

MIGRATION AND ELECTORAL PARTICIPATION IN INDIA

Mary F. Katzenstein

MIGRATION AND DEVELOPMENT STUDY GROUP

Center for International Studies
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

MIGRATION AND DEVELOPMENT STUDY GROUP

Jagdish M. Bhagwati

Nazli Choucri

Wayne A. Cornelius

John R. Harris

Michael J. Piore

Rosemarie S. Rogers

Myron Weiner

MIGRATION AND ELECTORAL PARTICIPATION IN INDIA

Mary F. Katzenstein

Department of Government Cornell University

Migration and Development Study Group

Center for International Studies Massachusetts Institute of Technology Cambridge, Massachusetts 02139

PREFACE

Nearly one out of every 13 Indians is a migrant living in a city or town. In absolute numbers the figures are even more striking: of India's 109 million urban residents, 43 million (about 40%) are migrants. Twenty-nine million of the migrants come from the same state, 11 million from other states, and three million from Pakistan, Bangladesh, and other countries.

In the past decade (1961-1971) India's urban areas gained 30 million residents, slightly under 20 million through natural population increase and more than ten million through migration (35%). India's high rate of natural population growth (24.7% in the decade) thus tends to disguise the magnitude of her cityward migration.

These 40 million migrants have had an enormous impact on India's towns and cities. They have played a major role in their industrial development, provided a large part of the manpower for constructing houses and factories, and provided much of the urban services, from plying rickshaws and taxis to working as household servants for the middle classes. At the same time they have also added to the burden on urban services, on schools and hospitals, electricity and water supply, transportation and housing.

In the course of her statistical analysis of electoral turnout in India's largest cities (those exceeding 100,000) for the 1962 state assembly elections Professor Katzenstein discovered that a single attempt

to correlate electoral turnout with the proportion of migrants in different cities revealed nothing of significance. This led her to disaggregate types of migration and to single out for analysis five characteristics of migrants, an exercise that proved to be remarkably fruitful. The result, therefore, is a study that is as useful for its careful specification of hypotheses relating different types of migrant characteristics to electoral behavior as it is for its specific findings.

Professor Katzenstein shows that the length of urban residence of migrants, the level of development of the region from which they came, and their commitment to urban life are important determinants of electoral participation. Rural origin and distance, even when it involves interstate migration, proved to be less important than one might have expected. With respect to each of these relationships, Professor Katzenstein not only reports her statistical findings but suggests why these relationships (or in some instances, the absence of a relationship) are theoretically plausible. The data reported here suggests that rather than play a major role in urban electoral politics, migrants tend to have a low rate of electoral assimilation, though for reasons suggested by Professor Katzenstein, some migrants have assimilated electorally more rapidly than others.

Professor Katzenstein's data suggests that while there is a large short-term migrant population in India's cities, there are also many long-term migrants who are, in effect, committed urban residents.

"Committed residents -- often whole families rather than single males -- are more likely to participate electorally than other migrants and native-born residents; I would surmise that they are also likely to engage

in other forms of political participation as well.

Electoral political participation is, of course, only one of several forms of political participation. While migrants may not play a particularly significant role in the electoral politics of Indian cities it does not mean that they do not make demands and exercise influence in other ways. Many migrants are trade union members. Their concerns with job security, especially for migrant workers who take lengthy leaves, with wages and benefits, and with finding jobs for their relatives and friends who come to the city in search of employment are often expressed through their unions. A great deal of demand making also takes place at the level of migrant interaction with state and local bureaucrats -- officials who have the authority to benefit (or deprive) migrants who seek electricity and water for their community, medical assistance, school admissions, shop permits, protection against evictions, etc. With the suspension of the electoral system since Prime Minister Gandhi declared a national emergency in June 1975 these forms of participation in a bureaucratic context are likely to assume greater importance, not only for migrants, but for other Indians who have demands to make upon the political system.

This study is suggestive of some of the research needs in the neglected field of migrant political behavior, a subject likely to grow in importance for India since the proportion of urban growth due to migration will increase as the rate of natural population growth declines, while the absolute number of migrants to cities continues to increase with the country's industrial growth.

Myron Weiner

TABLE OF CONTENTS

		Page
Preface	by Myron Weiner	i
List of	Tables	vii
List of	Figures	vii
	INTRODUCTION	1
	BACKGROUND: MIGRATION PATTERNS IN INDIA	7
	ELECTORAL ANALYSIS	17
	CONCLUSION	34
	APPENDIX	37

LIST OF TABLES

Table		Page
1	Ranking of States According to Migrant Percentage in City Population	9
2	Sex Ratios of Urban-Bound Migrants	12
3	The Migrant Population in Indian Cities	13
4	Net Immigration of Indian States as Percentage of State Population	14
5	The Effect of Duration of Residence on Turnout	20
6	The Effect of Migrant Commitment on Turnout	23
7	The Effect of Distance of Move on Electoral Turnout	26
8	Fragmentation: The Effect of Urban/Rural Origin of Migrants on Turnout	29

LIST OF FIGURES

Figure		Page
1	Dominant Patterns of Inter-State Migration in India, 1951-1961	15
2	Migration from Out-of-State and Turnout in West Bengal	32

MIGRATION AND ELECTORAL PARTICIPATION IN INDIA

INTRODUCTION*

Until recently, much of the literature on migration and politics focused on the alleged inclination among migrants toward extremist and violent political activity. This early debate about migrant political violence revolved around a large number of Italian, Indian, French, Latin American, and North American studies. At first, the mostly discursive discussions of this problem depicted the migration experience as anomic and destabilizing. The presumed break in traditional ties rendered the migrant available for political organizing by radical or extremist leaders. In a comprehensive piece published in 1969 Joan Nelson brought together material from several continents claiming that the image of the violent-prone migrant was misguided. In her criticism she charged that the studies failed "to distinguish important differences within the large and heterogeneous population groups with which they are concerned."

