show positive associations, are quite insignificant.

Maps show the relationship between growth of Small towns and non-agricultural sectors. Those sectors having significant relations with growth of Small towns are presented in the map.

5.3 Conclusion

From our analysis we can say that there is virtually no relationship between growth of Small towns and non-agricultural employment growth. Sectoral diversification in the districts were not affecting the growth of Small towns. Probably, it is taking place in higher order towns. In our analysis we also saw that class IV towns in Maharashtra showed significant positive relations with urban Manufacturing, Electricity, Gas and Water Services and with Construction activity during 1971-81 and with Transport during 1981-91. But such significant relations are not seen for class V and VI towns of Maharashtra. This means that, it is the higher order towns where sectoral diversification are taking place. Lower order towns generally have rural economic base. Still agricultural development indicators are not

² It is the less degrees of freedom that fails to prove their significance.

explaining non-agriculture employment growth and consequently growth of Small towns. This lead us to think that it is the extreme poverty, unemployment and rural conflict in rural areas that drives people to urban centres at the lower levels. Our results also show that non-agriculture division; Community, Social and Personal Services in many cases show significant correlations with the growth of Small towns; Rajasthan (1971-81), Orissa (1961-71) in case of class IV towns, in the case of class V towns, Maharashtra (1961-71) and Rajasthan (1961-71). One may attribute these relationships, due to the investments in various public services like administration, education etc.

In conclusion, we can say that, baring few divisions in some particular time periods, growth of Small towns were not associated with non-agricultural activities. So, we reject our hypotheses regarding the linkages of urbanization and non-agricultural activities, in case of Small towns. One can attribute the growth of Small towns, due to declining agricultural productivity, increasing population density in rural areas, and some investment in infrastructure and public amenities, particularly in administrative centres at lower levels of towns. But we can not generalise this conclusion as we have seen in earlier chapter (Ch III) that rural density showed negative effect on the growth of Small towns. Moreover rural density was positively associated with agricultural productivity in the three States.

In the next and last chapter we shall summarize the findings of previous chapters, regarding Small towns' urbanization processes and policy implications of our findings.

Table 5.1-A
Relationship between Growth of Non-Agricultural Activities
and Class IV towns during 1961-71, 71-81 & 81-91

MAHARASHTRA	Class IV towns 1961-71	Class IV towns 1971-81	Class IV towns 1981-91
RURAL			
Mining and Quarrying	-.085	-.215	.141
Manufacturing and Repair	.301	.374	-.047
Electricity, Gas and Water	.124	.379	
Construction	.233	-.162	-.084
Wholesale and Retail Trade and Restaurants and Hotels	.309	.105	
Transport, Storage and Communications	-.049	.649**	.093
Financing, Insurance, Real Estate and Business Services	-.099	-.024	
Community Social and personal Services	.215	-.053	
URBAN			
Mining and Quarrying	.179	.214	.083
Manufacturing and Repair	.351	.532*	.172
Electricity, Gas and Water	-.120	.505*	
Construction	.291	.514*	.203
Wholesale and Retail Trade and Restaurants and Hotels	.441	.217	
Transport, Storage and Communications	.378	.328	.491*
Financing, Insurance, Real Estate and Business Services	-.060	.113	
Community Social and personal Services	.420	.232	

* = Significant at 5 percent level of significance
 ** = Significant at 1 percent level of significance.

Table 5.1-B

Relationship between Growth of Non-Agricultural Activities
and Class IV towns during 1961-71, 1971-81 and 1981-91

RAJASTHAN	Class IV towns 1961-71	Class IV towns 1971-81	Class IV towns 1981-91
RURAL			
Mining and Quarrying	-.238	.101	.082
Manufacturing and Repair	.061	.428	-.195
Electricity, Gas and Water	.314	-.191	
Construction	-.275	-.087	.191
Wholesale and Retail Trade and Restaurants and Hotels	.065	.036	
Transport, Storage and Communications	-.035	.119	.293
Financing, Insurance, Real Estate and Business Services	-.254	-.145	
Community Social and personal Services	.097	.517*	
URBAN			
Mining and Quarrying	-.044	.209	.298
Manufacturing and Repair	.215	.345	-.083
Electricity, Gas and Water	-.192	.048	
Construction	-.089	.086	.087
Wholesale and Retail Trade and Restaurants and Hotels	-.148	.212	
Transport, Storage and Communications	.403	.097	-.017
Financing, Insurance, Real Estate and Business Services	-.148	.159	
Community Social and personal Services	.195	.181	

* = Significant at 5 percent level of significance

Table 5.1-C

**Relationship between Growth of Non-Agricultural Activities
and Class IV towns during 1961-71, 1971-81 and 1981-91**

ORISSA	Class IV towns 1961-71	Class IV towns 1971-81	Class IV towns 1981-91
RURAL			
Mining and Quarrying	.537	-.490	.034
Manufacturing and Repair	-.142	.212	.077
Electricity, Gas and Water	-.114	.242	
Construction	.112	.574	-.457
Wholesale and Retail Trade and Restaurants and Hotels	-.615	-.057	
Transport, Storage and Communications	-.093	.558	-.442
Financing, Insurance, Real Estate and Business Services	.044	-.473	
Community Social and personal Services	-.256	.236	
URBAN			
Mining and Quarrying	.343	.051	.154
Manufacturing and Repair	.511	-.089	-.158
Electricity, Gas and Water	-.101	.387	
Construction	.081	.258	-.500
Wholesale and Retail Trade and Restaurants and Hotels	.136	.354	
Transport, Storage and Communications	-.074	.368	-.251
Financing, Insurance, Real Estate and Business Services	.692	.463	
Community Social and personal Services	.805*	.364	

* = Significant at 5 percent level of significance.

Table 5.2-A

Relationship between Growth of Non-Agricultural Activities
and Class V towns during 1961-71, 1971-81 and 1981-91

	Class V towns 1961-71	Class V towns 1971-81	Class V towns 1981-91
RURAL			
Mining and Quarrying	-.477	-.141	.115
Manufacturing and Repair	.216	-.003	-.189
Electricity, Gas and Water	.546*	.156	
Construction	-.081	-.083	-.364
Wholesale and Retail Trade and Restaurants and Hotels	.277	.035	
Transport, Storage and Communications	.174	-.066	-.045
Financing, Insurance, Real Estate and Business Services	.003	-.099	
Community Social and personal Services	.577*	.060	
URBAN			
Mining and Quarrying	-.006	-.037	.150
Manufacturing and Repair	-.191	-.045	-.186
Electricity, Gas and Water	-.035	.144	
Construction	.014	-.068	-.218
Wholesale and Retail Trade and Restaurants and Hotels	.230	.051	
Transport, Storage and Communications	.245	-.038	-.038
Financing, Insurance, Real Estate and Business Services	.049	-.181	
Community Social and personal Services	-.050	.025	

* = Significant at 5 percent level of significance.

Table 5.2-B

Relationship between Growth of Non-Agricultural Activities
and Class V towns during 1961-71, 1971-81 and 1981-91

RAJASTHAN	Class V towns 1961-71	Class V towns 1971-81	Class V towns 1981-91
RURAL			
Mining and Quarrying	-.195	.360	-.169
Manufacturing and Repair	-.183	-.081	.239
Electricity, Gas and Water	.410	-.046	
Construction	.221	-.357	-.062
Wholesale and Retail Trade and Restaurants and Hotels	.121	.044	
Transport, Storage and Communications	.404	-.102	.373
Financing, Insurance, Real Estate and Business Services	.163	.005	
Community Social and personal Services	-.323	.111	
URBAN			
Mining and Quarrying	.134	-.071	-.214
Manufacturing and Repair	.314	.166	.089
Electricity, Gas and Water	.059	-.161	
Construction	.220	-.140	-.168
Wholesale and Retail Trade and Restaurants and Hotels	-.274	.307	
Transport, Storage and Communications	.484	-.090	.156
Financing, Insurance, Real Estate and Business Services	-.214	.482	
Community Social and personal Services	.506*	.022	

* = Significant at 5 percent level of significance.

Table 5.2-C

Relationship between Growth of Non-Agricultural Activities
and Class V towns during 1961-71, 1971-81 and 1981-91

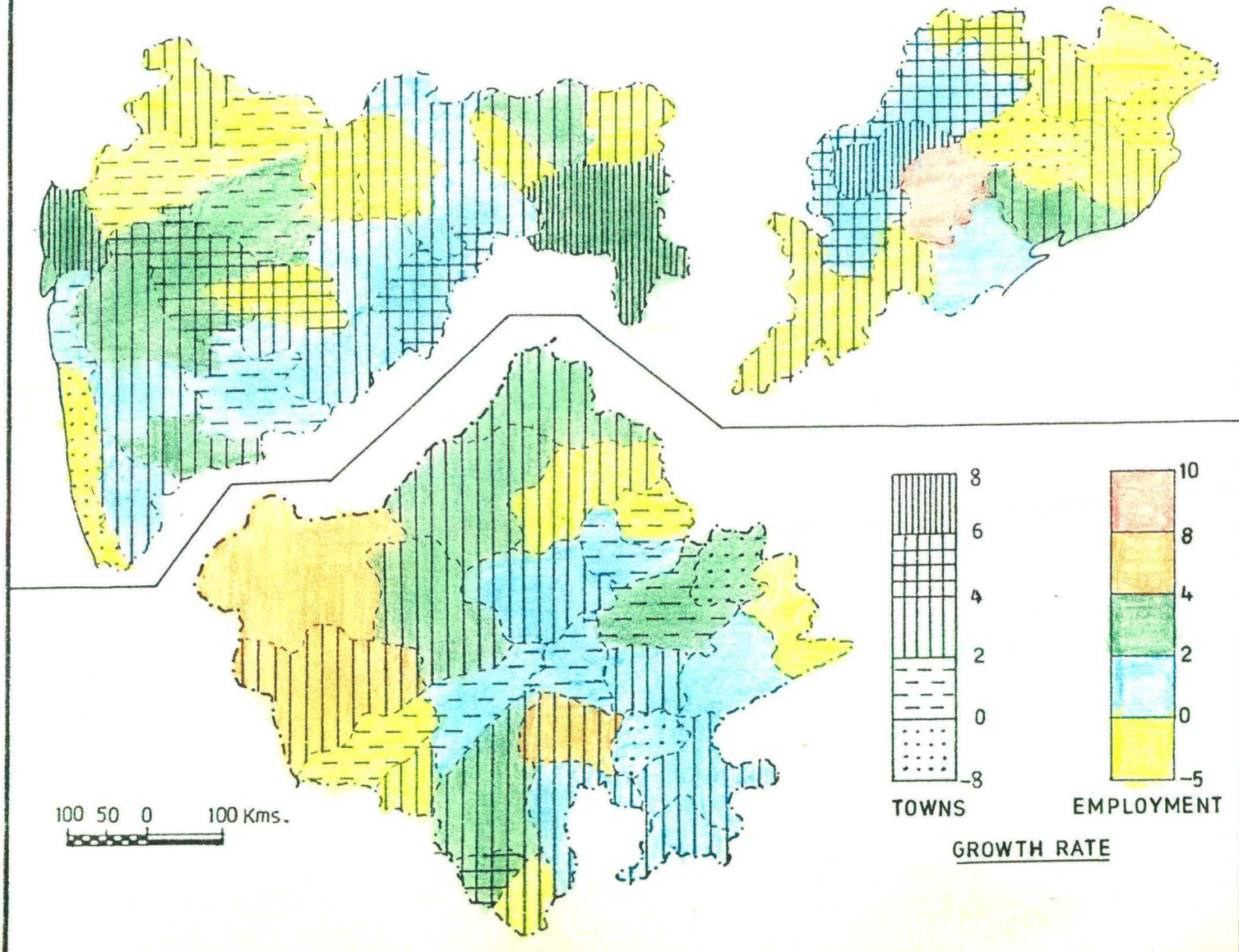
ORISSA	Class V towns 1961-71	Class V towns 1971-81	Class V towns 1981-91
RURAL			
Mining and Quarrying	.185	-.310	-.604
Manufacturing and Repair	-.508	.182	.288
Electricity, Gas and Water	.241	-.296	
Construction	.421	.481	.069
Wholesale and Retail Trade and Restaurants and Hotels	-.368	.329	
Transport, Storage and Communications	.193	.367	-.315
Financing, Insurance, Real Estate and Business Services	.496	-.472	
Community Social and personal Services	-.553	.413	
URBAN			
Mining and Quarrying	.026	.189	-.200
Manufacturing and Repair	.422	.302	.072
Electricity, Gas and Water	-.183	-.247	
Construction	.231	.376	-.191
Wholesale and Retail Trade and Restaurants and Hotels	.407	.472	
Transport, Storage and Communications	.299	-.190	.577
Financing, Insurance, Real Estate and Business Services	.541	.050	
Community Social and personal Services	.188	-.031	

Table 5.3

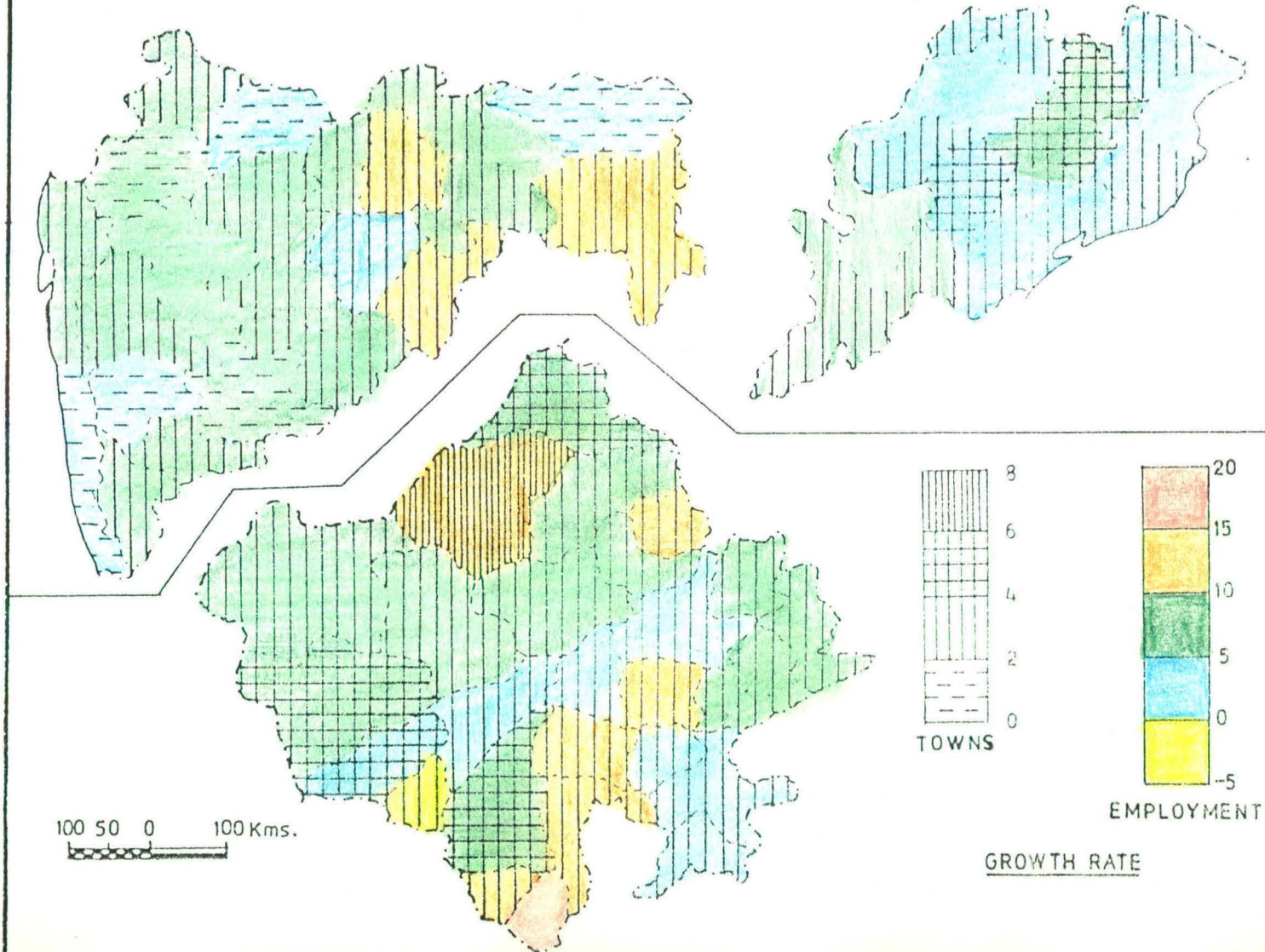
**Relationship between Growth of Non-Agricultural
Activities and Class VI towns during 1961-71**

	Class VI towns Maharashtra	Class VI towns Rajasthan
RURAL		
Mining and Quarrying	-.396	.718
Manufacturing and Repair	.208	.279
Electricity, Gas and Water	.211	.352
Construction	-.371	.738
Wholesale and Retail Trade and Restaurants and Hotels	.208	.318
Transport, Storage and Communications	-.095	.406
Financing, Insurance, Real Estate and Business Services	.194	-.231
Community Social and personal Services	.489	.737
URBAN		
Mining and Quarrying	-.371	.272
Manufacturing and Repair	-.352	-.726
Electricity, Gas and Water	-.124	-.323
Construction	-.129	.109
Wholesale and Retail Trade and Restaurants and Hotels	-.565	-.216
Transport, Storage and Communications	-.218	-.194
Financing, Insurance, Real Estate and Business Services	.197	-.122
Community Social and personal Services	-.307	-.361

GROWTH OF CLASS IV TOWNS AND URBAN COMMUNITY, SOCIAL AND PERSONAL SERVICES, 1961-71

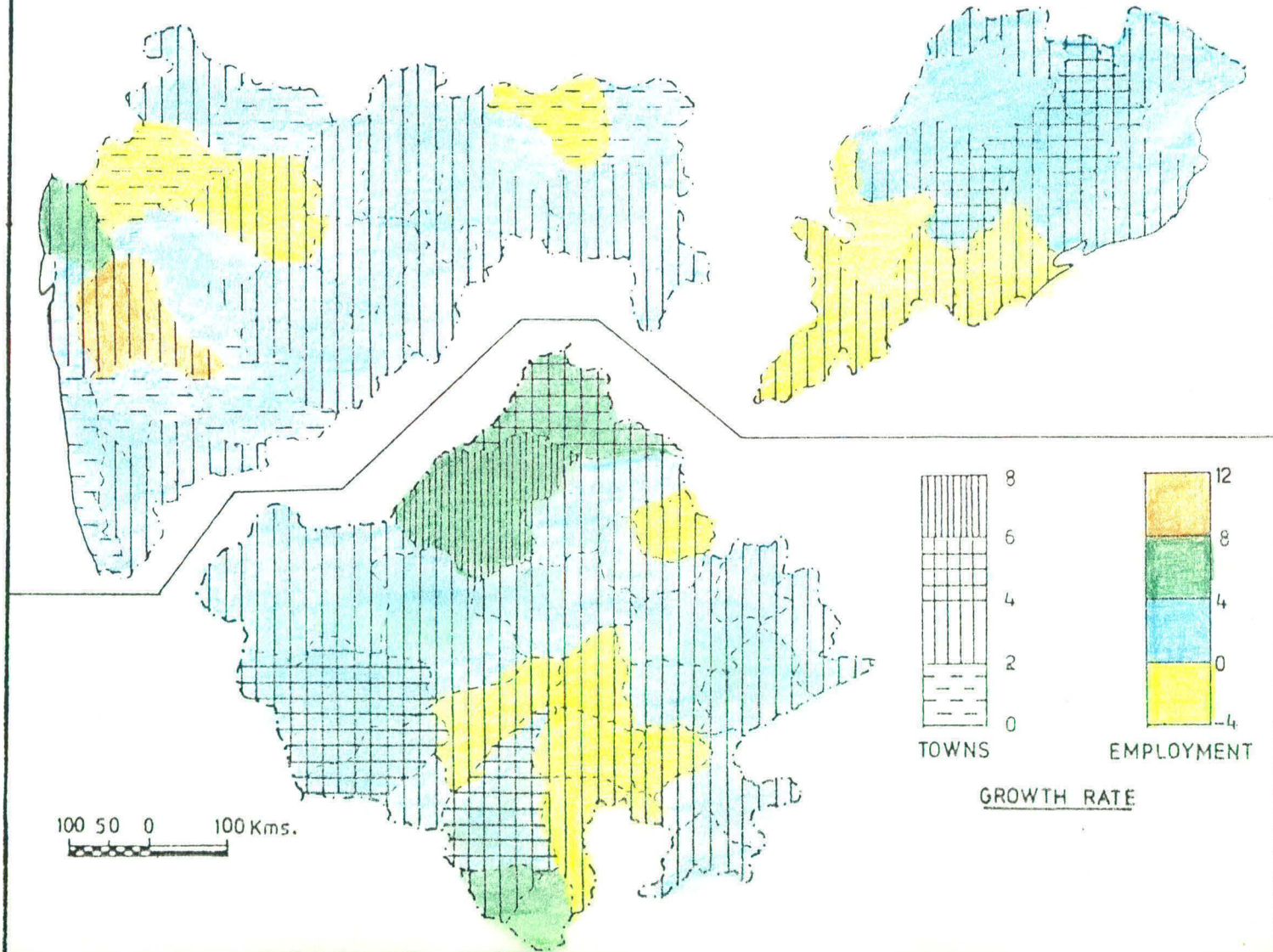


GROWTH OF CLASS IV TOWNS AND RURAL TRANSPORT SERVICES, 1971 - 81

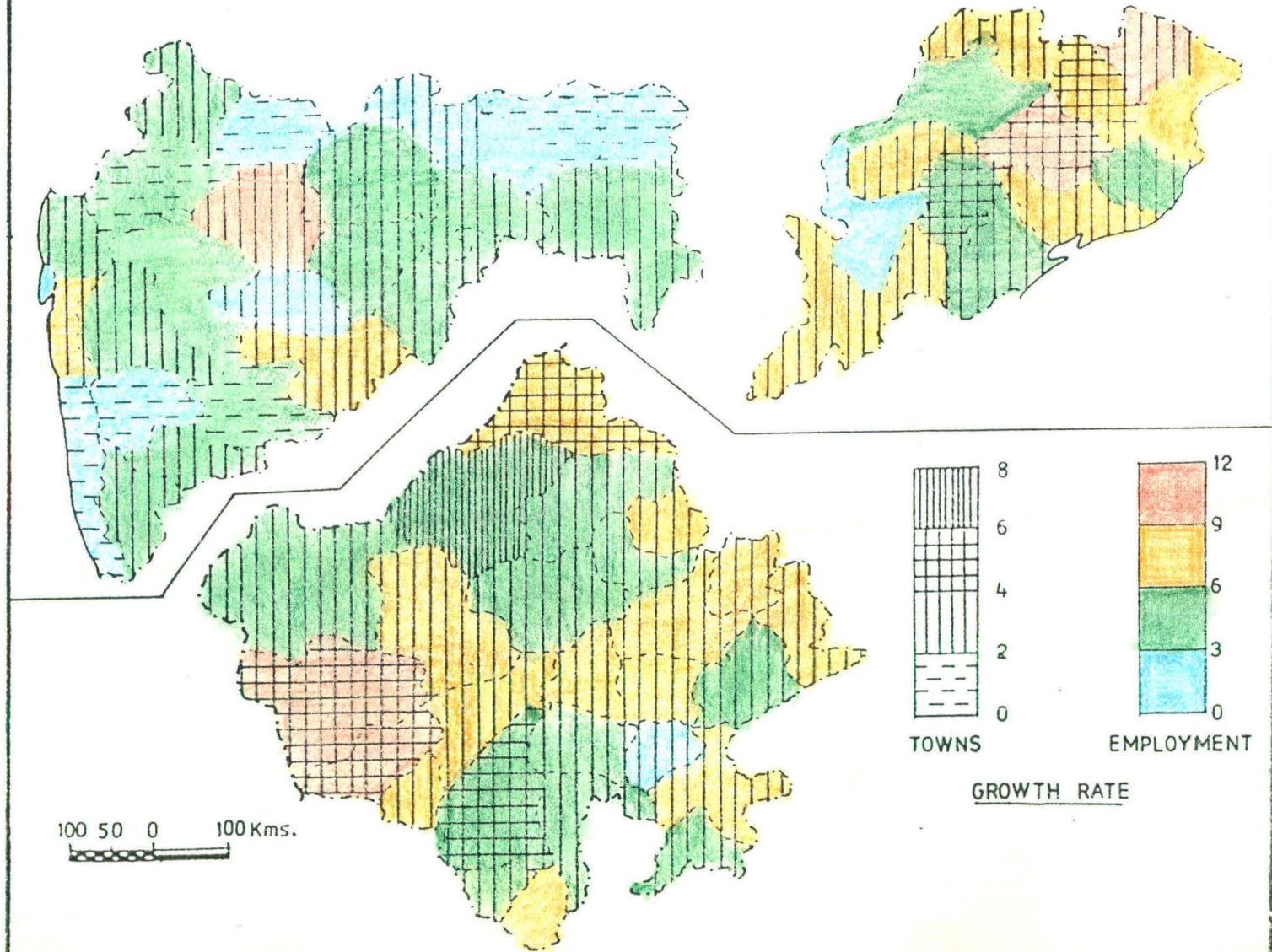


MAP no.-5.C

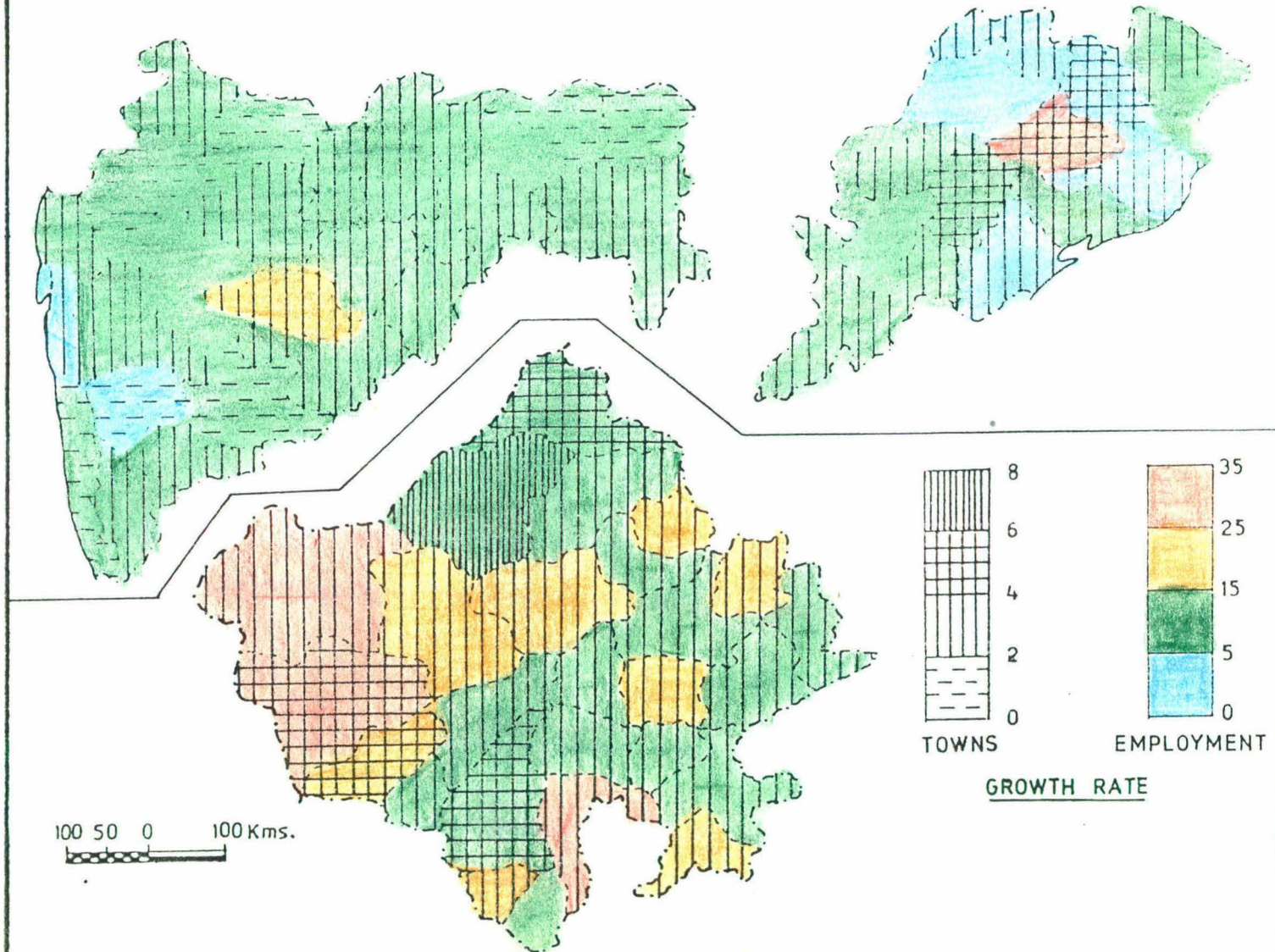
GROWTH OF CLASS IV TOWNS AND RURAL COMMUNITY, SOCIAL AND PERSONAL SERVICES, 1971- 81