The controversy surrounding these discussions has been partly responsible for directing more recent research away from the broader concept of migrant toward a differentiation among sub-types of migration. That others have reached conclusions similar to Joan Nelson's is evidenced by several

^{*}I am indebted to Priscilla Battis, John O. Field, Peter J. Katzenstein, and Myron Weiner for their assistance and comments on earlier drafts. Responsibility for the remaining errors is, of course, my own.

This debate is summarized in Joan Nelson's <u>Migrants</u>, <u>Urban Poverty</u>, and <u>Instability in Developing Nations</u>, Occasional Papers in International Affairs (Cambridge, Mass.: Center for International Affairs, Harvard University, Publication November 22, 1969).

²<u>Ibid.</u>, p. 68.

studies. Increasingly writing on migration begins by differentiating between kinds of migration -- temporary vs. permanent, voluntary vs. forced -- with the objective of establishing a clearer relationship between the migration process and politics.

If the impact of migration on political activity is to be fully understood, the many different kinds of migration processes must be specified.

The purpose, then, of the present study is to identify those aspects of the migration process relevant to one facet of political behavior in particular, electoral participation.

In this study of migrant electoral behavior the inadequacy of the single denotation of "migrant" can be quickly demonstrated. Using data from 1961 and 1962 we attempted to estimate through regression analysis the effect of migration on turnout in India's urban areas. No relationship was found, suggesting one of three conclusions: (1) the absence of any link between migration and turnout, (2) the existence of a relationship which had "washed out" at the all-India level of aggregation, (3) the possibility that a general migration measure enveloped disparate kinds of migratory phenomena whose impact on politics was thus obscured. As will be demonstrated in later sections of this report, the third conclusion proved correct: as the migration variable was broken down to its component parts, the results became significant.

³See for instance Shahid Javid Burki, "Social Groups and Development: A Case Study of Pakistan" (Cambridge, Mass.: Center for International Affairs, Harvard University, 1971). Burki suggests that the record of violence in migrant rural towns may be explained by the presence of former "landlords" forced off their small holdings. See also, the differentiation between the political behavior of migrants and refugees made by Myron Weiner, "Urbanization and Political Protest," Civilisations, 1967 (Vol. 17, No. 2), and Joan Nelson in her recent (unpublished) writings on "Sojourners" and "New Urbanites."

The establishment of a link between certain kinds of migration and turnout raises a critical question. Is the effect of different types of migration on turnout caused by factors inherent in the migration process itself or by forces independent of the actual experience of moving? Do such migration-related factors as the distance traveled by the migrant explain the effect of migrations on turnout or do other factors unrelated to migration, such as the character of the migrant's origins, provide a better explanation of migrant voting?

There are a number of migrant-related factors which studies have cited as affecting migrant political behavior. In the following analysis we will focus on three: (1) the amount of time that the migrant has spent in his urban destination, (2) the distance which the migrant traveled from his native home, and (3) the nature of the "commitment" which a migrant makes to his new destination.

The longer the amount of time which a migrant spends in his new community, the more likely, it could be reasoned, is his political involvement.

As one American study suggests: "People who first come into a community are likely to have fewer associational ties, less information on community affairs, fewer political contacts, and fewer emotional and material stakes in the group tensions that express themselves in politics."

The distance of move is sometimes also thought to affect the migrant's political involvement. The further the <u>geographical</u> distance separating the migrant's roots and new destination, the less he might know, or care, about the politics of his new home. Similarly, the greater the <u>cultural</u>

⁴Robert Lane, Political Life (Glencoe, Ill.: The Free Press, 1961), p. 267.

distance separating the migrant's origins and destination, the less familiar the migrant would probably be with the names, issues, or organizations which draw him into politics.

The "commitment" which underlies the migrant's move to his urban destination might also be hypothesized as affecting his future political involvement. As Joan Nelson has speculated, the less committed migrants, those in the city for some temporary purpose and "even those who plan to stay until they retire are likely to be uninterested in urban issues and candidates and (to the extent that they are politicized at all) will focus their attention on home-place issues and candidates." The pertinence of these migration-related factors — length of stay, distance of move, and commitment — to the voting levels of urban localities will be one focus of the present study.

In another part of the study we propose to determine to what extent the relation between certain kinds of migration and turnout can be explained by factors unrelated to the process of moving. Here, we will focus particularly on the notion of fragmentation. Drawing on Louis Hartz' concept of fragment societies, ⁶ Allan Goodman has suggested that political behavior of migrants may be determined by the cultural "baggage" which migrants bring with them in their move to the city. ⁷ Two variants of the fragment thesis suggest themselves. The first parallels Weiner and Field's discussion of

⁵See Joan Nelson, "Sojourners vs. New Urbanites" (unpublished manuscript, draft version, March 1972), p. 66. This particular hypothesis is based largely on data from the African experience.

⁶The concept of a fragment society describes the transmission of ideological and cultural values from old to new societies.

Allan E. Goodman, "The Political Implications of Urban Development in Southeast Asia: The 'Fragment' Hypothesis," <u>Economic Development and Cultural Change</u>, October 1961 (Vol. 20, No. 1), pp. 117-130.

the "attributional model" of urban politics and suggests that if a single generic and uniform type of urban politics exists, the political behavior of the migrant who comes from an urban locality would not be to any great degree different from that of the locally born urban population. If, on the other hand, the "contextual" model holds and the politics of the urban area bears greater resemblance to the politics of its rural environment, the migrant's political behavior in his new urban locale will reflect the particular norms of the region from which he comes.

A second variant of the fragment thesis proposes that the key attribute of the migrant's native locality which might impinge on his later political activity is not its urban-rural character but its level of political modernization. Migrants from politically more active regions might be expected to involve themselves more after the move than migrants from communities or regions where politicization is low. These arguments concerning the level of urbanization or modernization of the migrant's place of origin emphasize the presumed role of "fragmentation" in conditioning political behavior.

In the study which follows, then, we shall consider the place which both migration-related and non-migration-related factors occupy in an explanation of urban electoral patterns. The factors to be considered can be summarized as follows:

- (1) Migration-Related Explanations
 - a. Length of stay
 - b. Distance of move; culturally and geographically
 - c. Commitment to urban destination

⁸The terms "attributional" and "contextual" are fully explained in the study by Myron Weiner and John O. Field, "India's Urban Constituencies," in Myron Weiner and John O. Field (ed.), Electoral Politics in the Indian States: The Impact of Modernization (Delhi: Manohar Book Service, 1976, forthcoming).

- (2) Non-Migration-Related Explanations: The Fragment Thesis
 - a. The urban/rural character of the migrant's place of origin
 - b. The level of modernization of the migrant's place of origin.

BACKGROUND: MIGRATION PATTERNS IN INDIA

The political relevance of cityward migration necessarily depends on the type and magnitude of population movement. It is thus appropriate to sketch some aspects of Indian migration. What proportion of migrants in India move to cities? Who are the urban-bound migrants? Where do they come from? How long do they stay?

of the Indian-born population in the country's 98 largest urban communities, an average of 39.1% are migrant. Migrants to these largest of India's urban communities represent less than 10% of the entire migrant population in India. This low figure is explained in part by the fact that slightly over 75% of all migration in India is rural-bound. Close to half (47.8%) of all migrants in India are women moving within the same district where they were born — probably for marriage. While the size of the migrant population in these 98 cities is not large relative to the numbers of migrants nationally, they nevertheless comprise over 11.5 million people and typically constitute well over one-third of the city population where they are located. In a country where slightly under 25% of all migrants are city-bound, the 11.5 million migrants living in the 98 large cities under study are of no small interest.

The urban communities in question are those with populations of 100,000 or more based on the 1961 census. For a list of these cities see the Appendix. The figure of 39.1% is an unweighted average, i.e., the difference in population size of the cities is not taken into account.

¹⁰The figures for the 98 cities are based on the calculations from Table D-V, Vol. I, Part II-C (iii) Migration Tables, Census of India. Except where indicated, the calculations for national migration figures are drawn from the same census volume, Tables D-II and D-III.

8

LEVEL OF MIGRATION

While an average 39.1% of the population in large cities is migrant, 11 there is considerable variation from city to city. To some extent the migrant proportion seems to vary with the size of the city. 12 The largest of the 98 cities (with populations over one million) have migrant populations 4-5% higher, on the average, than the smaller cities of over 100,000. The proportion of migrants in the city population ranges from more than 60% in Vijayawada (Andhra Pradesh), Bombay and Thana (Maharashtra), and Bally (West Bengal) to under 25% in cities of Rajasthan and Uttar Pradesh. 13

STATE OF ORIGIN

The largest group of migrants, as might be expected, comes from within the state. The mean percent of in-state migrants is 28.6% and ranges from 8.9% in Kolar Gold Fields (Mysore) to 58% in Vijayawada (Andhra Pradesh). The states with cities having very high in-state migrant populations are the Punjab, Andhra, Assam, and Maharashtra.

Of the in-state migrant population, 13.1% on the average comes from within the district where the city itself is located. Again, there is considerable variation with 34.2% being intra-district migrants in Guntur (Andhra) and 34.1% in Tuticorin (Kerala) to under 9% in several Uttar Pradesh cities.

The proportion of migrants from beyond the state living in the 98

It is very important to note that this figure is an underestimate of the migration levels. It is an underestimate because the Table D-V from which it was drawn was based only in the Indian-born population and, in addition, did not include those migrants for whom information on length of stay in the city and place of birth was unknown.

¹²See P.B. Desai, <u>Size and Sex Composition of Population in India, 1901-61</u> (New York: Asia Publishing House, 1969), p. 174.

 $^{^{13}}$ See the Appendix for the percentage migrant in each city.

cities averages 10.8%. Because state boundaries normally coincide with linguistic and cultural divisions, this 10.8% can be interpreted as representing an intercultural migration. The range extends from a low of slightly over 1% in several Andhra cities to a high of 33.7% for Bombay. The states with cities having large out-of-state populations are Haryana and Assam (only one city each), West Bengal, Maharashtra, and Mysore. The following table ranks the states according to the percentage of out-of-state and in-state migrants in their large cities.

Table 1

RANKING OF STATES ACCORDING TO MIGRANT PERCENTAGE IN CITY POPULATION^a

	Migrants Fro		Migrants From Outside State			
High	Andhra	38.6	Haryana	24.5		
	Maharashtra	34.6	West Bengal	23.1		
	Punjab	34.3	Madhya Pradesh	20.1		
	Assam	34.1	Assam	19.3		
	Madras	31.0	Maharashtra	13.3		
	Bihar	30.4	Mysore	12.8		
	Orissa	29.7	Bihar	9.0		
	Gujarat	29.6	Punjab	8.2		
	Haryana	26.5	Rajasthan	7.8		
	Kerala	26.1	Guja rat	7.8		
Low	Uttar Pradesh	24.4	Uttar Pradesh	6.5		
	Madhya Pradesh	23.7	Orissa	5.9		
	Rajasthan	23.0	Madras	4.9		
	West Bengal	23.0	Kerala	3.5		
	Mysore	22.3	Andhra	3.4		

 $^{^{\}rm a}$ It is important to remember that these rankings are computed from figures on migrants.