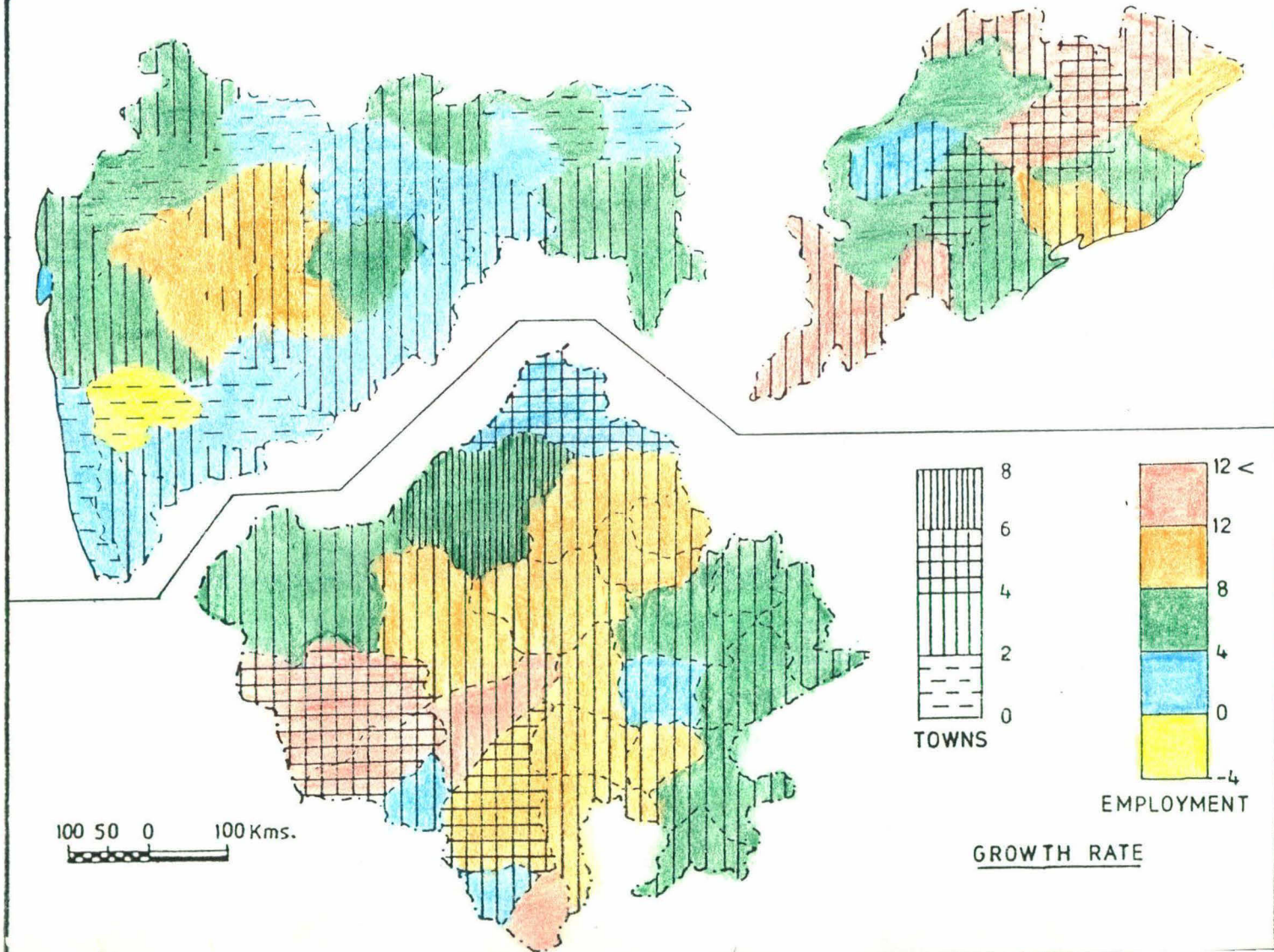
GROWTH OF CLASS IV TOWNS AND URBAN MANUFACTURING, 1971 - 81



GROWTH OF CLASS IV TOWNS AND URBAN UTILITY SECTOR, 1971-81

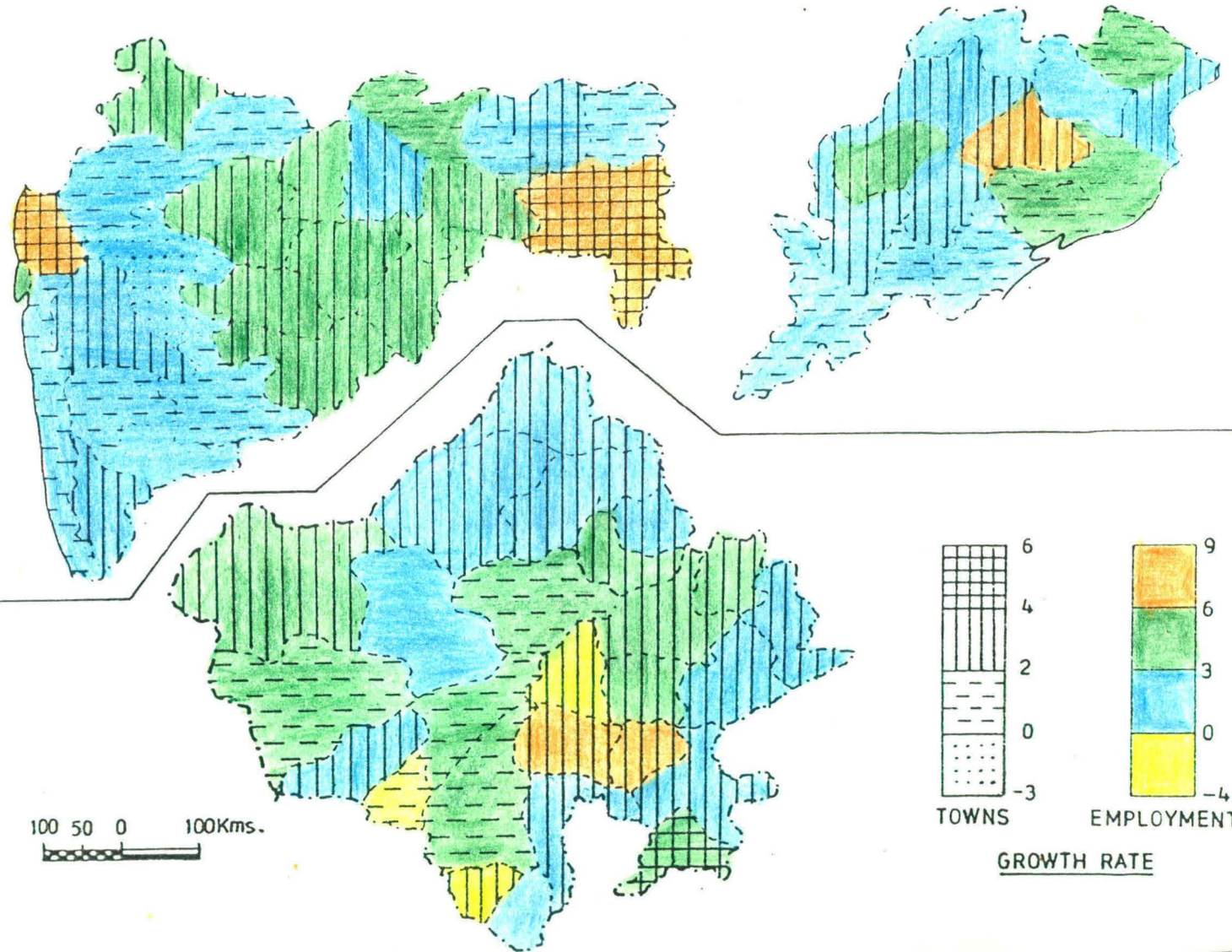


GROWTH OF CLASS IV TOWNS AND URBAN CONSTRUCTION SECTOR, 1971 - 81

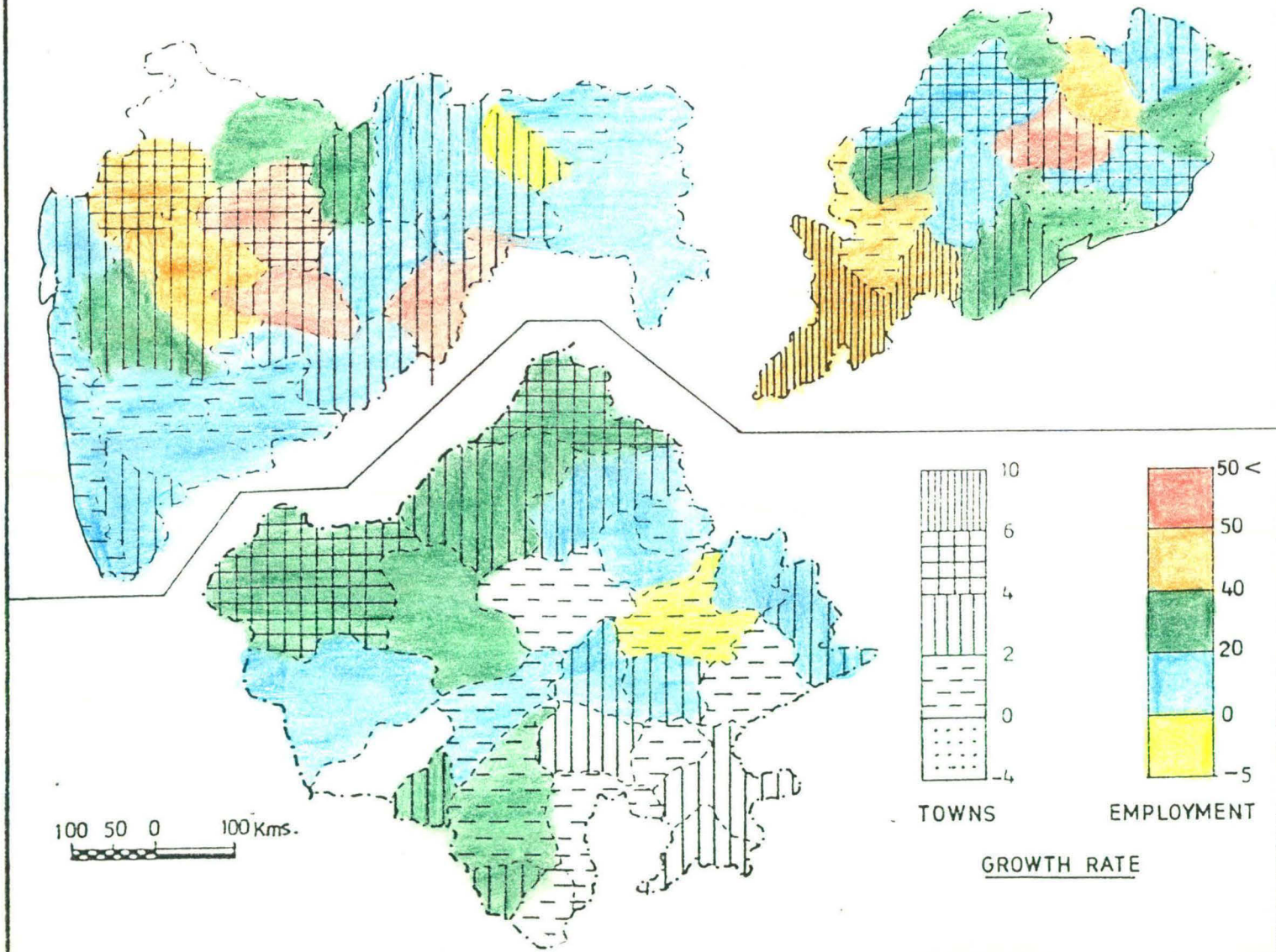


Map no.-5.6

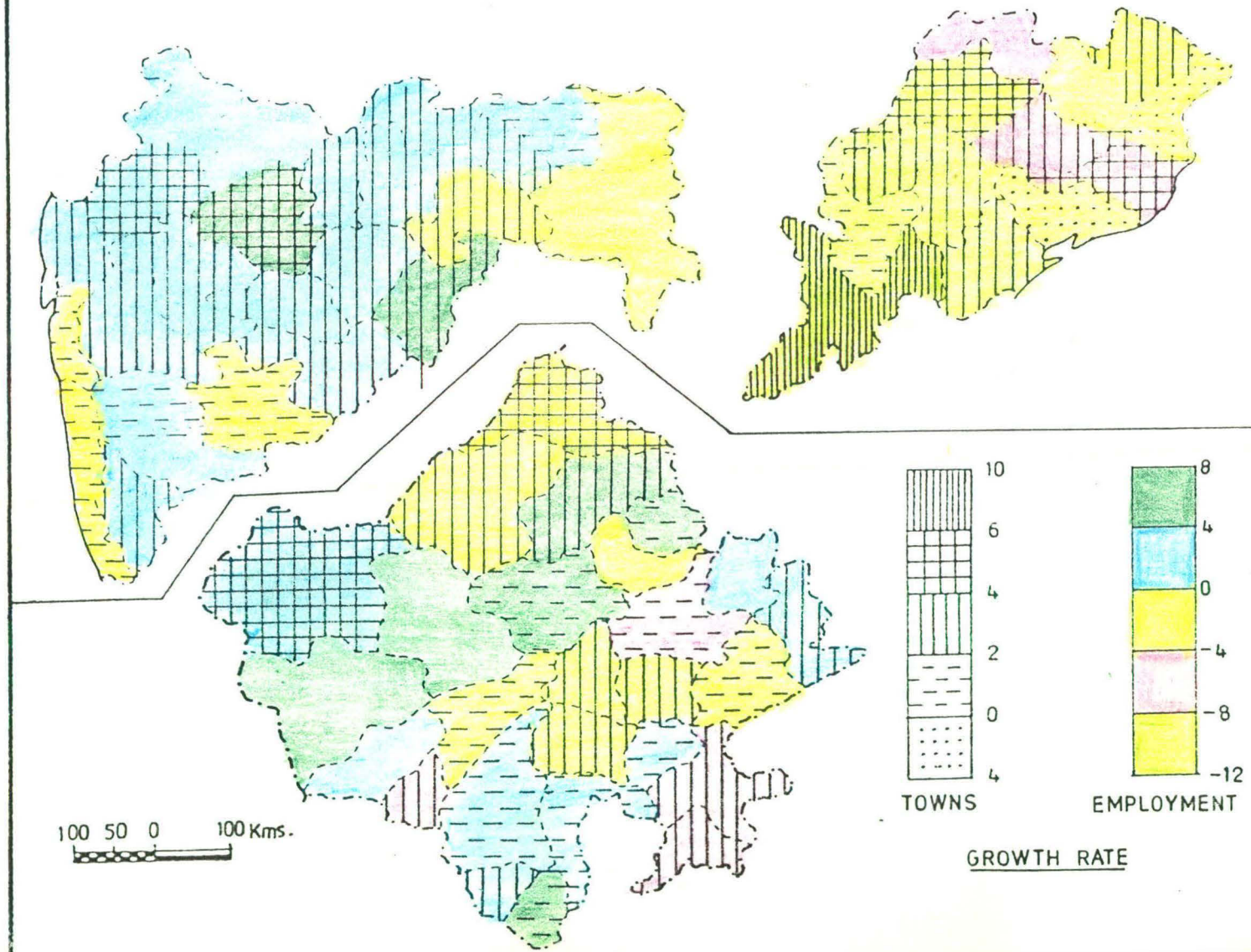
GROWTH OF CLASS IV TOWNS AND URBAN TRANSPORT SERVICES, 1981-91



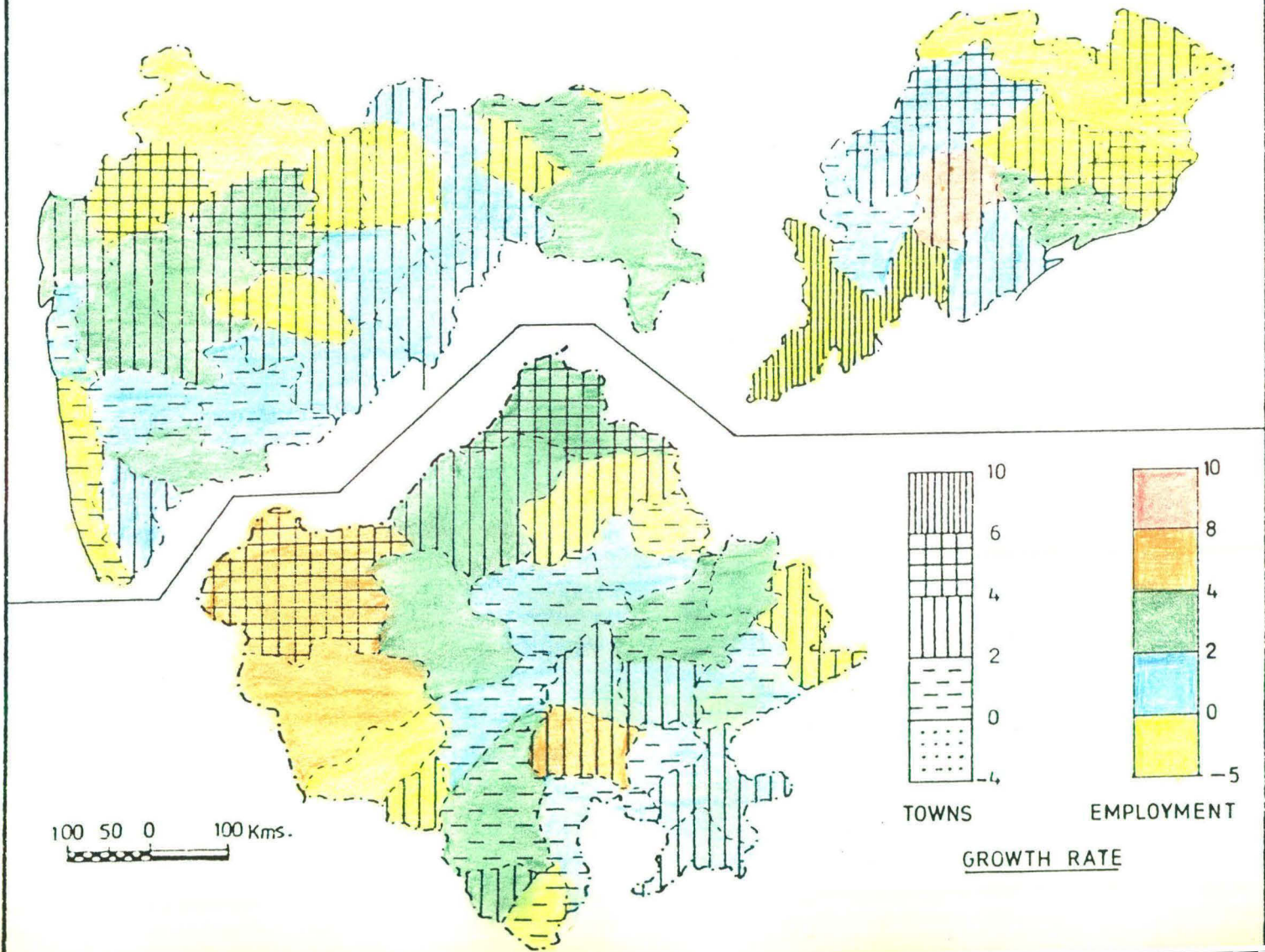
GROWTH OF CLASS V TOWNS AND RURAL UTILITY SECTOR, 1961-71



GROWTH OF CLASS V TOWNS AND RURAL COMMUNITY, SOCIAL AND PERSONAL SERVICES, 1961-71



GROWTH OF CLASS V TOWNS AND URBAN COMMUNITY, SOCIAL AND PERSONAL SERVICES, 1961 - 71



CHAPTER VI

CONCLUSION AND IMPLICATIONS

Small towns are related to rural hinterland, and growth of it much dependent upon development of rural areas or on agricultural development. Small town's existence is dependent on how it can serve the rural hinterland as a service centre. Relevance of linking Small towns growth with non-agricultural employment growth suggests that, there is a simultaneous growth of Small towns with growth of non-agricultural activities. This in turn depends on agricultural growth in a region. A linkages that helps to serve the rural hinterland and its (Small town) sustainability lies in the growth of rural hinterland. This had been the major objective of this study.

Growth trend of class IV towns of Maharashtra showed that there was a continuous slowing down of growth during the time period 1967-71, 1971-81 and 1981-91. But the trend was different in Rajasthan and Orissa. Their growth picked up during 1971-81 and then slowed down during 1981-91. Regarding class V towns there was ample variations in growth trend in the districts of Maharashtra. But in Rajasthan and Orissa the trend was uniform as was reflected in their class IV towns. Such uniform trend in growth rate of class VI towns were not seen in the study periods in the three states.

Our study found that there were large number of districts that had a high growth of female population, than male population during 1971-81. Possible explanations were, that, statistically it showed a high growth from a small base. Compared to small base of population in 1961, during 1971-81 it was likely to show a higher growth rate. With an enlarged base it slowed down in the next decade. Related to this another explanation is that, in new Small towns there is a likelihood that, initially male members settle down. After which they bring their families. This raises the growth rate of towns, more specially the growth rate of female population. Many newly created towns revealed such a phenomena. *The second chapter* does not take into account the empirical data to explain the growth trend of towns. Rather it goes through some descriptive information. Such as manufactured and exported items of the towns, to get an idea about the economic base and its effect on the growth of Small towns.

In the third chapter we have studied the determinants of Small town growth. Correlation analysis between levels of development and growth of class IV towns in districts showed that there was no significant relationship between these two. However, to some extent high negative correlation between levels of development and growth of class IV towns in Orissa during 1971 and 1981 revealed that backward districts were participating in the urbanization processes of class IV towns. No clear cut relationship can be established in case of class V towns, as the trend of correlation result is different for different time

periods, and they are also insignificant. Correlation value, though insignificant for class VI towns, positive values for Maharashtra during 1971 and 1981 showed that growth of class VI towns were associated with levels of development. Same was true for Rajasthan in 1971.

In general we had rejected our hypothesis that there is a positive association between economic development and urban growth, particularly for class V and V towns. But to a limited extent we accepted this hypothesis for class VI towns. The vitality of class VI towns more or less depends upon its economic base than on its population base. In most cases these towns are created by government to functions as industrial towns.

Regression analysis showed that the only indicator, namely commercial banks per lakh population positively explained the growth of class IV towns in all cases. On the other hand indicators such as villages electrified and rural density had a negative association with urban growth. This implied that commercial banks taken as an economic infrastructure of a district is needed for greater capital investment to generate the growth of Small towns. On the other hand electrification of villages, probably created greater economic opportunities in rural areas; this tended to discourage migration to urban areas. Rural density also negatively effected growth of Small towns. This meant that, pressure on land was probably counter-balanced by rising agricultural productivity.

Indicators such as non-household manufacturing workers, commercial banks and hospital beds in all cases and in all time periods have had a positive effect on the growth of class V towns. This meant that class V towns with a proper economic base and with additional diversification of economic activities can lead to a development of class V towns. This can come about only by locating more investment in the Small towns. This would lead to a growth of infrastructure and would positively attract people from rural and other urban centres leading to the development of class V towns (or Small town).

But there is insufficient appreciation of the infrastructural investment in the 1994-95 budget. The growth rate of non-food credit of commercial banks of India had fallen dramatically from 17 percent during 1992-93 to less than 3 percent during 1993-94. We can infer that slowing down of India's infrastructural investment is likely to have a repercussion on the growth of Small towns.

In the fourth chapter we have studied the growth trend of non-agricultural sector, for all National Industrial Classification divisions and their Major Groups. We related the growth of non-agricultural activities with agriculture productivity, commercialization of agriculture, urbanization and rural density of the districts.

Making an indepth study of the three states of Maharashtra, Rajasthan and Orissa, we came to a conclusion that agricultural productivity is not leading to a non-agricultural employment growth. Only in the case of Maharashtra did it explain to some extent the hypothesis of agricultural productivity and non-agricultural employment growth. While in case of Orissa significant negative association of urban Transport division with agricultural productivity implied that, with low level of agricultural productivity people were pushed to petty transportation jobs in the urban areas.

Commercialization of agriculture is not leading to a growth of non-agricultural employment in the three states. Only in case of Orissa (during 1967-71), Urban Financing and Business Services sector supported the hypothesis. Negative association of rural manufacturing, Trade and Community, Social and Personal Services with Commercialization in Orissa meant that, either these rural sectors were not keeping pace with commercialization of agriculture or possibly these sectors were growing due to other factors. But first one is the likely case, as urban division of Business Services showed a positive association with commercialization. Commercialization expected to encourage rural industrial activity by supplying more raw materials, creating greater demand for inputs and allied services. Such advantages seems to have gone to the urban sectors, probably in large towns, rather than in the rural sectors or in the lower levels of urban hierarchy.

Urbanization, (except in some particular cases), could not explain the growth of non-agricultural sectors. This suggest that non-agricultural activities are a precondition for urbanization to take place.

Rural density which we has taken as a proxy for rural unemployment did not show significant correlations with growth of non-agricultural activities. In regression analysis also rural density showed negative effect on the growth of Small towns.

We have seen that these four variables, agricultural productivity. Commercialization, urbanization and rural density representing either development or distress situation were not able to explain the growth of non-agricultural activities. Probably some other factors were operating behind the scene. Insignificant relationship of non-agricultural sectors with agricultural productivity, commercialization of agriculture and urbanization, strengthens the hypothesis propounded by Vaidyanathan (1986). But failure of the variable rural density to explain non-agricultural employment growth also questions the validity of residual sector hypothesis. So, it is very difficult to analyse the processes which encourage or prevent diversification of non-agricultural activities in the developed and backward districts.

Following Saith (1992) we have hypothesised, that positive linkages between urban and rural non-agricultural employment

would mean that there is favourable effect of urban located industries in rural areas. Rural people procuring jobs in urban areas have also become commuter from rural areas. It would also mean that industries which are rural located, their services are linked to urban areas. For certain part of the services they are dependent on each other. But our results showed that of the three states under study, Rajasthan and Orissa had no rural-urban linkages. However, to some extent Maharashtra showed the existence of such a linkage. Rural and Urban non-agricultural sectors are growing independent of each other. Implication of this on urbanization would be emergence of a dichotomous economy, whereby large towns having no linkages with its hinterland are growing faster. Absence of such linkages is likely to effect the growth of Small towns all the more. Cities particularly, 'World Cities' (Friedman 1988) have their own dynamics of development unrelated to rural hinterland. On the other hand Small towns are mainly affected by the processes of agricultural development.

In the fifth chapter we have seen that there is virtually no relationship between growth of Small towns and non-agricultural employment growth. Sectoral diversification in the district have not affected the growth of Small towns. Probably, it is taking place in the higher order towns. In our analysis we also saw that class IV towns in Maharashtra showed significant positive relationship with urban Manufacturing; Electricity, Gas and Water Services and with Construction activity during 1971-81 and with Transportation during 1981-91. But such significant

relationship was not discernable for class V and VI towns of Maharashtra. This means that, it is the higher order towns where sectoral diversification are taking place. Lower order towns generally have rural economic base. Still agriculture development indicators do not explain non-agricultural employment growth and consequently growth of Small towns. This leads us to think that, it is the extreme poverty and unemployment in rural areas that drives people to lower order urban centres. But this hypothesis also contradicts our result as the indicator rural density, showed negative effects in the growth of Small towns (Chapter III). But the regression coefficient for rural density is not significant for all cases.

We have brought out in the first chapter that the Small towns are expected to serve the countryside as marketing, distribution, administrative and service centre. Our results have shown that, urbanization could not explain the growth of non-agricultural sector. This means that growth of non-agricultural activities are a preconditions for urbanization to take place. One of the accepted proposition has been that in areas of high agricultural growth, the Small towns have generally developed and prospered. However, according to our study it fails to explain the growth of Small towns. This means that agriculture development fails to initiates the process of occupational diversification at the rural level, as also at the lower levels of the urban hierarchy.

Our study on determinants of Small town growth showed that indicators such as commercial banks investment and electrification of villages tend to explain maximum proportion of variation. This means that investment in Small towns would initiate non-agricultural activities, by providing sufficient infrastructure, to attract people from rural areas. So, the real challenge in the policy making would be to accelerate the process of sectoral diversification at the rural and lower level of urban hierarchy, by putting sufficient investment in infrastructural facilities. Studying data over time from 85 districts from 13 states of India, researchers found that lower transport cost increased farmer access to market and led to considerable agricultural expansion. At the same time improved communications (roads) lowered banks cost of doing business, banks expand lending to farmers. (World Development Report 1994 : 14) The adequacy of infrastructure helps to determine one country's success and another's failure - in diversifying production, expanding trade, reducing poverty or improving environmental conditions. The kind of infrastructure put in place also determines whether growth does all that it can to reduce poverty. Labour based approached to infrastructure development can be an important instrument for employment intensive economic growth (World Development Report 1994 : 19). But many governments in developing countries have been attracted to the political benefits of highly visible infrastructure created. Sufficient and wisely deployed investment would lead to modernization of

agriculture and a simultaneous initiation of a process of non-agricultural activities that is organically linked with agricultural development and growth of Small towns.

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APPENDIX 1.1

Discussion on Principal Component Analysis

In Principle Component Analysis, which is a branch of Factor Analysis, a large number of variables are synthesized into a smaller number of general components, which retain the maximum amount of descriptive ability. Principle Component Analysis enables one to determine a vector known as the First Principle Component, linearly dependent on the constituent variables, having the maximum sum of squared correlations with the variables. The eigen vector corresponding to the maximum eigen value of the correlation matrix, gives the required factor loading. First Principle factor is obtained by post multiplying the column vector to the standardized data matrix.

Advantage of Principle Component Analysis obtained, from correlation matrix is that, here weights depends upon correlations. Higher the correlation of a variable the greater its weights.

Disadvantage of Principle Component Analysis obtained from correlation matrix is that, subtraction of mean from each observation leads to a shift in the origin and distorts their relative positions. "The method also has the disadvantage of equalizing variance and length of all the variables and this may be discrimination against variables having higher dispersion independent of scale", (Kundu 1985).

"Once a set of variables has been selected on the strength of an analytical frame and proper empirical investigation, none should be assigned a negative weight, owing to the technicality of a method", (Kundu 1985:111). In most of the cases Factor Analysis method of, maximising sum of the squares of correlation give negative weights.

Modified Principle Component Analysis can help to solve the problems of Principle Component Analysis in many ways.

In this method we get a composite index, where sum of the squared projection of the original variables are maximized. Here scale transformation of the variables is done by dividing each of them by their mean. Advantage of scale transformation, divided by the mean, is that, one can get rid of the bias of the scale without affecting the relative position of the observations.

In this method weights are derived from projection matrix and a variable having greater disparity in space gets higher weightage.

This method of scale transformation ensures non-negativity of the matrix. When the data matrix is non-negative the method of maximising the sum of squared projections of the variables, would give non-negative weights. One of the property of non-negative square matrix is that, here the largest eigen value is real and non-negative and the associated eigen vector is also non-negative, (Frobenius Theorem).

APPENDIX 1.2

ISIC CODE OF CERTAIN MINOR GROUPS, THOSE ARE MENTIONED IN THE ADJUSTMENT PROCEDURE

- 210 - Production of distilled spirits, wines, liqueur from malt, fruits and brewery
- 211 - Production of country liqueur
- 212 - Production of indigenous liqueur such as, toddy, liqueur from mahua, palm juice
- 213 - Production of other liqueur not covered above
- 214 - Production of aerated and mineral water
- 256 - Embroidery and art work in woolen textile
- 266 - Manufacture of silk cordage, rope and twine
- 279 - Processing and manufacture of textile products not covered above.
- 314 - Repair of shoes and other leather footwear
- 315 - Repair of all other leather products except footwear
- 338 - Manufacture of common salt
- 384 - Repairing and servicing of motor vehicles
- 388 - Repairing of bicycles and tricycles
- 392 - Assembling and repairing of watches and clocks
- 399 - Manufacture and repair works of goods not assigned to any other group.
- 610 - Wholesale trading in medicine and chemicals
- 611 - Wholesale trading in fuel, coal, coke, kerosene, candle
- 612 - Wholesale trading in toiletries, perfumery and cosmetics
- 613 - Wholesale trading in metal, porcelain and glass utensils
- 614 - Wholesale trading in wooden steel and other metallic furniture and fittings

- 615 - Wholesale trading in footwear
- 616 - Wholesale trading in tyres, tubes and allied rubber products
- 617 - Wholesale trading in petrol, mobil oil and allied products
- 620 - Wholesale trading in bricks, tiles and other building materials
- 621 - Wholesale trading in wood, bamboo, cane, thatches
- 630 - Wholesale trading in paper and other stationary goods
- 632 - Wholesale trading in electrical machinery, motor battery, fan, bulb
- 633 - Wholesale trading in all kinds of transport and storage equipment
- 634 - Wholesale trading in skins leather and fur
- 635 - Wholesale trading in clocks, eye glasses, frame
- 636 - Wholesale trading in hardware and sanitary equipment
- 637 - Wholesale trading in scientific, medical and surgical instruments
- 638 - Wholesale trading in precious metals and stones, gold, silver wares
- 639 - Wholesale trading in all goods not covered in other categories
- 645 - Retail trading in fuel such as coke, coal, firewood and kerosene
- 647 - Retail trading in animals
- 648 - Retail trading in straw and fodder
- 650 - Retail trading in readymade garments of cotton, wool, silk, hosiery products
- 651 - Retail trading in toilet, perfumes and cosmetics
- 652 - Retail trading in medicine and chemicals

- 653 - Retail trading in footwear, headgear such as umbrella, hat
- 655 - Retail trading in petrol, mobil oil and allied products
- 660 - Retail trading in wooden, steel and other metallic furniture
- 661 - Retail trading in stationary goods and paper
- 662 - Retail trading in metal, porcelain and glass utensils
- 663 - Retail trading in earthenware and earthen toys
- 670 - Retail trading in bricks, tiles and other building materials
- 671 - Retail trading in hardware and sanitary equipments
- 672 - Retail trading in wood, bamboo, cane, bark and branches
- 673 - Retail trading in other building materials
- 682 - Retail trading in electrical goods like electric fan, bulb etc.
- 686 - Retail trading in precious stones and jewellery
- 688 - Book selling
- 689 - Retail trading in goods unspecified
- 691 - Real estate and properties
- 693 - Providents and insurances
- 694 - Money lending (indigenous)
- 695 - Banking and similar type of financial operation
- 696 - Auctioneering
- 699 - All other activities connected with trade and commerce not covered above
- 850 - Business services rendered by organizations of accountants, auditors
- 851 - Engineering services rendered by professional organizations or individuals

- 852 - Business services rendered by advertising and publicity agencies
- 853 - Business services rendered by news agency, columnists, journalists
- 841 - Matrimonial services rendered by organizations and individuals
- 860 - Services rendered by trade associations, chambers of commerce, trade unions
- 861 - Services rendered by civic, social, cultural, political and fraternal organization
- 862 - Community services such as, public libraries, museums, botanical and zoological gardens
- 890 - Services rendered by organizations or individuals not elsewhere classified.

Appendix 1.3

List of Selected Development Indicators

Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
1961																
G. Bombay	1751.0		56.20	3.40	39.50	25.4	100.00	1752.00	3.00			6.10	31.00			1000
Thana	1513.00	6.70	32.60	1.60	10.40	8.70	30.20	460.00	11.30	12.10	1.90	15.00	2.00	0.30	128.00	600
Raigarh	1089.00	6.50	19.60	1.00	2.30	7.30	10.10	70.00	15.60	13.60	1.40	1.60	0.30	0.20	138.00	
Ratnagiri	880.00	17.70	29.80	3.70	1.60	6.70	8.10	54.00	15.90	14.60	1.90	6.00	0.50	0.10	132.00	
Nasik	415.00	13.10	20.50	6.50	6.80	6.10	25.60	260.00	12.90	11.30	2.30	3.10	0.60	0.40	90.00	700
Dhule	510.00	7.70	29.70	5.20	2.40	5.50	16.00	179.00	10.40	11.30	1.90	2.20	0.40	0.80	91.00	
Jalgaon	629.00	7.20	44.20	4.50	2.50	6.10	22.50	151.00	12.20	17.20	3.30	5.50	1.40	0.80	124.00	
Ahmadnagar	396.00	15.90	15.10	10.50	4.00	5.80	10.50	200.00	13.50	16.00	2.00	5.00	0.50	0.40	96.00	630
Pune	437.00	25.90	23.30	9.30	7.90	13.40	38.10	764.00	13.60	13.40	3.40	23.40	3.30	0.20	102.00	780
Satara	511.00	26.10	29.50	12.10	2.40	6.10	11.10	83.00	18.80	20.30	2.50	5.70	2.90	0.10	126.00	
Sangli	582.00	23.70	22.00	6.40	2.80	5.90	15.60	195.00	18.50	11.80	2.90	8.50	5.90	0.20	125.00	660
Solapur	432.00	14.30	15.40	10.70	7.60	6.70	27.90	178.00	12.00	10.00	2.30	6.40	0.60	0.60	92.00	640
Kolhapur	873.00	10.10	34.80	7.90	4.80	6.10	19.30	494.00	14.70	10.50	2.90	4.20	6.20	0.20	161.00	620
Aurangabad	482.00	13.00	31.30	4.10	1.50	6.10	14.10	235.00	5.60	10.30	1.10	5.10	0.20	0.60	80.00	
Parbani	583.00	9.60	33.80	1.50	1.10	6.10	13.80	45.00	3.00	9.70	1.00	1.20	0.20	0.90	84.00	
Bid	476.00	12.60	25.20	4.80	0.90	5.20	9.90	46.00	5.10	9.00	1.10	3.80	0.30	0.60	85.00	
Nanded	558.00	9.10	32.80	1.30	1.90	6.60	14.40	70.00	2.60	8.90	1.00	2.10	0.10	0.80	92.00	
Osmanabad	603.00	9.00	28.30	3.80	0.80	5.10	14.70	57.00	4.70	10.90	1.00	1.20	0.20	0.80	95.00	
Buldana	527.00	7.80	46.30	1.30	1.80	5.50	16.60	188.00	7.40	12.10	2.90	4.30	1.60	1.00	92.00	
Akola	528.00	7.30	48.50	0.30	2.60	6.50	22.10	189.00	7.30	14.90	2.00	6.10	2.70	1.40	89.00	420
Amravati	589.00	6.10	55.30	1.00	3.00	7.40	26.10	381.00	7.80	15.20	1.80	6.70	6.30	1.80	76.00	420
Yavatmal	532.00	6.10	45.30	0.30	1.60	5.20	12.60	89.00	6.10	11.70	1.80	3.00	2.60	1.50	72.00	
Wardha	542.00	7.60	43.20	1.10	3.90	8.00	23.60	149.00	7.80	14.50	2.10	4.10	5.50	1.30	77.00	
Nagpur	492.00	9.30	20.60	4.70	8.70	10.40	52.10	333.00	7.00	12.00	2.40	24.30	11.10	0.70	75.00	870
Bhandara	934.00	7.90	11.60	23.50	1.90	5.30	9.00	141.00	6.00	13.00	1.20	2.60	2.00	0.30	122.00	
Chandrapur	651.00	7.90	17.20	13.20	1.20	5.50	7.70	118.00	4.20	9.20	1.50	2.20	0.50	0.40	44.00	
Ganganagar	933.00	66.80	10.60	29.20	3.10	7.30	14.50	405.00	3.20	9.90	2.40	1.50	1.60	0.20	44.00	
Bikaner	59.00	1293.40	3.60	0.02	3.20	12.50	42.30	284.00	2.40	8.70	2.00	16.30	1.30	0.01	9.00	800
Churu	102.00	1418.10	0.50	0.02	1.40	4.90	31.60	83.00	3.80	9.00	1.00	3.00	2.90	0.01	28.00	
Jhunjhunun	301.00	187.20	1.00	2.20	1.60	4.50	17.70	86.00	5.60	13.00	1.00	2.70	5.30	0.02	105.00	
Alwar	745.00	69.90	15.60	8.30	1.20	7.40	8.10	94.00	11.10	10.60	2.30	4.60	2.70	0.04	118.00	
Bharatpur	516.00	66.50	18.00	27.50	1.50	6.70	13.70	96.00	14.30	11.40	2.10	5.00	1.60	0.05	126.00	
S.Madhapur	736.00	48.20	10.10	11.50	1.90	5.40	10.20	52.00	6.70	9.60	2.20	1.40	1.40	0.06	81.00	
Jaipur	709.00	73.60	5.00	22.60	3.00	12.50	26.30	448.00	8.80	9.90	3.40	8.80	3.40	0.04	103.00	800
Sikar	337.00	206.60	1.40	5.30	1.80	6.10	17.50	63.00	5.00	12.00	2.90	2.40	2.90	0.02	90.00	

Contd.....

Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
Ajmer	558.00	44.50	11.50	28.50	4.20	11.40	37.40	172.00	13.30	12.00	2.40	10.80	3.20	0.07	76.00	63D
Tonk	952.00	91.30	11.00	13.60	1.40	6.50	14.70	69.00	6.40	7.40	1.80	2.80	1.60	0.05	61.00	
Jaisalmer	108.0	1040.0	0.10	0.04	0.50	6.00	9.70	120.00	0.80	5.10	0.50	0.00	0.20	0.01	3.00	
Jodhapur	74.00	268.20	3.80	2.60	2.40	8.60	29.90	409.00	6.90	8.10	1.90	13.30	2.80	0.03	28.00	84D
Nagaur	197.00	192.10	7.80	2.00	1.23	4.00	12.90	52.00	8.70	9.90	1.10	1.70	1.20	0.04	47.00	
Pali	420.00	38.70	24.40	24.10	2.40	7.40	9.50	107.00	7.50	10.60	2.90	2.10	3.00	0.14	61.00	
Barmer	115.00	568.00	1.30	0.70	0.40	1.90	6.10	45.00	3.60	5.50	1.80	0.90	1.00	0.02	22.00	69D
Jalor	229.00	105.00	10.40	8.10	0.60	4.30	4.50	50.00	3.10	6.60	1.70	2.20	2.20	0.07	51.00	
Sirohi	637.00	28.60	18.60	21.60	1.30	14.50	16.40	133.00	8.30	8.60	2.40	3.30	2.70	0.19	59.00	
Bhilwara	1491.00	18.40	29.30	45.40	1.20	4.20	7.30	64.00	4.90	7.60	2.10	1.70	1.50	0.02	78.00	
Udaipur	945.00	53.90	17.80	28.90	1.30	5.30	10.90	120.00	11.30	8.00	2.30	6.00	1.20	0.02	74.00	
Chittaurgarh	834.00	41.30	22.30	22.20	1.10	4.40	9.50	35.00	4.80	9.10	2.00	2.60	1.60	0.05	65.00	
Dungarpur	770.00	58.50	9.00	6.10	0.70	2.90	5.30	38.00	8.60	7.70	2.10	4.60	1.30	0.02	103.00	
Banaswara	844.00	75.60	22.70	2.40	0.40	2.70	5.20	52.00	5.50	6.00	1.80	2.80	1.20	0.03	89.00	
Bundi	748.00	44.80	12.60	12.40	2.90	7.60	15.30	101.00	6.30	6.60	2.30	3.50	0.80	0.10	52.00	
Kota	617.00	31.90	11.10	5.40	2.40	13.80	18.90	240.00	6.80	11.50	2.40	3.70	1.30	0.19	56.00	
Jhalwara	178.00	244.00	6.90	7.10	1.00	6.90	7.70	57.00	9.70	9.60	1.70	2.80	2.10	0.15	75.00	
Sambalpur	979.00	5.30	3.10	31.90	1.10	13.40	7.70	111.00	2.30	17.30	0.10	2.23	1.30	0.30	80.00	
Sundargarh	920.00	14.20	4.80	2.50	5.60	15.90	17.90	274.50	4.00	12.60	0.40	2.23	1.50	0.20	65.00	
Keonjhar	1031.00	12.80	2.80	5.40	0.40	7.40	4.30	147.40	2.40	12.30	0.10	1.09	0.60	0.20	86.00	
Mayurbhanj	935.00	6.00	1.70	10.10	0.20	6.60	2.40	26.60	2.50	8.40	0.20	2.25	0.70	0.50	113.00	
Balasore	868.00	16.70	1.60	8.40	1.10	11.20	6.50	37.50	5.20	25.00	0.20	1.48	2.60	0.20	208.00	
Cuttack	1020.00	12.10	4.90	17.80	2.40	17.80	6.80	76.80	4.60	25.50	0.20	3.24	5.20	0.30	264.00	70D
Dhenkanal	1073.00	15.20	7.70	34.20	0.30	13.90	4.60	46.00	2.00	20.40	0.30	2.17	3.60	0.20	90.00	
Phulbani	677.00	12.50	8.00	3.20	0.10	13.70	1.20	28.00	5.00	15.40	0.20	3.61	0.10	0.20	46.00	
Bolangir	1027.00	12.00	9.60	12.60	0.20	11.40	4.60	51.70	5.10	11.70	0.30	1.89	0.90	0.30	116.00	
Kalahandi	745.00	10.40	12.50	9.10	0.20	12.00	2.80	26.60	3.20	8.70	0.20	1.47	0.40	0.40	75.00	
Koraput	557.00	12.80	6.40	5.50	0.50	13.60	5.10	45.80	2.50	6.10	0.60	1.38	0.40	0.30	56.00	
Ganjam	1102.00	5.70	4.50	27.60	1.00	17.00	8.30	38.90	3.30	18.20	0.20	2.54	5.40	0.40	141.00	
Puri	1005.00	11.10	1.80	21.40	1.30	13.80	7.20	40.60	5.40	25.70	0.20	2.67	3.40	0.30	167.00	
1971																
G. Bombay	1798.00		75.00	2.80	41.00	20.30	100.00	2584.00	7.30		10.10	22.70				100D
Thana	1657.00	4.14	34.20	1.40	20.00	8.90	36.20	728.00	14.80	29.80	5.80	11.30	39.20	0.60	156.00	73D
Raigarh	1569.00	6.60	21.70	2.10	4.40	6.70	12.10	177.00	18.00	32.10	5.10	1.50	49.50	0.30	157.00	
Ratnagiri	1111.00	12.08	30.90	5.60	2.40	6.20	8.40	141.00	17.30	37.90	3.90	5.30	29.20	0.20	142.00	
Nasik	545.00	8.68	18.40	12.10	8.70	7.60	28.60	573.00	17.50	29.40	5.70	2.70	26.50	0.70	111.00	68D
Dhule	582.00	6.70	26.40	11.00	3.30	5.80	17.30	363.00	9.90	27.30	4.00	2.60	29.90	1.20	105.00	47D
Jalgaon	565.00	6.13	37.80	12.30	3.80	6.50	23.70	358.00	13.90	42.20	4.80	4.90	53.20	1.50	141.00	42D

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Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
Ahmadnagar	271.00	12.91	14.70	13.20	4.90	7.20	11.10	462.00	16.20	33.30	5.40	4.20	85.10	0.70	119.00	590
Pune	292.00	18.19	32.40	11.60	14.00	15.80	41.80	1545.00	19.40	32.70	7.30	18.90	36.70	0.40	123.00	850
Satara	542.00	18.11	35.30	13.50	4.20	8.00	13.20	240.00	19.90	85.20	5.20	4.70	41.60	0.30	148.00	
Sangli	429.00	16.96	26.30	10.60	6.10	7.50	18.60	446.00	20.70	33.90	6.20	7.50	47.80	0.40	151.00	703
Solapur	222.00	12.71	13.80	11.60	9.40	6.40	27.40	385.00	15.50	28.20	4.30	6.00	38.80	0.90	112.00	640
Kolhapur	1032.00	9.71	37.30	12.40	8.20	6.70	21.50	920.00	18.40	29.80	6.30	3.30	59.40	0.30	204.00	603
Aurangabad	335.00	13.03	25.10	7.10	1.70	7.60	16.70	495.00	8.70	24.40	5.00	4.70	30.30	0.80	102.00	502
Parbani	299.00	9.74	36.10	2.60	1.20	5.60	16.10	57.00	6.60	21.10	3.30	1.00	26.40	1.10	103.00	
Bid	335.00	12.58	19.20	6.60	0.90	5.60	11.60	57.00	8.10	21.40	3.90	3.90	29.30	0.80	104.00	
Nanded	294.00	9.42	34.50	3.50	3.00	6.30	16.30	158.00	9.50	19.60	4.70	1.40	33.00	1.00	114.00	555
Osmanabad	269.00	10.72	26.30	8.00	2.20	5.60	12.50	118.00	8.90	25.70	4.40	1.00	30.70	1.00	121.00	
Buldana	438.00	6.80	43.00	2.30	1.80	5.30	17.60	316.00	11.80	34.00	4.20	3.80	30.00	1.50	107.00	
Akola	299.00	6.29	47.40	1.00	2.80	6.00	23.50	400.00	11.50	35.50	3.50	5.50	31.80	2.20	110.00	
Amravati	315.00	5.74	49.50	2.00	3.20	7.40	27.60	730.00	10.60	38.00	3.20	6.10	43.10	2.70	93.00	450
Yavatmal	333.00	5.95	49.50	1.10	1.90	5.00	13.60	200.00	10.60	28.40	3.10	2.50	29.80	2.10	89.00	
Wardha	342.00	7.17	46.30	2.40	4.20	8.10	24.50	319.00	12.90	36.80	3.80	3.70	41.70	2.00	94.00	
Nagpur	348.00	7.55	27.60	7.30	9.70	14.20	54.30	812.00	10.60	32.00	4.40	19.50	38.50	1.30	93.00	882
Bhandara	1047.00	5.31	8.60	27.00	3.70	4.40	11.40	242.00	9.10	53.10	2.20	1.90	38.80	0.50	154.00	
Chandrapur	646.00	7.10	14.40	16.10	2.30	6.00	10.20	165.00	5.20	24.10	2.50	1.50	10.50	0.80	58.00	
Ganganagar	1695.00	35.70	15.20	51.30	3.80	6.90	16.50	865.00	5.80	15.40	2.40	2.80	6.40	0.30	57.00	
Bikaner	1018.00	106.10	0.90	0.03	3.90	14.90	41.40	520.00	1.90	11.70	2.90	20.70	5.70	0.10	12.00	88D
Churu	1140.00	351.00	0.20	0.03	2.10	6.20	29.60	1.80	4.70	12.10	1.90	3.00	11.00	0.05	37.00	
Jhunjhunun	1442.00	79.70	4.70	4.80	2.20	13.50	17.40	183.00	7.50	20.80	1.90	2.60	21.10	0.10	131.00	
Alwar	642.00	64.30	8.80	13.10	1.90	9.70	9.10	240.00	14.50	16.90	3.20	4.60	10.80	0.10	152.00	79D
Bharatpur	892.00	41.40	15.60	18.40	2.30	7.40	13.80	275.00	16.60	15.90	3.00	4.80	6.10	0.10	162.00	
S. Madhopur	707.00	39.80	12.80	17.60	2.30	6.60	11.90	83.00	7.10	13.70	3.10	2.30	5.30	0.10	100.00	
Jaipur	695.00	742.20	8.10	27.60	5.90	13.40	30.00	1004.00	9.70	14.10	4.30	8.90	13.80	0.10	128.00	850
Sikar	548.00	84.80	1.30	10.20	2.80	8.70	17.00	124.00	7.40	16.90	3.80	3.50	11.40	0.08	113.00	
Ajmer	401.00	31.50	14.80	19.70	6.00	12.00	37.60	461.00	15.00	16.00	3.30	13.30	13.10	0.16	85.00	612
Tonk	441.00	73.50	8.90	15.70	2.60	6.90	17.40	117.00	8.10	11.70	2.70	3.70	6.40	0.12	74.00	
Jaisalmer	6.00	16.10	0.02	0.90	1.20	12.90	14.60	336.00	0.10	8.70	1.40	2.80	0.60	0.14	4.00	
Jodhapur	70.00	94.00	4.10	3.30	4.20	11.70	31.90	919.00	3.20	10.60	2.80	12.70	11.60	0.11	35.00	863
Nagaur	188.00	79.70	7.10	2.10	2.30	5.70	12.30	78.00	3.70	12.40	2.00	2.60	4.60	0.10	63.00	
Pali	149.00	16.50	23.00	27.30	4.50	6.70	11.20	181.00	5.50	14.60	3.80	3.10	12.90	0.40	71.00	
Barmer	24.00	62.90	0.30	3.20	1.10	4.10	7.30	115.00	1.10	8.40	2.70	1.70	3.60	0.08	25.00	
Jalor	120.00	35.80	4.20	14.00	1.40	4.50	4.40	75.00	1.80	9.00	2.60	2.10	8.40	0.22	60.00	
Sirohi	393.00	14.30	15.70	27.50	2.50	9.20	17.90	211.00	8.80	10.70	3.30	4.90	10.60	0.50	69.00	
Bhilwara	767.00	32.10	23.50	36.60	2.60	5.40	11.00	133.00	7.20	11.80	3.00	2.40	6.50	0.10	91.00	

Contd.....

Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
Udaipur	906.00	26.70	15.20	29.10	2.60	8.10	12.30	268.00	8.30	12.70	3.20	7.30	4.60	0.10	92.00	720
Chittaurgarh	834.00	34.60	22.20	23.10	2.00	6.40	10.40	83.00	7.10	14.40	2.90	2.40	6.40	0.10	79.00	
Dungarpur	240.00	20.90	6.10	12.00	1.20	5.00	5.90	76.00	9.00	12.00	3.00	3.90	5.10	0.15	133.00	
Banaswara	764.00	44.10	18.50	6.00	0.90	4.40	5.10	84.00	6.90	10.30	3.90	2.90	4.90	0.10	124.00	
Bundi	769.00	34.60	10.00	37.90	3.40	8.70	14.60	141.00	7.70	11.70	3.20	2.60	2.40	0.20	70.00	
Kota	646.00	28.30	8.30	20.00	6.50	11.10	24.00	72.00	7.40	18.30	3.60	5.00	5.30	0.30	71.00	770
Jhalwara	676.00	23.80	16.40	10.10	2.50	6.00	9.50	105.00	10.50	14.50	2.60	4.60	8.60	0.30	92.00	
Sambalpur	1048.00	7.80	5.80	16.30	3.80	7.10	12.00	379.00	5.60	24.30	0.50	6.60	7.90	0.60	94.00	470
Sundargarh	787.00	12.00	4.70	3.90	10.70	12.30	23.30	941.00	6.10	19.40	0.40	9.60	17.50	0.40	84.00	720
Keonjhar	877.00	9.40	9.30	2.60	1.40	7.40	7.10	316.00	3.80	20.00	0.40	3.80	9.70	0.40	109.00	
Mayurbhanj	849.00	5.50	6.50	5.80	0.70	6.20	2.80	106.00	6.40	17.00	0.30	3.50	2.90	0.80	134.00	
Balasore	856.00	7.60	3.60	11.10	1.40	6.90	5.50	106.00	10.00	33.00	0.60	2.10	6.70	0.50	274.00	
Cuttack	1094.00	6.40	7.20	27.20	3.20	9.70	8.00	393.00	10.40	34.70	0.40	6.90	10.90	0.60	320.00	670
Dhenkanal	1059.00	9.40	10.10	7.70	1.20	7.90	4.00	115.00	6.80	26.90	0.90	3.40	8.30	0.50	115.00	
Phulbani	839.00	2.60	12.80	11.40	0.50	7.10	3.20	48.00	6.70	18.80	0.60	6.60	0.50	0.50	55.00	
Bolangir	871.00	8.20	9.30	14.00	1.10	5.90	6.90	114.00	4.80	18.00	0.40	2.80	7.20	0.50	134.00	
Kalahandi	922.00	9.00	10.90	3.70	0.90	6.50	4.90	105.00	4.90	12.60	0.70	4.90	2.50	0.60	94.00	
Koraput	771.00	8.30	11.20	6.40	1.40	7.50	8.20	120.00	3.60	8.00	0.40	4.00	3.40	0.60	70.00	
Ganjam	1032.00	4.70	11.60	34.90	1.80	10.40	11.30	150.00	12.10	21.60	0.50	5.70	8.60	0.80	164.00	450
Puri	1342.00	6.80	4.80	13.00	1.90	11.10	9.80	168.00	9.80	33.00	0.60	4.80	9.20	0.50	211.00	460
1981																
G. Bombay	1600.00		79.10	11.60	38.90	22.60	100.00	3812.00	8.90		11.90	36.00				1000
Thana	1760.00	4.11	27.40	2.60	24.60	13.40	44.30	1159.00	35.20	38.60	6.10	11.20	40.30	0.40	200.00	770
Raigarh	1679.00	6.27	14.10	3.80	7.60	8.30	14.10	450.00	52.60	42.20	5.20	7.90	52.60	0.30	182.00	
Ratnagiri	1473.00	15.19	28.80	4.30	3.30	7.50	8.10	369.00	42.10	45.80	5.80	8.60	28.70	0.10	150.00	
Nasik	702.00	7.49	16.90	15.40	10.90	7.20	31.00	1263.00	39.00	36.60	4.70	7.90	24.40	0.60	136.00	720
Dhule	729.00	5.66	22.30	8.40	4.20	5.60	19.50	734.00	41.50	32.40	3.90	6.90	31.60	1.10	126.00	520
Jalgaon	1054.00	5.06	30.00	12.60	4.90	6.50	25.10	847.00	29.00	34.40	3.80	7.00	53.70	0.90	171.00	420
Ahmadnagar	558.00	9.69	15.20	21.30	7.10	6.00	13.00	1065.00	37.50	40.10	3.70	9.40	34.50	0.60	140.00	510
Pune	654.00	13.30	22.50	17.70	16.70	14.70	47.30	3123.00	40.50	42.70	7.90	26.90	37.80	0.40	146.00	850
Satara	792.00	11.43	21.10	19.60	5.30	5.80	13.00	690.00	38.90	45.40	5.30	9.00	34.80	0.30	175.00	
Sangli	734.00	11.89	21.20	14.40	7.30	8.10	21.50	1021.00	44.30	43.10	6.90	14.10	50.60	0.40	174.00	680
Solapur	427.00	9.86	11.30	13.30	12.00	6.60	29.40	832.00	40.40	34.90	5.20	14.80	31.40	0.90	126.00	670
Kolhapur	1622.00	8.14	31.40	14.90	11.30	7.80	24.80	1713.00	51.30	39.80	5.90	9.00	60.90	0.30	240.00	780
Aurangabad	610.00	10.45	22.90	12.50	5.50	6.50	22.10	1042.00	32.10	30.20	4.20	8.10	28.80	0.70	117.00	810
Parbani	668.00	8.15	34.70	6.50	2.80	5.20	18.70	179.00	35.80	26.20	3.40	4.30	22.30	1.00	120.00	310
Bid	637.00	11.18	17.80	12.20	3.00	6.00	15.50	194.00	33.60	28.20	3.10	6.80	31.00	0.60	116.00	
Nanded	764.00	7.39	34.80	6.00	4.10	5.90	18.70	356.00	39.20	25.40	4.00	5.10	28.90	0.90	138.00	580

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Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
Osmanabad	667.00	9.08	20.40	12.90	3.30	5.60	15.40	244.00	33.70	32.40	3.50	4.00	31.50	0.90	136.00	325
Buldana	1123.00	5.79	39.50	4.20	2.70	4.90	18.50	530.00	31.60	49.10	3.40	5.00	20.80	1.10	128.00	
Akola	763.00	5.57	42.70	2.60	4.00	6.00	24.90	847.00	23.60	44.20	3.40	9.40	33.70	1.70	132.00	495
Amravati	993.00	4.93	50.00	5.10	4.00	7.30	29.30	1400.00	19.10	37.70	3.90	18.40	44.30	2.10	109.00	480
Yavatmal	802.00	5.08	48.30	3.20	2.80	4.90	15.10	450.00	25.80	35.50	3.20	6.80	30.50	1.70	109.00	
Wardha	906.00	5.86	46.80	7.80	5.00	7.30	25.00	682.00	24.00	46.30	4.30	17.80	45.00	1.60	111.00	885
Nagpur	717.00	6.13	25.30	10.10	10.90	13.80	56.80	1983.00	18.70	41.40	8.80	21.00	38.80	1.20	117.00	417
Bhandara	1269.00	4.18	7.40	34.10	3.80	5.10	13.10	499.00	20.60	41.10	2.80	8.50	41.70	0.60	175.00	442
Chandrapur	884.00	6.44	16.00	17.20	3.70	6.20	12.70	393.00	12.41	31.30	3.10	10.30	12.10	0.60	70.00	295
Ganganagar	1439.00	44.80	22.60	50.10	5.70	7.70	20.60	1736.00	13.80	20.50	4.90	3.20	6.40	0.25	79.00	855
Bikaner	76.00	466.20	5.80	3.90	6.70	15.40	39.50	1476.00	5.50	13.50	6.40	16.50	5.70	0.05	19.00	
Churu	155.00	458.50	0.80	0.10	3.40	6.40	29.20	233.00	13.40	14.60	5.40	5.20	11.10	0.04	50.00	
Jhunjhunun	450.00	86.90	5.40	13.50	5.50	9.70	20.70	330.00	12.70	25.80	5.30	8.80	21.20	0.08	166.00	743
Alwar	1468.00	48.10	13.60	34.40	5.00	9.10	11.10	780.00	19.20	22.90	5.10	4.00	10.90	0.08	191.00	327
Bharatpur	1449.00	43.30	25.60	26.30	4.60	8.10	17.10	708.00	16.80	22.20	4.10	4.10	6.20	0.09	196.00	
S. Madhopur	919.00	53.50	17.00	20.30	4.10	6.80	13.40	177.00	9.70	20.00	4.20	2.30	5.40	0.08	128.00	812
Jaipur	1365.00	50.00	7.60	43.80	10.80	15.00	36.60	2656.00	15.20	20.00	6.70	9.40	13.90	0.08	160.00	363
Sikar	545.00	90.00	5.70	21.30	5.00	9.40	20.30	292.00	11.40	22.40	4.90	5.50	11.50	0.07	146.00	609
Ajmer	492.00	25.10	10.20	32.00	9.90	10.50	42.80	1420.00	16.80	19.20	6.00	13.10	13.20	0.15	102.00	
Tonk	873.00	53.50	7.90	21.40	5.60	6.70	18.40	325.00	8.70	16.50	3.70	3.80	6.50	0.12	91.00	
Jaisalmer	19.00	280.30	0.50	0.04	3.10	11.50	13.50	407.00	3.20	10.50	4.50	3.50	0.70	0.06	5.00	873
Jodhapur	85.00	137.40	8.70	5.20	6.30	11.40	34.80	2569.00	10.50	14.20	5.80	8.70	11.70	0.08	48.00	
Nagaur	266.00	102.80	12.50	6.10	4.10	4.90	14.60	350.00	6.60	16.60	4.90	3.00	4.70	0.08	80.00	
Pali	361.00	22.00	20.20	31.70	6.30	6.10	18.40	669.00	14.10	18.09	6.90	3.90	13.00	0.30	86.00	
Barmer	132.00	395.10	3.10	2.60	2.70	3.90	8.80	170.00	7.40	9.30	2.70	2.00	3.70	0.04	36.00	
Jalor	253.00	20.10	24.90	25.90	2.20	4.50	8.10	272.00	6.90	11.50	4.90	3.10	9.40	0.20	79.00	
Sirohi	590.00	14.20	22.80	39.30	5.10	10.00	17.90	608.00	15.00	13.50	7.20	5.40	11.60	0.40	87.00	
Bhilwara	809.00	25.10	19.20	49.30	4.30	5.30	14.40	584.00	14.00	15.50	4.40	3.10	6.60	0.09	110.00	650
Udaipur	1167.00	21.00	10.30	35.10	4.70	8.40	15.10	997.00	13.00	15.80	4.60	6.30	4.70	0.09	117.00	653
Chittaurgarh	222.00	26.70	17.20	29.40	3.60	5.70	13.20	416.00	10.30	17.40	4.10	2.90	6.50	0.10	100.00	
Dungarpur	883.00	19.90	2.70	11.80	2.30	6.10	6.50	230.00	18.90	15.90	4.20	3.80	5.20	0.10	170.00	
Banaswara	640.00	33.00	8.90	9.20	2.20	5.80	6.20	344.00	14.30	14.00	3.60	5.40	5.00	0.09	166.00	
Bundi	1186.00	27.60	13.60	52.50	5.20	7.40	17.00	554.00	11.60	15.00	4.60	3.10	2.50	0.20	90.00	
Kota	1064.00	19.70	11.80	29.80	9.70	12.90	31.90	2152.00	11.40	22.80	5.80	5.90	5.40	0.36	88.00	719
Jhalwara	679.00	18.10	13.70	12.00	3.40	5.30	11.70	271.00	11.40	18.10	3.90	3.80	8.90	0.20	113.00	
Sambalpur	1123.00	6.30	8.10	28.50	5.10	7.00	15.49	3568.00	3.30	30.80	3.60	6.40	2.30	0.70	112.00	459
Sundargarh	850.00	8.90	8.30	8.30	15.70	10.70	30.62	2908.00	5.00	26.80	1.80	4.70	2.50	0.50	98.00	524

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Districts	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	IA	IB	IC
Keonjhar	822.00	9.00	11.20	8.80	2.70	7.40	11.34	4898.00	3.40	28.10	2.30	4.10	2.60	0.40	121.00	
Mayurbhanj	1016.00	5.20	10.20	9.80	1.60	6.40	5.72	3298.00	3.50	23.80	2.50	5.60	2.70	0.70	144.00	
Balasore	1117.00	7.20	6.90	18.30	2.50	8.10	8.25	3382.00	6.20	41.40	2.30	2.40	3.60	0.50	335.00	
Cuttack	1102.00	5.80	12.50	29.30	5.20	11.60	10.28	30327.00	5.60	43.70	3.20	5.20	6.20	0.50	380.00	688
Dhenkanal	936.00	7.50	12.90	10.10	3.10	8.90	7.82	3889.00	2.80	35.10	2.30	3.00	4.60	0.60	136.00	
Phulbani	731.00	7.00	21.70	10.80	1.20	6.40	5.26	940.00	6.00	25.30	2.70	6.10	0.10	0.60	61.00	
Bolangir	1013.00	6.80	9.50	18.80	3.60	5.90	9.13	3382.00	6.10	23.30	2.90	3.90	1.90	0.60	151.00	
Kalahandi	728.00	7.50	14.40	6.80	1.30	4.60	6.01	2552.00	4.20	17.80	2.20	3.90	0.70	0.70	108.00	
Koraput	872.00	8.00	16.50	4.40	1.70	6.20	11.31	5612.00	3.10	12.30	3.50	3.20	0.80	0.50	83.00	
Ganjam	1179.00	4.30	9.80	31.90	2.60	7.80	14.25	8706.00	4.30	27.80	3.10	5.80	7.40	0.80	187.00	420
Puri	956.00	6.20	6.30	38.40	3.00	12.50	14.71	4536.00	6.40	42.40	3.80	4.90	5.40	0.50	250.00	740

Appendix Table 2.1

Class IV Towns, Where Growth and Total Population was Higher Than Male Population Growth and Their Export and Manufacturing Base

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
MAHARASHTRA						
1961-71						
Jalgaon	Raver	Low	1.81	1.65		
Nasik	Nandgaon	Low	2.00	1.87		
Pune	Kalamb	Low	1.65	1.43		
Buldana	Buldana	Low	4.70	4.57		
Akola	Murtazpur	Low	1.89	1.72		
Amravati	Warud	Low	3.07	2.88		
Nagpur	Narkhed	Low	2.26	2.11		
1971-81						
Thana	Palghar	Low	1.69	1.40	Gram	Rice mill mach.
Raigarh	Khopli New Township	Low	5.87	5.65		
	Uran	Low	1.86	1.73	Grinding Wheels	Grinding Wheels
	Murud	High	0.02	-0.10	Bettle nut	
Nasik	Ravalgaon	Low	1.19	1.07	Sugar	Sugar
Dhule	Shahada	Low	3.12	3.00	Cotton	Gur
Jalgaon	Faizpur	Low	1.50	1.34	Bananas	Ginned Cotton
Satara	Satara Road	Low	0.50	0.24	Diesal Engines	Diesal Engines
	Rahimatpur	High	1.12	0.94	Groundnut	
Sangli	Vita	Low	2.55	2.31		
	Astha	Low	1.81	1.68	Tobacco	Groundnut
Sholapur	Karmala	Low	1.76	1.56	Jowar	Pulse
Kolhapur	Jaisingpur	Low	3.43	3.26	Tobacco	Chewing Tobacco
	Kurundvad	Low	1.58	1.46	Powerloom Dhoti	Powerloom Dhoti
Aurangabad	Vajipur	Low	2.17	1.85	Cotton	Groundnut oil
	Paithan	Low	3.82	3.39	Jowar	Handloom Sarres
1971-81						
Parbani	Sailu	Low	2.19	1.98	Cotton	Cotton bells
	Jintur	Low	3.03	2.84	Cotton bells	
	Partur	Low	1.80	1.63	N.A.	N.A.
	Pathri	Low	3.13	2.97	Jowar	
Bid	Manjlegoan	Low	5.19	5.06	Jowar	
Osmanabad	Umarga	Low	3.28	2.63	Groundnut	
	Kallam	Low	3.04	2.71	Leather	Sweet Oil

Contd.....

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
Buldana	Chikhli	Low	4.01	3.79	Cotton	Tobacco
	Mehkar	Low	3.29	3.11	Cotton	
	Jalgoan	Low	1.93	1.80	Jowar	
	DeulgoanRaja	Low	2.08	1.93	Cotton	Powerloom & Hand
Yavatmal	Darwha	Low	2.63	2.51	Jowar	
Nagpur	Khapa	Low	0.52	0.35	Manganese ore	Handloom cloth
Chandrapur	Desaiganj	Low	2.78	2.50	Bamboo	Cement tiles
1981-91						
Raigarh	Shrivardhan	High	0.72	0.57	Bettle nut	
	RohaAsthami	Low	2.28	2.02	Rice	Rice
Nasik	Ehlahare	Low	1.53	0.93		
Pune	VadgoanSheri	Low	9.52	9.29	Fans	Fans
	Savad	Low	4.52	4.36	Vegetables	Snuff
	Kalar	Low	0.26	0.12	N.A.	N.A.
Sholapur	Karmala	Low	1.54	1.41	Sweet oil	Sweet oil
Kolhapur	Kagal	Low	1.66	1.53	Sugarcane	Gur
Aurangabad	Gangapur	Low	4.12	3.99	Sugar	Sugar
Yavatmal	Pandharkhoda	Low	2.64	2.49	Timber	Timber
	Ghatanji	Low	2.26	2.03	Cotton bales	Cotton bales
Wardha	Deoli	Low	1.74	1.62	Cotton bales	Aurvedic Medicin
Nagpur	Kanhan	Low	4.46	4.34	Steel pipes	Steel pipes
RAJASTHAN						
1961-71						
Ganganagar	Hanumangarh	Low	5.30	5.04		
	Nohar	Low	1.98	1.60		
Pali	Sadri	Low	1.53	1.30		
Sirohi	Abu Road	Low	3.63	3.46		
Udaipur	Nathdwara	Low	3.12	2.95		
	Rajasamand	Low	2.37	2.14		
1971-81						
Ganganagar	Bhadra	Low	4.83	4.61	Gram	Rice
	Raisingpur	Low	4.51	4.23	Cotton	Ginned & Balled
Bharatpur	Bayana	High	2.96	1.86	Chillies	Foundary article
Sawai Madhopur	Todalhim	Low	2.41	2.28	Corriander	Iron & Steel goods
Sikar	Neem-ka-Thana	Low	2.77	2.63	Lime	Ground minerals
Jaisalmer	Jaisalmer	Low	2.89	2.70	Stone	Crusted stone
Nagaur	Merta	Low	2.68	2.42	Oil	Oil

Contd.....

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
Jhalawar	Bhawani-mandi	Low	4.37	4.09	Cotton	Ginned cotton
1981-91						
Ganganagar	Sangaria	High	2.94	0.94	Wheat	Mustard oil
	Karanpur	Low	1.80	1.48	Wheat	Mustard oil
	Anupgarh	Low	5.00	4.87	Suji	Soap
Jhunjhunun	Gothra	Low	3.14	2.78	Copper	Copper
Alwar	Khairthan	High	3.60	1.68	Carrot	Mustard oil
	Rajgarh	Low	3.60	3.43	Gram	Oil
Bharatpur	Rajakhera	Low	2.74	2.62	Mustards	Carpets
	Bhusawar	Low	2.76	2.49	Mango	Pickle
Jaipur	Bandikui	Low	0.36	0.24	Bajra	Mustard oil
	Phulera	Low	2.01	1.83	Grams	Bulls
Ajmer	Vijainagar	Low	3.09	2.89	Cotton cloth	Cotton yarn
Tonk	Malpura	Low	2.76	2.64	Felt	Felt
	Niwai	Low	3.67	3.50	Cuminseed	Pulses
Jaisalmer	Pokhran	Low	3.16	2.93	Salt	Salt
Pali	Sadri	High	1.36	1.20	Cotton	Leather
	Nimaj	Low	2.01	1.89	Jaggery	Cement
Sirohi	Mt.Abu	Low	2.03	1.70	Vegetables	Oil
Bundi	Kesoraipatan	Low	3.24	2.99	Sugar	Sugar
ORISSA						
1961-71						
Sambalpur	Bargarh	Low	4.04	3.61		
	Burla	Low	4.30	3.96		
	Brajrajnagar	Low	6.98	6.81		
Sundargarh	Rajrangpur	Low	4.68	4.14		
Keonjhar	Barbil	Low	2.32	2.06		
	Keonjhar	Low	4.35	4.16		
Cuttack	Chowdwar	Low	6.07	5.33		
Koraput	Nowgangpur	Low	2.84	2.57		
1971-81						
Keonjhar	Joda	Low	4.25	3.89	Maganese ore	Ferro Maganese
Cuttack	Jaipur Road	Low	4.22	4.09	Ferro crome	Ferro crome
Dhenkanal	Dhenkanal	Low	6.16	6.00	Rice	Wooden furniture
1981-91						
Sambalpur	Delagarh	Low	2.43	2.18	Asbestos	Jute Products

Contd.....

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
Mayurbhanj	Rairangpur	Low	1.53	1.31	Sal oil	Leaf
	Karanja	Low	1.68	1.48	Wood	Tiles
Baleshwar	Soro	Low	2.02	1.86	Rice	Gudakhu
	Jaleshwar	Low	2.48	2.27	Pulses	Cloth
Cuttack	Athagad	Low	2.11	1.95	Edible oil	Wooden furniture
Dhenkanal	Angul	Low	3.20	2.49	Groundnut	Bidi
Koraput	Gunupur	Low	0.81	0.63	Rice	Cloths
	Malkangiri	Low	1.64	1.44	Jute	Bidi
	Chandli	Low	2.61	2.22	Paper	Paper
Ganjam	Bhanjanagar	Low	1.10	0.98	Rice	Cycle tyres
	Chhatnapur	Low	2.40	2.19	Fish	Kewara water

Appendix Table 2.2

Class V Towns, where Growth and Total Population was Higher Than Male Population Growth and Their Export and Manufacturing Base

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
MAHARASHTRA						
1961-71						
Thana	Bhayndar	Low	4.27	3.95		
Raigarh	Alibag	Low	1.86	1.73		
Ratnagiri	Dapolicamp	Low	2.33	2.19		
Nasik	Chander	Low	4.80	4.50		
	Lasalgaon	Low	2.47	2.34		
Pune	Sasvad	Low	2.33	2.13		
	Lohagam	Low	9.34	8.66		
Satara	Satara Road	Low	2.85	2.46		
Kolhapur	Murgud	Low	2.12	1.87		
Parbani	Gangakher	Low	4.95	4.75		
	Jintur	Low	4.83	4.64		
Nanded	Mukhed	Low	3.43	3.30		
Osmanabad	Nilangna	Low	3.45	3.28		
Akola	Patur	Low	2.44	2.25		
	Telhara	Low	2.23	2.01		
1971-81						
Thana	Shahapur	Low	1.13	0.89	Rice	
Ratnagiri	Dapolicamp	Low	2.17	2.05	Bettle nut	
	Dabhol	High	1.65	1.37	Fish	
Jalgaon	Varnagaon	Low	12.50	11.97		
Ahmadnagar	Wari	Low	1.12	0.89	Sugar	Sugar
Aurangabad	Bhakardan	Low	3.17	2.76	Jowar	Sweet oil
Nanded	Biloli	Low	2.17	2.05	Chilli	
Osmanabad	Naldurg	Low	2.75	2.57	Groundnut	Bricks
Chandrapur	Ghugus	Low	6.30	5.85	Rice	
	Rajura	Low	4.03	3.90	Jowar	Bricks
1981-91						
Thana	Vada	Low	1.97	1.81	Rice	Rice
Raigarh	Neral	Low	1.97	1.62	Rice & Milk	Plastic articles
Ratnagiri	Dapolicamp	Low	2.16	1.94	Mangoes	
Pune	Alandi	Low	3.14	3.02	Onion	Wax candles
Nagpur	Mohpa	Low	0.55	0.23	Cotton bales	Woolen blankets

Contd.....

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
RAJASTHAN						
1961-71						
Ganganagr	Sangari	Low	4.82	4.53		
Bikaner	Deshnoke	High	1.81	1.62		
Jhunjhunun	Udaipur	Low	2.50	2.36		
Jaipur	Chaksu	Low	2.59	2.46		
Ajmer	Bijainagar	Low	3.96	3.77		
Udaipur	Bhindar	Low	1.76	1.58		
	Salumlar	High	1.87	1.60		
Sirohi	Mt.Abu	Low	2.00	1.45		
1971-81						
Ajmer	Sarwar	Low	1.78	1.64	Cotton	Got kinari
Tonk	Uniara	Low	1.79	1.62	Foodgrains	Agri. tools
Nagaur	Parbatsar	Low	2.53	2.17		Silica sand
Pali	Sajat Road	Low	3.14	2.27	Cotton	Lime powder
Sirohi	Pindwara	Low	2.39	2.25	Bamboo	Leather articles
Bhilwara	Gangapur	Low	1.87	1.59	Cotton	Ginned cotton
Chittaurgarh	BariSadri	Low	2.52	2.31	Drill reeds	Ginned cotton
Bundi	Nairwa	Low	2.43	2.22	N.A.	Handloom cloths
Jhalawar	Sunel	High	2.02	1.89	Jowar	Ginned cotton
1981-91						
Ganganagar	Kesaraisingpur	Low	1.90	1.70	Ginned cotton	Bale cotton
	Gajasingpur	Low	1.83	1.70	Cotton	Railway parts
Jaipur	Jobner	Low	2.19	1.91	Wheat	Cement pipe
Pali	RaniKhurund	Low	1.63	1.36	Powder	Lime powder
	Sajat Road	Low	2.84	2.51	Lime stone	Cement articles
Bhilwara	Asind	High	1.59	1.38	Oil cakes	Oil
Banaswara	Kusalgarh	Low	2.76	2.56	Cotton	Tanned leather
Ajmer	Pushkar	Low	2.07	1.91	Rose flower	Handicraft goods
ORISSA						
1961-71						
Mayurbhanj	Rairangpur	Low	3.29	2.81		
Kalahandi	Khariar Road	Low	3.72	3.47		
Ganjam	Chatrapur	Low	3.29	3.06		

Contd.....

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
1971-81						
Sambalpur	Barpali	Low	4.23	4.11	Bucket	Bucket
Keonjhar	Anandpur	Low	14.57	14.44	Wooden furniture	Wooden furniture
Cuttack	Paradip	Low	17.29	16.59	Ironore	Canned fish
Dhenkanal	Angul	Low	7.15	6.56	Groundnut	Bidi
Bolangir	Tarbha	High	0.77	0.50	Gudakhu	Brass Bell metal
Koraput	Kotpad	High	1.65	1.52	Forest prod.	Rice
	Umarkot	Low	3.83	3.57	Paddy	
Ganjam	Surada	High	1.37	1.06	Tamarind	Salai grass rope
	Rambha	High	1.93	1.76	Rice	Gudakhu
	Buguda	High	5.40	5.23	Paddy	Tiles
1981-91						
Sambalpur	Kochinda	Low	2.62	2.36	Chillie	Gudakhu
Mayurbhanj	Udala	Low	4.68	4.47	Rice	
Baleshwar	Chandabali	High	0.47	0.05	Fish	Ice
Dhenkanal	Talcher thermal Power township	Low	2.90	2.34		
	Fertilizer Corp of India Townsh	Low	6.32	5.33	Mustard	
Phulabani	G.Udagiri	High	2.17	1.76	Paddy	Juggary
Koraput	Balimelanagar	Low	0.66	0.27	Niger	
Puri	Kantilo	Low	0.47	0.32	Utensils	Utensils
	Nayagarh	Low	3.03	2.60	Firewood	Wooden furniture

Appendix Table 2.3

Class VI Towns, where Growth and Total Population was Higher Than Male Population Growth and Their Export and Manufacturing Base

Districts	Towns	Female Population Base	Growth Rate		Export	Manufactured
			Total	Male		
MAHARASHTRA						
1961-71						
Thana	Jawhar	Low	2.59	2.38		
Nasik	Trimbek	Low	1.33	1.12		
1971-81						
Raigarh	Rasayani	Low	6.11	5.11		
Amravati	Chikalda	Low	0.52	-0.55	Teakwood, Bamboo	
1981-91						
Kolhapur	Panhala	Low	1.57	1.22		
Amravati	Chikalda	Low	0.63	0.19	Teak	Teak wood
RAJASTHAN						
1961-71						
Jhunjhunu	Vidya Vihar	Low	7.22	7.09		
Alwar	Kherli	Low	4.34	3.98		
Jaipur	Jobner	Low	2.01	1.65		
Kota	Indergarh	Low	0.18	-0.11		
1971-81						
Alwar	Kherli	Low	5.31	5.06	Pulse	Oil
1981-91						
Kota	Indergarh	Low	0.88	0.68	Linseed	Lime
ORISSA						
1961-71						
Ganjam	Gopalpur	High	0.13	-0.03		
1981-91						
Dhenkanal	Dera colliery Township	Low	11.39	11.14	Paddy	Bread

Appendix Table 2.4

Class IV Towns With Negative Growth Rate and Their Export and Manufacturing Base

Districts	Towns	Growth Rate		Export	Manufactured
		Total	Male		
MAHARASHTRA					
1961					
Ratnagiri	Malvan	-0.14	-0.07		
	Vengurla	-0.21	-0.24		
	Redi	-5.37	-6.85		
Kolhapur	Jaisinghpur	-0.22	-0.15		
1971					
Thana	Sirgaon	-12.59	-13.18		
Ratnagiri	Malwan	-0.14	-0.50	Cashewnut	
1981					
Raigarh	Uran	-1.05	-0.99	Grinding wheels	Grinding wheels
Nasik	Ravalgaon	-0.54	-0.40	Sugar	Sugar
Ahmednagar	Wari	-2.9	-3.03	Sugar	Sugar
Satara	Satara Road	-1.24	-1.07	Diseal engine	Diseal engine
RAJASTHAN					
1961					
Ganganagar	Karnapur	-0.01	-0.17		
Alwar	Rajgarh	-0.88	-0.78		
Jaipur	Bandikui	-3.02	-3.09		
Sikar	SriMadhopur	-1.15	-1.06		
Bundi	Lakheri	-7	-6.98		
1971					
Tonk	Deoli	-0.97	-0.69	Grams	Coarse cloth
ORISSA					
1961					
Dhenkanal	Angul	-5.37	-4.61		
Balasore	Jaleshwar	-4.1	-4.96		
1981					
Koraput	Chitrakonda	-2.56	-2.92	Fish	

Appendix Table 2.5

Class V Towns With Negative Growth Rate and Their Export and Manufacturing Base

Districts	Towns	Growth Rate		Export	Manufactured
		Total	Male		
MAHARASHTRA					
1961					
Chandrapur	Sasti	-0.34	-0.47		
1971					
Ratnagiri	Rajapur	-0.15	-0.11	Steel furniture	Steel furniture
	Harnai	-4.47	-3.85	Fish	
	Pophali	-2.76	-3.15	Jowar	
1981					
Raigarh	Karjat	-0.56	-0.69	Rice & Milk	Plastic articles
	Kegaon	-0.83	-1.58	Rice	Rice
Kolhapur	Murgud	-0.02	-0.01	Rice	Rice
Chandrapur	Sasti	-1.19	-0.86	Steamcoal	Steamcoal
RAJASTHAN					
1961					
Jhunjhunu	Bagar	-0.44	-0.68		
Jaipur	Phulera	-0.95	-1.16		
Nagaur	Nawa	-0.34	-0.46		
1981					
SawaiMadhopur	Toda	-3.22	-3.43	Limestone	Pitcher
ORISSA					
1961					
Balasore	Chandbali	-3.31	-3.86		
Kalahandi	Khariar	-0.29	-0.11		
Puri	Nayagarh	-1.09	-0.89		
1981					
Koraput	Chittrakonda	-2.56	-2.92	Fish	

Appendix Table 2.6

Class VI Towns With Negative Growth Rate and Their Export and Manufacturing Base

Districts	Towns	Growth Rate		Export	Manufactured
		Total	Male		
MAHARASHTRA					
1971					
Ratnagiri	Alore	-0.24	-0.99	Paddy	
RAJASTHAN					
1961					
Ganganagar	Gajsingpur	-0.45	-0.90		
Kota	Indergarh	0.18	-0.11		
ORISSA					
1961					
Ganjam	Gopalpur	0.13	-0.03		
1981					
Kendujhar	Daitari	-0.88	-1.04	Timber	Wooden furniture

Appendix Table 2.7

Towns That Were Declassified Export and Manufacturing Base			
Districts	Towns	Export	Manufacturing Base
ORISSA			
Class IV Towns (1961)			
Balasore	Soro		
Class VI Towns (1961)			
Koraput	Machkund		
Class V Towns (1971)			
Sambalpur	Govindpur	Wood, Bamboo	Bidi
RAJASTHAN			
Class IV Towns (1981)			
Jalor	Ahore	Cloth	Powerloom cloths
Class V Towns (1981)			
Jhunjhunu	Mandela	Wheat	Mustard oil
MAHARASHTRA			
Class V Towns (1971)			
Satara	Sadashivgad	Hurricane Lanterns	Hurricane Lanterns
	Patan	Gur	
Ratnagiri	Nate	Mangoes	
	Redi	Ironore	

Contd.....

Districts	Towns	Export	Manufacturing Base
Nasik	Vani Pimplegaon Bhaswan	Onion	Grape juice
Class VI Towns (1971)			
Thana	Badlapur	Kita	
Ratnagiri	Shirgaon	Fish	
Pune	Kuranka	Milk	
Satara	Humbrali	Firewood	
	Bhade	Onion	
	Gokul T Helwuk	Firewood	
Class V Towns (1981)			
Bhandara	Mohadi	Handloom cloths	Handloom cloths
Class VI Towns (1981)			
Raigarh	Rasayani	Vegetables	Chemicals
Ratnagiri	Pophali	Paddy	
	Kankavli	Cottonbales	
Nasik	Vadner	N.A.	N.A.
Ahmednagar	Warwandi	N.A.	N.A.
Nagpur	Bina	Vegetables	Turdal
	Davtameti	N.A.	N.A.
Chandrapur	Majare	N.A.	N.A.

Source : Census Town Directory of the Three States.