RURAL/URBAN ORIGIN

On the average, 25% of a city's population comes from rural areas, while only 14.1% of the population migrates from other urban areas, the remainder being native to the city in question. The proportion of urban-born among migrants from other states is higher than for in-state migrants -- urban-born migrants being two-fifths of all out-of-state migrants while urban-born in-state migrants are only slightly over one-third of all in-state movers.

The population in the 98 cities shows a surprisingly high percentage of migrants recently arrived in the city. On the average, about one-tenth of the population resided in the urban locality for less than three years. As the proportion of migrants in the population is slightly over 30%, the percentage of recent arrivals reaching the city within the last three years comes to more than one-third of the total migrant population. In some cities, such as Vijayawada (Andhra Pradesh), Bhopal (Madhya Pradesh), Ambala (Haryana), and Thana (Maharashtra), these recent migrants form over 20% of the city's population. A higher proportion of out-of-state than of in-state migrants consists of recent arrivals. Over 50% of all out-of-state migrants and 40% of all in-state migrants arrived within the last three years. Even so this high out-of-state figure is probably not as much a result of large numbers arriving recently to the cities from other states as it is a result of return migration diminishing the ranks of older migrants.

SEX COMPOSITION

Males substantially exceed females in the migrant population. In the cities under review males average 54.7% of the migrant population. This means that male migrants on the average comprise 21.4% of the cities' population

while female migrants are 17.7%. These figures also vary considerably from state to state. In the southern states of Mysore, Andhra Pradesh, and Tamil Nadu, female <u>in-state</u> migrants actually exceed male migrants from within the state. In all of the remaining states, male migrants from within the state exceed female in-state migrants. In Assam, female migrants from within the state are only 33% of all in-state migrants. There is no state, on the other hand, where female migrants born out-of-state exceed their male counterparts. Assam ranks as the state which has the highest percentage of male relative to female out-of-state migrants, while Uttar Pradesh is the state where male and female proportions among the out-of-state migrant population is closest.

The sex ratio of migrants born in India who have moved to rural areas is 3072 females for every 1000 males as against the comparable figure for urban migration of 901. The sex ratio among migrants further suggests that family migrations (with husband and wife moving together) are most common among migrants from the same district, slightly less common among migrants from elsewhere in the state, and much less common among out-of-state migrants. Family migrations, however, are not simply a function of distance. As shown in Table 2, the evenly balanced sex ratio of migrants from other urban areas suggests that migrants moving between cities are more apt to travel as families than are migrants from rural areas.

¹⁴Calculations were not done for Kerala because the state did not hold assembly elections in 1962.

 $^{^{15}}$ Desai, op. cit., p. 171. These figures pertain to all communities identified as urban by the 1961 census.

Table 2
SEX RATIOS OF URBAN-BOUND MIGRANTS

	Number Number	of Females Per 1,000	Males
	Rural Origin	Urban Origin	Total
Same District Outside District	1,198	1,248	1,209
but Within State	804	1,055	897
Outside State	504	790	617

Source: P.B. Desai, <u>Size and Sex Composition of Population in India 1901-1969</u> (Bombay: Asia Publishing House, 1969), p. 171. The urban figures pertain to all communities identified as urban by the 1961 census.

The lower ratio of females to males among the rural migrants may point to the existence of lower-class migrations where the male migrant cannot afford to bring his family. Equally likely, it may represent the existence of a temporary or short-term migration of males moving to the city to search for jobs, earn money, acquire education — all objectives not necessarily associated with an intention of settling permanently in the city. This sort of cityward movement represents a fairly large-scale "uncommitted migration." ¹⁶

LARGE VS. SMALL CITIES

It is interesting that there is little difference between the kinds of migration to the 98 larger cities of over 100,000 population and migration to smaller cities. Whatever aspect of migration is compared -- whether it be the percentage of in-state, out-of-state, rural, or urban migration -- the difference between the smaller cities and the set of 98 larger cities is

 $^{^{16}}$ There is a discussion of this in Joan Nelson, "Sojourners vs. New Urbanites," op. cit.

never more than 3% or 4%. Somewhat surprisingly, the percentage of migrants originating within India in the 98 cities does not exceed the percentage of migration in the smaller urban localities. In fact, as Table 3 shows, it is only in the case of the percentage of urban-born migrants and the percentage of males within the migrant population that the figures for the set of larger cities exceed those for the smaller urban localities. ¹⁷

Table 3
THE MIGRANT POPULATION IN INDIAN CITIES

	Average for 98 Cities	All-India Urban Average	Smaller Cities
% Migrant of Urban Popula- tion	39.1 ^a	40.4 ^a	41.5 ^a
<pre>% In-state of migrant % Out-state of migrant</pre>	73.1 26.9	72.1 27.9	71.1 28.9
% Urban of Migrant % Rural of Migrant	36.1 63.9	35.4 64.6	34.7 65.3
% Male of Migrant Popula- tion	54.7	53.6	51.8

^aThese figures do not include foreign-born migrants or those whose urbanrural background could not be classified.

Source: <u>Census of India</u>, Volume I, Part II, C (iii) Migration Tables (New Delhi: Government of India, 1961).

DIRECTION OF MIGRATION

Only five states have a net import of migrants: Maharashtra and West Bengal because of their industrial centers, Assam, Madhya Pradesh, and Mysore.

¹⁷In order to make the figures for the smaller cities and the larger 98 cities comparable, calculations for the smaller cities were done using only the Indian-born population and only those migrants for whom urban/rural, length of stay, and place of birth information was known.

As indicated in Table 4, all the other states are net exporters of population. The three states which have the highest percentage of their own locally born population migrating out are the Punjab, Rajasthan, and Bihar. Despite what is sometimes believed, the four southern states of Andhra Pradesh, Kerala, Tamil Nadu, and Mysore are not, relative to their own population,

Table 4

NET IMMIGRATION OF INDIAN STATES AS PROPORTION OF STATE POPULATION

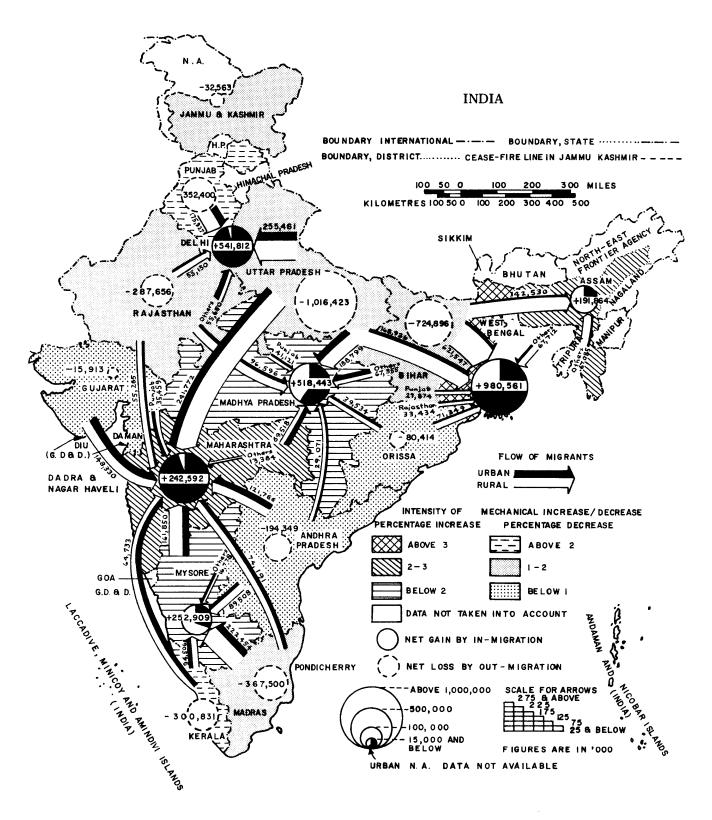
West Rengal	+.0458
Maharashtra	+.0410
Assam	+.0310
Madhya Pradesh	+.0189
Mysore	+.0071
Andhra Pradesh	0083
Orissa	0078
Gujarat	0109
Tamil Nadu	0157
Uttar Pradesh	0206
Kerala	0236
Rajasthan	0260
Bihar	0264
Punjab	0323

^aHaryana is included in figures for the Punjab.

among the heaviest exporters of migrants. Except for Mysore, they <u>are</u> among the states with the least immigration from other states. The following map gives a clear visual presentation of migration patterns.

Figure 1

DOMINANT PATTERNS OF INTER-STATE MIGRATION IN INDIA, 1951-1961



Source: Census of India, "Economic Regionalization of India" Monograph Series, Vol. I., No. 8 (New Delhi: Government of India, 1968), Figure 17.

SUMMARY

Migrations to large cities with populations of over 100,000 are thus composed of (1) a large migrant population -- close to 40% of the cities' population; (2) a sizable group of inter-state and thus largely inter-cultural migrants -- over 10% of the cities' population; (3) a large group of city-born migrants -- over one-third of all migrants; (4) a large city-ward migration of "single" males, representing perhaps the existence of an important temporary migration stream; and (5) a large short-term migration with one-third of all migrants, on the average, resident in the city for less than three years.

This pattern of cityward migration poses several questions for urban politics in India. Do cities with a large short-term migration exhibit, perhaps, lower rates of voter turnout than cities with long-settled migrants? Do cities with more urban- than rural-born migrants have higher voter turnout? Do large streams of inter-state, as distinct from intrastate, migrations negatively affect electoral participation? These questions are among those considered in the subsequent analysis of migration and urban electoral behavior in India.

ELECTORAL ANALYSIS

DATA AND METHODS

The analysis which follows will draw on voting and migration data from 98 Indian cities. These cities, located in 11 Indian states, include only the larger urban centers with populations of over 100,000. The 98 cities together comprise slightly under 45% of the 2,700 localities classified in India as being urban. The migration data employed in this study are from the 1961 census; the voting data are drawn from the 1962 state assembly elections.

The method employed is a multiple regression analysis. This will permit us to assess efficiently the statistical importance of different variables related to migration for voting turnout. Naturally such an analysis raises problems of cross-level inference. Statistical patterns observed at the city level for India and her subregions cannot be assumed to hold at the level of individual voters. But for a first attempt at analyzing the voting patterns of urban India, aggregate analysis offers an economical and manageable method promising interesting theoretical insights.

MIGRATION IN GENERAL

In examining the relationship between electoral turnout and migration, the first of our findings was essentially a negative one: The simple act of migration does not by itself influence electoral behavior. The relationship between the percentage of migrants -- defined as people born outside the city of residence -- and turnout is weak and insignificant at the all-

18

India level and regionally. 18

As indicated in the Introduction, however, this classification of migration includes too broad a variation of different types of migrants obscuring the relation which does exist between certain types of migration and electoral turnout. Thus, when the migration variable is specified according to its more precise components reflecting the different places and distances traveled, the effect of migration on turnout is fully evident.

Two of the three migration-related variables included in our analysis have a demonstrable impact on the level of turnout in Indian cities. The length of time a migrant resides in the city and his "commitment" to staying in his new residence are both factors which contribute to increased voting rates. The third factor — the length of "cultural" and geographic distance traveled by the migrant to his urban destination — appears not to affect either positively or negatively the level of urban turnout.