Appendix Table 2.8
Growth of Different Size Classes of Town in Districts

District	G674T	G674M	G675T	G675M	G676T	G676M	G784T	G784M	G785T	G785M	G786T	G786M	G894T	G894M	G895T	G895M	G896T	G896M
Thana	6.40	6.63	3.09	4.66	2.59	2.38	2.20	2.02	2.91	2.85			1.54	1.53	0.55	0.25	1.84	1.80
Raigarh	1.76	1.81	1.95	0.14	1.80	1.87	2.46	2.46	2.30	2.35	3.40	3.07	0.70	1.20	1.39	1.37	1.69	1.81
Ratnagiri	-0.58	-1.00	1.19	1.18			0.44	0.69	-0.12	-0.08	-0.24	-0.59	0.85	0.72	2.56	2.59		
Nasik	1.88	1.91	4.80	4.49	1.33	1.22	1.74	1.67	1.83	1.90			2.23	2.20				
Dhule	2.54	2.52					2.40	2.36					1.47	1.64				
Jalgaon	1.70	1.72					1.87	1.86	12.50	11.97			-2.90	-3.03				
Ahmadnagar		4.35	4.51	2.90	2.92					1.12	0.89			3.96	3.90	3.00	3.00	
Pune	2.29	2.30	2.44	2.39	2.93	3.21	2.44	2.53	3.18	3.28	3.50	3.88	1.78	1.94	1.78	2.15		
Satara	2.50	2.62	1.97	1.91			1.12	0.92	2.20	2.30								
Sangli	2.73	2.87					2.19	2.01					1.75	1.74	2.45	2.47		
Solapur	1.62	1.70	1.15	1.17			1.36	1.35	2.12	2.07			2.05	2.00	-0.02	0.01	1.05	1.03
Kolhapur	3.36	3.40	2.27	2.20	1.32	1.29	2.53	2.42	1.41	1.45	0.87	0.90	3.01	3.31	2.53	2.66		
Aurangabad		1.84	1.97	4.14	4.29	4.46	4.77	3.41	3.15	2.64	2.62			3.08	3.22	3.04	3.24	
Parbani	3.47	3.51	3.77	3.68			2.52	2.42	1.82	1.93			3.52	3.58	33.20	3.21		
Bid	4.63	4.95	3.98	4.02	1.64	1.65	3.90	3.85	2.21	2.24			2.82	2.94	3.01	3.11		
Nanded	4.04	4.30	2.91	3.01	2.68	2.88	3.14	3.19	3.15	3.18			3.54	3.63	2.77	2.92		
Osmanabad		3.87	4.03	3.58	3.57	4.36	4.47	2.69	2.54	2.54	2.52			2.55	2.68			
Buldana	2.99	3.03	2.72	2.90			2.99	2.81					2.40	2.39				
Akola	2.47	2.46	2.34	2.14			2.24	2.29	1.71	1.70			1.14	1.13			0.63	0.19
Amravati	2.48	2.32	2.60	2.50	6.40	7.57	2.25	2.24	2.22	2.19	0.52	-0.55	2.00	2.17				
Yavatmal	3.32	3.40	3.60	3.64			2.69	2.68	3.24	3.56								

Contd.....

District	G674T	G674M	G675T	G675M	G676T	G676M	G784T	G784M	G785T	G785M	G786T	G786M	G894T	G894M	G895T	G895M	G896T	G896M
Wardha			2.11	2.18					1.87	1.95			1.74	1.62	1.51	1.45		
Nagpur	2.21	2.24	1.66	1.76			1.86	1.78	2.50	3.34			2.46	2.49	3.19	3.20		
Bhandara	2.02	1.96					1.08	1.03					1.13	1.22	4.14	4.41		
Chandrapur	6.01	6.56				-4.99	5.47	2.78	2.50	4.85	4.62		4.44	4.67	-1.19	-0.86		
Ganganagar	3.12	2.94	4.02	3.78	2.63	2.35	4.15	4.15	5.26	5.28	8.02	8.28	3.06	2.70	1.87	1.70		
Bikaner	2.51	2.76	2.72	2.73			7.95	8.36	3.16	3.60			2.04	2.26				
Churu	2.31	2.33	2.32	2.35	2.14	2.26	2.78	2.77	2.53	2.70			2.85	3.13	2.04	2.35		
Jhunjhunun	1.47	1.34	1.56	1.65	7.22	7.09	2.74	2.73	3.49	3.59			2.57	2.63				
Alwar	-0.88	-0.78			4.34	3.98	3.34	3.32			5.31	5.06	3.24	2.49	4.31	4.30		
Bharatpur	2.51	2.52	2.88	2.88			2.95	2.74	3.07	3.02			2.76	2.75				
SawaiMadhopur			1.90	1.97			2.41	2.28					2.34	2.38	-3.22	-3.43		
Jaipur	1.22	1.28	1.65	1.50	2.01	1.65	3.03	3.06	3.17	3.59			2.49	2.37	2.54	2.52		
Sikar	0.81	0.98					3.39	3.47					2.98	3.10				
Ajmer	1.92	1.94	2.37	2.36			3.12	3.14	3.66	3.70			3.09	2.89	2.51	2.34		
Tonk	2.78	2.70	3.96	4.02			2.23	2.20	1.79	1.62			3.20	3.14	2.52	2.65		
Jaisalmer			5.96	6.75			2.89	2.70	3.43	4.16			3.16	2.92				
Jodhapur	2.27	2.54					3.80	3.94										
Nagaur	2.59	2.62	0.31	0.32			3.17	3.05	2.37	2.22			1.94	2.02	3.46	3.52		
Pali	0.71	0.66	1.83	1.79	1.30	1.20	3.03	3.04	3.14	2.27			1.89	1.84	2.20	1.89		
Barmer	3.81	3.90					4.78	5.00					0.80	0.97				
Jalor	1.79	1.75					5.07	5.10					3.20	2.97				
Sirohi	3.20	3.12	2.14	2.00			2.81	3.02	2.49	2.67			1.92	1.77				

Contd.....

District	G674T	G674M	G675T	G675M	G676T	G676M	G784T	G784M	G785T	G785M	G786T	G786M	G894T	G894M	G895T	G895M	G896T	G896M
Bhilwara	2.34	2.36	2.04	2.26			2.34	2.33	2.36	2.17			2.27	2.26	1.59	1.38		
Udaipur	2.79	2.60	1.49	1.34			4.68	4.63	2.91	2.91			1.99	2.07	1.59	2.06		
Chittaurgarh		3.33	3.49	1.90	2.15			3.70	3.77	2.65	2.55			2.88	2.97			
Dungarpur	4.48	4.46	2.86	2.80			3.50	3.67					2.99	3.33				
Banaswara	3.41	3.40	1.04	1.15					2.00	1.95					2.75	2.55		
Bundi	-7.00	-6.98	1.37	1.41	4.54	4.43	2.36	2.38	3.53	3.47			2.96	2.83	1.96	2.13		
Kota			3.81	3.85	0.18	-0.11	3.24	3.27	2.12	2.11	4.59	4.82	3.22	3.29	3.74	3.87	0.88	0.68
Jhalwara	3.18	3.32	3.24	3.40			3.68	3.51	1.67	1.58			4.27	2.24	1.51	1.71		
Sambalpur	4.52	4.21	4.49	3.92					3.85	3.93			2.18	2.12	2.62	2.36		
Sundargarh		4.50	4.18						3.23	3.12								
Keonjhar	3.17	2.91					4.00	3.92	14.57	14.44					1.80	2.02	-0.88	-1.04
Mayurbhanj				3.29	2.81			3.28	3.47					1.60	1.40	4.68	4.47	
Balasore	-4.10	-4.96	-3.31	-3.86					4.55	4.48			2.21	2.03	0.47	0.05		
Cuttack	3.54	3.52	4.23	4.39			3.51	3.48	8.56	9.18			1.69	1.60				
Dhenkanal	0.27	-0.13	2.76	2.95			4.55	4.53	7.15	6.56			2.54	2.26	4.68	3.88	11.39	11.14
Phulbani			3.85	3.98			5.72	5.73	3.54	3.61			3.26	3.17	2.17	1.76		
Bolangir	6.71	6.64	3.37	3.43			3.20	3.20	1.82	1.76			2.04	2.12	0.75	0.89		
Kalahandi	4.78	4.99	1.68	1.68					2.52	2.49			2.30	2.29	1.67	1.96		
Koraput	3.91	3.85	8.53	8.25			3.07	3.15	4.32	4.25	1.78	1.70	1.88	1.75	-0.10	-0.38		
Ganjam			2.54	2.71	4.05	4.23	2.35	2.43	2.16	2.14	2.31	2.47	1.93	1.93	1.79	2.00	1.83	1.80
Puri	3.68	4.00	-1.09	-0.89			3.50	3.42	4.07	4.10			1.56	1.49	2.22	2.08		

Note : G = Annual Compound Growth Rate; 67 = 1961-71; 78 = 1971-81; 89 = 1981-91
4T = Class IV towns; 5T = Class V towns and 6T = Class VI towns.

Appendix Table 2.9

FREQUENCY DISTRIBUTION OF CLASS IV TOWNS IN DISTRICTS

MAHARASHTRA

	1961	1971	1981	1991
Thana	3	5	6	4
Raigarh	5	7	7	7
Ratnagiri	4	3	4	4
Nasik	5	4	3	3
Dhule	4	3	1	-
Jalgaon	7	5	2	1
Ahmadnagar	1	-	1	3
Pune	3	3	7	5
Satara	3	3	4	6
Sangli	3	2	-	-
Solapur	4	5	5	4
Kolhapur	4	5	4	2
Aurangabad	1	3	3	4
Parbani	5	7	4	2
Bid	2	3	2	1
Nanded	1	3	6	7
Osmanabad	4	7	9	4
Buldana	5	4	2	3
Akola	3	2	3	2
Amravati	5	4	4	3
Yavatmal	6	3	3	2
Wardha	-	-	1	2
Nagpur	3	5	5	7
Bhandara	2	2	2	-
Chandrapur	1	1	3	6

FREQUENCY DISTRIBUTION OF CLASS IV TOWNS IN DISTRICTS

RAJASTHAN

	1961	1971	1981	1991
Ganganagar	8	6	4	5
Bikaner	2	1	1	2
Churu	4	3	4	2
Jhunjhunu	8	4	2	5
Alwar	3	2	1	4
Bharatpur	7	4	4	5
Sawai Madhopur	1	1	-	2
Jaipur	10	6	5	9
Sikar	6	4	5	2
Ajmer	1	1	1	2
Tonk	4	4	-	2
Jaisalmer	1	1	-	1
Jodhapur	-	3	3	-
Nagaur	2	3	4	4
Pali	8	4	2	6
Barmer	1	1	1	2
Jalor	2	2	2	1
Sirohi	3	2	2	3
Bhilwara	4	1	1	6
Udaipur	5	2	2	7
Chittaurgar	5	3	3	4
Dungarpur	1	2	1	-
Banaswara	-	-	1	-
Bundi	2	1	1	3
Kota	7	1	-	7
Jhalawara	3	2	1	3

FREQUENCY DISTRIBUTION OF CLASS IV TOWNS IN DISTRICTS

ORISSA

	1961	1971	1981	1991
Sambalpur	4	-	3	4
Sundargarh	2	1	-	-
Keonjhar	2	2	-	1
Mayurbhanj	-	1	2	3
Balasore	2	-	2	2
Cuttack	3	2	2	2
Dhenkanal	2	3	5	4
Phulbani	-	1	2	1
Bolangir	1	3	4	4
Kalahandi	1	-	3	3
Koraput	3	2	6	6
Ganjam	-	5	8	14
Puri	2	1	2	6

FREQUENCY DISTRIBUTION OF CLASS V TOWNS IN DISTRICTS

MAHARASHTRA

	1961	1971	1981	1991
Thana	5	4	7	4
Raigarh	6	4	4	7
Ratnagiri	6	8	3	4
Nasik	2	4	3	2
Dhule	-	-	-	1
Jalgaon	-	1	-	1
Ahmadnagar	1	1	-	1
Pune	6	2	4	5
Satara	4	4	2	1
Sangli	-	-	-	1
Solapur	2	1	1	-
Kolhapur	2	1	1	2
Aurangabad	5	4	2	1
Parbani	5	2	1	-
Bid	3	1	1	1
Nanded	7	6	3	1
Osmanabad	7	3	1	-
Buldana	1	-	-	-
Akola	2	1	-	-
Amravati	2	1	-	-
Yavatmal	1	1	-	-
Wardha	2	2	1	-
Nagpur	4	4	5	4
Bhandara	-	-	2	1
Chandrapur	2	3	1	3

FREQUENCY DISTRIBUTION OF CLASS V TOWNS IN DISTRICTS

RAJASTHAN

	1961	1971	1981	1991
Ganganagar	3	2	2	1
Bikaner	4	2	-	-
Churu	2	2	1	1
Jhunjhunu	6	4	1	-
Alwar	-	-	1	1
Bharatpur	3	2	-	-
Sawai Madhopur	1	-	1	-
Jaipur	3	1	2	1
Sikar	-	-	-	-
Ajmer	3	3	2	-
Tonk	3	1	1	1
Jaisalmer	2	1	-	-
Jodhapur	-	-	-	-
Nagaur	2	2	2	1
Pali	1	1	2	3
Barmer	-	-	-	-
Jalor	-	-	-	-
Sirohi	3	2	-	1
Bhilwara	1	2	1	1
Udaipur	3	3	1	2
Chittaurgar	3	3	-	-
Dungarpur	1	-	-	1
Banaswara	1	1	1	2
Bundi	1	2	1	-
Kota	2	2	1	2
Jhalawara	3	2	2	3

FREQUENCY DISTRIBUTION OF CLASS V TOWNS IN DISTRICTS

ORISSA

	1961	1971	1981	1991
Sambalpur	2	5	1	-
Sundargarh	-	-	-	2
Keonjhar	-	1	1	1
Mayurbhanj	1	-	1	-
Balasore	1	2	1	1
Cuttack	3	3	-	3
Dhenkanal	2	1	2	4
Phulbani	1	1	1	1
Bolangir	4	2	1	1
Kalahandi	2	4	1	-
Koraput	2	3	4	3
Ganjam	6	7	9	4
Puri	1	1	3	2

Appendix Table 3.1

Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1961-71

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I9	-.11673	.0594	-1.948	.147	-	.108	3.793 (.034)
						Signif F.	
Step 2							
I9	-.13087	.0594	-2.203*	.222	.075	.148	3.003 (.072)
I1	1.6131	1.1304	1.424				
Step 3							
I9	-.4403	.08596	-.512				
I1	2.8451	1.4256	1.996	.289	.067	.182	2.714 (.072)
IB	-.02619	.01908	-1.372				
Step 4							
I9	-.07214	.09172	-.787				
I1	2.6631	1.4458	1.842	.318	.029	.175	2.224 (.101)
IB	-.0285	.01935	-1.477				
IA	-.7238	.79712	-.908				
Step 5							
I9	-.10614	.1006	-1.055				
I1	2.634	1.4567	1.809				
IB	-.0251	.0199	-1.262	.345	.027	.163	1.899 (.141)
IA	-.73734	.80307	-.918				
IC	8.068	3.463	.853				

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-10	-.035	9.988	-3.564**	.376	-	.347	12.70** (.001)
Signf F.							
Step 2							
I-10	-.029	.010	-2.694**	.431	.055	.374	7.58** (.003)
I-9	-.049	.031	-1.384				
Step 3							
I-10	-.012	.010	-1.244				
I-9	-.162	.046	-3.508**	.623	.192	.564	10.50** (.000)
I-11	.681	.156	4.347**				
I-C	-.010	3.978	-2.554*				
Step 5							
I-10	-.017	8.665	-.299				
I-9	-.164	.038	-.966				
I-11	.781	.153	1.250	.775	.052	.709	11.76** (.000)
I-C	-.012	3.830	-.523				
I-A	.326	.165	.275				
Step 6							
I-10	-.014	8.650	-1.659				
I-9	-.169	.037	-4.566				
I-11	.801	.149	5.348	.801	.026	.727	10.78** (.000)
I-C	-6.684	5.317	-1.257				
I-A	.421	.172	2.439				
I-7	-.020	.014	-1.447				
Step 7							
I-10	-.015	8.798	-1.724				
I-9	-.170	.037	-4.535**				
I-11	.795	.151	5.251**				
I-C	-5.680	5.512	-1.030	.810	.009	.721	9.14** (.002)
I-A	.468	.183	2.548*				
I-7	-.035	.023	-1.515				
I-12	.032	.040	.817				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-13	-.066	.023	-2.845	.278	-	.243	8.09*
						Signif F.	(.009)
Step 2							
I-13	-.074	.023	-3.104**	.328	.050	.261	4.89*
I-C	.012	9.856	1.224				(.018)
Step 3							
I-13	-.072	.024	-2.947				
I-C	.012	.010	1.212	.343	.015	.239	3.30*
I-2	.059	.092	.649				(.042)

significant t

** significant at 1% level

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-5	-.840	.455	-1.846	.139	-	.098	3.40 (.079)
						Signif F.	
Step 2							
I-5	-1.517	.599	-2.531*	.242	.103	.167	3.20 (.061)
I-8	7.917	4.790	1.653				
Step 3							
I-5	-2.109	.727	-2.899**				
I-8	7.004	4.734	1.479	.311	.069	.202	2.86 (.063)
I-7	.084	.061	1.374				
Step 4							
I-5	-2.790	.803	-3.475**				
I-8	6.867	4.519	1.519	.405	.094	.273	3.07* (0.43)
I-7	.143	.068	2.098*				
I-4	.066	.039	1.690				
Step 5							
I-5	-3.019	.841	-3.587**				
I-8	7.874	4.659	1.690	.435	.030	.268	2.61 (.062)
I-7	.138	.068	2.017				
I-4	.064	.039	1.634				
I-10	.219	.233	.939				
Step 6							
I-5	-3.179	.843	-3.772				
I-8	8.206	4.614	1.779				
I-7	.113	.071	1.570	.480	.045	.285	2.46 (.069)
I-4	.075	.040	1.877				
I-10	.443	.298	1.484				
I-B	.022	.018	-1.183				
Step 7							
I-5	-3.179	.832	-3.817**				
I-8	5.587	5.072	1.101				
I-7	.074	.077	.963	.521	.044	.302	2.36 (.076)
I-4	.083	.040	2.079				
I-10	.566	.313	1.810				
I-B	-.024	.018	-1.318				
I-C	.023	.020	1.178				

significant t

** significant at 1% level

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-12	.160	.045	3.563**	.355	-	.327	12.69** (.001)
						Signif F.	
Step 2							
I-12	.166	.039	4.209**	.527	.172	.484	12.26** (.003)
I-9	-.119	.042	-2.824**				
Step 3							
I-12	.324	.054	5.958**				
I-9	-.126	.034	-3.693*	.706	.179	.664	16.83** (.000)
I-7	-.087	.024	-3.579**				
Step 4							
I-12	.360	.047	7.539**				
I-9	-.152	.030	-5.019**	.797	.091	.757	19.70** (.000)
I-7	-.109	.022	-4.956**				
I-1	9.143	3.043	3.004**				
Step 5							
I-12	.367	.046	7.936**				
I-9	-.129	.032	-3.977**				
I-7	-.118	.022	-5.376**	.821	.024	.774	17.45** (.000)
I-1	9.920	2.975	3.334**				
I-3	-.030	.019	-1.584				
Step 6							
I-12	.386	.044	8.723**				
I-9	-.121	.030	-3.946**				
I-7	-.104	.021	-4.749**	.852	.031	.803	17.33** (.000)
I-1	1.048	2.792	3.757**				
I-3	-.039	.018	-2.119*				
I-6	-.102	.052	-1.952				
Step 7							
I-12	.394	.043	9.086**				
I-9	-.113	.030	-3.740**				
I-7	-.105	.021	-4.951**				
I-1	1.134	2.779	4.082**	.868	.016	.814	16.01** (.000)
I-3	-.053	.020	-2.600*				
I-6	-.115	.051	-2.231*				
I-A	1.558	1.089	1.431				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-12	.411	.044	9.172**				
I-9	-.138	.035	-3.841**				
I-7	-.106	.021	-5.042**				
I-1	9.578	3.092	3.097**	.879	.011	.819	14.62** (.000)
I-3	-.053	.020	-2.650*				
I-6	-.144	.056	-2.570*				
I-A	1.521	1.073	1.417				
I-10	.068	.055	1.229				
Step 9							
I-12	.417	.044	9.378**				
I-9	-.083	.057	-1.456				
I-7	-.123	.025	-4.910**				
I-1	9.544	3.050	3.129**	.890	.011	.824	13.62** (.000)
I-3	-.057	.020	-2.849**				
I-6	-.136	.056	-2.435*				
I-A	1.050	1.128	.931				
I-10	.100	.061	1.645				
I-B	-8.003	6.642	-1.205				
Step 10							
I-12	.463	.046	9.906				
I-9	-.030	.058	-.526				
I-7	-.166	.031	-5.254				
I-1	8.922	2.805	3.181	.914	.024	.853	14.97** (.000)
I-3	-.060	.018	-3.232				
I-6	-.140	.051	-2.746				
I-A	1.035	1.031	1.004				
I-10	.168	.065	2.576				
I-B	-.018	7.930	-2.290				
I-2	1.974	9.922	1.990				
Step 11							
I-12	.448	.048	9.290**				
I-9	.021	.059	-.365				
I-7	-.169	.031	-5.348**				
I-1	1.025	3.044	3.370**				
I-3	-.066	.019	-3.431**				
I-6	-.128	.052	-2.476*				
I-A	.628	1.090	.576	.921	.007	.855	13.90** (.000)
I-10	.158	.065	2.401*				
I-B	-.020	8.153	-2.508*				
I-2	1.634	1.033	1.581				
I-11	.240	.220	1.090				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 12							
I-12	.446	.048	9.133**				
I-9	-.018	.059	-.317*				
I-7	-.157	.033	-4.653**				
I-1	9.167	3.245	2.824*				
I-3	-.058	.020	-2.823*				
I-6	-.127	.052	-2.436*	.927	.006	.805	12.78*
I-A	.870	1.120	.777				(.000)
I-10	.201	.079	2.541*				
I-B	-.023	8.595	-2.686*				
I-2	1.938	1.080	1.794				
I-11	.380	.262	1.447				
I-5	-.163	.166	-.981				

significant t

** significant at 1% level

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-2	-1.700	9.734	-1.747	.121	-	.081	3.05 (.094)
Step 2							
I-2	-2.645	1.321	-2.001	.165	.044	.086	2.08 (.148)
I-4	-.012	.011	-1.053				
Step 3							
I-2	-2.243	1.366	-1.641				
I-4	-.019	.013	-1.454	.212	.047	.094	1.79 (.179)
I-1	4.586	4.213	1.089				
Step 4							
I-2	-2.837	1.477	-1.921				
I-4	-.024	.014	-1.725	.255	.043	.098	1.62 (.208)
I-1	4.894	4.213	1.162				
I-7	.016	.015	1.046				
Step 5							
I-2	-4.357	1.611	-2.704				
I-4	-.022	.013	-1.668	.375	.120	.202	2.16 (.103)
I-1	6.318	4.037	1.565	.375	.120	.202	2.16 (.103)
I-7	.079	.036	2.149				
I-5	-.298	.160	-1.863				
Step 6							
I-2	-5.228	1.832	-2.854				
I-4	-.028	.014	-1.937				
I-1	9.224	4.976	1.854	.410	.035	.202	1.97 (.126)
I-7	.082	.037	2.229				
I-5	-3.06	.160	-1.909				
I-B	-4.088	4.091	-.999				

significant t

** significant at 1% level

* significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-2	-.620	.272	-2.27	.393	-	.317	5.185
						Signif. F	(.052)
Step 2							
I-2	-.549	.241	-2.27	.593	.200	.477	5.114*
I-10	-.190	.102	-1.85				(.042)
Step 3							
I-2	-.336	.186	-1.805				
I-10	-.390	.101	-3.86	.826	.233	.739	9519*
I-12	3.201	1.130	2.84				(.010)
Step 4							
I-2	-.128	.117	-1.091				
I-10	-.552	.070	-7.79**	.954	.128	.918	26494*
I-12	7.682	1.342	5.72**				(.001)
I-6	-.882	.233	-3.78*				
Step 5							
I-2	-.207	.066	-3.12*				
I-10	-.562	.037	-14.81**				
I-12	6.919	.746	9.27**	.989	.035	.976	77023*
I-6	-.780	.127	-6.10**				(.005)
I-9	.516	.140	3.68*				
Step 6							
I-2	-.123	.065	-1.87				
I-10	-.577	.029	-19.31**				
I-12	8.936	1.166	7.66**	.995	.006	.986	111.73**
I-6	-1.138	.205	-5.54*				(.003)
I-9	.368	.130	2.83				
I-1	-3.845	1.941	-1.98				
Step 7							
I-2	-.083	.018	-4.45*				
I-10	-.579	8.024	-72.22**				
I-12	10.201	.371	27.461**	.999	.004	.999	1338.18**
I-6	-1.41	.070	-20.071**				(.007)
I-9	.240	.040	5.94*				
I-1	-6.25	6.459	-9.68**				
I-7	.069	.011	6.30*				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-2	-.054	8.130	-6.71				
I-10	-.571	2.833	-201.81**				
I-12	10.227	.107	95.02**				
I-6	-1.445	.021	-67.93**	.999	.0002	.999	13988.8
I-9	.185	.016	11.36				(.006)
I-1	-6.115	1.891	-32.32*				
I-7	.091	5.524	16.53*				
I-A	2.159	.451	4.78				

significant t

** significant at 1% level

* significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-11	2.784	1.629	1.70	.267	-	.175	2.92 (.125)
Signif F.							
Step 2							
I-11	2.811	1.567	1.79	.406	.139	.237	2.40 (.16)
I-4	-.033	.025	-1.28				
Step 3							
I-11	2.76	1.278	2.159				
I-4	-.059	.024	-2.438	.662	.256	.493	3.91 (.072)
I-2	-.202	.094	-2.12				
Step 4							
I-11	1.913	.961	1.98				
I-4	-.041	.018	-2.22	.858	.196	.745	7.58* (.023)
I-2	-.289	.075	-3.85**				
I-A	-4.00	1.51	-2.63*				
Step 5							
I-11	2.441	1.075	2.27				
I-4	-.031	.020	-1.49	.889	.031	.751	6.43* (.047)
I-2	-2.86	.074	-3.86*				
I-A	-4.135	1.50	-2.74*				
I-1	-1.196	1.132	-1.05				
Step 6							
I-11	2.659	.429	6.19**				
I-4	-.045	8.79	-5.15**				
I-2	-.289	.029	-9.83**	.986	.097	.960	37.74** (.006)
I-A	-2.839	.657	-4.31*				
I-1	-4.089	7.589	-5.39**				
I-10	.081	.017	4.73*				
Step 7							
I-11	1.883	.430	4.374*				
I-4	-.058	7.92	-7.364*				
I-2	-.254	.024	-10.498**	.996	.010	.984	80.79** (.012)
I-A	-2.327	.472	-4.926*				
I-1	-3.699	5.108	-7.242				
I-10	.101	.014	7.247*				
I-3	.079	.034	2.328				

significant t

** significant at 1% level

* significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class IV Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-3	.070	.026	2.59*	.427	-	.364	6.73*
						Signif F.	(.029)
Step 2							
I-3	.060	.026	2.27*	.542	.115	.428	4.74*
I-8	-1.99	1.406	-1.41				(.043)
Step 3							
I-3	.086	.023	3.62**				
I-8	-3.71	1.341	-2.76*	.744	.202	.634	6.79*
I-10	.029	.012	2.35*				(.017)
Step 4							
I-3	.106	.019	5.62**				
I-8	-6.19	1.347	-4.60**	.883	.139	.806	11.39**
I-10	.028	9.200	3.10*				(.005)
I-5	.228	.085	2.68*				
Step 5							
I-3	.118	.019	6.054**				
I-8	-8.39	2.012	-4.163**	.915	.032	.931	10.89**
I-10	.027	8.620	3.159*				(.010)
I-5	.262	.083	3.157*				
I-C	6.587	4.755	1.385				
Step 6							
I-3	.120	.010	11.86**				
I-8	-7.297	1.084	-6.72**				
I-10	.050	7.482	6.68**	.981	.066	.954	36.01**
I-5	.191	.047	4.08*				(.009)
I-C	.010	2.686	3.94*				
I-6	-.146	.038	-3.80*				
Step 7							
I-3	.132	4.259	31.06**				
I-8	-7.90	4.072	-19.40**				
I-10	.054	2.833	19.28**				
I-5	.195	.016	15.50**	.998	.017	.994	241.61**
I-C	.016	1.78	11.14**				(.004)
I-6	-.195	.016	-11.70**				
I-12	-.077	.014	-5.27**				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-3	.133	3.353	39.76**				
I-8	-7.93	3.165	-25.06**				
I-10	.056	2.468	22.91**				
I-5	.189	.013	14.03**	.999	.001	.996	351.69**
I-C	.016	1.182	14.35**				(.002)
I-6	-.200	.013	-15.04**				
I-12	-.080	.011	-6.98*				
I-9	-.013	8.054	-1.72				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-9	-.099	.043	-2.28	.224	-	.180	5.19* (.035)
Signif F.							
Step 2							
I-9	-.096	.040	-2.37	.361	.137	.286	4.81* (.022)
I-13	-.127	.066	-1.91				
Step 3							
I-9	-.111	.041	-2.69**				
I-13	-.172	.073	-2.33**	.422	.061	.314	3.90* (.028)
I-8	1.532	1.178	1.30				
Step 4							
I-9	-.109	.038	-2.84*				
I-13	-.140	.070	-1.99	.533	.111	.409	4.28* (.016)
I-8	3.278	1.433	2.28*				
I-6	-.254	.134	-1.88				
Step 5							
I-9	-.066	.054	-1.21				
I-13	-.149	.070	-2.11				
I-8	3.582	1.45	2.47*	.570	.037	.417	3.71* (.023)
I-6	-.287	.137	-2.09				
I-B	-.011	.010	-1.09				
Step 6							
I-9	-.092	.054	-1.68				
I-13	-.095	.075	-1.25				
I-8	3.845	1.394	2.75*	.636	.066	.469	3.75* (.020)
I-6	-.371	.141	-2.61*				
I-B	-.020	.011	-1.77				
I-A	-.901	.584	-1.54				
Step 7							
I-9	-.016	.060	-.279				
I-13	-.055	.070	-.799				
I-8	5.158	1.385	3.719**				
I-6	-.532	.147	-3.611**	.735	.101	.580	4.75** (.009)
I-B	-.040	.014	-2.894**				
I-A	-1.955	.721	-2.712				
I-4	-.152	.072	-2.110				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-9	-.018	.058	-.324				
I-13	9.389	.082	.114				
I-8	5.763	1.403	4.107**				
I-6	-.390	.174	-2.237*	.775	.040	.611	4.73** (.010)
I-B	-.048	.014	-3.315**				
I-A	-2.471	.785	-3.145**				
I-4	-.161	.069	-2.309*				
I-12	-.085	.061	-1.399				
Step 9							
I-9	-.095	.78	-1.216				
I-13	.016	.078	.213				
I-8	6.663	1.493	4.462				
I-6	-.413	.168	-2.459				
I-B	-.050	.014	-3.539	.811	.036	.642	4.78** (.011)
I-A	-3.037	.856	-3.546				
I-4	-.173	.067	-2.567				
I-12	-.104	.060	-1.733				
I-10	.120	.086	1.394				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-2	-.164	.138	-1.185	.068	-	.019	1.40 (.250)
Signif F.							
Step 2							
I-2	-.332	.145	-2.280*	.275	.207	.194	3.42 (.055)
I-4	.258	.113	2.265*				
Step 3							
I-2	-.321	.142	-2.254*				
I-4	.349	.129	2.703*	.348	.073	.233	3.03 (.057)
I-3	.070	.051	1.383				
Step 4							
I-2	-.287	.149	-1.919				
I-4	.371	.133	2.780**	.373	.025	.217	2.38 (.094)
I-3	.078	.052	1.495				
I-9	-.095	.118	-.799				
Step 5							
I-2	-.315	.152	-2.066				
I-4	.367	.133	2.751**	.411	.038	.214	2.09 (.122)
I-3	.085	.053	1.605				
I-9	-.200	.161	-1.247				
I-11	.609	.624	.976				
Step 6							
I-2	-.341	.151	-2.254				
I-4	.413	.136	3.030				
I-3	.115	.057	2.000	.469	.058	.241	2.06 (.123)
I-9	-.234	.160	-1.462				
I-11	1.231	.792	1.554				
I-8	-2.439	1.968	-1.239				
Step 7							
I-2	-.403	.147	-2.742				
I-4	.491	.136	3.607				
I-3	.143	.056	2.538	.565	.096	.330	2.41 (.080)
I-9	-.249	.151	-1.654				
I-11	1.605	.776	2.066				
I-8	-6.162	2.873	-2.145				
I-12	.253	.149	1.693				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-2	-.363	.150	-2.412				
I-4	.494	.135	3.65				
I-3	.109	.064	1.689				
I-9	-.224	.152	-1.475	.603	.038	.339	2.28
I-11	2.104	.900	2.337				(.095)
I-8	-7.337	3.057	-2.400				
I-12	.270	.149	1.807				
I-A	1.368	1.270	1.077				
Step 9							
I-2	.014	.319	.045				
I-4	.580	.146	3.965**				
I-3	.075	.067	1.114				
I-9	-.392	.194	-2.020				
I-11	2.691	.978	2.751*	.658	.055	.378	2.35
I-8	-8.348	3.060	-2.728*				(.091)
I-12	.278	.145	1.912				
I-A	4.491	2.653	1.693				
I-1	4.319	3.250	1.329				
Step 10							
I-2	.490	.387	1.266				
I-4	.882	.210	4.196**				
I-3	.146	.072	2.020				
I-9	-.285	.185	-1.538				
I-11	3.210	.929	3.454**				
I-8	-.013	4.018	-3.416**	.745	.087	.490	2.92*
I-12	.469	.167	2.803*				(.022)
I-A	8.021	3.068	2.614				
I-1	8.714	3.783	2.303*				
I-10	-.136	.073	-1.849				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-10	-.460	.277	-1.662	.164	-	.105	2.76 (.118)
Step 2							
I-10	-.463	.272	-1.702	.251	.087	.135	2.17 (.152)
I-3	.227	.185	1.224				
Step 3							
I-10	-.427	.277	-1.544				
I-3	.285	.195	1.444	.299	.048	.124	1.70 (.218)
I-6	-.059	.065	-.910				

significant t

** significant at 1% level

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-B	-.015	8.621	-1.816	.147	-	.103	3.29 (.085)
Step 2							
I-B	-.012	9.096	-1.386	.195	.048	.106	2.19 (.140)
I-3	-.035	.003	-1.035				
Step 3							
I-B	-6.687	.010	-.659				
I-3	-.050	.035	-1.416	.262	.067	.132	2.01 (.149)
I-13	-.328	.264	-1.243				
Step 4							
I-B	-7.557	9.907	-.763				
I-3	-.092	.046	-2.005	.341	.079	.176	2.07 (.132)
I-13	-.406	.263	-1.542				
I-4	.038	.028	1.382				
Step 5							
I-B	-4.879	9.987	-.489				
I-3	-.101	.046	-2.202*				
I-13	-.455	.262	-1.736	.402	.061	.202	.201 (.134)
I-4	.035	.027	1.287				
I-A	5.016	4.065	1.234				
Step 6							
I-B	-8.042	9.894	-.813				
I-3	-.128	.048	-2.661				
I-13	-.371	.260	-1.430	.479	.077	.256	2.14 (.111)
I-4	.057	.030	1.862				
I-A	6.745	4.105	1.643				
I-5	-.441	.306	-1.441				

significant t

** significant at 1% level

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-8	2.073	5.518	3.758**	.453	-	.421	14.12** (.001)
						Signif F.	
Step 2							
I-8	2.768	5.739	4.823**	.592	.139	.541	11.64 (.003)
I-2	-2.091	8.946	-2.338*				
Step 3							
I-8	2.880	5.469	5.267**				
I-2	-1.869	8.562	-2.184*	.658	.066	.590	9.63** (.003)
I-11	-.294	.173	-1.698				
Step 4							
I-8	2.420	5.882	4.115**				
I-2	-1.265	8.897	-1.422	.714	.056	.632	8.74** (.003)
I-11	.432	.184	-2.346*				
I-4	.017	.010	1.650				
Step 5							
I-8	2.420	5.835	4.148**				
I-2	-1.538	9.164	-1.678				
I-11	-.440	.182	-2.407*	.738	.024	.638	7.35 (.003)
I-4	.017	.010	1.717				
I-13	.029	.026	1.107				
Step 6							
I-8	2.209	6.033	3.663**				
I-2	-2.011	9.908	-2.030				
I-11	-.305	.214	-1.426				
I-4	.025	.012	2.095	.765	.027	.648	6.52** (.003)
I-13	.036	.026	1.379				
I-3	-.031	.026	-1.167				
Step 7							
I-8	2.209	6.033	3.662**				
I-2	-2.504	1.106	-2.263*				
I-11	-.238	.224	-1.060				
I-4	.029	.012	2.305*	.784	.019	.647	5.73** (.005)
I-13	.046	.028	1.630				
I-3	-.036	.027	-1.348				
I-A	-1.192	1.192	-1.000				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-8	2.524	6.612	3.818**				
I-2	-2.978	1.176	-2.533*				
I-11	.016	.319	.052				
I-4	.029	.012	2.283*	.808	.024	.655	5.27** (.008)
I-13	.049	.028	1.747				
I-3	-.056	.032	-1.748				
I-A	-1.636	1.246	-1.313				
I-C	-6.172	5.566	-1.109				
Step 9							
I-8	2.581	6.654	3.879				
I-2	-3.170	1.195	-2.653				
I-11	.174	.359	.486				
I-4	.029	.012	2.318	.826	.018	.653	4.77** (.014)
I-13	.066	.033	1.996				
I-3	-.054	.032	-1.671				
I-A	-2.391	1.470	-1.627				
I-C	-8.167	5.943	-1.374				
I-B	-4.529	4.645	-.975				