Before proceeding further, one methodological observation is in order. Because it was important to test our several hypotheses against data at a different and more homogeneous unit than the all-India level and because the number of cities at the <u>state</u> level is not large enough for meaningful analysis, it was decided to aggregate the state data into "regional" units. Three regions, two in the north and one in the south, were designated on criteria of economic and cultural homogeneity. The states included in the Northern Developed Region are Maharashtra, Gujarat, Haryana, Punjab, and West Bengal. The northern states of Bihar, Rajasthan, Madhya Pradesh,

Despite the fact that the data employed here enumerate rather than sample the statistical universe, the statistical tests have been performed for the reasons suggested in Galtung, Theory and Methods of Social Research (London: Allen and Unwin, 1967), pp. 364-365. The significant level was measured in this case, as in all subsequent cases, by the F statistic. The variance explained for the all-India level was under 1% and was less than 5% in two of the three regions identified below.

Orissa, and Uttar Pradesh are grouped into the Northern "Backward" Region.

The three states in the south with elections in 1962 -- Mysore, Andhra

Pradesh, and Tamil Nadu -- are considered as the third region.

LENGTH OF RESIDENCE

In the data set used for this analysis the length of time a migrant has spent in his urban destination is categorized as either less or more than three years. Despite this somewhat unrefined classification, the duration of time spent by the migrant in the city can be seen to have a clear bearing on electoral turnout. In the Southern and Northern Backward regions the number of short-term residents has, as we would expect, a strong and significant negative effect on turnout. Likewise, our expectation that political involvement grows with increasing length of residence in the city seems to be upheld by the strong positive relationship between the percentage of long-term residents in the city and electoral turnout.

The strong impact of the length of residence on turnout is best illustrated by the case of the Northern Backward Region. In this area, consisting of Uttar Pradesh, Bihar, Madhya Pradesh, Orissa, and Rajasthan, a 1% increase in the number of recent migrants causes slightly under a 1% (.85) decrease in turnout. Evidence for this, presented in Table 5, also indicates that in the Southern Region a 1% increase in the number of longer-term migrants

The analysis of the Northern Developed Region has proved least satisfactory for two reasons. (1) It is perhaps the least homogeneous; certainly, it is far less of a distinct cultural region than the Southern Region. (2) The migration figures do not include statistics on those people born outside of India (refugees or others). This is a numerically substantial group in some cities of the Northern Developed Region. The presence of ex-aliens may well have affected the results of the regression analysis, as the electoral turnout figures do not exclude this group of the population. In the interpretation of the data, the reader should be further cautioned about the problems of cross-level inference.

Table 5

THE EFFECT OF DURATION OF RESIDENCE ON TURNOUT

			tal Nati opulatio		% Migrant Than Thre		Gr Th	Migra eater ' ree Ye	Than		% Fema	
	Constant	R ²	b	s.e.	R ² b	s.e.	RZ	b	s.e.	R	Ъ	s.e.
All-India (N = 98)	57.51	.001	000	.000	.002113	.248	.013	.044	.143	.040	.215	.131 ^a
Southern $(N = 26)$	51.65	.123	000	.000	.123579	. 547	.299	.740	.340	.350	.264	.210
Northern Backward (N = 36)	60.55	.027	.000	.000	.140849	.327*	.200	.226	.195	.202	.076	.237
Northern Developed (N = 35)	61.17	.000	.000	.000	.043 .374	.326	.048	082	.220	.048	.004	.245

^aSignificant at the .01 level.

The Regression equation for explaining electoral turnout (tnout) is:

TNOUT = K + (b_1 total population_i) + (b_2 Mig $< 3\%_i$) + (b_3 Mig $> 3\%_i$) = ($b_4\%$ fem lit_i) where i indicates the region being analyzed; nat. pop. is the absolute number of people born in the city; mig < 3% is the percentage of migrants living in the city for less than three years; mig > 3% is the percentage of population living in the city for more than three years (exempting the natives); % fem lit is the percentage of females in the population who are literate. (This last variable has been used throughout the study as a control for the level of socioeconomic development.)

causes a .74% increase in turnout.

Length of residence, however, does not have a uniform effect on turnout in all three regions. The expected negative relationship between the
number of recent migrants and turnout does not show up in the Northern
Developed Region. In this area (which includes the states of Maharashtra,
Gujarat, Punjab, West Bengal, and Haryana) the number of recent migrants to
the city, shown also in Table 5, is positively if weakly related to turnout,
while the number of longer-term migrants appear unrelated to electoral
behavior. The failure of the expected relationship to hold in the Northern
Developed Region seems to explain the insignificant and weak results of
the regressions for the all-India level.

The strength and significance of the relationship in the Southern and Northern Backward areas, however, do appear to confirm the argument that recent migrants to the city have less reason, whether because of lack of information, interest, or other factors, to become involved in political activity.

THE "COMMITTED" AND "UNCOMMITTED" MIGRANT

The motivation behind a migrant's move to the city can be expected to affect his involvement in politics. As Joan Nelson has reasoned, a migrant who moves to the city with the intention of settling permanently is likely to have a different attitude toward involving himself in politics from a migrant who is trying to find a job or who is staying in the city only a short period of time in order to earn some money or to educate himself. 20 It is plausible that the more "committed" a migrant is toward settling in

Reference here is to work by Joan Nelson, "Sojourners vs. New Urbanites," op. cit.

the new urban location, the more likely would be his inclination to vote. With some qualifications, this theory seems confirmed by the Indian data.

The indicator used here to measure the degree of a migrant's "commitment" to his urban destination is the sex ratio among migrants. The larger the number of female migrants relative to male migrants, the stronger is the possibility that the male has moved with his family and thus with the intention of settling at the new urban destination.

The results of the regression analysis show that the "commitment" hypothesis is at least partially substantiated. The effect of "commitment" on turnout is strong and significant at the all-India level and in two of the three regions. Again, this relationship is particularly striking in the Northern Backward Region, where — as illustrated in Table 6 — a 1% reduction in the difference between the male and female migrant percentage (the measure of "commitment") causes a 1% increase in turnout.

A number of cautionary remarks must be made, however. First, the relationship does not hold up in the Northern Developed Region. More important, the relationship is not sustained when the commitment measure is looked at for in-state migrants and out-of-state migrants separately. If the hypothesis is strong and if our indicator of "commitment" is a good one, we would expect that a migrant who is committed to the city would be likely to vote irrespective of whether he came from within or outside the state. As shown in Table 6, however, the "commitment" measure, when tested against out-of-state migrants, proves to be either insignificant or negative in India as a whole and in each of the three regions. This need not indicate that the "commitment" theory is wrong, only that there are either other influences confounding the relationship or that it is not as strong an explanation of

 $\mbox{ Table 6} \\ \mbox{THE EFFECT OF MIGRANT COMMITMENT ON TURNOUT}$

		(01) Native Female R b s.e.			(02)			(03) In-State Committed Migrants R b s.e.			(04) Out-of-State Committed Migrants R b s.e.			(05) % Female Literates R b s.e.		(06)			
	Constant				Native Male R^2 b s.e.		$\frac{1}{R^2}$									% Male Literates R b s.e.			
All-India (N = 98)	55.21	.001	.000	.000	.025	000	.000	.090	.887 ^c	.268	.091	.205	.231	.184	.445	.202	.141	.071	.236
Southern (N = 26)	57.18	.118 ^b	.001	.000	.243 ^b	001	.000	.277	1.661 ^a	.879	.396	-4.164	.457	.426	.020	.404	.426	.240	.510
Northern Backward (N = 35)	44.35	.022	.000	.000	.100	.000	.000	.245	1.194 ^b	.410	.256	027	.854	.308	.173	.330	.302	.153	.256
Northern Developed (N = 35)	31.93	.003	.000	.000	.011	.000	.000	.040	.792	.780	.051	.139	.234	.090	.315	.421	.071	.694	.690

Independent Variables:

^{01 =} the absolute number of native females in population

^{02 =} the absolute number of native males in population

^{03 =} the difference between the percentage of in-state male and in-state female migrants

^{04 =} the difference between the percentage of out-of-state male and out-of-state female migrants

⁰⁵ = % of female literates in the population

⁰⁶ = % of male literates in the population

^aSignificant at the .05 level.

^bSignificant at the .01 level.

 $^{^{\}mathrm{C}}\mathrm{Significant}$ at the .001 level.

migrant electoral behavior as other possible explanations.

One further note of caution should be added. The percentage difference between male and female migrants may serve not only as an indicator of commitment but also as an indicator of the economic class of the migrant. As a number of migration studies in India have shown, the migrants least likely to bring their families are the blue-collar male laborers. If the voting rate for blue-collar workers is lower than for higher income groups — and such a voting pattern has not been empirically demonstrated in India 21 — there is then an alternative economic or class explanation to the commitment hypothesis.

Nevertheless, the strong relationship between the level of commitment and electoral turnout in the Southern and Northern Backward regions, and at the all-India level, indicates that the "commitment" explanation is a plausible one warranting further examination with more suitable data.

DISTANCE OF MOVE

Of the three migrant-related factors which it was proposed might affect turnout, the distance of a migrant's move seems to be most clearly unrelated. The distance which a migrant has moved is broken down in our data set according to three categories: whether a migrant was born within the same district, born outside the district but within the same state, or born in another state. With these categories we can measure, if somewhat clumsily, not only the effect of the actual geographic distance which a person moves but also the effect of "cultural" distance. As state boundaries coincide

See for instance G.S. Badhe and M.U. Rao, <u>The Bombay Civic Election of 1968</u> (Bombay: All-India Institute of Local Self Government, 1968), pp. 104-105, which suggests that voting rates are higher for lower- and middle-class groups than for upper-income communities.

generally with linguistic and cultural divisions in India, it is plausible to interpret movement across state borders as movement between cultural regions.

Because, as shown in Table 7, the effect on turnout of different migration streams from within and outside the district is so irregular, it is clear that the length of distance traveled has no direct bearing on the level of migrant political involvement. The effect of "cultural" distance is also slight. At the all-India level the expected relationship, although weak, appears to hold. The percentage of migrants from within the state has a positive effect, while the percentage of migrants coming from outside the state has a negative effect on turnout. This appears, however, to be a statistical artifact of the irregularity of the pattern in the three subregions. As shown in Table 7, the only region where in-state migration has the expected positive effect and out-of-state migration a negative effect on turnout is in the Northern Developed Region, and even there the reliability of the sign itself is in question because of the total absence of a statistically significant relationship.

The extreme inconsistency of the relationship between turnout and geographic or cultural distance traveled points to a null finding. Of the migration-related variables available for analysis with our data, the geographic and/or cultural distance a migrant travels has no clear relationship with turnout. A migrant's commitment to his new urban destination has a somewhat clearer impact on turnout. Of the three variables, the length of time spent by the migrant in the urban locality has the most distinct effect on electoral behavior.

Table 7

THE EFFECT OF DISTANCE OF MOVE ON ELECTORAL TURNOUT

		(01) % District Migrants		(02) % Within-State Migrants			(03) % Out-of-State Migrants		
	Constant	<u>R</u> <u>b</u>	s.e.	$\frac{R^2}{R}$	<u>b</u>	s.e.	R	b	s.e.
All-India (N = 98)	58.44	.077 .343 ^b	.137	.083	.100	.123	.083	017	.112
Southern (N = 26)	56.54	.163 .574 ^b	.256	.166	.168	.244	.196	.356	.388
Northern Backward (N = 36)	66.23	.109429 ^a	.214	.125	165	.198	.129	•056	.153
Northern Developed (N = 35)	60.73	.001 .014	.288	. 065	.223	.178	.068	073	.191

Independent Variables:

 $^{01 = % \ \}text{of population migrating to city from within the same district}$

^{02 = %} of population migrating to city from within the same state

^{03 = %} of population migrating to city from outside the state

^aSignificant at the .05 level.