significant t

** significant at 1% level

* significant at 5% level

**Rajashan Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-C	-.017	.012	-1.448	.138	-	.072	2.09 (.171)
Signif F.							
Step 2							
I-C	-.029	.011	-2.482*	.403	.265	.303	4.05* (.045)
I-8	1.242	5.389	2.306*				
Step 3							
I-C	-.037	.012	-2.984**				
I-8	2.108	7.802	2.702*	.501	.098	.366	3.69* (.046)
I-7	-.077	.052	-1.475				
Step 4							
I-C	-.038	.012	-3.055**				
I-8	2.571	9.255	2.778	.542	.041	.359	2.96 (.074)
I-7	-.109	.062	-1.744				
I-2	3.828	4.061	.943				
Step 5							
I-C	-.040	.013	-2.958*				
I-8	2.467	9.827	2.511*	.555	.013	.308	2.24 (.137)
I-7	-.112	.065	-1.722				
I-2	4.262	4.303	.991				
I-10	.088	.172	.551				
Step 6							
I-C	-.045	.015	-2.877*				
I-8	2.529	1.014	2.492*				
I-7	-.102	.068	-1.482	.581	.026	.268	1.85 (.205)
I-2	4.992	4.545	1.098				
I-10	.149	.197	.758				
I-13	-.106	.149	-.710				
Step 7							
I-C	-.048	.016	-3.019*				
I-8	2.249	1.044	2.153				
I-7	-.079	.071	-1.113	.637	.0566	.275	1.76 (.236)
I-2	5.157	4.524	1.140				
I-10	.176	.197	.893				
I-13	-.228	.189	-1.205				
I-9	.176	.169	1.041				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-C	.052	.016	-3.114*				
I-8	3.085	1.400	2.204				
I-7	-.057	.076	-.754	.681	.044	.257	1.60
I-2	5.459	4.592	1.189				(.289)
I-10	.250	.216	1.161				
I-13	-.273	.198	-1.378				
I-9	.216	.177	1.221				
I-6	-.324	.355	-.911				
Step 9							
I-C	-.048	.016	-2.882*				
I-8	2.702	1.419	1.904				
I-7	-.206	.154	-1.337				
I-2	.013	8.456	1.578				
I-10	.173	.223	.775	.744	.063	.283	1.61
I-13	-.355	.208	-1.705				(.310)
I-9	.317	.196	1.614				
I-6	-.580	.419	-1.383				
I-5	1.045	.947	1.103				
Step 10							
I-C	-.020	.010	-2.069				
I-8	4.322	7.526	5.743**				
I-7	-.356	.079	-4.499**				
I-2	.011	3.929	2.978*				
I-10	.408	.116	3.507*				
I-13	-.414	.097	-4.258**	.956	.212	.846	8.73*
I-9	.526	.102	5.129**				(.025)
I-6	-2.133	.402	-5.297**				
I-5	2.385	.533	4.468**				
I-3	-.453	.103	-4.401**				
Step 11							
I-C	-.018	.011	-1.603				
I-8	4.335	8.155	5.316**				
I-7	-.333	.093	-3.576*				
I-2	9.039	5.952	1.519				
I-10	.443	.137	3.224*				
I-13	-.441	.113	-3.891*	.961	.005	.820	6.80
I-9	.525	.111	4.725*				
I-6	-2.185	.443	-4.924*				
I-5	2.212	.638	3.466*				
I-3	-.496	.130	-3.805*				
I-11	.335	.524	.640				

significant t ** significant at 1% level
* significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-10	-.257	.112	-2.285*	.367		.296	5.22** (.048)
Signif F.							
Step 2							
I-10	-3.89	.100	-3.86**	.662	.295	.577	7.83** (.013)
I-6	.639	.241	2.64*				
Step 3							
I-10	-.408	.087	-4.649**				
I-6	.525	.218	2.40*	.777	.115	.682	8.14** (.011)
I-8	.044	.023	1.90				
Step 4							
I-10	-.442	.084	-5.22**				
I-6	.431	.212	2.03	.836	.059	.726	7.654* (.015)
I-8	.047	.021	2.18				
I-12	1.187	.809	1.46				
Step 5							
I-10	-.337	.046	-7.231**				
I-6	.161	.118	1.372				
I-8	.061	.010	5.623**	.968	.132	.936	30.54** (.003)
I-12	2.089	.437	4.778**				
I-11	11.801	2.584	4.566**				
Step 6							
I-10	-.291	.031	-9.19**				
I-6	.137	.071	1.92				
I-8	.053	6.926	7.79**	.990	.022	.977	72.05** (.005)
I-12	2.258	.268	8.41**				
I-11	12.108	1.557	7.78**				
I-9	-.434	.138	-3.14*				
Step 7							
I-10	-.297	.015	-18.78**				
I-6	.114	.035	3.17*				
I-8	.049	3.61	13.83**				
I-12	2.111	.139	15.18**	.998	.008	.994	252.68** (.004)
I-11	11.687	.781	14.95**				
I-9	-.466	.069	-6.72**				
I-C	.016	4.464	3.64*				

significant t ** significant at 1% level
 * significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-8	.016	8.60	1.958	.298		.220	3.83 (.081)
Signif F.							
Step 2							
I-8	.053	.010	5.170**	.773	.475	.716	13.633** (.002)
I-5	-5.146	1.258	-4.091**				
Step 3							
I-8	.053	9.644	5.591**				
I-5	-5.682	1.235	-4.598**	.825	.052	.750	11.043**
I-10	.111	.076	1.450				
Step 4							
I-8	.052	9.692	5.38**				
I-5	-4.623	1.577	-2.93	.853	.028	.755	8.72** (.011)
I-10	.142	.081	1.74				
I-C	-.044	.042	-1.06				
Step 5							
I-8	.051	4.88	10.516				
I-5	-2.249	.966	-2.328				
I-10	.100	.042	2.369	.968	.113	.937	31.23** (.003)
I-C	-.182	.038	-4.766				
I-6	1.606	.371	4.318				
Step 6							
I-8	.048	3.636	13.45**				
I-5	-1.138	.830	-1.37				
I-10	.187	.047	3.97*				
I-C	-.213	.030	-7.05**	.987	.019	.968	51.96** (.003)
I-6	1.670	.267	6.25**				
I-3	.327	.136	2.40				
Step 7							
I-8	.052	3.526	14.763**				
I-5	-1.070	.686	-1.559				
I-10	.212	.041	5.101**				
I-C	-.226	.026	-8.68**	.993	.006	.978	65.80** (.002)
I-6	1.858	.246	7.52**				
I-3	.320	.112	2.85*				
I-13	-.172	.101	-1.695				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-8	.061	3.049	20.10**				
I-5	-1.197	.312	-3.82				
I-10	.289	.028	10.04**				
I-C	-.178	.017	-9.94**	.999	.006	.995	282.35**
I-6	1.915	.112	16.96**				(005)
I-3	.623	.099	6.27*				
I-13	-.632	.137	-4.60*				
I-12	-1.024	.288	-3.55				

significant t

** significant at 1% level

* significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class V Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-9	-.431	.330	-1.30	.159	-	.065	1.70
						Signif F.	(.224)
Step 2							
I-9	-.641	.335	-1.90	.353	.194	.191	2.18
I-10	.080	.051	1.55				(.174)
Step 3							
I-9	-.755	.310	-2.43				
I-10	.109	.049	2.19	.539	.186	.341	2.72
I-7	-.188	.122	-1.68				(.123)
Step 4							
I-9	-.817	.209	-3.89				
I-10	.127	.033	3.78**	.821	.282	.702	6.90*
I-7	-.262	.079	-3.31*				(.019)
I-12	.627	.203	3.08*				
Step 5							
I-9	-.831	.183	-4.52**				
I-10	.069	.045	1.51				
I-7	-.328	.079	-4.12**	.885	.064	.771	7.77*
I-12	.660	.179	3.68**				(.021)
I-6	.370	.220	1.68				
Step 6							
I-9	-.759	.147	-5.145				
I-10	3.644	.047	.076				
I-7	-.473	.094	-5.034	.944	.059	.861	11.35*
I-12	.669	.139	4.785				(.017)
I-6	.625	.212	2.951				
I-5	.586	.285	2.055				
Step 7							
I-9	-1.013	.120	-8.446**				
I-10	-.025	.029	-.873				
I-7	-.621	.073	-8.479**				
I-12	.454	.107	4.212*	.986	.042	.953	30.56**
I-6	.594	.122	4.848*				(.008)
I-5	.527	.165	3.182*				
I-4	.090		.030	3.005			

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-9	-.926	.095	-9.676*				
I-10	-.068	.029	-2.291				
I-7	-.587	.054	-10.737**				
I-12	.510	.081	6.273*	.995	.009	.976	53.84*
I-6	.749	.116	6.432*				(.018)
I-5	.644	.131	4.912*				
I-4	.091	.021	4.295*				
I-11	-.644	.322	-1.996				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class VI Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-4	-.529	.165	-3.19	.531	-	.479	10.22** (.010)
Step 2							
I-4	-.685	.151	-4.52**	.720	.189	.650	10.30**
I-2	.247	.106	2.32*			(.006)	
Step 3							
I-4	-5.23	.113	-4.62**				
I-2	.272	.072	3.76**	.889	.169	.841	18.72**
I-3	.130	.040	3.26**			(.001)	
Step 4							
I-4	-.552	.114	-4.81**				
I-2	.352	.102	3.44**	.907	.018	.846	14.75**
I-3	.139	.040	3.46**				(.002)
I-6	-.238	.217	-1.09				
Step 5							
I-4	-.528	.098	-5.36**				
I-2	.412	.093	4.43**				
I-3	.120	.035	3.37*	.944	.037	.888	16.98**
I-6	-.539	.248	-2.17				(.003)
I-10	.412	.226	1.81				
Step 6							
I-4	-.518	.103	-5.01**				
I-2	.516	.165	3.11*				
I-3	.133	.040	3.27*	.951	.007	.879	13.11**
I-6	-.749	.375	-1.99				(.013)
I-10	.462	.245	1.88				
I-1	1.352	1.750	.77				
Step 7							
I-4	-.364	.169	-2.14				
I-2	.605	.179	3.37				
I-3	.222	.088	2.51	.965	.014	.886	12.15*
I-6	-.899	.387	-2.32				(.032)
I-10	.653	.292	2.23				
I-1	2.72	2.091	1.30				
I-13	-3.97	.353	-1.12				

contd.....

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 8							
I-4	.206	2.16	9.56				
I-2	.401	.118	3.383				
I-3	.454	.092	4.894				
I-6	-.543	.240	-2.256	.993	.028	.967	38.14*
I-10	.949	.186	5.086				(.025)
I-1	-1.012	1.482	-.068				
I-13	-1.59	.453	-3.519				
I-B	.057	.019	2.909				
Step 9							
I-4	.339	.063	5.734				
I-2	.486	.035	13.648*				
I-3	.403	.026	15.095*				
I-6	-.557	.064	-8.665				
I-10	.864	.052	16.467*	.999	.006	.997	478.58*
I-1	1.547	5.072	3.051				(.035)
I-13	-1.736	.124	-14.000*				
I-B	.076	6.791	11.747				
I-A	3.221	.619	5.201				

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class VI Towns 1971-81**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-11	.668	.450	1.484	.423	-	.231	2.20
						Signif F.	(.23)
Step 2							
I-11	1.784	.182	9.758**	.979	.556	.959	48.25
I-4	-.453	.061	-7.402*			(.020)	
Step 3							
I-11	1.451	6.990	207.668**				
I-4	-.465	1.450	-320.674**	.999	.020	.999	59593.0**
I-5	.137	2.288	60.241**				(.02)

significant t

** significant at 1% level

* significant at 5% level

**Maharashtra Stepwise Regression Dependent Variable Annual
Compound Growth of Class VI Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-A	-.846	.175	-4.837*	.921	-	.881	23.39*
						Signif F.	(.040)
Step 2							
I-A	-1.082	.057	-18.71*	.997	.076	.993	224.19*
I-3	.015	2.571	5.86				(.047)

significant t

* significant at 5% level

**Rajasthan Stepwise Regression Dependent Variable Annual
Compound Growth of Class VI Towns 1961-71**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-6	-.430	.210	-2.049	.411	-	.313	4.19 (.085)
						Signif F.	
Step 2							
I-6	-.467	.159	-2.929*	.719	.308	.607	6.42*
I-B	.037	.016	2.345			(.041)	
Step 3							
I-6	-.378	.177	-2.131				
I-B	.059	.025	2.329	.783	.064	.621	4.82
I-9	-.380	.350	-1.085				
Step 4							
I-6	-.473	.172	-2.752				
II-B	.092	.032	2.828	.870	.087	.697	5.04
I-9	-.619	.355	-1.743			(.107)	
I-13	-.767	.540	-1.420				
Step 5							
I-6	-.247	.221	-1.120				
I-B	.115	.032	3.504				
I-9	-.970	.400	-2.426	.934	.064	.769	5.67 (.156)
I-13	-.899	.481	-1.868				
I-8	-6.068	4.365	-1.390				
Step 6							
I-6	-.054	.092	-.587				
I-B	.131	.012	10.693				
I-9	-1.214	.154	-7.884	.995	.051	.971	40.75 (.119)
I-13	-.514	.196	-2.627				
I-8	-8.376	1.645	-5.089				
I-10	-.482	.123	-3.894				

significant t * significant at 5% level

**Orissa Stepwise Regression Dependent Variable Annual
Compound Growth of Class VI Towns 1981-91**

Variables	Regression Coefficient	S.E.	t	R ²	Increase R ²	R ²	F
Step 1							
I-6	8.288	.403	20.55*	.997	-	.995	422.29* (.031)
						Signif F.	

significant t * significant at 5% level

Appendix Table 4.1 (A)
Growth of Non-Agricultural Sector (Rural)

NIC Divisions	1961-71	1971-81	1981-91	1961-71	1971-81
	Total	Total	Total	Male	Male
THANA					
Mining and Quarrying	-0.14	0.00	5.34	-1.66	0.43
Manufacturing and Repair	6.31	8.07	-2.61	8.73	7.69
Electricity, Gas and Water	11.37	5.15		11.30	5.08
Construction	8.69	3.43	1.66	8.31	3.24
Wholesale and Retail Trade & Restaurants and Hotels	2.04	3.59		3.17	3.26
Transport, Storage and Communication	0.24	7.73	-0.59	0.21	7.82
Financing, Insurance, Real Estate & Business Services	5.29	10.53		5.41	11.46
Community, Social and Personal Services	1.17	7.85		3.15	7.56
RAIGARH					
Mining and Quarrying	-13.59	25.18	-8.25	-14.64	24.27
Manufacturing and Repair	1.21	7.22	6.82	2.16	6.61
Electricity, Gas and Water	5.54	12.45		5.40	12.19
Construction	8.21	10.58	-2.18	8.44	9.63
Wholesale and Retail Trade & Restaurants and Hotels	-0.50	4.67		0.48	4.40
Transport, Storage and Communication	-1.33	6.77	6.01	-1.29	6.69
Financing, Insurance, Real Estate & Business Services	12.26	6.48		11.69	6.31
Community, Social and Personal Services	-2.33	3.87		-0.76	3.56
RATNAGIRI					
Mining and Quarrying	0.47	13.60	5.34	0.54	15.47
Manufacturing and Repair	-2.37	2.82	2.91	-0.61	2.88
Electricity, Gas and Water	17.11	9.68		17.11	9.61
Construction	-2.78	9.63	3.67	-2.27	8.26
Wholesale and Retail Trade & Restaurants and Hotels	-1.64	4.24		0.61	3.67
Transport, Storage and Communication	1.77	3.71	0.00	1.73	3.80
Financing, Insurance, Real Estate & Business Services	-2.42	2.76		-1.07	2.24
Community, Social and Personal Services	-2.46	2.10		-1.07	1.44
NASIK					
Mining and Quarrying	-6.19	-16.33	23.97	-3.70	-16.55
Manufacturing and Repair	-0.02	5.25	1.34	0.76	4.93
Electricity, Gas and Water	41.92	12.14		41.92	12.98
Construction	-2.35	8.63	-2.42	-2.13	7.30
Wholesale and Retail Trade & Restaurants and Hotels	-0.33	6.32		0.01	5.51
Transport, Storage and Communication	3.53	5.79	4.07	3.51	5.86
Financing, Insurance, Real Estate & Business Services	15.01	5.82		15.04	5.83
Community, Social and Personal Services	2.68	-0.36		3.94	-0.44

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
DHULE					
Mining and Quarrying	-21.43	15.55	9.00	-18.75	15.52
Manufacturing and Repair	0.97	3.81	1.21	1.56	3.69
Electricity, Gas and Water	0.00	10.87			12.96
Construction	0.41	10.16	-0.57	0.87	8.65
Wholesale and Retail Trade & Restaurants and Hotels	-0.15	4.46		0.89	4.11
Transport, Storage and Communication	1.87	9.59	6.35	1.72	9.04
Financing, Insurance, Real Estate & Business Services	17.07	1.68		17.26	1.60
Community, Social and Personal Services	1.70	1.56		2.57	1.42
JALGAON					
Mining and Quarrying	0.97	-6.14	9.70	1.79	-2.27
Manufacturing and Repair	-1.31	4.43	0.05	-0.44	4.27
Electricity, Gas and Water	30.35	15.36		30.35	15.33
Construction	-7.18	6.03	0.83	-6.44	6.73
Wholesale and Retail Trade & Restaurants and Hotels	-0.01	5.11		0.11	5.16
Transport, Storage and Communication	2.45	4.66	5.68	2.42	4.74
Financing, Insurance, Real Estate & Business Services	18.43	2.00		18.60	1.84
Community, Social and Personal Services	2.24	1.95		2.78	1.76
AHMEDNAGAR					
Mining and Quarrying	-7.60	-2.40	9.91	-5.83	-2.51
Manufacturing and Repair	-0.28	4.64	1.92	0.26	3.70
Electricity, Gas and Water	45.18	10.22		47.32	10.43
Construction	-0.95	4.80	2.29	-0.09	3.39
Wholesale and Retail Trade & Restaurants and Hotels	1.21	3.59		1.94	3.37
Transport, Storage and Communication	0.06	7.94	6.29	0.20	7.89
Financing, Insurance, Real Estate & Business Services	12.96	6.61		12.96	6.56
Community, Social and Personal Services	2.18	1.82		3.17	1.65
PUNE					
Mining and Quarrying	-6.14	-1.19	17.70	-6.58	0.59
Manufacturing and Repair	0.25	4.78	3.22	1.54	4.59
Electricity, Gas and Water	23.16	7.17		23.16	7.08
Construction	-7.40	3.56	4.56	-6.00	2.70
Wholesale and Retail Trade & Restaurants and Hotels	1.34	3.81		1.91	3.41
Transport, Storage and Communication	6.11	6.30	6.05	6.24	6.30
Financing, Insurance, Real Estate & Business Services	11.44	4.48		11.50	4.35
Community, Social and Personal Services	1.84	10.75		2.94	3.49

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
SATARA					
Mining and Quarrying	5.76	-4.88	2.58	5.16	-3.57
Manufacturing and Repair	-2.46	3.77	4.12	-0.55	3.45
Electricity, Gas and Water	13.99	11.88		14.59	11.53
Construction	-9.27	12.50	-4.04	-8.63	10.36
Wholesale and Retail Trade & Restaurants and Hotels	-0.85	4.67		0.49	4.48
Transport, Storage and Communication	8.72	2.54	6.41	8.28	3.03
Financing, Insurance, Real Estate & Business Services	1.71	6.18		4.78	5.99
Community, Social and Personal Services	0.54	2.57		1.37	2.03
SANGLI					
Mining and Quarrying	0.38	-3.82	9.65	0.34	-3.63
Manufacturing and Repair	-0.14	2.51	2.18	1.73	2.10
Electricity, Gas and Water	17.01	9.55		17.01	9.31
Construction	-0.90	10.81	0.52	-0.78	10.96
Wholesale and Retail Trade & Restaurants and Hotels	0.81	4.90		1.28	3.72
Transport, Storage and Communication	4.05	6.23	5.54	4.19	6.23
Financing, Insurance, Real Estate & Business Services	6.72	4.46		9.05	4.29
Community, Social and Personal Services	2.20	2.93		3.03	2.50
SOLAPUR					
Mining and Quarrying	4.14	4.78	5.35	5.26	3.73
Manufacturing and Repair	-1.91	4.37	2.78	-0.88	4.24
Electricity, Gas and Water	8.20	11.48		5.99	11.08
Construction	4.39	11.12	-6.20	3.85	7.69
Wholesale and Retail Trade & Restaurants and Hotels	1.61	4.26		2.18	4.10
Transport, Storage and Communication	-0.10	7.44	5.84	-0.06	7.55
Financing, Insurance, Real Estate & Business Services	17.53	0.91		17.34	0.96
Community, Social and Personal Services	-0.97	2.57		0.36	2.59
KOLHAPUR					
Mining and Quarrying	3.97	4.02	0.52	3.91	2.36
Manufacturing and Repair	0.80	4.83	3.26	2.86	4.69
Electricity, Gas and Water	13.79	7.08		13.88	6.88
Construction	0.99	9.63	4.29	1.01	9.11
Wholesale and Retail Trade & Restaurants and Hotels	0.27	4.61		1.62	4.44
Transport, Storage and Communication	6.54	7.77	8.04	6.55	7.83
Financing, Insurance, Real Estate & Business Services	11.50	0.49		13.01	0.36
Community, Social and Personal Services	1.17	3.71		1.71	3.34

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
AURANGABAD					
Mining and Quarrying	-5.08	-8.51	17.52	-4.91	-6.37
Manufacturing and Repair	1.80	5.50	1.48	-1.03	5.37
Electricity, Gas and Water	70.70	17.53		70.70	17.50
Construction	6.56	-2.65	1.95	6.40	-1.85
Wholesale and Retail Trade & Restaurants and Hotels	2.51	3.50		2.66	3.47
Transport, Storage and Communication	-0.77	8.70	8.30	-0.76	8.70
Financing, Insurance, Real Estate & Business Services	2.47	2.83		4.16	2.80
Community, Social and Personal Services	5.86	-0.37		5.37	-1.00
PARBHANI					
Mining and Quarrying	-16.20	5.26	10.31	-15.48	4.99
Manufacturing and Repair	-1.71	4.41	-0.10	-0.96	3.83
Electricity, Gas and Water	18.38	7.59		18.11	7.39
Construction	-7.95	9.58	-5.78	-6.35	7.99
Wholesale and Retail Trade & Restaurants and Hotels	-0.15	4.52		0.10	4.16
Transport, Storage and Communication	4.06	2.23	4.51	4.09	2.11
Financing, Insurance, Real Estate & Business Services	-2.17	6.47		-1.16	6.47
Community, Social and Personal Services	2.56	1.88		2.55	2.08
BID					
Mining and Quarrying	-5.40	-11.85	18.33	-6.90	-14.79
Manufacturing and Repair	-3.22	4.99	0.55	-2.16	4.47
Electricity, Gas and Water	87.60	16.64		87.60	17.27
Construction	-1.68	15.97	-6.92	-0.31	13.77
Wholesale and Retail Trade & Restaurants and Hotels	0.29	4.85		0.55	4.59
Transport, Storage and Communication	3.98	9.10	8.93	3.97	8.86
Financing, Insurance, Real Estate & Business Services	-0.74	4.82		0.99	5.94
Community, Social and Personal Services	3.80	0.52		3.99	0.53
NANDED					
Mining and Quarrying	-12.53	-9.63	13.52	-12.33	-8.35
Manufacturing and Repair	-0.01	3.82	0.13	0.74	3.88
Electricity, Gas and Water	84.30	11.65		84.30	11.65
Construction	-1.54	8.64	0.49	-0.81	7.06
Wholesale and Retail Trade & Restaurants and Hotels	0.15	6.42		0.31	6.08
Transport, Storage and Communication	-1.56	11.06	5.01	-1.64	11.10
Financing, Insurance, Real Estate & Business Services	-0.31	8.13		0.97	8.09
Community, Social and Personal Services	4.60	2.42		5.69	2.15

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
OSMANABAD					
Mining and Quarrying	-6.78	5.20	7.00	-6.38	5.75
Manufacturing and Repair	-1.48	4.06	2.38	-0.78	3.76
Electricity, Gas and Water	8.23	20.68		13.97	20.57
Construction	1.64	1.40	5.15	1.62	1.13
Wholesale and Retail Trade & Restaurants and Hotels	0.24	4.91		0.29	4.76
Transport, Storage and Communication	3.60	9.57	8.43	3.62	9.54
Financing, Insurance, Real Estate & Business Services	0.30	8.50		4.15	8.39
Community, Social and Personal Services	3.13	2.74		3.52	2.55
BULDANA					
Mining and Quarrying	-0.71	-17.79	25.59	-0.39	-16.27
Manufacturing and Repair	-0.51	4.11	-0.95	-0.01	3.76
Electricity, Gas and Water	23.51	15.90		23.51	15.84
Construction	-5.83	9.03	-0.37	-4.68	7.47
Wholesale and Retail Trade & Restaurants and Hotels	-2.34	6.95		-2.06	6.93
Transport, Storage and Communication	0.72	9.01	4.81	0.63	8.90
Financing, Insurance, Real Estate & Business Services	9.51	2.65		9.51	2.65
Community, Social and Personal Services	2.44	0.61		2.82	0.99
AKOLA					
Mining and Quarrying	-0.14	-0.68	1.45	-0.57	-2.02
Manufacturing and Repair	-1.18	5.97	-0.35	-0.56	5.36
Electricity, Gas and Water	2.02	5.58		2.73	5.60
Construction	2.01	3.63	1.18	3.01	3.20
Wholesale and Retail Trade & Restaurants and Hotels	-1.38	5.52		-1.13	5.50
Transport, Storage and Communication	-3.71	10.34	-0.20	-3.07	10.48
Financing, Insurance, Real Estate & Business Services	-25.77	7.94		-25.19	7.80
Community, Social and Personal Services	1.84	2.63		1.58	2.61
AMRAVATI					
Mining and Quarrying	-10.81	-13.63	32.81	-9.01	-11.16
Manufacturing and Repair	0.13	3.17	-1.44	0.34	3.09
Electricity, Gas and Water	18.05	12.20		18.05	12.18
Construction	0.97	7.40	5.07	1.46	6.33
Wholesale and Retail Trade & Restaurants and Hotels	-0.95	4.03		-0.80	3.90
Transport, Storage and Communication	-4.23	7.85	4.77	-3.51	7.81
Financing, Insurance, Real Estate & Business Services	9.56	8.00		9.33	8.03
Community, Social and Personal Services	1.51	1.63		1.57	1.56

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
YAVATMAL					
Mining and Quarrying	-5.37	14.27	4.46	-5.59	14.02
Manufacturing and Repair	0.48	3.41	0.44	1.11	3.19
Electricity, Gas and Water	16.61	11.85		16.74	11.85
Construction	3.68	11.55	0.13	3.49	10.25
Wholesale and Retail Trade & Restaurants and Hotels	-0.37	3.99		0.05	3.91
Transport, Storage and Communication	3.77	5.30	7.38	3.24	5.84
Financing, Insurance, Real Estate & Business Services	10.94	14.73		10.94	14.58
Community, Social and Personal Services	-0.69	2.32		-0.29	2.00
WARDHA					
Mining and Quarrying	7.18	-7.72	13.12	6.33	-7.86
Manufacturing and Repair	-0.94	4.46	0.06	0.32	3.53
Electricity, Gas and Water	-4.70	25.33		-4.70	25.33
Construction	-0.86	3.74	5.36	-1.36	2.99
Wholesale and Retail Trade & Restaurants and Hotels	-1.37	4.30		-0.81	4.33
Transport, Storage and Communication	-4.76	9.85	5.13	-4.96	10.10
Financing, Insurance, Real Estate & Business Services	2.74	13.60		2.74	13.52
Community, Social and Personal Services	1.61	1.14		2.31	0.72
NAGPUR					
Mining and Quarrying	-0.61	7.42	-3.60	1.42	8.97
Manufacturing and Repair	-1.75	3.91	1.63	-0.22	3.52
Electricity, Gas and Water	6.01	7.55		6.52	7.59
Construction	8.20	18.45	-4.23	8.43	16.79
Wholesale and Retail Trade & Restaurants and Hotels	-0.65	-23.19		0.13	-22.38
Transport, Storage and Communication	0.77	4.34	4.85	0.32	4.96
Financing, Insurance, Real Estate & Business Services	5.00	12.69		4.71	12.55
Community, Social and Personal Services	3.97	-0.41		4.33	-0.14
BHANDRA					
Mining and Quarrying	-1.64	-4.14	4.32	-0.89	-3.75
Manufacturing and Repair	1.47	-1.58	-0.02	1.11	-1.53
Electricity, Gas and Water	12.61	8.99		12.61	8.83
Construction	10.12	8.94	-3.02	9.54	6.63
Wholesale and Retail Trade & Restaurants and Hotels	-3.45	6.26		-2.67	6.99
Transport, Storage and Communication	1.60	3.16	5.38	0.90	4.20
Financing, Insurance, Real Estate & Business Services	-6.05	13.68		-6.37	13.89
Community, Social and Personal Services	-1.89	2.26		-0.17	2.13

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
CHANDRAPUR					
Mining and Quarrying	-1.36	4.91	5.10	-1.79	5.33
Manufacturing and Repair	-1.36	3.91	0.01	0.38	3.48
Electricity, Gas and Water	0.94	10.76		3.21	11.12
Construction	10.81	10.32	-0.03	9.73	8.79
Wholesale and Retail Trade & Restaurants and Hotels	-0.35	3.20		0.59	3.48
Transport, Storage and Communication	-1.28	10.23	0.14	-2.05	10.50
Financing, Insurance, Real Estate & Business Services	-0.97	9.66		-0.97	9.45
Community, Social and Personal Services	-1.15	3.45		1.03	3.24

Appendix Table 4.1 (B)
Growth of Non-Agricultural Sector (Rural)

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
GANGANAGAR					
Mining and Quarrying	2.54	32.75	-17.21	1.81	26.70
Manufacturing and Repair	-0.42	7.74	1.43	0.76	7.94
Electricity, Gas and Water	26.32	10.46		28.40	10.37
Construction	-8.58	1.09	0.72	-7.25	0.08
Wholesale and Retail Trade & Restaurants and Hotels	-1.33	3.40		-1.29	5.24
Transport, Storage and Communication	3.12	7.59	4.07	3.08	7.63
Financing, Insurance, Real Estate & Business Services	6.10	9.81		6.23	9.81
Community, Social and Personal Services	-2.53	6.23		-1.92	6.21
BIKANER					
Mining and Quarrying	-9.64	6.50	-1.20	-9.34	5.00
Manufacturing and Repair	-8.97	15.22	-3.09	-3.91	15.06
Electricity, Gas and Water	37.16	11.32		37.16	11.32
Construction	18.94	2.99	-0.20	20.55	2.56
Wholesale and Retail Trade & Restaurants and Hotels	-2.89	7.21		-2.15	7.12
Transport, Storage and Communication	-0.72	10.39	-0.05	-0.70	10.32
Financing, Insurance, Real Estate & Business Services	8.52	8.88		9.70	8.88
Community, Social and Personal Services	-1.26	7.26		-0.87	7.50
CHURU					
Mining and Quarrying	5.56	-4.33	24.21	6.63	-3.72
Manufacturing and Repair	0.09	8.71	1.83	3.05	8.94
Electricity, Gas and Water	5.24	32.40		5.24	32.32
Construction	-0.82	13.61	9.29	-0.06	13.91
Wholesale and Retail Trade & Restaurants and Hotels	0.13	11.10		0.54	11.31
Transport, Storage and Communication	3.03	7.69	2.45	3.01	7.64
Financing, Insurance, Real Estate & Business Services	0.51	23.42		0.78	23.42
Community, Social and Personal Services	6.48	1.70		7.03	1.66
JHUNJHUNUN					
Mining and Quarrying	18.83	6.50	-1.35	18.99	6.56
Manufacturing and Repair	-0.82	7.05	-0.26	2.13	6.67
Electricity, Gas and Water	14.55	36.90		15.20	36.90
Construction	6.55	2.98	5.27	6.37	4.29
Wholesale and Retail Trade & Restaurants and Hotels	0.32	7.14		0.90	7.06
Transport, Storage and Communication	7.33	12.95	2.32	7.30	12.96
Financing, Insurance, Real Estate & Business Services	-3.38	19.62		-3.31	19.62
Community, Social and Personal Services	7.70	-2.59		9.21	-2.77

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
ALWAR					
Mining and Quarrying	-1.93	9.53	6.92	-1.99	9.42
Manufacturing and Repair	-0.48	4.51	1.13	2.05	4.63
Electricity, Gas and Water	6.66	32.27		6.66	32.18
Construction	4.33	7.82	5.89	4.31	7.90
Wholesale and Retail Trade & Restaurants and Hotels	-0.06	4.77		-0.37	4.76
Transport, Storage and Communication	8.56	7.53	6.64	8.58	7.56
Financing, Insurance, Real Estate & Business Services	-3.98	9.40		-3.91	9.35
Community, Social and Personal Services	0.65	0.08		2.00	-0.05
BHARATPUR					
Mining and Quarrying	2.21	12.64	8.59	2.55	13.10
Manufacturing and Repair	0.18	6.29	-1.37	2.60	5.94
Electricity, Gas and Water	0.00	55.90		0.00	55.90
Construction	7.30	8.73	4.96	7.22	8.92
Wholesale and Retail Trade & Restaurants and Hotels	1.09	4.29		1.48	4.09
Transport, Storage and Communication	10.46	5.73	1.65	10.51	5.69
Financing, Insurance, Real Estate & Business Services	-1.24	21.38		-1.02	21.22
Community, Social and Personal Services	0.76	2.03		2.24	1.89
SAWAI MADHOPUR					
Mining and Quarrying	13.88	-1.62	12.46	13.89	-1.12
Manufacturing and Repair	2.24	3.28	-3.21	8.14	3.32
Electricity, Gas and Water	0.00	0.00			
Construction	3.59	8.06	6.18	4.05	8.04
Wholesale and Retail Trade & Restaurants and Hotels	0.00	4.39		0.17	4.39
Transport, Storage and Communication	1.91	6.96	-0.61	2.09	6.92
Financing, Insurance, Real Estate & Business Services	-2.63	18.43		-2.18	18.32
Community, Social and Personal Services	-1.30	0.05		0.34	0.20
JAIPUR					
Mining and Quarrying	0.35	2.58	1.81	0.96	2.86
Manufacturing and Repair	-4.79	4.94	-0.30	-0.30	4.90
Electricity, Gas and Water	-4.93	39.54		-4.93	39.43
Construction	2.40	5.15	9.44	2.96	5.14
Wholesale and Retail Trade & Restaurants and Hotels	-1.02	2.35		-0.77	2.24
Transport, Storage and Communication	12.33	4.86	4.84	12.50	4.85
Financing, Insurance, Real Estate & Business Services	-3.33	13.52		-2.96	13.53
Community, Social and Personal Services	-4.64	1.56		-2.90	1.58

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
SIKAR					
Mining and Quarrying	-1.78	7.76	-2.58	-1.74	7.83
Manufacturing and Repair	-2.25	4.05	0.99	2.96	4.05
Electricity, Gas and Water	1.06	72.30		1.06	72.23
Construction	4.60	6.49	4.36	5.53	6.52
Wholesale and Retail Trade & Restaurants and Hotels	-0.02	6.09		0.16	6.10
Transport, Storage and Communication	5.90	7.57	5.88	5.86	7.58
Financing, Insurance, Real Estate & Business Services	-6.96	18.25		-6.86	18.18
Community, Social and Personal Services	-2.06	0.70		3.50	0.48
AJMER					
Mining and Quarrying	-2.16	8.42	4.41	-2.73	6.55
Manufacturing and Repair	15.81	-10.48	0.33	18.87	-11.50
Electricity, Gas and Water	18.71	27.13		18.71	27.13
Construction	-2.55	5.58	9.31	-1.82	5.19
Wholesale and Retail Trade & Restaurants and Hotels	-1.77	2.48		-1.30	2.14
Transport, Storage and Communication	3.00	3.18	7.07	2.94	3.21
Financing, Insurance, Real Estate & Business Services	4.99	1.92		4.71	1.96
Community, Social and Personal Services	-2.01	-0.25		0.23	0.09
TONK					
Mining and Quarrying	3.36	3.36	-2.61	4.27	2.35
Manufacturing and Repair	-1.63	7.16	0.12	1.40	6.92
Electricity, Gas and Water	6.31	15.21		6.55	15.21
Construction	1.21	9.12	8.73	1.58	8.20
Wholesale and Retail Trade & Restaurants and Hotels	3.22	1.15		3.54	1.03
Transport, Storage and Communication	8.47	11.26	4.87	8.30	10.30
Financing, Insurance, Real Estate & Business Services	19.29	6.95		22.77	6.55
Community, Social and Personal Services	-3.26	3.01		-1.08	2.75
JAISALMER					
Mining and Quarrying	2.79	2.48	36.83	13.24	2.85
Manufacturing and Repair	-9.45	4.17	1.93	-2.98	5.11
Electricity, Gas and Water	34.93	17.22		34.93	17.22
Construction	19.25	13.11	9.23	16.47	14.99
Wholesale and Retail Trade & Restaurants and Hotels	1.00	4.39		0.65	4.63
Transport, Storage and Communication	24.16	8.00	7.59	24.10	80.00
Financing, Insurance, Real Estate & Business Services	0.00	0.00		0.00	0.00
Community, Social and Personal Services	3.16	3.71		3.32	4.48

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
JODHPUR					
Mining and Quarrying	-11.96	20.65	9.77	-11.64	18.73
Manufacturing and Repair	-0.10	7.75	0.62	1.51	7.84
Electricity, Gas and Water	21.82	20.08		21.82	20.03
Construction	-11.98	20.17	9.16	-11.31	20.35
Wholesale and Retail Trade & Restaurants and Hotels	0.64	6.05		0.68	6.13
Transport, Storage and Communication	3.03	5.71	3.50	2.93	5.83
Financing, Insurance, Real Estate & Business Services	-3.66	10.09		-3.66	9.86
Community, Social and Personal Services	6.01	0.79		7.17	0.86
NAGPUR					
Mining and Quarrying	4.16	7.04	3.55	5.60	7.00
Manufacturing and Repair	2.55	6.47	0.60	5.17	6.50
Electricity, Gas and Water	0.00	25.67			25.67
Construction	-0.51	9.54	8.82	-0.38	10.16
Wholesale and Retail Trade & Restaurants and Hotels	-0.72	6.42		-0.48	6.33
Transport, Storage and Communication	4.28	8.78	2.20	4.30	8.67
Financing, Insurance, Real Estate & Business Services	2.89	0.61		3.12	0.61
Community, Social and Personal Services	6.00	0.30		6.86	0.19
PALI					
Mining and Quarrying	-9.47	11.30	6.16	-8.97	9.81
Manufacturing and Repair	-1.51	2.47	-2.96	0.81	2.33
Electricity, Gas and Water	2.47	11.34		25.03	11.34
Construction	-3.48	9.36	1.35	-2.38	8.76
Wholesale and Retail Trade & Restaurants and Hotels	0.10	1.78		0.22	1.67
Transport, Storage and Communication	0.51	0.24	0.04	0.52	-0.28
Financing, Insurance, Real Estate & Business Services	1.38	1.17		2.11	1.06
Community, Social and Personal Services	-2.96	-0.55		-0.30	-0.72
BARMER					
Mining and Quarrying	2.17	4.25	-1.21	2.08	4.92
Manufacturing and Repair	1.79	8.39	1.23	3.98	8.37
Electricity, Gas and Water	11.12	25.71		12.07	25.71
Construction	1.91	9.92	13.09	3.35	9.74
Wholesale and Retail Trade & Restaurants and Hotels	-0.96	3.33		-0.82	2.91
Transport, Storage and Communication	6.19	6.12	1.73	6.15	6.13
Financing, Insurance, Real Estate & Business Services	-4.67	3.22		-4.31	2.66
Community, Social and Personal Services	6.38	3.74		6.55	3.72

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
JALOR					
Mining and Quarrying	18.69	12.26	1.56	20.31	12.25
Manufacturing and Repair	2.88	3.10	0.60	4.42	3.51
Electricity, Gas and Water	0.00	16.24			16.24
Construction	0.59	7.86	8.78	1.77	7.73
Wholesale and Retail Trade & Restaurants and Hotels	-0.66	2.08		-0.47	1.82
Transport, Storage and Communication	8.47	4.66	3.11	8.47	4.78
Financing, Insurance, Real Estate & Business Services	-2.98	-5.70		-2.98	-5.70
Community, Social and Personal Services	1.26	0.31		3.30	0.27
SIROHI					
Mining and Quarrying	-7.38	18.63	1.11	-2.18	15.95
Manufacturing and Repair	0.50	4.31	-0.16	2.53	3.72
Electricity, Gas and Water	20.89	36.25		20.89	36.25
Construction	-0.52	6.33	7.18	0.18	6.01
Wholesale and Retail Trade & Restaurants and Hotels	-0.01	6.10		0.13	5.94
Transport, Storage and Communication	5.35	-1.71	3.82	4.96	-1.55
Financing, Insurance, Real Estate & Business Services	23.37	3.48		23.76	3.42
Community, Social and Personal Services	-4.69	2.78		-2.50	2.11
BHILWARA					
Mining and Quarrying	-1.92	12.17	-0.84	-2.40	11.77
Manufacturing and Repair	1.15	3.86	1.87	3.30	3.71
Electricity, Gas and Water	0.00	27.78			29.35
Construction	3.06	6.33	0.10	3.94	5.34
Wholesale and Retail Trade & Restaurants and Hotels	0.61	2.74		0.88	2.58
Transport, Storage and Communication	5.49	10.52	5.28	5.40	10.53
Financing, Insurance, Real Estate & Business Services	-7.95	21.41		-7.87	21.24
Community, Social and Personal Services	-0.09	-0.38		1.75	-0.32
UDAIPUR					
Mining and Quarrying	8.70	10.59	5.50	9.10	10.17
Manufacturing and Repair	0.71	4.38	2.44	3.52	4.46
Electricity, Gas and Water	32.47	12.86		32.47	12.74
Construction	3.97	6.80	3.19	5.19	6.00
Wholesale and Retail Trade & Restaurants and Hotels	1.79	2.45		2.29	2.15
Transport, Storage and Communication	7.66	5.47	6.81	7.23	5.89
Financing, Insurance, Real Estate & Business Services	7.13	9.57		7.23	9.79
Community, Social and Personal Services	1.08	0.98		2.83	0.77

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
CHITTAURGARH					
Mining and Quarrying	-1.69	8.94	8.64	-0.33	9.16
Manufacturing and Repair	0.69	5.15	-1.59	3.89	4.81
Electricity, Gas and Water	0.00	38.13			40.62
Construction	-8.28	17.45	-5.47	-6.66	15.27
Wholesale and Retail Trade & Restaurants and Hotels	0.48	5.16		1.05	4.65
Transport, Storage and Communication	5.29	14.32	3.26	4.92	14.52
Financing, Insurance, Real Estate & Business Services	-5.29	18.19		-5.23	17.95
Community, Social and Personal Services	3.66	-2.75		6.41	-2.80
DUNGARPUR					
Mining and Quarrying	11.35	37.59	-3.98	9.60	35.79
Manufacturing and Repair	1.71	6.32	1.35	5.50	6.51
Electricity, Gas and Water	35.15	27.53		40.74	27.53
Construction	6.22	13.24	8.88	6.58	12.30
Wholesale and Retail Trade & Restaurants and Hotels	1.39	3.83		1.75	3.77
Transport, Storage and Communication	13.66	10.47	8.20	12.33	10.55
Financing, Insurance, Real Estate & Business Services	-5.76	13.95		-5.17	13.58
Community, Social and Personal Services	3.50	4.32		4.95	4.59
BANSWARA					
Mining and Quarrying	5.53	12.85	9.63	4.03	14.15
Manufacturing and Repair	1.23	6.66	-0.14	4.17	6.60
Electricity, Gas and Water	0.00	14.87			14.87
Construction	0.77	41.83	-9.19	0.99	41.83
Wholesale and Retail Trade & Restaurants and Hotels	1.68	4.49		2.26	4.49
Transport, Storage and Communication	11.07	16.13	2.29	16.28	16.13
Financing, Insurance, Real Estate & Business Services	-3.58	21.48		-3.17	21.48
Community, Social and Personal Services	5.06	5.92		6.15	5.92
BUNDI					
Mining and Quarrying	15.28	16.58	3.45	17.36	16.40
Manufacturing and Repair	2.60	5.79	-2.37	3.89	5.40
Electricity, Gas and Water	0.00	8.86			11.09
Construction	9.47	-0.56	-2.43	11.07	-1.25
Wholesale and Retail Trade & Restaurants and Hotels	0.40	7.00		0.67	6.48
Transport, Storage and Communication	8.12	1.06	5.62	5.50	3.10
Financing, Insurance, Real Estate & Business Services	18.03	-4.88		18.42	-4.88
Community, Social and Personal Services	0.78	-1.53		3.00	-1.59

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
KOTA					
Mining and Quarrying	2.37	8.71	2.38	2.70	8.01
Manufacturing and Repair	-0.47	4.20	-4.35	1.51	3.70
Electricity, Gas and Water	0.00	33.43			33.22
Construction	-6.21	6.11	-1.63	-5.64	5.80
Wholesale and Retail Trade & Restaurants and Hotels	0.02	3.12		0.98	2.93
Transport, Storage and Communication	4.11	1.81	0.80	2.74	3.11
Financing, Insurance, Real Estate & Business Services	12.18	-12.70		12.26	-12.61
Community, Social and Personal Services	-7.22	1.48		-3.22	1.24
JHALAWAR					
Mining and Quarrying	-10.16	20.76	1.58	-8.22	18.48
Manufacturing and Repair	20.97	4.53	-4.42	-0.90	3.83
Electricity, Gas and Water	0.00	2.77			3.99
Construction	-0.08	0.35	2.91	0.17	0.64
Wholesale and Retail Trade & Restaurants and Hotels	0.42	3.01		0.82	3.00
Transport, Storage and Communication	4.09	2.58	2.09	3.97	2.65
Financing, Insurance, Real Estate & Business Services	4.12	1.00		4.49	0.78
Community, Social and Personal Services	-6.02	1.20		-3.45	0.80

Appendix Table 4.1 (C)
Growth of Non-Agricultural Sector (Rural)

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
SAMBALPUR					
Mining and Quarrying	12.3	12.45	5.14	16.02	12.59
Manufacturing and Repair	-3.26	2.53	1.28	0.6	2.45
Electricity, Gas and Water	10.61	5.73		9.43	6.86
Construction	16.54	7.46	-6.74	15.5	7.09
Wholesale and Retail Trade & Restaurants and Hotels	1.73	6.94		4.4	7.5
Transport, Storage and Communication	20.42	4.62	-0.99	19.78	5.1
Financing, Insurance, Real Estate & Business Services	2.32	-4.52		1.83	-4.21
Community, Social and Personal Services	-10.86	0.73		-7.05	1.13
SUNDERGARH					
Mining and Quarrying	20.34	3.45	3.87	21.88	4.06
Manufacturing and Repair	4.07	3.64	-2.21	9.81	3.18
Electricity, Gas and Water	22.76	8.36		21.76	9.25
Construction	6.48	11.49	-7.71	6.79	10.14
Wholesale and Retail Trade & Restaurants and Hotels	3.29	5.42		4.06	5.43
Transport, Storage and Communication	10.63	4.15	-2.14	10.34	4.3
Financing, Insurance, Real Estate & Business Services	-7.46	2.79		-7.41	2.79
Community, Social and Personal Services	-7.41	1.27		-4.36	1.18
KEONJHAR					
Mining and Quarrying	10.39	-1.84	3.85	13.02	-2.64
Manufacturing and Repair	-4.59	3.56	2.23	-0.69	3.9
Electricity, Gas and Water	49.86	7.7		49.86	7.62
Construction	0.87	21.33	-8.60	2.66	19.62
Wholesale and Retail Trade & Restaurants and Hotels	2.13	6.34		4.25	6.2
Transport, Storage and Communication	3.41	5.18	5.08	8.05	5.09
Financing, Insurance, Real Estate & Business Services	2.03	-7.29		0.61	-6.07
Community, Social and Personal Services	-1.6	2.21		0.77	2.04
MAYURBHANJ					
Mining and Quarrying	-20.18	12.23	-6.60	-21.19	12.37
Manufacturing and Repair	-2.99	4.45	1.62	1.24	2.42
Electricity, Gas and Water	5.21	5.21		4.33	6.09
Construction	5.72	14.7	-4.59	6.17	10.36
Wholesale and Retail Trade & Restaurants and Hotels	1.8	7.09		2.87	7.1
Transport, Storage and Communication	6.03	2.96	4.53	5.47	3.48
Financing, Insurance, Real Estate & Business Services	0.82	7.62		0.63	7.77
Community, Social and Personal Services	-3.39	1.43		-0.18	1.06

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
BALASORE					
Mining and Quarrying	0	9.6	28.46	84.21	-8.16
Manufacturing and Repair	-0.57	6.5	2.50	1.74	5.68
Electricity, Gas and Water	13.48	6.57		38.76	16.35
Construction	0.77	8.46	-1.35	11.84	10.6
Wholesale and Retail Trade & Restaurants and Hotels	5.34	5.5		0.94	8.31
Transport, Storage and Communication	8.46	3.65	4.46	5.32	3.51
Financing, Insurance, Real Estate & Business Services	2.36	3.12		2.12	4.74
Community, Social and Personal Services	-4.54	3.21		-1.83	3.14
CUTTACK					
Mining and Quarrying	0.09	12.78	1.28	3.88	11.2
Manufacturing and Repair	-3.9	4.17	0.39	-0.12	4.33
Electricity, Gas and Water	14.4	9.79		13.11	9.72
Construction	-8.67	6.7	4.80	-8.8	6.87
Wholesale and Retail Trade & Restaurants and Hotels	-0.26	4.55		2.01	4.87
Transport, Storage and Communication	3.75	4.66	2.88	3.76	4.57
Financing, Insurance, Real Estate & Business Services	10.76	0.79		12.39	-0.8
Community, Social and Personal Services	-6.55	2.83		-5.15	2.7
DIHENKANAL					
Mining and Quarrying	14.65	3.05	-0.66	14.57	2.05
Manufacturing and Repair	-3.61	4.1	3.15	1.57	4.52
Electricity, Gas and Water	82.61	6.49		82.61	6.36
Construction	16.37	12.47	1.73	16.91	12.56
Wholesale and Retail Trade & Restaurants and Hotels	3.27	7.4		4.64	7.5
Transport, Storage and Communication	25.09	6.41	0.50	25.05	6.28
Financing, Insurance, Real Estate & Business Services	1.24	10.82		0.28	11.83
Community, Social and Personal Services	-7.51	1.72		-5.64	1.5
PHULBANI					
Mining and Quarrying	1.05	-3.03	-2.23	3.87	-5.31
Manufacturing and Repair	-5.7	3.27	0.91	-1.88	3.02
Electricity, Gas and Water	4.6	11.19		5.24	11.19
Construction	6.62	13.86	-9.62	6.27	12.05
Wholesale and Retail Trade & Restaurants and Hotels	0.71	3.09		1.93	3.03
Transport, Storage and Communication	11.57	4.94	1.90	11.21	5.24
Financing, Insurance, Real Estate & Business Services	6.86	-0.75		11.21	-0.72
Community, Social and Personal Services	-10.17	0.01		-6.15	-0.12

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
BOLANGIR					
Mining and Quarrying	21.06	17.86	0.60	21.03	9.05
Manufacturing and Repair	-4.95	1.46	2.11	-0.94	1.02
Electricity, Gas and Water	33.75	13.26		29.57	16.92
Construction	5.42	4.82	4.88	5.66	5.69
Wholesale and Retail Trade & Restaurants and Hotels	-0.08	4.04		3.61	4.53
Transport, Storage and Communication	13.83	3.76	3.71	13.87	3.95
Financing, Insurance, Real Estate & Business Services	3.07	1.2		2.62	1.71
Community, Social and Personal Services	-10.24	0.24		-7.11	0.23
KALAHANDI					
Mining and Quarrying	7.47	1.03	22.02	8.2	4.75
Manufacturing and Repair	-6.12	2.99	2.64	-2.54	2.4
Electricity, Gas and Water	40.51	19.26		40.51	19.26
Construction	10.96	21.44	-7.62	11.06	17.58
Wholesale and Retail Trade & Restaurants and Hotels	-1.95	5.41		0.31	5.62
Transport, Storage and Communication	9.22	5.09	4.86	9.01	5.24
Financing, Insurance, Real Estate & Business Services	4.36	6.86		3.62	7.02
Community, Social and Personal Services	-8.96	-2.59		-5.74	-1.62
KORAPUT					
Mining and Quarrying	21.93	-13.5	11.14	27.29	-14.6
Manufacturing and Repair	-3.3	1.56	0.59	1.72	-8
Electricity, Gas and Water	43.01	9.47		48.83	10.07
Construction	17.84	6.43	-7.75	19.64	4.97
Wholesale and Retail Trade & Restaurants and Hotels	3.36	6.58		8.07	5.85
Transport, Storage and Communication	9.07	5.49	3.21	8.87	5.6
Financing, Insurance, Real Estate & Business Services	9.09	6.47		8.85	6.63
Community, Social and Personal Services	-8.37	-2.7		-4.1	-2.96
GANJAM					
Mining and Quarrying	1.2	26.19	3.31	5.82	27.2
Manufacturing and Repair	-6.05	1.4	1.87	-1.91	1.41
Electricity, Gas and Water	30.66	6.21		32.03	6.2
Construction	9.95	2.05	1.62	9.67	1.25
Wholesale and Retail Trade & Restaurants and Hotels	0.6	3.31		2.29	3.05
Transport, Storage and Communication	9.95	2.21	3.20	9.37	2.61
Financing, Insurance, Real Estate & Business Services	1.82	21		8.9	21.45
Community, Social and Personal Services	-8.53	-2.42		-4.36	-2.01

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
PURI					
Mining and Quarrying	18.87	9.05	4.58	-18.81	28.76
Manufacturing and Repair	4.28	8.34	2.42	0.33	2.43
Electricity, Gas and Water	1.72	7.58		21.86	10.29
Construction	3.28	8.89	1.92	7.98	4.94
Wholesale and Retail Trade & Restaurants and Hotels	4.7	7.36		3.97	2.53
Transport, Storage and Communication	3.93	5.83	5.04	9.49	2.62
Financing, Insurance, Real Estate & Business Services	3.29	3.56		19.97	1.83
Community, Social and Personal Services	3.6	5.41		-2.34	0.8

Appendix Table 4.2 (A)
Growth of Non-Agricultural Sector (Urban)

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
GREATER BOMBAY					
Mining and Quarrying	-0.90	4.76	6.27	-0.45	5.52
Manufacturing and Repair	3.05	2.45	0.65	3.11	2.35
Electricity, Gas and Water	-0.78	2.46		-0.37	2.41
Construction	4.08	3.64	4.27	4.28	3.36
Wholesale and Retail Trade & Restaurants and Hotels	1.71	2.77		1.79	2.66
Transport, Storage and Communication	2.27	1.95	3.07	2.31	1.84
Financing, Insurance, Real Estate & Business Services	7.22	1.24		6.88	0.40
Community, Social and Personal Services	2.35	3.55		1.94	3.16
THANA					
Mining and Quarrying	-12.99	13.03	20.98	-10.32	13.70
Manufacturing and Repair	6.76	5.95	8.10	7.16	5.87
Electricity, Gas and Water	5.83	8.69		4.98	8.76
Construction	5.82	6.72	18.44	5.99	6.57
Wholesale and Retail Trade & Restaurants and Hotels	2.76	5.34		2.97	5.13
Transport, Storage and Communication	3.42	6.01	8.74	3.25	5.83
Financing, Insurance, Real Estate & Business Services	-0.86	15.58		-1.42	14.50
Community, Social and Personal Services	2.90	8.89		2.75	9.08
RAIGARH					
Mining and Quarrying	16.19	7.63	-0.07	25.66	6.41
Manufacturing and Repair	6.26	6.00	4.92	7.17	5.80
Electricity, Gas and Water	20.21	2.36		20.28	2.03
Construction	9.62	5.86	8.11	8.91	6.17
Wholesale and Retail Trade & Restaurants and Hotels	1.07	3.13		2.39	3.18
Transport, Storage and Communication	3.34	5.19	2.80	3.34	4.84
Financing, Insurance, Real Estate & Business Services	11.58	2.06		11.26	1.15
Community, Social and Personal Services	0.78	3.13		0.89	2.67
RATNGIRI					
Mining and Quarrying	-13.30	-18.20	6.86	-12.57	-19.10
Manufacturing and Repair	-0.45	1.86	1.58	0.73	2.73
Electricity, Gas and Water	21.24	7.16		21.24	7.08
Construction	-1.65	2.57	1.84	-2.33	2.09
Wholesale and Retail Trade & Restaurants and Hotels	-0.01	2.42		0.20	3.08
Transport, Storage and Communication	0.78	2.12	2.09	1.00	1.81
Financing, Insurance, Real Estate & Business Services	3.64	5.25		3.73	4.08
Community, Social and Personal Services	-0.34	1.43		0.00	0.82

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
NASIK					
Mining and Quarrying	4.50	-11.06	15.00	3.03	-8.83
Manufacturing and Repair	0.61	4.54	2.21	2.51	4.70
Electricity, Gas and Water	12.14	11.37		12.05	11.30
Construction	0.87	5.73	9.09	1.56	6.65
Wholesale and Retail Trade & Restaurants and Hotels	2.01	4.37		2.53	4.49
Transport, Storage and Communication	3.56	3.34	2.51	3.24	3.72
Financing, Insurance, Real Estate & Business Services	5.16	5.33		5.21	4.66
Community, Social and Personal Services	-1.36	3.34		-1.27	2.99
DHULE					
Mining and Quarrying	4.77	-20.07	42.90	4.14	-21.18
Manufacturing and Repair	-0.29	3.33	0.86	0.83	3.35
Electricity, Gas and Water	9.44	11.21		9.44	11.14
Construction	2.87	6.20	3.77	3.53	5.22
Wholesale and Retail Trade & Restaurants and Hotels	0.87	4.21		1.69	4.24
Transport, Storage and Communication	3.29	3.45	3.26	3.29	3.65
Financing, Insurance, Real Estate & Business Services	7.53	0.87		7.61	0.73
Community, Social and Personal Services	-0.61	2.73		0.36	2.88
JALGAON					
Mining and Quarrying	-2.49	-12.40	11.73	-2.47	-7.62
Manufacturing and Repair	1.04	2.79	2.06	2.30	2.72
Electricity, Gas and Water	10.20	9.93		10.11	9.86
Construction	3.36	3.39	6.93	3.38	3.77
Wholesale and Retail Trade & Restaurants and Hotels	0.39	4.29		0.86	4.13
Transport, Storage and Communication	0.90	3.03	1.26	0.83	3.14
Financing, Insurance, Real Estate & Business Services	5.66	-0.15		5.77	-0.43
Community, Social and Personal Services	-0.88	2.36		-0.41	2.19
AHMADNAGAR					
Mining and Quarrying	7.38	-5.71	6.54	13.56	-6.44
Manufacturing and Repair	1.17	4.23	3.29	1.72	4.60
Electricity, Gas and Water	9.90	6.92		9.90	6.41
Construction	2.70	10.82	4.19	3.37	9.53
Wholesale and Retail Trade & Restaurants and Hotels	1.47	4.37		1.83	4.35
Transport, Storage and Communication	2.79	3.65	2.68	3.38	3.83
Financing, Insurance, Real Estate & Business Services	4.52	7.65		4.52	4.33
Community, Social and Personal Services	2.60	0.52		3.32	-0.49

Contd.....

NIC Divisions	1961-71	1971-81	1981-91	1961-71	1971-81
	Total	Total	Total	Male	Male
PUNE					
Mining and Quarrying	9.59	-7.45	7.44	10.59	-6.42
Manufacturing and Repair	5.29	5.19	2.76	5.91	5.04
Electricity, Gas and Water	8.88	7.32		8.46	7.14
Construction	4.88	7.95	9.92	4.47	7.36
Wholesale and Retail Trade & Restaurants and Hotels	1.31	4.27		1.54	4.10
Transport, Storage and Communication	1.27	4.96	2.39	1.37	5.25
Financing, Insurance, Real Estate & Business Services	7.86	8.39		7.75	7.34
Community, Social and Personal Services	2.14	2.16		2.25	1.11
SATARA					
Mining and Quarrying	3.33	15.16	-4.18	1.40	13.82
Manufacturing and Repair	1.14	2.28	0.69	2.27	2.01
Electricity, Gas and Water	11.64	4.16		11.44	4.18
Construction	11.94	-2.82	2.56	12.06	-2.53
Wholesale and Retail Trade & Restaurants and Hotels	1.66	2.97		2.58	2.65
Transport, Storage and Communication	2.86	5.55	0.76	3.39	5.71
Financing, Insurance, Real Estate & Business Services	6.34	4.44		6.39	4.10
Community, Social and Personal Services	1.69	1.86		2.14	1.11
SANGLI					
Mining and Quarrying	6.16	3.30	2.57	6.19	2.38
Manufacturing and Repair	2.67	4.05	1.29	4.75	4.29
Electricity, Gas and Water	6.55	7.22		6.98	6.94
Construction	5.39	2.26	9.29	5.99	1.98
Wholesale and Retail Trade & Restaurants and Hotels	2.18	2.34		2.91	2.90
Transport, Storage and Communication	7.15	3.42	1.95	6.94	3.54
Financing, Insurance, Real Estate & Business Services	8.57	5.09		8.39	4.91
Community, Social and Personal Services	2.56	3.71		2.59	3.06
SOLAPUR					
Mining and Quarrying	-14.00	10.07	3.73	-12.19	7.99
Manufacturing and Repair	-1.36	4.03	-0.21	-0.53	3.01
Electricity, Gas and Water	7.00	7.87		6.69	8.03
Construction	3.56	3.43	8.12	3.99	3.52
Wholesale and Retail Trade & Restaurants and Hotels	0.78	2.73		1.24	2.59
Transport, Storage and Communication	3.64	1.43	2.14	3.44	1.59
Financing, Insurance, Real Estate & Business Services	10.68	-0.60		10.42	-0.72
Community, Social and Personal Services	0.49	2.48		1.17	1.97

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
KOLHAPUR					
Mining and Quarrying	18.39	-9.22	9.12	19.98	-8.55
Manufacturing and Repair	2.33	4.72	2.18	3.51	4.56
Electricity, Gas and Water	6.15	6.84		6.35	6.46
Construction	8.57	2.80	8.39	8.32	2.66
Wholesale and Retail Trade & Restaurants and Hotels	3.07	4.32		3.58	4.09
Transport, Storage and Communication	5.63	3.99	2.91	6.21	3.96
Financing, Insurance, Real Estate & Business Services	5.51	2.81		5.40	2.69
Community, Social and Personal Services	1.28	4.54		1.54	4.32
AURANGABAD					
Mining and Quarrying	-42.44	23.97	20.58	-41.58	26.39
Manufacturing and Repair	-10.48	9.88	5.95	-9.46	9.74
Electricity, Gas and Water	8.79	11.23		8.78	11.15
Construction	9.06	8.04	4.83	9.34	6.60
Wholesale and Retail Trade & Restaurants and Hotels	2.14	4.52		2.72	4.36
Transport, Storage and Communication	4.21	5.82	5.80	4.27	5.83
Financing, Insurance, Real Estate & Business Services	6.94	6.40		6.94	6.11
Community, Social and Personal Services	2.86	2.09		3.92	1.71
PARBHANI					
Mining and Quarrying	11.61	-9.11	21.37	13.73	-10.52
Manufacturing and Repair	-0.84	4.81	1.43	1.05	4.12
Electricity, Gas and Water	3.27	12.33		4.67	12.30
Construction	4.82	5.55	6.25	4.78	4.70
Wholesale and Retail Trade & Restaurants and Hotels	0.04	5.57		0.59	5.24
Transport, Storage and Communication	-0.97	7.73	4.10	-1.26	7.94
Financing, Insurance, Real Estate & Business Services	9.12	3.09		8.94	2.95
Community, Social and Personal Services	1.38	3.15		2.72	2.94
BID					
Mining and Quarrying	0.00	32.47	-4.11		27.43
Manufacturing and Repair	2.08	2.85	3.07	3.60	2.52
Electricity, Gas and Water	29.04	15.48		19.04	15.17
Construction	1.84	10.68	5.75	2.89	9.86
Wholesale and Retail Trade & Restaurants and Hotels	0.69	4.87		1.19	4.85
Transport, Storage and Communication	6.82	3.42	5.05	6.26	3.96
Financing, Insurance, Real Estate & Business Services	12.05	4.51		11.51	4.52
Community, Social and Personal Services	-0.57	5.08		1.54	4.65

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
NANDED					
Mining and Quarrying	-1.69	-25.66	39.34	-2.11	-26.25
Manufacturing and Repair	-0.13	4.26	2.04	1.24	3.57
Electricity, Gas and Water	14.72	9.16		14.67	9.29
Construction	11.33	1.22	12.72	11.04	0.80
Wholesale and Retail Trade & Restaurants and Hotels	1.77	4.38		2.10	4.21
Transport, Storage and Communication	6.65	3.47	4.91	6.58	3.50
Financing, Insurance, Real Estate & Business Services	7.50	4.11		7.55	4.00
Community, Social and Personal Services	0.77	2.83		2.02	3.05
OSMANABAD					
Mining and Quarrying	0.00	-26.13	43.32		-26.30
Manufacturing and Repair	0.29	6.07	2.62	1.80	5.54
Electricity, Gas and Water	7.25	12.67		7.39	12.64
Construction	4.32	3.28	13.77	4.76	3.03
Wholesale and Retail Trade & Restaurants and Hotels	0.63	5.07		1.15	4.81
Transport, Storage and Communication	3.59	7.07	4.34	3.72	6.97
Financing, Insurance, Real Estate & Business Services	10.49	6.48		10.52	5.88
Community, Social and Personal Services	1.63	2.21		3.06	2.15
BULDANA					
Mining and Quarrying	0.00	-14.51	49.93		-9.78
Manufacturing and Repair	-2.71	3.73	2.19	-1.22	3.55
Electricity, Gas and Water	8.96	10.87		8.96	10.69
Construction	1.35	3.42	9.92	2.28	3.34
Wholesale and Retail Trade & Restaurants and Hotels	-1.23	4.75		-0.93	4.59
Transport, Storage and Communication	2.33	3.43	4.12	2.24	3.49
Financing, Insurance, Real Estate & Business Services	7.69	2.11		7.70	2.14
Community, Social and Personal Services	-2.05	3.21		-1.36	2.54
AKOLA					
Mining and Quarrying	1.28	-8.07	5.59	-0.29	-8.07
Manufacturing and Repair	-0.19	3.41	1.52	0.72	3.41
Electricity, Gas and Water	1.83	7.70		1.60	7.70
Construction	2.09	3.20	9.08	1.96	3.20
Wholesale and Retail Trade & Restaurants and Hotels	-0.21	2.95		0.11	2.95
Transport, Storage and Communication	2.53	3.66	2.54	2.44	3.66
Financing, Insurance, Real Estate & Business Services	-17.33	0.77		-15.72	0.77
Community, Social and Personal Services	-0.59	2.09		-0.18	2.09

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
AMRAVATI					
Mining and Quarrying	-7.49	-18.81	17.46	-3.68	-16.62
Manufacturing and Repair	-0.92	2.93	0.96	0.14	2.87
Electricity, Gas and Water	8.49	7.88		8.53	7.84
Construction	3.80	6.28	7.21	4.05	6.20
Wholesale and Retail Trade & Restaurants and Hotels	0.87	2.48		1.07	2.45
Transport, Storage and Communication	2.34	3.14	3.51	2.30	3.17
Financing, Insurance, Real Estate & Business Services	4.49	1.32		4.55	1.13
Community, Social and Personal Services	0.52	2.26		0.82	2.21
YAVATMAL					
Mining and Quarrying	16.41	-4.59	43.21	12.85	-1.10
Manufacturing and Repair	-0.92	4.12	1.39	-0.04	4.17
Electricity, Gas and Water	1.68	6.61		3.59	6.65
Construction	4.09	3.98	9.12	4.21	4.13
Wholesale and Retail Trade & Restaurants and Hotels	0.45	2.10		0.65	2.30
Transport, Storage and Communication	4.55	2.32	3.35	4.10	2.60
Financing, Insurance, Real Estate & Business Services	1.08	0.80		0.99	0.78
Community, Social and Personal Services	0.97	2.56		2.31	2.49
WARDHA					
Mining and Quarrying	-21.24	-12.02	44.25	-24.89	-1.81
Manufacturing and Repair	-1.25	1.91	0.16	-4.00	1.72
Electricity, Gas and Water	16.68	13.28		16.68	8.69
Construction	9.61	0.25	6.69	9.01	0.31
Wholesale and Retail Trade & Restaurants and Hotels	0.19	3.26		0.61	3.35
Transport, Storage and Communication	5.17	-0.06	2.15	5.05	0.11
Financing, Insurance, Real Estate & Business Services	4.83	1.14		4.75	1.10
Community, Social and Personal Services	-0.91	1.14		-0.40	1.32
NAGPUR					
Mining and Quarrying	3.93	0.28	13.58	5.04	3.23
Manufacturing and Repair	-1.28	2.22	1.17	0.22	2.30
Electricity, Gas and Water	3.74	11.27		3.58	11.40
Construction	-2.31	5.46	12.19	-0.97	4.68
Wholesale and Retail Trade & Restaurants and Hotels	0.15	-22.40		0.44	-22.27
Transport, Storage and Communication	0.49	4.12	2.76	1.24	4.17
Financing, Insurance, Real Estate & Business Services	9.02	3.89		9.00	3.49
Community, Social and Personal Services	3.87	2.86		4.29	2.59

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
BHANDARA					
Mining and Quarrying	-3.79	-7.38	34.27	-6.70	-6.51
Manufacturing and Repair	0.12	1.20	-1.05	0.68	1.34
Electricity, Gas and Water	7.15	6.56		7.15	6.49
Construction	4.39	3.43	2.08	6.01	3.02
Wholesale and Retail Trade & Restaurants and Hotels	0.50	2.26		1.03	2.40
Transport, Storage and Communication	0.66	1.74	1.67	1.05	1.80
Financing, Insurance, Real Estate & Business Services	0.99	1.83		0.88	1.78
Community, Social and Personal Services	-0.20	3.10		1.02	3.22
CHANDRAPUR					
Mining and Quarrying	3.28	7.65	10.29	3.43	7.90
Manufacturing and Repair	2.83	4.10	4.91	4.71	4.18
Electricity, Gas and Water	9.47	13.91		9.47	13.79
Construction	7.56	4.46	14.15	6.78	4.89
Wholesale and Retail Trade & Restaurants and Hotels	3.03	3.89		4.30	4.13
Transport, Storage and Communication	3.99	3.60	8.02	3.90	3.59
Financing, Insurance, Real Estate & Business Services	3.00	6.28		3.00	6.02
Community, Social and Personal Services	3.99	2.49		5.65	2.11

Appendix Table 4.2 (B)
Growth of Non-Agricultural Sector (Urban)

NIC Divisions	1961-71	1971-81	1981-91	1961-71	1971-81
	Total	Total	Total	Male	Male
GANGANAGAR					
Mining and Quarrying	26.51	10.50	11.21	26.51	10.50
Manufacturing and Repair	3.44	7.86	-0.05	3.69	7.82
Electricity, Gas and Water	3.86	8.10		4.53	8.10
Construction	1.79	2.88	6.09	1.95	2.83
Wholesale and Retail Trade & Restaurants and Hotels	1.69	7.51		1.71	6.78
Transport, Storage and Communication	4.06	7.86	0.72	4.04	7.85
Financing, Insurance, Real Estate & Business Services	13.31	7.19		13.23	7.12
Community, Social and Personal Services	2.18	4.13		2.36	3.77
BIKANER					
Mining and Quarrying	4.50	16.06	5.96	4.30	16.14
Manufacturing and Repair	1.19	5.48	3.27	2.28	5.83
Electricity, Gas and Water	-3.48	9.63		-3.49	9.66
Construction	-3.36	5.03	12.63	-3.14	5.37
Wholesale and Retail Trade & Restaurants and Hotels	0.92	5.05		1.08	5.10
Transport, Storage and Communication	0.89	2.73	1.17	0.87	2.74
Financing, Insurance, Real Estate & Business Services	4.88	4.21		4.81	4.21
Community, Social and Personal Services	2.56	3.52		2.94	3.47
CHURU					
Mining and Quarrying	3.92	-2.83	5.18	4.28	-2.77
Manufacturing and Repair	0.35	4.31	1.27	2.23	4.36
Electricity, Gas and Water	-0.10	14.08		-0.03	14.01
Construction	-0.07	9.14	3.21	0.26	9.11
Wholesale and Retail Trade & Restaurants and Hotels	0.16	4.92		0.31	4.94
Transport, Storage and Communication	1.53	6.13	2.39	1.56	6.13
Financing, Insurance, Real Estate & Business Services	13.48	3.33		13.78	3.16
Community, Social and Personal Services	-0.67	2.84		-0.03	2.73
JHUNJHUNUN					
Mining and Quarrying	19.97	25.38	4.46	20.73	25.42
Manufacturing and Repair	-0.33	6.39	-1.56	2.27	6.35
Electricity, Gas and Water	4.27	22.25		4.27	22.25
Construction	1.15	10.83	1.19	1.47	10.79
Wholesale and Retail Trade & Restaurants and Hotels	0.92	5.31		1.28	5.22
Transport, Storage and Communication	3.59	6.20	2.06	3.59	6.16
Financing, Insurance, Real Estate & Business Services	10.46	1.61		10.46	1.61
Community, Social and Personal Services	-0.16	0.55		0.14	0.02

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
ALWAR					
Mining and Quarrying	-1.19	17.11	6.25	-1.62	16.60
Manufacturing and Repair	1.02	7.58	6.86	3.07	7.48
Electricity, Gas and Water	0.37	12.69		0.37	12.69
Construction	-1.33	6.36	2.93	-1.11	6.25
Wholesale and Retail Trade & Restaurants and Hotels	3.75	6.14		3.56	6.18
Transport, Storage and Communication	4.61	6.13	4.54	4.49	6.21
Financing, Insurance, Real Estate & Business Services	17.28	4.40		17.20	4.39
Community, Social and Personal Services	2.42	2.51		2.80	2.39
BHARATPUR					
Mining and Quarrying	-2.21	19.92	5.59	0.54	18.07
Manufacturing and Repair	0.92	6.61	0.51	2.13	6.57
Electricity, Gas and Water	6.28	10.38		6.28	10.38
Construction	-0.88	4.86	4.18	-0.77	4.71
Wholesale and Retail Trade & Restaurants and Hotels	0.68	4.98		0.88	4.90
Transport, Storage and Communication	3.32	4.77	1.37	3.35	4.75
Financing, Insurance, Real Estate & Business Services	13.43	3.54		13.64	3.47
Community, Social and Personal Services	-0.08	2.75		-0.08	2.74
SAWAI MADHOPUR					
Mining and Quarrying	-5.93	13.66	9.57	-5.53	14.09
Manufacturing and Repair	0.00	3.32	2.07	1.56	3.40
Electricity, Gas and Water	6.54	12.30		6.72	12.24
Construction	0.49	6.68	5.61	0.81	6.42
Wholesale and Retail Trade & Restaurants and Hotels	1.81	3.21		1.92	3.34
Transport, Storage and Communication	3.43	3.66	0.53	3.45	3.61
Financing, Insurance, Real Estate & Business Services	13.51	2.17		13.84	2.08
Community, Social and Personal Services	1.97	2.91		2.59	2.71
JAIPUR					
Mining and Quarrying	0.21	7.85	10.45	2.38	7.51
Manufacturing and Repair	3.35	6.94	2.48	4.40	7.01
Electricity, Gas and Water	0.77	5.73		0.95	5.69
Construction	-2.52	6.99	8.23	-1.84	6.67
Wholesale and Retail Trade & Restaurants and Hotels	2.80	3.84		2.91	3.79
Transport, Storage and Communication	2.99	3.22	4.69	2.96	3.22
Financing, Insurance, Real Estate & Business Services	10.76	6.38		10.82	6.13
Community, Social and Personal Services	3.26	4.91		3.77	4.50

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
SIKAR					
Mining and Quarrying	12.33	-0.51	3.58	11.91	-0.13
Manufacturing and Repair	-3.33	5.31	2.44	1.78	4.98
Electricity, Gas and Water	11.38	14.36		11.38	14.36
Construction	3.85	8.19	4.71	4.26	8.23
Wholesale and Retail Trade & Restaurants and Hotels	1.49	4.36		1.92	4.36
Transport, Storage and Communication	1.88	5.10	5.61	1.88	5.08
Financing, Insurance, Real Estate & Business Services	4.68	1.86		4.70	1.72
Community, Social and Personal Services	1.22	3.03		0.87	3.09
AJMER					
Mining and Quarrying	15.92	8.05	-1.51	14.59	8.45
Manufacturing and Repair	2.45	6.39	1.19	3.27	6.34
Electricity, Gas and Water	-7.86	7.31		-7.81	7.31
Construction	-2.84	9.09	2.01	-2.58	9.15
Wholesale and Retail Trade & Restaurants and Hotels	0.49	3.33		0.53	3.41
Transport, Storage and Communication	-0.21	2.86	-3.56	-0.26	2.85
Financing, Insurance, Real Estate & Business Services	3.37	2.15		3.32	1.97
Community, Social and Personal Services	1.21	1.39		1.62	1.22
TONK					
Mining and Quarrying	2.89	13.27	-8.15	10.00	11.22
Manufacturing and Repair	2.15	7.35	0.66	3.31	5.83
Electricity, Gas and Water	11.03	15.02		11.03	15.02
Construction	-0.01	1.89	4.75	-0.24	1.82
Wholesale and Retail Trade & Restaurants and Hotels	-1.66	7.38		-9.00	7.41
Transport, Storage and Communication	7.14	4.52	3.18	6.69	4.93
Financing, Insurance, Real Estate & Business Services	9.68	3.16		9.64	2.96
Community, Social and Personal Services	0.48	0.09		1.47	0.34
JAISALMER					
Mining and Quarrying	0.00	0.69	14.28	0.00	0.69
Manufacturing and Repair	2.76	5.69	0.14	2.78	5.99
Electricity, Gas and Water	7.18	28.94		7.18	28.94
Construction	2.59	6.57	18.11	2.53	6.88
Wholesale and Retail Trade & Restaurants and Hotels	-0.87	6.12		-0.77	6.15
Transport, Storage and Communication	6.21	1.53	4.96	6.08	1.65
Financing, Insurance, Real Estate & Business Services	4.35	11.11		4.35	11.11
Community, Social and Personal Services	7.95	0.89		8.54	0.63

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
JODHPUR					
Mining and Quarrying	-0.09	7.73	2.52	0.52	7.99
Manufacturing and Repair	4.11	6.65	1.96	4.69	6.70
Electricity, Gas and Water	0.49	15.43		0.59	15.28
Construction	-1.74	9.35	5.79	-1.55	9.47
Wholesale and Retail Trade & Restaurants and Hotels	2.34	5.07		2.52	5.02
Transport, Storage and Communication	1.81	3.74	0.06	1.81	6.36
Financing, Insurance, Real Estate & Business Services	7.47	7.01		7.91	6.82
Community, Social and Personal Services	2.34	3.48		2.70	3.33
NAGPUR					
Mining and Quarrying	2.52	11.61	4.27	3.50	11.14
Manufacturing and Repair	2.45	5.35	0.80	3.46	5.29
Electricity, Gas and Water	-3.43	23.39		-3.31	23.39
Construction	-3.47	9.49	4.82	-3.42	9.59
Wholesale and Retail Trade & Restaurants and Hotels	0.91	5.32		1.18	5.30
Transport, Storage and Communication	1.06	4.39	4.42	1.06	4.37
Financing, Insurance, Real Estate & Business Services	8.30	0.37		8.31	0.37
Community, Social and Personal Services	1.59	-0.21		2.39	-0.54
PALI					
Mining and Quarrying	18.05	-9.21	13.25	17.94	-8.86
Manufacturing and Repair	2.59	7.38	2.94	4.02	7.39
Electricity, Gas and Water	23.46	14.91		23.46	14.86
Construction	1.42	16.25	4.55	2.15	16.08
Wholesale and Retail Trade & Restaurants and Hotels	1.02	7.40		1.43	7.38
Transport, Storage and Communication	2.86	10.18	4.34	2.97	9.84
Financing, Insurance, Real Estate & Business Services	14.61	7.74		14.65	7.71
Community, Social and Personal Services	1.01	5.09		2.62	4.94
BARMER					
Mining and Quarrying	-3.87	25.11	-15.72	-3.87	23.89
Manufacturing and Repair	-0.33	10.57	2.17	1.72	10.68
Electricity, Gas and Water	-5.87	32.36		-5.17	32.36
Construction	-2.11	15.10	10.74	-1.98	15.65
Wholesale and Retail Trade & Restaurants and Hotels	-0.42	5.50		-0.27	5.45
Transport, Storage and Communication	1.38	7.21	4.05	1.35	7.33
Financing, Insurance, Real Estate & Business Services	6.71	5.72		6.94	5.56
Community, Social and Personal Services	6.57	-0.26		7.17	-0.82

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
JALOR					
Mining and Quarrying	1.55	32.03	-12.89	1.06	32.67
Manufacturing and Repair	1.12	10.74	0.48	2.98	10.62
Electricity, Gas and Water	11.61	21.10		11.61	21.10
Construction	-0.94	12.70	3.19	-1.50	13.05
Wholesale and Retail Trade & Restaurants and Hotels	0.77	8.80		1.20	9.12
Transport, Storage and Communication	4.16	13.95	0.81	4.16	13.13
Financing, Insurance, Real Estate & Business Services	8.93	5.70		8.93	5.70
Community, Social and Personal Services	-0.40	5.50		0.38	5.25
SIROHI					
Mining and Quarrying	-13.55	10.86	-4.18	-11.36	8.54
Manufacturing and Repair	1.35	6.29	2.88	2.62	5.87
Electricity, Gas and Water	5.24	14.05		5.24	14.05
Construction	-1.92	3.37	3.41	-1.48	3.20
Wholesale and Retail Trade & Restaurants and Hotels	1.23	3.45		1.75	3.15
Transport, Storage and Communication	3.13	3.06	-1.31	3.13	3.16
Financing, Insurance, Real Estate & Business Services	10.45	3.54		10.73	3.35
Community, Social and Personal Services	-1.57	2.67		-0.81	2.10
BHILWARA					
Mining and Quarrying	0.62	9.36	2.29	1.45	11.69
Manufacturing and Repair	6.51	3.76	6.74	8.40	3.43
Electricity, Gas and Water	-10.56	13.41		-10.56	13.41
Construction	1.73	9.61	7.58	1.82	8.87
Wholesale and Retail Trade & Restaurants and Hotels	4.39	3.47		4.33	3.67
Transport, Storage and Communication	5.30	6.50	6.85	5.28	6.41
Financing, Insurance, Real Estate & Business Services	-2.33	3.51		-2.33	3.33
Community, Social and Personal Services	4.41	3.51		5.78	3.68
UDAIPUR					
Mining and Quarrying	-19.56	16.25	10.37	-19.61	16.23
Manufacturing and Repair	2.64	5.61	3.64	4.47	5.53
Electricity, Gas and Water	1.78	14.90		1.81	14.77
Construction	-7.44	10.42	1.42	-6.94	10.82
Wholesale and Retail Trade & Restaurants and Hotels	1.37	4.74		2.14	4.60
Transport, Storage and Communication	2.70	4.06	5.06	2.68	4.05
Financing, Insurance, Real Estate & Business Services	38.35	6.44		39.29	6.19
Community, Social and Personal Services	2.52	3.13		3.14	2.82

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
CHITTAURGARH					
Mining and Quarrying	-1.47	6.03	7.04	-1.70	7.10
Manufacturing and Repair	1.05	5.67	3.44	3.06	5.45
Electricity, Gas and Water	3.98	32.13		4.43	32.24
Construction	-0.12	9.48	5.88	-0.30	8.85
Wholesale and Retail Trade & Restaurants and Hotels	2.30	3.79		2.62	3.71
Transport, Storage and Communication	5.36	9.16	2.60	5.36	8.73
Financing, Insurance, Real Estate & Business Services	9.57	7.75		9.70	7.59
Community, Social and Personal Services	1.41	4.22		2.41	4.01
DUNGARPUR					
Mining and Quarrying	14.98	-4.06	3.54	14.98	-4.06
Manufacturing and Repair	1.78	5.10	2.54	3.62	5.29
Electricity, Gas and Water	-7.21	19.62		-7.09	19.62
Construction	-8.42	1.10	18.22	-8.48	1.66
Wholesale and Retail Trade & Restaurants and Hotels	0.41	1.56		1.74	1.19
Transport, Storage and Communication	8.00	9.30	-0.81	7.52	9.17
Financing, Insurance, Real Estate & Business Services	1.80	7.81		1.58	8.11
Community, Social and Personal Services	3.19	2.19		3.74	7.54
BANSWARA					
Mining and Quarrying	-9.34	27.48	6.86	-8.12	27.48
Manufacturing and Repair	1.89	7.52	2.62	3.48	7.77
Electricity, Gas and Water	17.46	8.28		17.76	8.28
Construction	2.11	14.75	-1.29	3.29	14.67
Wholesale and Retail Trade & Restaurants and Hotels	0.75	4.02		1.85	4.27
Transport, Storage and Communication	4.75	11.92	1.75	4.94	11.92
Financing, Insurance, Real Estate & Business Services	10.33	3.83		10.44	3.83
Community, Social and Personal Services	-0.10	5.10		0.46	4.32
BUNDI					
Mining and Quarrying	-1.46	28.87	3.20	-2.21	30.20
Manufacturing and Repair	0.53	2.38	1.21	1.40	2.70
Electricity, Gas and Water	5.76	13.58		5.45	13.61
Construction	-2.92	8.42	3.78	-3.11	8.59
Wholesale and Retail Trade & Restaurants and Hotels	1.01	4.05		1.98	4.26
Transport, Storage and Communication	-0.09	7.47	6.01	-0.42	7.78
Financing, Insurance, Real Estate & Business Services	13.60	5.41		14.43	5.48
Community, Social and Personal Services	0.33	3.46		1.28	3.23

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
KOTA					
Mining and Quarrying	-6.43	23.93	7.66	-5.65	22.30
Manufacturing and Repair	10.33	6.48	1.57	11.61	6.35
Electricity, Gas and Water	7.80	11.52		7.92	11.59
Construction	-1.74	6.94	6.92	-1.48	6.69
Wholesale and Retail Trade & Restaurants and Hotels	3.13	4.24		3.73	4.31
Transport, Storage and Communication	5.18	2.54	2.08	5.06	2.56
Financing, Insurance, Real Estate & Business Services	12.62	0.59		12.60	0.47
Community, Social and Personal Services	1.83	5.69		2.31	5.69
JAISALMER					
Mining and Quarrying	-11.93	9.97	13.84	-11.66	9.97
Manufacturing and Repair	4.88	4.71	3.69	5.99	4.86
Electricity, Gas and Water	1.12	17.36		1.12	17.36
Construction	-3.78	7.29	12.20	-3.61	5.12
Wholesale and Retail Trade & Restaurants and Hotels	2.79	4.48		3.28	4.32
Transport, Storage and Communication	3.11	9.01	5.83	3.48	8.93
Financing, Insurance, Real Estate & Business Services	11.85	0.45		11.91	0.57
Community, Social and Personal Services	1.93	3.21		2.39	3.36

Appendix Table 4.2 (C)
Growth of Non-Agricultural Sector (Urban)

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
SAMBALPUR					
Mining and Quarrying	19.83	7.9	1.93	20.24	8.21
Manufacturing and Repair	3.25	5.8	0.48	3.74	4.96
Electricity, Gas and Water	10.48	2.37		3.65	2.23
Construction	-6.33	7.94	1.01	-6.55	7.45
Wholesale and Retail Trade & Restaurants and Hotels	6.99	5.16		7.55	4.98
Transport, Storage and Communication	8.48	1.76	1.10	8.12	1.98
Financing, Insurance, Real Estate & Business Services	21.83	-1.7		21.56	-1.66
Community, Social and Personal Services	0.35	4.23		1.06	3.9
SUNDARGARH					
Mining and Quarrying	5.94	-6.08	4.67	5.75	-6.28
Manufacturing and Repair	0.61	7.92	1.72	1.07	7.73
Electricity, Gas and Water	4.22	3.34		4.28	3.14
Construction	-14.52	18.64	-1.14	-13.46	17.29
Wholesale and Retail Trade & Restaurants and Hotels	3.77	5.63		3.76	5.56
Transport, Storage and Communication	3.7	3.36	1.36	4.96	3.36
Financing, Insurance, Real Estate & Business Services	21.07	-6.68		20.45	-6.35
Community, Social and Personal Services	-0.31	1.45		1.17	0.78
KEONJHAR					
Mining and Quarrying	12.65	8.43	2.89	13.73	9.77
Manufacturing and Repair	8.32	6.78	1.10	8.87	6.93
Electricity, Gas and Water	25.92	-3.86		25.5	-3.54
Construction	9.86	13.8	-1.01	9.68	12.28
Wholesale and Retail Trade & Restaurants and Hotels	12.08	7.38		12.09	7.43
Transport, Storage and Communication	4.74	0.5	0.60	4.91	2.62
Financing, Insurance, Real Estate & Business Services	15.21	1.69		15.18	-1.87
Community, Social and Personal Services	-1.49	1.97		-0.37	1.58
MAYURBHANJ					
Mining and Quarrying	12.93	-3.45	11.81	12.93	-6.36
Manufacturing and Repair	-0.76	11.14	-0.78	0.56	10.73
Electricity, Gas and Water	18.08	13.51		17.78	10.97
Construction	2.61	13.79	-0.39	2.61	12.87
Wholesale and Retail Trade & Restaurants and Hotels	6.15	10.39		6.27	10.2
Transport, Storage and Communication	7.67	6.68	4.69	7.67	6.63
Financing, Insurance, Real Estate & Business Services	3.81	5.36		3.67	5.69
Community, Social and Personal Services	-1.08	7.19		-0.88	6.47

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
BALASORE					
Mining and Quarrying	4.13	5.24	48.96	0	9.6
Manufacturing and Repair	-0.91	6.44	-0.24	-0.57	6.5
Electricity, Gas and Water	13.48	6.68		13.48	6.57
Construction	0.92	8.66	3.33	0.77	8.46
Wholesale and Retail Trade & Restaurants and Hotels	5.06	5.5		5.34	5.5
Transport, Storage and Communication	8.83	3.36	1.88	8.46	3.65
Financing, Insurance, Real Estate & Business Services	2.48	3.13		2.36	3.12
Community, Social and Personal Services	-4.68	3.82		-4.54	3.21
CUTTACK					
Mining and Quarrying	-1.72	6.11	26.24	-0.69	6.11
Manufacturing and Repair	0.28	4.17	1.14	0.8	4.16
Electricity, Gas and Water	-22.78	3.92		-22.79	3.92
Construction	1.56	5.43	4.37	1.5	5.02
Wholesale and Retail Trade & Restaurants and Hotels	6.2	4.36		6.47	4.37
Transport, Storage and Communication	4.28	2.85	4.20	4.2	3.02
Financing, Insurance, Real Estate & Business Services	10.17	0.38		10.14	0.24
Community, Social and Personal Services	-0.22	5.58		-0.36	5.28
DIENKANAL					
Mining and Quarrying	8.23	18.65	12.99	14.12	18.54
Manufacturing and Repair	-2.97	11.25	4.94	-1.62	11.21
Electricity, Gas and Water	7.87	29.3		7.87	29.19
Construction	0.03	34.24	-2.93	-0.03	34.21
Wholesale and Retail Trade & Restaurants and Hotels	4.15	7.22		4.87	7.29
Transport, Storage and Communication	7.2	2.52	7.25	7.2	2.86
Financing, Insurance, Real Estate & Business Services	14.99	5.62		14.99	5.24
Community, Social and Personal Services	-2.71	8.74		-2.15	6.96
PHULABANI					
Mining and Quarrying	0	0	14.87		
Manufacturing and Repair	3.21	3.17	-0.28	4.76	5.66
Electricity, Gas and Water	24.06	12		24.06	12
Construction	15.21	6.91	-1.34	15.51	6.65
Wholesale and Retail Trade & Restaurants and Hotels	9.34	7.3		13.33	7.31
Transport, Storage and Communication	18.5	6.6	1.22	18.07	6.99
Financing, Insurance, Real Estate & Business Services	19.5	4.84		19.5	4.67
Community, Social and Personal Services	9.55	6.14		11.9	5.79

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
BOLANGIR					
Mining and Quarrying	20.2	-11.3	21.84	16.74	-8.66
Manufacturing and Repair	2.42	6	0.03	4.63	5.85
Electricity, Gas and Water	10.23	8.03		10.23	7.81
Construction	8.14	3.13	3.02	8.22	3.31
Wholesale and Retail Trade & Restaurants and Hotels	5.25	3.41		6	3.69
Transport, Storage and Communication	5.44	-0.14	4.91	5.37	0.1
Financing, Insurance, Real Estate & Business Services	31.33	3.63		32.57	3.38
Community, Social and Personal Services	0.46	4.25		1.52	3.81
KALAHANDI					
Mining and Quarrying	0	13.87	21.16		13.87
Manufacturing and Repair	5.61	1.41	2.82	6.31	1.76
Electricity, Gas and Water	18.34	9.78		18.34	9.51
Construction	7	7.05	-2.55	6.28	6.56
Wholesale and Retail Trade & Restaurants and Hotels	6.51	4.11		8.98	3.53
Transport, Storage and Communication	13.96	2.45	1.38	13.23	3.12
Financing, Insurance, Real Estate & Business Services	17.46	-0.14		17.6	-0.14
Community, Social and Personal Services	0.73	1.74		1.53	1.89
KORAPUT					
Mining and Quarrying	9.16	-0.18	-1.69	9.75	-5.4
Manufacturing and Repair	6.19	6.2	3.82	8.29	5.48
Electricity, Gas and Water	2.62	7.92		2.68	7.88
Construction	9.3	14.9	-2.96	9.47	13.44
Wholesale and Retail Trade & Restaurants and Hotels	6.17	6.69		7.28	5.95
Transport, Storage and Communication	13.62	-0.97	1.37	11.89	0.47
Financing, Insurance, Real Estate & Business Services	17.46	-2.42		17.75	-2.47
Community, Social and Personal Services	-0.97	7.43		0.46	6.93
GANJAM					
Mining and Quarrying	-6.89	17.43	0.03	0.77	15.2
Manufacturing and Repair	0.58	4.73	0.34	2.82	4.84
Electricity, Gas and Water	12.69	4.61		12.69	4.42
Construction	5.86	4.64	0.81	5.73	4.68
Wholesale and Retail Trade & Restaurants and Hotels	4.25	4.14		4.67	4.46
Transport, Storage and Communication	5.83	2.73	2.44	5.42	2.85
Financing, Insurance, Real Estate & Business Services	11.38	0.51		11.3	0.53
Community, Social and Personal Services	0.26	2.19		1.18	2.4

Contd.....

NIC Divisions	1961-71 Total	1971-81 Total	1981-91 Total	1961-71 Male	1971-81 Male
PURI					
Mining and Quarrying	18.92	9.09	5.12	18.87	9.05
Manufacturing and Repair	2.45	8.43	5.68	4.28	8.34
Electricity, Gas and Water	1.82	7.69		1.72	7.58
Construction	3.51	9.05	6.97	3.28	8.89
Wholesale and Retail Trade & Restaurants and Hotels	4.07	7.14		4.7	7.36
Transport, Storage and Communication	3.95	5.61	4.24	3.93	5.83
Financing, Insurance, Real Estate & Business Services	3.41	3.68		3.29	3.56
Community, Social and Personal Services	3.02	5.94		3.6	5.41

Appendix Table 4.3 (A)

**Important Non-Agricultural Groups (two-digit) that Show
High Employment Growth in Districts During 1961-71, 1971-81**

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Thane (Rural)			
91 (38.52)	42 (36.29)	36 (24.42)	39 (22.03)
41 (34.93)	74 (31.41)	30 (25.34)	33 (13.71)
74 (21.73)	80 (19.41)	22 (21.52)	30 (12.39)
40 (13.66)	61 (18.38)	23 (15.65)	28 (12.00)
75 (10.56)	82 (18.00)	33 (15.49)	32 (11.69)
82 (9.60)	73 (17.22)	31 (14.06)	34 (11.38)
		37 (13.22)	35 (9.79)
		35 (14.16)	
Raigarh (Rural)			
74 (20.89)	64 (37.00)	39 (28.66)	33 (22.40)
82 (15.67)	62 (27.66)	37 (14.57)	36 (16.98)
42 (17.02)	42 (15.52)	42 (14.49)	30 (16.50)
80 (9.66)	67 (15.92)	31 (13.86)	31 (12.90)
68 (9.08)	81 (16.49)	30 (13.78)	35 (12.85)
93 (8.07)	82 (17.06)	24 (12.19)	37 (11.12)
	91 (13.67)	35 (11.97)	
	19 (25.33)	34 (10.88)	
Ratnagiri (Rural)			
40 (22.63)	42 (17.22)	33 (13.24)	39 (14.56)
91 (22.11)	50 (12.33)	30 (12.36)	34 (6.71)
80 (11.88)	60 (14.71)	35 (3.76)	37 (12.79)
60 (10.47)	68 (13.14)		32 (4.72)
64 (6.68)	62 (17.12)		20 (4.20)
19 (5.92)	83 (10.31)		

contd.....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Nasik (Rural)							
40	(49.17)	73	(33.21)	39	(17.65)	35	(27.95)
42	(16.53)	42	(23.47)	24	(8.77)	37	(21.00)
80	(26.21)	83	(18.15)	28	(8.48)	36	(16.49)
66	(15.11)	60	(14.60)	31	(6.53)	39	(14.07)
93	(7.98)	82	(11.39)	26	(4.68)	23	(16.97)
60	(13.90)	40	(11.20)	37	(4.60)		
Dhule (Rural)							
60	(11.36)	40	(15.09)	39	(13.44)	39	(18.31)
80	(32.89)	67	(12.09)	38	(10.70)	37	(17.34)
69	(8.28)	70	(10.87)	22	(6.76)	31	(24.71)
93	(7.65)	74	(10.76)	20	(6.26)	23	(10.54)
75	(7.12)	56	(10.32)			28	(11.61)
90	(5.27)						
Jalgaon (Rural)							
40	(52.67)	40	(15.37)	29	(26.46)	28	(26.27)
80	(34.91)	42	(15.26)	39	(18.04)	37	(25.99)
67	(37.32)	91	(14.07)	31	(13.74)	36	(21.48)
60	(25.13)	82	(11.51)	38	(5.25)	39	(14.73)
92	(8.15)	66	(8.31)			31	(16.75)
93	(7.65)	95	(8.30)			20	(13.17)
Ahamadabad (Rural)							
40	(51.00)	82	(34.37)	28	(22.99)	36	(25.51)
42	(38.65)	73	(20.77)	33	(17.65)	39	(12.37)
80	(29.21)	80	(14.52)	31	(10.35)	28	(8.43)
82	(14.78)	61	(14.50)	23	(8.35)	30	(8.08)
92	(10.13)	66	(12.12)	32	(4.45)	20	(5.85)
75	(9.57)	40	(11.53)				

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Pune (Rural)							
74	(97.89)	41	(21.13)	37	(22.26)	33	(26.44)
82	(45.49)	90	(18.34)	28	(17.24)	37	(21.68)
60	(28.69)	82	(18.33)	36	(17.31)	35	(15.92)
40	(28.64)	62	(16.13)	34	(11.82)	39	(10.31)
81	(20.11)	64	(15.43)	38	(10.48)	28	(7.22)
42	(13.38)	73	(12.16)	39	(10.02)	23	(6.88)
80	(10.20)			35	(9.64)		
Satara (Rural)							
80	(27.70)	81	(21.01)	32	(22.61)	37	(22.48)
81	(14.13)	50	(16.24)	39	(11.95)	39	(21.00)
40	(12.75)	40	(12.56)	28	(4.65)	30	(19.89)
60	(12.25)	68	(12.17)	35	(3.20)	31	(16.55)
91	(10.06)	42	(13.37)			22	(8.92)
42	(15.02)	93	(9.97)				
70	(9.67)	94	(9.94)				
Sangli (Rural)							
80	(25.98)	50	(17.65)	33	(27.29)	30	(16.74)
60	(19.54)	93	(12.18)	22	(14.59)	39	(15.90)
91	(23.31)	99	(11.70)	35	(9.17)	37	(15.61)
42	(18.02)	92	(11.63)	28	(9.15)	28	(10.03)
40	(16.60)	83	(11.03)	30	(17.46)	20	(6.15)
92	(5.86)	40	(10.45)	20	(8.23)		
Solapur (Rural)							
74	(42.69)	63	(14.87)	22	(26.48)	31	(15.79)
82	(42.28)	62	(14.73)	33	(8.36)	39	(14.13)
40	(29.48)	71	(13.24)	37	(9.90)	30	(18.37)
91	(20.89)	64	(29.63)	26	(7.79)	35	(16.63)
80	(18.34)	40	(11.66)	34	(7.15)	22	(7.97)
60	(16.84)	67	(11.55)				
		50	(11.27)				

Non-Agricultural Group		Manufacturing Groups					
1961-71	1971-81	1961-71	1971-81	1961-71	1971-81		
Kolhapur (Rural)							
92	(35.71)	50	(11.17)	39	(12.37)	39	(19.97)
40	(14.58)	62	(15.90)	28	(10.03)	22	(8.69)
42	(11.64)	68	(16.44)	33	(9.71)	20	(6.99)
80	(28.16)	64	(11.92)	31	(6.52)	36	(6.39)
70	(7.91)	75	(11.55)	20	(6.24)	37	(6.09)
53	(6.09)	94	(10.78)	35	(5.45)		
		61	(13.67)				
Aurangabad (Rural)							
69	(103.60)	64	(24.71)	35	(52.94)	28	(61.41)
40	(65.59)	82	(20.31)	39	(14.00)	30	(33.44)
60	(38.73)	40	(20.02)	30	(7.18)	23	(29.12)
99	(29.93)	67	(14.02)	34	(4.83)	31	(26.87)
83	(17.46)	91	(10.24)			35	(24.67)
37	(12.75)	70	(10.03)			36	(19.12)
						20	(10.57)
Parbani (Rural)							
42	(61.85)	82	(21.99)	39	(49.39)	35	(30.93)
69	(31.23)	67	(18.92)	20	(4.91)	23	(20.81)
80	(67.61)	64	(14.58)	26	(4.10)	32	(9.82)
60	(34.67)	40	(14.65)			39	(8.67)
40	(17.05)	70	(11.88)			28	(7.70)
83	(17.46)	50	(9.84)				
Bid (Rural)							
40	(78.04)	40	(23.02)	35	(36.53)	20	(17.30)
69	(55.58)	82	(23.46)	39	(9.34)	39	(17.25)
80	(16.05)	67	(15.83)	26	(3.72)	23	(11.25)
83	(11.30)	50	(16.06)			32	(4.77)
99	(10.05)	70	(12.13)			26	(4.44)
60	(15.93)	95	(11.28)				

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Nanded (Rural)			
69 (68.67)	82 (30.68)	28 (9.60)	23 (18.06)
40 (42.58)	42 (15.93)	38 (8.84)	28 (21.31)
83 (25.89)	70 (13.21)	20 (5.33)	39 (12.33)
92 (18.99)	67 (11.43)	26 (3.13)	22 (11.42)
67 (18.28)	40 (10.68)		20 (10.37)
60 (21.75)	83 (10.03)		
	95 (9.77)		
Osmanabad (Rural)			
40 (60.01)	83 (30.57)	28 (9.60)	35 (23.47)
69 (53.62)	82 (29.14)	35 (7.18)	23 (17.78)
60 (23.89)	40 (21.89)	39 (7.02)	39 (17.76)
80 (14.38)	91 (14.73)		20 (10.21)
99 (14.45)	70 (10.74)		28 (9.45)
66 (14.20)	67 (10.67)		
	62 (10.44)		
Buldana (Rural)			
42 (35.06)	40 (21.64)	35 (22.77)	23 (8.88)
64 (25.89)	82 (19.22)	39 (16.19)	39 (8.41)
40 (18.68)	67 (17.62)	24 (10.46)	20 (6.99)
80 (16.98)	70 (10.23)	28 (8.84)	35 (5.97)
42 (35.06)	95 (16.26)	38 (8.60)	34 (5.46)
60 (11.99)			
Akola (Rural)			
60 (14.80)	42 (24.25)	35 (30.20)	31 (38.94)
80 (14.71)	67 (17.00)	28 (20.81)	23 (16.85)
69 (13.39)	83 (16.74)	30 (17.46)	39 (9.95)
66 (9.96)	82 (14.92)	39 (16.54)	32 (9.58)
82 (8.31)	74 (17.92)	38 (4.87)	35 (9.28)
92 (6.30)	95 (12.03)		

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Amravati (Rural)							
82	(24.96)	40	(12.92)	27	(50.56)	39	(20.40)
69	(24.68)	75	(12.51)	37	(39.11)	31	(17.92)
60	(19.52)	82	(10.78)	35	(36.25)	23	(12.41)
40	(16.07)	67	(10.15)	39	(12.33)	20	(4.29)
80	(12.09)	91	(9.88)	28	(13.69)		
67	(11.36)			24	(11.07)		
				22	(10.76)		
Yavatmal (Rural)							
40	(20.08)	82	(20.34)	35	(24.78)	39	(15.69)
60	(16.57)	99	(20.30)	39	(14.82)	20	(8.25)
80	(10.17)	42	(18.69)	32	(2.92)	23	(13.83)
69	(9.76)	40	(11.25)			26	(4.11)
92	(7.44)	67	(11.25)				
93	(8.55)	50	(11.49)				
Wardha (Rural)							
60	(23.63)	82	(37.64)	39	(12.23)	35	(28.90)
42	(15.67)	40	(30.49)	26	(2.66)	39	(17.37)
67	(10.25)	99	(17.84)	32	(2.50)	32	(7.94)
69	(8.47)	51	(17.46)			37	(8.31)
74	(25.89)	70	(10.90)			20	(4.54)
91	(14.13)	80	(10.66)				
80	(7.83)	67	(10.38)				
		75	(10.20)				
Nagpur (Rural)							
81	(29.57)	82	(22.88)	39	(34.49)	37	(24.57)
19	(24.23)	64	(21.88)	35	(39.26)	25	(26.51)
69	(16.02)	50	(19.12)	30	(31.39)	30	(19.92)
83	(19.04)	41	(12.57)	28	(14.19)	24	(13.93)
90	(8.27)	80	(9.29)	33	(7.34)	32	(10.38)
50	(7.53)					35	(12.69)

Non-Agricultural Group		Manufacturing Groups			
1961-71	1971-81	1961-71	1971-81		
Bhandara (Rural)					
40 (18.23)	82 (36.92)	28 (10.86)	33 (37.76)		
69 (12.31)	19 (20.37)	30 (3.63)	35 (32.91)		
50 (9.97)	62 (16.68)	22 (2.10)	30 (19.82)		
92 (9.45)	83 (20.77)		39 (21.72)		
93 (7.57)	50 (8.99)		37 (15.97)		
75 (7.71)	60 (8.79)				
	81 (8.20)				
Chandrapur (Rural)					
50 (10.88)	82 (19.82)	35 (31.83)	33 (34.80)		
19 (10.29)	40 (11.64)	31 (22.31)	39 (16.23)		
69 (8.86)	75 (10.89)	28 (20.69)	20 (7.36)		
92 (8.44)	70 (10.22)	26 (47.25)	32 (6.56)		
91 (7.73)	51 (10.44)				
	50 (10.15)				

Appendix Table 4.3 (B)

Important Non-Agricultural Groups (two-digit) that Show High Employment Growth in Districts During 1961-71, 1971-81

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Ganganagar (Rural)			
40 (26.33)	62 (19.82)	35 (17.46)	39 (26.23)
69 (11.08)	42 (17.98)	39 (5.11)	35 (13.98)
75 (15.12)	91 (13.51)	28 (7.18)	26 (12.33)
93 (6.29)	96 (12)		20 (11.27)
67 (6.25)	94 (11.92)		23 (6.28)
	67 (11.81)		
	51 (11.61)		
Bikaner (Rural)			
42 (56.48)	75 (21.03)	25 (7.18)	39 (50.57)
69 (37.22)	65 (16.04)	31 (2.26)	24 (22.93)
40 (29.07)	60 (15.79)		25 (22.32)
50 (18.94)	42 (15.48)		20 (19.83)
80 (34.93)	91 (14.11)		34 (17.92)
68 (11.29)	90 (13.57)		32 (14.49)
93 (7.38)	80 (14.87)		29 (15.56)
	67 (17.77)		26 (10.85)
Churu (Rural)			
69 (19.34)	82 (27.66)	37 (25.89)	39 (25.35)
64 (17.46)	40 (20.44)	33 (19.62)	22 (23.42)
68 (14.96)	80 (24.08)	38 (8.32)	23 (17.83)
75 (16.09)	60 (17.81)		20 (17.59)
83 (12.79)	94 (19.79)		27 (12.04)
90 (9.51)	64 (16.49)		26 (9.81)
92 (8.11)	62 (16.23)		
	65 (15.37)		

contd....

Non-Agricultural Group		Manufacturing Groups			
1961-71	1971-81	1961-71	1971-81	1961-71	1971-81
Jhunjhunun (Rural)					
90 (18.32)	80 (43.29)	35 (14.13)	39 (44.59)		
67 (13.41)	19 (23.39)	34 (13.44)	33 (44.79)		
42 (52.94)	75 (20.88)	38 (4.8)	28 (19.22)		
70 (8.57)	65 (17.05)	27 (3.58)	20 (16.31)		
80 (6.92)	70 (11.31)		24 (15.43)		
	93 (12.39)		26 (10.59)		
	42 (19.71)				
Alwar (Rural)					
42 (54.99)	65 (13.43)	35 (47.88)	24 (22.4)		
75 (24.67)	83 (12.58)	38 (10.44)	31 (20.77)		
90 (10.94)	67 (12.56)	31 (12.79)	39 (22.36)		
67 (10.33)	80 (10.49)	34 (6.61)	33 (31.1)		
92 (8.44)	42 (9.97)	22 (9.6)	23 (8.73)		
68 (8.02)	93 (9.1)				
70 (6.99)					
Bharatpur (Rural)					
94 (36.97)	42 (37.06)	39 (31.71)	37 (40.39)		
69 (20.94)	83 (21.09)	28 (25.89)	33 (26.63)		
42 (17.46)	80 (15.94)	25 (17.46)	39 (23.33)		
67 (9.64)	95 (14.49)	38 (14.26)	26 (10.28)		
70 (8.07)	67 (12.5)	31 (24.7)	20 (9.04)		
90 (7.77)	19 (13.05)	22 (7.18)			
	51 (23.11)				
Sawai Madhopur (Rural)					
75 (17.16)	40 (30.85)	24 (37.97)	39 (30.85)		
19 (13.88)	64 (21.71)	35 (20.89)	30 (23.42)		
92 (6.48)	82 (17.77)	33 (18.12)	26 (8.25)		
64 (5.84)	80 (16.67)	28 (17.46)	28 (16.67)		
67 (5.82)	67 (15.09)	31 (12.79)	20 (7.15)		
93 (5.56)	75 (11.22)				

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Jaipur (Rural)							
69	(27.82)	81	(32.75)	30	(47.88)	35	(31.43)
67	(18.44)	42	(20.82)	31	(11.47)	39	(31.19)
75	(16.43)	61	(17.22)	26	(4.4)	33	(28.9)
70	(11.96)	82	(16.58)			24	(27.42)
94	(6.66)	67	(12.64)			28	(21.46)
		83	(11.86)			30	(20.88)
		75	(11.28)				
Sikar (Rural)							
69	(38.84)	42	(43.57)	22	(73.69)	39	(36.67)
80	(11.61)	67	(17.85)	33	(27.02)	30	(25.77)
75	(11.09)	82	(17.74)	35	(17.46)	35	(20.21)
68	(9.77)	60	(15.89)	30	(12.79)	36	(20.21)
90	(7.64)	65	(11.05)	38	(3.76)	20	(16.44)
		75	(10.28)			26	(11.84)
Ajmer (Rural)							
42	(50.6)	40	(36.44)	28	(13.93)	24	(22.68)
82	(39.52)	42	(13.29)	18	(7.18)	39	(17.9)
69	(37.62)	83	(13.35)	26	(6.34)	23	(10.9)
80	(17.46)	75	(7.75)	39	(4.4)	31	(9.6)
40	(17.46)	65	(7.47)			25	(8.69)
75	(7.67)	64	(7.18)				
90	(7.55)						
Tonk (Rural)							
82	(50.6)	40	(33.88)	35	(17.46)	39	(30.26)
75	(27.63)	67	(20.27)	34	(6.28)	24	(25.77)
69	(36.01)	64	(14.73)	26	(3.33)	26	(14.83)
80	(18.22)	69	(14.07)			29	(8.6)
60	(21.86)	70	(12.4)			38	(5.67)
93	(7.84)	92	(9.48)			20	(5.4)
90	(7.67)	50	(8.95)				

contd.....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Jaisalmer (Rural)			
42 (34.93)	50 (13.03)	23 (111.9)	32 (10.24)
68 (25.89)	69 (12.59)	38 (13.5)	26 (9.06)
70 (22.32)	75 (9.67)		27 (6.14)
50 (19.25)	94 (16.74)		
96 (16.35)	67 (9.6)		
19 (13.24)	92 (9.45)		
82 (9.64)	95 (8.2)		
Jodhpur (Rural)			
42 (38.87)	40 (22.24)	35 (9.6)	39 (30.98)
60 (38.87)	50 (19.91)	34 (6.46)	35 (30.01)
75 (20.89)	80 (15.29)	20 (2.55)	28 (19.62)
83 (20.89)	65 (10.87)		24 (20.71)
69 (13.48)	96 (10.7)		23 (12.43)
40 (16.35)	42 (16.61)		26 (11.25)
68 (9.96)	19 (20.57)		20 (10.09)
			25 (11.61)
Nagaur (Rural)			
69 (18.05)	40 (27.77)	35 (36.35)	29 (69.74)
83 (31.1)	42 (22.03)	34 (36.32)	39 (26.5)
90 (10)	67 (18.93)	23 (10.17)	31 (17.66)
92 (10.71)	69 (10.6)	27 (8.06)	20 (15.19)
75 (12.33)	83 (10.71)	22 (6.36)	24 (12.14)
	50 (9.4)		
Pali (Rural)			
42 (19.88)	40 (20.63)	34 (26.87)	22 (24.57)
69 (10.73)	19 (10.78)	24 (20.89)	39 (23.06)
93 (6.18)	50 (9.4)	31 (6.97)	28 (16.74)
80 (5.14)	96 (5.65)	30 (6.27)	24 (12.68)

contd.....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Barmer (Rural)							
69	(17.67)	40	(23.91)	38	(10.78)	39	(30.96)
94	(16.45)	50	(13.38)	26	(4.49)	25	(66.23)
93	(12.4)	93	(8.11)	27	(5.69)	26	(13.43)
99	(12.37)	60	(10.03)	34	(3.15)	32	(11.33)
75	(19.72)	65	(6)			20	(16.14)
92	(10.64)	92	(5.97)			23	(8.35)
Jalor (Rural)							
68	(25.8)	40	(36.83)	27	(8.19)	39	(29.92)
67	(17.7)	61	(31.19)	34	(7.97)	20	(14.76)
83	(17.46)	60	(17.09)	26	(7.48)	30	(18.37)
75	(21.26)	19	(21.48)	38	(6.2)	27	(4.64)
93	(11.59)	42	(10.17)				
19	(11.17)	70	(6.52)				
60	(12.39)						
Sirohi (Rural)							
80	(29.57)	40	(34.27)	34	(16.2)	39	(27.23)
40	(25.89)	67	(29.94)	39	(11.9)	32	(10.24)
82	(23.97)	19	(15.81)	20	(2.75)	30	(9.15)
60	(14.42)	65	(15.33)			26	(7.16)
75	(9.28)	80	(11.2)				
92	(6.74)	60	(11.35)				
69	(6.49)	93	(10.74)				
Bhilwara (Rural)							
60	(19.04)	40	(35.26)	33	(24.31)	39	(28.38)
67	(17.89)	82	(29.14)	28	(12.79)	30	(24.43)
93	(8.3)	42	(13.04)	22	(4.82)	33	(12.1)
75	(9.32)	64	(12.33)	38	(4.13)	26	(12.02)
96	(5.55)	80	(19.42)			20	(5.17)
92	(4.66)	19	(12.06)				
70	(4.47)	63	(11.61)				
		60	(10.65)				

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Udaipur (Rural)			
42 (37.97)	64 (22.64)	34 (80.57)	39 (22.87)
40 (30.43)	82 (18.51)	35 (38.41)	24 (26.87)
69 (17.14)	19 (12.32)	30 (33.83)	30 (17.55)
60 (14.75)	67 (12.02)	37 (15.2)	31 (9.5)
75 (10.83)	63 (11.23)	28 (13.11)	
96 (8.02)	40 (15.17)	31 (10.25)	
		39 (9.83)	
Chittoor (Rural)			
96 (12.2)	80 (19.47)	34 (31.73)	30 (44.69)
69 (9.55)	50 (17.32)	39 (8.36)	39 (17.05)
67 (8.23)	42 (16.84)	20 (8.03)	32 (11.07)
75 (8.2)	67 (15.41)	38 (4.68)	26 (6)
90 (7.92)	70 (15.12)		34 (4.51)
60 (7.79)	69 (15.39)		
	75 (11)		
	64 (10.44)		
	60 (11.72)		
	19 (8.85)		
Dungarpur (Rural)			
60 (34.93)	40 (37.47)	22 (27.16)	39 (36.89)
40 (25.89)	19 (35.61)	39 (12.79)	28 (10.44)
70 (12.35)	67 (26.27)	38 (8.26)	26 (9.34)
75 (12.29)	80 (22.68)	28 (17.46)	23 (9.87)
93 (15.71)	65 (17.35)	29 (4.11)	34 (8.08)
19 (9.6)	50 (13.26)		27 (6.06)
92 (7.7)	42 (17.8)		
	75 (11.72)		

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Banaswara (Rural)			
70 (22.44)	50 (51.82)	34 (60.63)	39 (21.08)
60 (25.89)	67 (21.99)	36 (34.93)	23 (19.88)
95 (18.34)	75 (19.82)	39 (13.35)	20 (10.31)
65 (13.69)	80 (17.41)	20 (8.72)	32 (6.6)
94 (10.18)	93 (12.89)	38 (5.82)	27 (6.53)
69 (10.69)	42 (15.29)		
90 (9.12)	19 (13.77)		
Bundi (Rural)			
82 (30.4)	67 (20.02)	34 (42.47)	39 (28.26)
71 (12.79)	19 (17.16)	22 (19.62)	20 (12.38)
19 (14.91)	65 (15.26)	38 (13.01)	26 (8.02)
65 (10.75)	40 (19.01)	24 (12.79)	32 (6.61)
75 (14.72)	69 (13.93)	39 (27.5)	34 (5.12)
50 (9.47)	80 (12.47)		
Kota (Rural)			
69 (26.39)	62 (33.51)	26 (47.05)	39 (17.4)
82 (21.6)	67 (14.24)	34 (28.27)	35 (16.49)
67 (15.67)	69 (11.66)	37 (54.99)	20 (15.61)
60 (16.09)	42 (10.94)	35 (12.79)	32 (14.3)
65 (13.07)	19 (8.7)	22 (7.12)	24 (6.91)
75 (13.29)	75 (6.43)	39 (5.96)	
Jhalawar (Rural)			
75 (11.85)	62 (23.42)	34 (26.51)	39 (14.51)
67 (8.43)	19 (18.43)	28 (9.6)	23 (10.52)
60 (8.06)	96 (5.22)	39 (6.95)	22 (5.45)
65 (6.25)		23 (5.27)	20 (5)
83 (6.66)		25 (5.24)	34 (4.71)
80 (5.24)			

Appendix Table 4.3 (C)

Important Non-Agricultural Groups (two-digit) that Show High Employment Growth in Districts During 1961-71, 1971-81

Non-Agricultural Group		Manufacturing Groups					
1961-71	1971-81	1961-71	1971-81	1961-71	1971-81		
Sambalpur (Rural)							
74	(40.51)	68	(18.56)	28	(66.86)	30	(11.98)
60	(21.10)	66	(14.19)	24	(38.06)	22	(6.92)
50	(13.60)	74	(9.30)	31	(20.89)	31	(6.91)
70	(17.75)	83	(8.81)			26	(5.25)
94	(9.81)	67	(8.83)				
Sundergarh (Rural)							
12	(28.72)	68	(29.24)	28	(42.69)	31	(27.20)
19	(15.90)	50	(11.99)	31	(36.53)	30	(21.99)
96	(12.00)	69	(16.80)	33	(22.05)	27	(5.37)
70	(11.78)	42	(8.57)	22	(12.49)	23	(5.30)
94	(10.36)	93	(9.74)	32	(9.36)	32	(5.09)
93	(10.24)	51	(7.31)				
92	(9.84)						
Keonjhar (Rural)							
67	(17.60)	50	(25.61)	33	(12.07)	26	(10.35)
75	(16.00)	93	(11.42)	22	(2.88)	31	(9.49)
68	(12.53)	68	(10.03)			27	(4.85)
96	(10.52)	99	(12.73)			20	(4.84)
12	(9.67)	92	(7.12)				
Mayurbhanj (Rural)							
96	(11.88)	68	(14.16)	26	(11.45)	26	(23.56)
93	(7.47)	50	(13.25)			28	(14.58)
92	(6.85)	92	(4.54)			32	(4.43)
94	(4.81)	90	(2.98)			27	(4.12)
90	(4.26)	65	(5.34)				
70	(4.01)						

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Balasore (Rural)							
68	(39.69)	68	(19.39)	29	(16.98)	26	(11.57)
93	(11.98)	67	(10.45)	34	(9.53)	28	(12.22)
50	(11.46)	50	(9.60)			31	(23.49)
92	(6.11)	65	(7.09)			33	(19.25)
		93	(5.94)			35	(18.48)
Cuttack (Rural)							
80	(31.82)	81	(26.02)	28	(24.46)	36	(12.45)
40	(18.59)	92	(15.21)	26	(3.68)	22	(10.76)
68	(14.12)	50	(9.97)	22	(2.18)	31	(8.60)
82	(11.85)	80	(9.85)			23	(7.65)
75	(9.23)	93	(8.06)			26	(7.27)
95	(9.01)	74	(6.98)				
93	(7.06)	90	(6.43)				
70	(4.94)	68	(6.31)				
Dhenkanal (Rural)							
80	(72.99)	50	(13.78)	28	(14.87)	31	(40.72)
75	(29.21)	67	(13.77)	26	(11.81)	28	(21.17)
70	(26.53)	99	(6.67)	29	(10.45)	26	(11.97)
50	(13.37)	92	(6.04)	22	(15.91)	27	(5.00)
93	(8.36)	69	(5.83)			38	(4.43)
Phulbani (Rural)							
80	(19.00)	50	(13.52)	24	(31.10)	28	(27.61)
75	(17.16)	92	(11.40)	31	(17.46)	26	(10.91)
68	(16.45)	67	(4.00)	29	(9.60)	27	(5.60)
90	(8.71)						
70	(7.99)						
93	(7.92)						

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Bolangir (Rural)							
70	(12.19)	12	(14.87)	28	(36.53)	26	(5.76)
40	(28.73)	19	(9.21)	31	(23.97)	34	(4.13)
67	(28.30)	51	(6.13)	22	(10.28)	39	(10.14)
60	(26.76)	69	(8.33)	26	(3.98)		
75	(25.16)	65	(5.08)				
83	(34.93)	93	(4.59)				
92	(11.61)						
Kalahandi (Rural)							
80	(41.70)	50	(25.91)	26	(13.40)	39	(17.90)
75	(25.54)	69	(17.12)	31	(25.89)	28	(10.84)
67	(17.87)	40	(25.99)	28	(21.73)	26	(7.45)
93	(10.52)	93	(7.20)			27	(5.61)
92	(10.50)	94	(7.13)			32	(5.11)
96	(6.92)	90	(7.03)			20	(5.08)
50	(6.26)						
Koraput (Rural)							
40	(41.23)	68	(30.43)	28	(42.14)	36	(17.22)
12	(25.89)	40	(7.87)	22	(11.01)	26	(6.26)
19	(29.12)	93	(7.58)			27	(4.27)
82	(40.43)	92	(7.24)			32	(4.62)
90	(15.81)	50	(7.00)				
75	(10.93)	75	(9.14)				
70	(8.90)	67	(6.58)				
Ganjam (Rural)							
60	(63.70)	19	(20.85)	30	(12.79)	28	(19.91)
42	(29.97)	51	(31.70)	31	(9.61)	39	(8.58)
69	(16.23)	93	(10.60)			30	(17.46)
80	(13.83)	80	(9.14)			37	(17.17)
90	(10.83)	83	(7.44)				
70	(4.39)						

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Puri (Rural)							
80	(45.61)	19	(29.01)	25	(38.34)	28	(7.86)
40	(19.19)	81	(15.15)	35	(18.59)	26	(6.10)
82	(14.42)	40	(10.78)	29	(4.49)	30	(11.61)
75	(11.34)	66	(8.41)				
69	(7.70)	68	(8.26)				
92	(5.85)	80	(6.19)				

Appendix Table 4.4 (A)

Important Non-Agricultural Groups (two-digit) that Show High Employment Growth in Districts During 1961-71, 1971-81

Non-Agricultural Group		Manufacturing Groups					
1961-71	1971-81	1961-71	1971-81				
Greater Bombay (Urban)							
67	(12.13)	11	(63.71)	35	(22.35)	39	(36.07)
82	(11.08)	99	(11.38)	30	(9.56)	38	(5.67)
80	(9.04)	75	(23.74)	36	(6.80)	26	(4.53)
72	(7.49)	12	(8.20)	33	(4.86)	27	(3.88)
74	(6.70)	91	(6.86)	34	(4.26)		
Thane (Urban)							
91	(22.78)	72	(17.56)	30	(19.94)	39	(13.37)
71	(18.99)	99	(17.34)	36	(19.32)	34	(9.15)
80	(12.04)	64	(16.35)	38	(15.35)	23	(8.61)
41	(7.39)	74	(16.26)	33	(12.94)	20	(7.33)
92	(7.37)	73	(14.14)	31	(8.49)	26	(6.70)
		19	(13.29)				
		60	(14.71)				
		75	(12.61)				
Rajgarh (Urban)							
74	(36.83)	64	(23.84)	37	(55.47)	36	(12.39)
40	(21.83)	41	(23.57)	39	(29.97)	35	(11.78)
19	(16.19)	63	(23.16)	28	(23.62)	37	(11.90)
80	(15.02)	73	(13.67)	24	(17.46)	23	(10.19)
42	(12.95)	99	(12.21)	33	(20.78)	30	(9.76)
67	(9.12)	62	(14.16)	31	(21.74)	39	(9.75)
				34	(11.08)	31	(9.52)
				30	(10.48)		

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Ratnagiri (Urban)			
40 (31.95)	64 (21.20)	30 (17.46)	35 (25.00)
42 (20.61)	99 (18.77)	35 (9.60)	33 (11.61)
67 (14.68)	62 (10.44)		31 (8.59)
74 (17.46)	94 (9.70)		31 (5.76)
12 (9.93)	68 (7.60)		30 (5.76)
80 (7.18)	80 (7.22)		27 (4.32)
Nasik (Urban)			
40 (12.75)	74 (21.72)	34 (21.07)	30 (34.64)
80 (9.26)	73 (20.84)	37 (13.91)	36 (36.59)
42 (9.50)	64 (12.45)	39 (7.77)	35 (23.57)
60 (7.75)	61 (19.91)	35 (4.24)	31 (15.67)
75 (7.26)	42 (22.80)		33 (15.26)
	40 (11.74)		29 (10.80)
	99 (14.49)		
Dhule (Urban)			
91 (24.78)	73 (22.16)	25 (28.73)	36 (35.46)
74 (20.58)	63 (21.99)	30 (15.13)	30 (12.18)
80 (12.66)	64 (13.26)	39 (10.91)	33 (11.86)
68 (11.43)	40 (11.06)	35 (10.63)	31 (8.32)
93 (7.93)	81 (9.08)	28 (4.19)	39 (6.89)
40 (7.74)	68 (8.44)		
Jalgaon (Urban)			
91 (31.94)	41 (22.16)	37 (26.73)	36 (30.57)
42 (11.01)	61 (22.40)	31 (24.96)	30 (11.98)
80 (10.05)	73 (13.02)	29 (16.93)	24 (9.15)
40 (9.96)	42 (12.64)	30 (11.39)	39 (7.18)
75 (9.50)	92 (11.32)	39 (11.17)	35 (6.55)
	62 (2.38)		

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Ahmadnagar (Urban)							
80	(10.69)	74	(24.10)	35	(8.88)	36	(51.71)
40	(10.00)	41	(21.48)	28	(7.01)	37	(35.63)
68	(9.94)	62	(17.54)	34	(5.70)	30	(26.14)
42	(8.67)	81	(11.28)			35	(18.08)
91	(11.04)	68	(16.81)			31	(11.32)
19	(7.38)	61	(10.31)			39	(9.13)
Pune (Urban)							
82	(13.95)	99	(18.10)	24	(24.92)	37	(16.57)
42	(9.70)	41	(13.33)	35	(19.13)	35	(8.16)
80	(9.27)	73	(12.20)	36	(18.20)	24	(7.52)
19	(8.53)	74	(12.05)	37	(14.59)	36	(7.53)
40	(8.01)	80	(9.03)	30	(11.02)	34	(6.86)
Satara (Urban)							
42	(26.51)	63	(24.85)	30	(13.87)	37	(26.58)
80	(12.16)	62	(22.80)	39	(13.51)	30	(9.56)
50	(11.57)	64	(18.10)	28	(4.11)	28	(8.38)
40	(10.40)	41	(14.87)	34	(4.08)	22	(8.02)
91	(10.02)	74	(13.67)			31	(7.24)
		61	(13.51)				
		42	(11.47)				
		19	(15.61)				
Sangli (Urban)							
74	(15.34)	62	(25.43)	37	(33.14)	33	(19.43)
80	(10.50)	63	(22.80)	34	(14.23)	36	(19.30)
75	(9.31)	73	(21.13)	35	(14.09)	24	(16.98)
92	(9.09)	99	(20.09)	28	(9.64)	35	(13.24)
40	(7.38)	81	(10.47)	20	(7.58)	30	(12.68)
		64	(16.25)			25	(11.42)
		42	(10.16)				

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Solapur (Urban)			
91 (25.93)	62 (12.55)	26 (83.80)	24 (26.22)
82 (16.70)	61 (10.03)	28 (50.30)	36 (23.62)
40 (12.32)	19 (9.96)	35 (3.68)	34 (20.78)
74 (11.71)	63 (9.90)		25 (14.87)
68 (8.76)	40 (8.40)		35 (11.31)
			30 (12.59)
Kolhapur (Urban)			
19 (18.39)	62 (39.58)	37 (43.68)	30 (12.77)
80 (12.44)	73 (26.75)	30 (14.75)	24 (12.30)
91 (8.54)	72 (17.46)	39 (11.50)	29 (12.22)
68 (8.11)	63 (15.01)	28 (7.74)	37 (18.38)
38 (7.34)	61 (14.65)		36 (15.69)
50	64 (11.69)		
Aurangabad (Urban)			
91 (66.63)	61 (23.42)	30 (17.46)	36 (42.61)
68 (18.36)	19 (22.67)	37 (10.65)	37 (38.62)
80 (13.46)	81 (14.82)	28 (10.70)	33 (38.46)
74 (31.10)	34 (13.30)	39 (8.42)	35 (33.04)
40 (9.60)	72 (12.16)	35 (6.85)	31 (29.74)
50 (8.60)	42 (11.40)		30 (21.54)
82 (8.48)	40 (11.25)		23 (17.04)
	62 (10.95)		
Parbani (Urban)			
40 (19.42)	42 (31.95)	37 (12.61)	33 (20.02)
19 (11.61)	63 (26.14)	34 (10.62)	32 (13.73)
82 (11.21)	64 (15.68)	39 (18.62)	22 (13.51)
80 (10.20)	40 (10.75)	30 (9.60)	28 (11.42)
60 (9.65)	68 (10.18)		29 (9.34)
92 (6.37)	96 (9.04)		

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Bid (Urban)							
40	(28.36)	19	(27.56)	29	(29.63)	36	(32.28)
80	(14.85)	40	(16.00)	39	(12.76)	35	(27.94)
82	(14.19)	95	(20.77)	32	(6.11)	23	(12.00)
68	(12.73)	68	(11.07)	34	(5.79)	39	(9.63)
92	(9.47)	50	(10.77)	27	(3.24)	38	(6.69)
93	(8.17)	96	(9.58)			28	(6.26)
		75	(9.26)				
Nanded (Urban)							
42	(21.35)	61	(16.23)	28	(70.28)	32	(13.80)
67	(20.67)	83	(10.84)	31	(9.28)	39	(10.77)
80	(16.03)	40	(9.69)	34	(6.22)	22	(13.64)
40	(13.84)	81	(9.60)	20	(5.66)	28	(8.65)
50	(11.03)	68	(8.22)	24	(3.85)	26	(6.80)
70	(6.91)	92	(6.56)			20	(5.51)
92	(6.28)	42	(6.42)				
93	(6.10)						
Osmanabad (Urban)							
91	(19.48)	95	(19.08)	25	(17.46)	32	(15.92)
82	(17.81)	81	(13.98)	35	(17.46)	30	(9.74)
40	(12.28)	42	(15.72)	39	(13.18)	19	(9.25)
80	(13.17)	61	(12.68)	31	(5.24)	20	(6.86)
92	(7.97)	83	(12.51)	28	(5.12)	28	(6.71)
93	(7.63)	40	(12.11)			23	(5.88)
Buldana (Urban)							
74	(27.10)	68	(10.67)	39	(13.36)	35	(9.53)
82	(9.19)	40	(10.73)	25	(11.07)	38	(6.92)
42	(9.15)	42	(10.44)	31	(4.70)	39	(7.35)
40	(8.93)	64	(9.81)	28	(3.21)	20	(4.90)
80	(8.41)	95	(7.77)			26	(4.50)

contd.....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Akola (Urban)							
80	(14.53)	74	(18.48)	37	(40.17)	31	(8.52)
74	(12.79)	42	(13.12)	31	(15.47)	32	(7.81)
67	(12.48)	63	(8.01)	35	(7.62)	38	(5.95)
95	(5.07)	68	(7.94)	39	(6.91)	39	(4.63)
92	(4.96)	40	(7.50)			36	(4.48)
82	(4.22)	71	(7.18)				
amravati (Urban)							
91	(30.39)	61	(20.95)	37	(23.06)	33	(25.89)
74	(28.73)	42	(10.03)	39	(7.48)	39	(7.56)
42	(30.55)	83	(7.63)	31	(5.61)	24	(7.18)
67	(7.54)	40	(7.64)	25	(3.72)	20	(5.67)
40	(7.42)	63	(11.98)			31	(4.84)
68	(5.92)	94	(9.23)				
92	(4.15)						
Yavatmal (Urban)							
40	(17.97)	61	(19.62)	39	(7.93)	33	(11.98)
19	(16.41)	74	(11.33)	31	(4.67)	99	(9.34)
67	(7.73)	51	(8.11)	34	(4.26)	32	(8.65)
74	(11.07)	95	(7.21)			29	(5.87)
80	(6.78)	40	(6.81)			26	(4.90)
70	(5.07)	68	(6.78)				
Wardha (Urban)							
74	(81.60)	61	(9.15)	39	(9.07)	39	(8.60)
42	(13.35)	68	(8.54)	28	(2.19)	32	(8.15)
91	(31.36)	83	(8.14)			36	(8.53)
50	(9.38)	40	(8.83)			34	(4.48)
40	(8.91)	42	(7.63)			26	(4.20)
92	(6.24)						

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Nagpur (Urban)			
41 (13.30)	61 (15.75)	39 (7.81)	36 (13.03)
99 (11.30)	73 (31.01)	25 (5.24)	30 (16.09)
82 (13.19)	71 (14.87)	34 (5.47)	33 (15.05)
80 (9.45)	98 (11.61)	20 (3.06)	29 (13.00)
67 (9.28)	40 (12.15)		38 (7.99)
74 (9.11)			
92 (6.52)			
Bhandara (Urban)			
19 (11.07)	42 (9.81)	25 (25.89)	30 (18.80)
67 (9.82)	90 (7.65)	34 (23.64)	25 (15.15)
40 (9.16)	61 (7.44)	24 (17.46)	39 (7.81)
80 (7.66)	40 (6.34)		35 (6.37)
90 (7.47)	81 (5.84)		20 (6.35)
92 (7.16)	60 (5.36)		
Chandrapur (Urban)			
62 (20.86)	93 (23.54)	28 (8.74)	33 (50.65)
74 (12.27)	61 (21.04)	22 (6.58)	36 (21.13)
90 (11.45)	40 (15.73)	31 (6.33)	31 (10.98)
40 (10.54)	81 (8.59)	30 (4.56)	37 (10.84)
19 (14.25)	63 (8.20)	20 (4.50)	38 (10.61)
67 (70.95)		34 (4.50)	39 (9.50)

Appendix Table 4.4 (B)

Important Non-Agricultural Groups (two-digit) that Show High Employment Growth in Districts During 1961-71, 1971-81

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Ganganagar (Urban)			
74 (39.29)	64 (49.45)	24 (31.10)	36 (27.77)
67 (36.84)	91 (30.66)	30 (13.14)	37 (17.14)
82 (18.49)	62 (22.85)	31 (10.31)	33 (15.29)
19 (13.35)	63 (22.48)	39 (17.12)	34 (15.17)
91 (17.46)	92 (14.59)	35 (9.21)	39 (12.19)
92 (12.04)	61 (22.87)		32 (9.42)
96 (9.43)	95 (13.24)		27 (9.30)
	80 (10.59)		
	99 (10.11)		
	19 (19.62)		
Bikaner (Urban)			
91 (52.94)	64 (56.04)	39 (16.15)	30 (16.32)
69 (9.74)	99 (22.85)	33 (8.22)	31 (19.10)
67 (6.54)	62 (20.14)	34 (6.98)	36 (10.03)
68 (6.32)	61 (15.25)	25 (8.31)	20 (9.73)
90 (5.41)	94 (10.61)		39 (10.86)
	40 (9.58)		
	66 (8.77)		
Churu (Urban)			
82 (44.52)	42 (16.65)	30 (31.81)	39 (14.80)
67 (32.84)	94 (13.59)	39 (29.07)	31 (13.60)
74 (25.89)	40 (11.93)	24 (15.67)	33 (11.31)
69 (11.36)	61 (11.61)	35 (6.66)	28 (9.10)
42 (11.52)	50 (9.27)	34 (4.94)	27 (8.10)
70 (5.96)	81 (8.20)		32 (7.99)
	66 (7.38)		25 (7.44)

Contd...

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Jhunjhunun (Urban)							
66	(28.60)	12	(26.77)	35	(34.93)	33	(46.79)
82	(25.89)	91	(14.25)	24	(31.10)	36	(16.49)
42	(31.10)	50	(10.94)	28	(12.79)	39	(15.05)
60	(11.10)	64	(19.22)	39	(11.07)	30	(10.31)
74	(10.76)	42	(10.36)	34	(9.53)	23	(10.50)
		60	(9.02)	22	(8.81)	31	(7.60)
Jaipur (Urban)							
82	(15.30)	61	(30.52)	24	(19.41)	30	(15.11)
80	(12.83)	73	(39.84)	25	(16.00)	39	(13.64)
91	(8.84)	91	(28.09)	30	(8.61)	31	(12.91)
67	(8.77)	83	(10.95)	39	(8.99)	26	(12.59)
69	(8.31)	94	(10.29)			34	(9.92)
92	(6.21)	80	(8.74)			23	(7.06)
95	(7.78)	42	(8.36)			36	(7.03)
81	(6.09)						
Sikar (Urban)							
40	(11.35)	40	(15.99)	39	(32.55)	28	(38.62)
42	(11.42)	80	(15.85)	30	(15.90)	33	(21.13)
69	(10.96)	99	(12.61)	35	(7.62)	39	(12.71)
82	(6.37)	81	(10.58)			31	(16.49)
75	(4.52)	42	(11.12)			26	(9.68)
95	(4.80)	64	(9.15)			30	(8.75)
		50	(8.21)				
Alwar (Urban)							
80	(38.34)	19	(15.87)	25	(37.69)	37	(47.40)
74	(17.46)	60	(13.97)	30	(25.89)	24	(34.02)
82	(17.15)	51	(10.69)	39	(23.96)	33	(27.46)
75	(6.81)	95	(11.99)	24	(19.62)	36	(24.57)
95	(6.40)	94	(10.26)	38	(4.67)	32	(19.85)

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Alwar (Urban)			
67 (8.98)	40 (14.18)		30 (17.81)
	96 (8.54)		34 (15.78)
	67 (8.31)		28 (13.87)
	64 (19.22)		
Bharatpur (Urban)			
42 (17.46)	19 (34.93)	25 (25.80)	33 (31.62)
82 (28.62)	64 (43.41)	30 (23.62)	36 (26.14)
75 (10.38)	74 (17.30)	35 (14.13)	37 (19.57)
80 (10.12)	83 (10.69)	39 (14.19)	39 (16.19)
67 (8.93)	94 (18.66)	38 (6.47)	30 (9.15)
92 (5.65)	42 (13.56)	20 (6.09)	26 (8.67)
	40 (9.43)		
Sawai Madhopur (Urban)			
82 (42.56)	91 (21.87)	30 (22.32)	33 (29.73)
75 (20.89)	81 (23.42)	24 (17.46)	24 (15.15)
67 (6.80)	51 (21.06)	31 (10.89)	39 (12.17)
75 (5.56)	42 (15.97)	35 (16.44)	30 (9.45)
90 (5.15)	64 (11.61)		34 (5.21)
65 (6.15)	40 (10.84)		
	19 (13.54)		
Ajmer (Urban)			
42 (27.54)	63 (26.87)	25 (24.57)	36 (35.15)
80 (9.15)	74 (22.48)	35 (10.76)	35 (15.67)
81 (7.40)	62 (22.03)	39 (10.76)	30 (13.48)
90 (4.92)	51 (20.02)	32 (9.19)	39 (12.71)
69 (4.56)	64 (16.96)	38 (5.92)	31 (11.54)
19 (19.85)	73 (15.15)		26 (9.87)
	50 (8.64)		23 (8.32)

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Tonk (Urban)			
40 (12.39)	64 (19.51)	28 (16.35)	36 (13.98)
83 (8.43)	40 (14.95)	22 (15.70)	26 (13.96)
42 (8.07)	19 (13.38)	26 (15.20)	35 (12.33)
75 (6.49)	42 (15.21)	29 (5.69)	22 (8.26)
93 (5.58)	69 (12.85)	35 (5.24)	39 (9.10)
	94 (12.54)		37 (8.20)
	62 (9.74)		
	83 (9.19)		
Jaisalmer (Urban)			
42 (34.93)	40 (36.47)	24 (17.46)	38 (12.79)
69 (18.22)	42 (22.88)	20 (8.45)	26 (13.80)
90 (12.67)	75 (19.49)	27 (9.89)	20 (11.23)
94 (7.70)	83 (18.51)		32 (10.20)
67 (10.48)	92 (12.20)		
70 (6.06)	60 (11.61)		
	96 (11.61)		
	80 (14.28)		
	65 (11.04)		
Jodhpur (Urban)			
82 (12.90)	91 (27.28)	25 (24.57)	37 (43.63)
80 (10.29)	51 (22.04)	24 (21.52)	36 (19.94)
75 (10.90)	42 (17.27)	32 (11.57)	33 (15.80)
42 (10.42)	64 (17.46)	38 (6.94)	31 (15.60)
67 (7.11)	83 (12.02)	34 (6.08)	30 (16.35)
74 (12.79)	94 (11.46)	35 (12.79)	39 (12.59)
72 (9.49)	81 (11.12)		20 (10.34)
96 (6.22)	40 (14.02)		

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Nagaur (Urban)			
82 (18.20)	51 (25.12)	30 (25.89)	29 (30.89)
74 (17.46)	42 (22.27)	33 (19.44)	30 (14.22)
75 (10.72)	61 (21.13)	39 (28.46)	39 (13.56)
67 (31.20)	94 (13.39)	24 (9.15)	34 (8.63)
90 (8.21)	64 (12.86)	34 (6.74)	24 (8.48)
95 (7.27)	83 (12.53)		
	50 (9.40)		
	81 (9.45)		
Pali (Urban)			
82 (34.45)	67 (73.88)	30 (44.61)	31 (39.09)
42 (24.80)	42 (19.98)	33 (16.44)	39 (19.48)
40 (23.11)	51 (17.46)	35 (14.87)	36 (16.48)
75 (10.58)	81 (16.61)	38 (7.20)	22 (15.79)
93 (8.82)	50 (16.24)		34 (12.31)
92 (7.34)	63 (14.87)		24 (22.05)
90 (6.33)	94 (14.00)		30 (11.17)
19 (17.39)			
Barmer (Urban)			
67 (14.61)	40 (22.80)	39 (56.83)	25 (22.16)
82 (14.53)	51 (26.14)	30 (25.89)	23 (19.64)
75 (10.70)	63 (23.42)	31 (7.18)	30 (16.49)
90 (10.63)	83 (12.46)		34 (14.95)
95 (7.18)	93 (10.63)		31 (14.58)
92 (6.26)	94 (10.84)		27 (11.82)
	19 (26.17)		
Jalor (Urban)			
42 (27.85)	61 (37.52)	32 (3.82)	20 (20.86)
82 (20.45)	19 (32.67)	27 (3.98)	33 (15.43)
94 (15.57)	40 (24.29)	26 (2.90)	26 (12.44)

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Jalor (Urban)			
80 (11.94)	42 (18.24)		27 (12.40)
75 (10.48)	62 (17.92)		32 (10.56)
93 (7.80)	65 (10.84)		39 (16.27)
	82 (10.93)		38 (11.31)
	66 (11.05)		
	50 (12.41)		
Sirohi (Urban)			
82 (35.66)	40 (14.45)	39 (23.29)	37 (27.33)
69 (6.40)	51 (22.48)	33 (20.11)	30 (19.62)
40 (4.86)	42 (12.79)	31 (16.09)	32 (12.23)
93 (4.09)	94 (12.96)	30 (11.07)	20 (10.65)
95 (5.69)	67 (9.47)	28 (8.31)	28 (13.67)
		35 (9.60)	39 (9.08)
Bhilwara (Urban)			
82 (41.53)	62 (32.60)	30 (16.79)	24 (64.21)
75 (29.89)	63 (20.40)	23 (15.47)	30 (14.58)
94 (20.96)	80 (15.18)	39 (15.11)	39 (11.94)
90 (15.00)	12 (14.87)	31 (33.76)	26 (9.12)
95 (10.06)	61 (10.44)	26 (7.22)	28 (6.94)
66 (15.43)	40 (16.59)	27 (6.06)	33 (6.05)
92 (8.55)	96 (10.32)		
67 (31.10)	19 (9.26)		
Udaipur (Urban)			
82 (16.58)	61 (20.02)	25 (17.46)	30 (36.84)
67 (12.14)	74 (19.62)	35 (15.90)	33 (29.34)
69 (5.72)	19 (17.34)	39 (9.64)	31 (15.06)
75 (7.08)	42 (12.51)	32 (7.32)	36 (18.07)
96 (4.92)	81 (12.01)	38 (6.49)	24 (27.77)
	64 (12.13)	34 (5.45)	39 (9.67)
	50 (10.42)		26 (8.39)

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Chittorgarh (Urban)			
82 (25.07)	40 (35.53)	39 (21.16)	30 (24.67)
67 (16.72)	42 (20.16)	31 (14.13)	22 (18.27)
75 (12.26)	51 (27.25)	27 (6.90)	32 (9.48)
96 (8.92)	39 (11.97)	22 (5.73)	36 (6.63)
69 (7.80)	70 (9.51)		20 (20.61)
92 (6.51)	63 (9.75)		39 (7.97)
42 (6.05)			
Dungarpur (Urban)			
95 (12.79)	42 (22.80)	39 (29.65)	31 (20.40)
93 (8.01)	40 (19.01)	38 (7.62)	29 (8.43)
67 (9.34)	91 (23.11)	23 (6.25)	39 (6.42)
75 (9.15)	70 (9.79)	35 (5.24)	38 (5.05)
70 (7.45)	94 (9.30)	29 (3.44)	20 (8.61)
80 (6.88)	60 (19.92)		
19 (14.98)	67 (9.3)		
	82 (19.62)		
Balsawar (Urban)			
82 (15.13)	40 (32.69)	39 (15.41)	23 (17.73)
42 (18.34)	19 (25.89)	36 (12.79)	30 (13.24)
83 (11.90)	91 (14.87)	32 (12.79)	33 (13.35)
75 (7.78)	70 (12.79)	24 (8.31)	39 (11.55)
80 (5.04)	93 (12.53)	29 (6.1)	38 (11.54)
70 (4.60)	80 (10.17)		20 (9.72)
	66 (9.41)		26 (8.44)
Bundi (Urban)			
82 (44.61)	19 (31.67)	30 (34.93)	39 (13.39)
83 (27.10)	91 (23.79)	24 (22.32)	37 (12.33)
42 (12.79)	94 (15.6)	31 (17.46)	30 (8.69)
60 (7.77)	42 (14.61)	39 (11.04)	31 (7.18)

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
BUndi (Urban)							
93	(5.67)	75	(15.22)	20	(8.47)	35	(7.18)
66	(6.54)	80	(9.11)	28	(5.97)	26	(5.09)
KOta (Urban)							
82	(25.99)	51	(35.56)	24	(43.91)	37	(21.79)
75	(11.33)	19	(24.13)	31	(42.28)	36	(18.06)
69	(10.76)	71	(20.02)	26	(39.03)	39	(17.07)
40	(10.39)	74	(19.62)	35	(16.78)	23	(15.95)
67	(5.50)	42	(16.37)	39	(16.2)	26	(13.41)
65	(5.15)	81	(12.27)	33	(12.84)	30	(13.05)
93	(4.00)	91	(20.27)	38	(9.28)	34	(9.04)
		40	(10.64)	22	(5.2)	20	(8.89)
Jhalawar (Urban)							
82	(30.04)	62	(20.02)	39	(32.98)	30	(20.02)
67	(11.61)	40	(19.56)	30	(22.32)	22	(19.01)
42	(11.30)	94	(15.73)	23	(18.49)	36	(13.23)
75	(11.55)	91	(15.43)	32	(5.03)	33	(10.03)
80	(6.49)	60	(14.83)	25	(9.6)	39	(9.12)
65	(5.05)	42	(12.53)			28	(8.67)

Appendix Table 4.4 (C)

Important Non-Agricultural Groups (two-digit) that Show High Employment Growth in Districts During 1961-71, 1971-81

Non-Agricultural Group		Manufacturing Groups			
1961-71	1971-81	1961-71	1971-81		
91 (32.75)	50 (11.53)	26 (15.09)	31	(10.33)	
74 (31.10)	95 (9.01)	27 (14.73)	23	(11.13)	
93 (10.30)	80 (7.77)	23 (13.37)	22	(11.08)	
65 (8.30)	90 (7.05)	33 (12.6)	32	(9.49)	
70 (8.28)	92 (6.19)	20-21	(11.71)	34	
(8.18)					
Sambalpur (Urban)					
12 (62.00)	50 (25.68)	31 (16.25)	23	(39.27)	
92 (20.09)	64 (15.63)	22 (3.36)	38	(15.48)	
42 (18.18)	67 (8.5)		31	(11.97)	
90 (17.99)	68 (5.79)		27	(9.47)	
94 (12.50)	19 (47.46)		26	(8.99)	
99 (12.79)					
Sundargarh (Urban)					
69 (19.13)	67 (29.61)	33 (24.7)	20	(14.82)	
75 (18.14)	50 (22.03)	26 (12.93)	26	(10.58)	
67 (16.35)	68 (10.99)		32	(6.63)	
94 (15.62)	12 (9.25)		33	(5.95)	
93 (15.04)	92 (8.19)				
65 (13.75)					
12 (12.80)					
19 (12.11)					

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Keonjhar (Urban)							
93	(11.27)	65	(10.79)	32	(2.95)	20	(16.04)
92	(10.24)	68	(10.59)	26	(2.73)	28	(14.28)
70	(7.80)	92	(8.84)			26	(10.95)
94	(5.69)	90	(8.15)			27	(10.13)
		99	(7.83)				
		96	(7.03)				
Mayurbhanj (Urban)							
67	(20.28)	50	(17.02)	27	(22.1)	23	(14.36)
92	(8.80)	67	(9.79)			26	(5.89)
70	(8.45)	90	(6.97)			27	(4.54)
93	(4.51)	93	(6.37)				
		68	(6.34)				
Balasore (Urban)							
69	(21.36)	50	(11.22)	28	(9.54)	31	(9.01)
67	(20.10)	81	(10.13)	26	(6.05)	20	(6.84)
82	(18.52)	90	(8.39)	27	(5.4)	26	(6.44)
66	(16.69)	80	(8.73)			34	(4.97)
70	(11.74)	67	(7.97)				
95	(11.02)	99	(6.43)				
40	(9.49)						
92	(9.42)						
Cuttack (Urban)							
93	(9.64)	50	(42.81)	30	(9.6)	20	(9.30)
92	(7.53)	99	(18.65)	26	(3.58)	27	(8.43)
70	(7.42)	93	(9.79)			23	(5.76)
67	(5.67)	67	(9.34)				
65	(4.24)	90	(7.72)				
		65	(7.17)				

contd....

Non-Agricultural Group		Manufacturing Groups	
1961-71	1971-81	1961-71	1971-81
Dhenkanal (Urban)			
70 (18.37)	92 (12.65)	32 (25.89)	27 (14.81)
93 (17.46)	68 (11.81)	34 (17.46)	20 (10.54)
92 (13.76)	69 (11.15)	27 (5.81)	
90 (13.45)	50 (8.38)		
50 (13.37)	65 (7.68)		
96 (10.43)	12 (4.81)		
65 (9.07)			
Phulbani (Urban)			
92 (32.95)	65 (5.84)	38 (18.39)	32 (12.41)
93 (29.61)	92 (5.84)	34 (15.34)	22 (10.40)
94 (12.10)	93 (5.51)	26 (10.5)	26 (9.61)
96 (7.48)	90 (5.28)	32 (7.55)	23 (7.05)
95 (5.57)		22 (6.3)	
Bolangir (Urban)			
67 (15.67)	50 (12.68)	20 (11.24)	34 (8.48)
92 (15.61)	69 (6.38)	34 (8.49)	27 (4.36)
70 (14.39)	90 (4.58)	32 (5.06)	
93 (12.44)		26 (4.49)	
94 (10.44)			
96 (8.23)			
Kalahandi (Urban)			
70 (13.98)	50 (17.69)	38 (5.65)	23 (15.06)
93 (13.18)	19 (12.67)	26 (4.17)	32 (13.77)
75 (9.90)	67 (10.31)		26 (5.48)
92 (9.77)	99 (11.83)		27 (4.06)
67 (7.90)	90 (8.01)		20 (6.06)
	62 (7.08)		

contd....

Non-Agricultural Group		Manufacturing Groups					
1961-71		1971-81		1961-71		1971-81	
Koraput (Urban)							
67	(21.42)	19	(15.48)	38	(3.84)	32	(12.45)
80	(11.44)	91	(11.77)	34	(3.79)	39	(8.97)
70	(7.28)	50	(8.43)	26	(3.51)	26	(5.49)
92	(6.63)	80	(5.96)			20	(5.30)
93	(6.48)	65	(4.9)				
65	(5.74)						
Ganjam (Urban)							
80	(32.52)	80	(14.38)	28	(16.65)	38	(34.95)
69	(18.98)	81	(14.32)	31	(12.99)	29	(9.15)
95	(17.46)	50	(12.21)	26	(11.22)	23	(9.13)
68	(17.15)	68	(10.26)			27	(9.02)
93	(12.00)	95	(9.25)			26	(8.26)
66	(10.24)	92	(7.98)				
96	(9.39)						
75	(9.07)						