^bSignificant at the .01 level.

FRAGMENTATION: THE ORIGIN OF THE MIGRANT

As suggested in the Introduction, an explanation of migrant electoral behavior may lie not merely in factors directly related to the experience of moving but may also derive from forces independent of the migration experience. One set of forces may relate to the locality from which the migrant has moved. Our observation above that turnout seems to be only inconsistently influenced by whether a migration originated from within or outside the state suggests that the key variable may not be distance of move but the level of modernization or politization of the migrant's place of origin. As the theory of "fragmentation" suggests, the cultural and political norms which the migrant brings with him to the city may be an important input in his decision about whether to involve himself in politics. Our analysis indicates that the fragmentation thesis provides a convincing explanation of voter turnout in India.

In the analysis we considered two versions of the fragmentation thesis.

The first version relates to the urban/rural character of the migrant's place of origin. Here we considered a hypothesis suggested by the "attri-

Strikingly similar observations have been made by Lane in <u>Political Life</u>, op. cit., p. 268. He writes:

Newcomers into a community differ in their rates of electoral assimilation (achieving a rate of turnout similar to that of matched groups of longer residence in the community) but these differences are not as might be expected according to age, occupation or education. Rather they are according to where the newcomers came from. Southerners moving North tend to have rates of participation lower than matched Northern groups — and this is not because of race Foreigners (and foreign countries have higher voting rates than the United States) also take quick advantage of their electoral rights. . . . All of this suggests that the most important single factor affecting the rate of electoral assimilation is the voting norms of the community from which a person comes.

butional" model described by Weiner and Field. ²³ This model, which sees urban areas as having more in common with each other than with the surrounding cultural region in which a particular city is located, predicts that the higher the percentage of migrants from urban areas, wherever they are located, the higher might be the turnout.

This hypothesis is not corroborated by the data analysis; instead, the analysis yielded a conclusion which provides a modification of the "attributional" hypothesis. The regression of the percentage of migrants from urban and rural origins against the level of turnout showed that information on a migrant's urban or rural origin is only important for predicting turnout among migrants from backward regions. In the case of migrants from more developed regions, knowledge of the urban/rural character of the "native place" is not a powerful predictor of electoral behavior. As illustrated in Table 8, we find a strong negative relationship between rural origin and turnout in the Northern Backward Region. The amount of variance explained when the variable specifying the rural origin of the migrant is added to the regression equation jumps from 6% to 17%. The additional variance explained with the same procedure in the case of the Northern Developed Region or the (advanced) Southern Region is completely inconsequential.

The results of our regressions thus seem to bear out through cross-sectional analysis the conclusions of Weiner and Field in their study of urban-rural voting patterns over time. Consistent with their prediction of a narrowing gap between urban and rural turnout, we find that the differ-

²³See Weiner and Field, <u>op</u>. <u>cit</u>., pp. 1-2.

FRAGMENTATION: THE EFFECT OF URBAN/RURAL ORIGIN
OF MIGRANTS ON TURNOUT

		P	(01) Native opulati		<u>I</u>	(02) n-Urba			(03) <u>In-Rura</u>			(04) % Femal iterate	s
	Constant	R	<u>b</u>	s.e.	R	<u>b</u>	s.e.	R	<u>b</u>	s.e.	<u> </u>	<u>b</u>	<u>s.e.</u>
All-India (N = 98)		.001	000	.000	.025	.218	.248	.050	.100	.130	.100	.243 ^a	.130
Southern (N = 26)		.123	000	.000	. 227	.526	.461	.266	.258	.228	.397	.434	.213
Northern Backward (N = 36)		.026	.000	.000	.059	.066	.515	.167	333 ^a	.182	.170	.027	.253
Northern Developed (N = 35)		.000	.000	.000	.086	.507	.425	.087	062	.341	.093	.105	.252

Independent Variables

^{01 =} absolute number of population born in city

^{02 = %} of population born in other cities within the state

^{03 = %} of population born in rural areas within the state

 $^{04 = % \}text{ of female literates in city population}$

^aSignificant at the .01 level.

ential between the effect of a migrant's urban/rural origin is most visible in the "backward" and least noticeable in the more advanced regions of India.

This "attributional" model -- depicting a single, uniform type of urban political system -- is then discredited by several parts of our analysis. Not only do the effects on electoral behavior of coming from an urban background within the same state vary greatly from one region to another; the effects of migrating from an urban background in another state also vary so widely in size and sign as to exclude the possibility of a consistent, powerful urban culture.

This does not suggest, it should be emphasized, that knowing the urban/rural character of a migrant's background is unimportant for an explanation of turnout. In the more backward states of India the rural character of a migrant's origin is extremely salient. That it is not salient elsewhere suggests that there is not, as is sometimes hypothesized, a homogeneous urban political culture.

The second version of the "fragment" thesis suggests that the urban/
rural focus of the first version is perhaps misdirected. The second variant points to the level of political modernization of the migrant's origin
as being an important determinant of the migrant's inclination to become
politically involved in his new destination. This thesis suggests that the
urban/rural variant of the "fragment" thesis taps the wrong explanation -focusing as it does on the level of urbanization rather than on political
modernization, two variables which are not necessarily coeterminous. If
this is correct, the urban/rural explanation should "work" where urban and
rural designations coincide with more politically advanced and more backward

localities. Where an urban-rural distinction, however, does not reveal a difference in the level of political modernization, the "urban" theory would falter. Because the urban theory in fact does work in the Northern Backward Region but does not work in either of the two more developed regions, it seems plausible that the political modernization version of the "fragment" thesis provides a persuasive correction to the first urban/rural version.

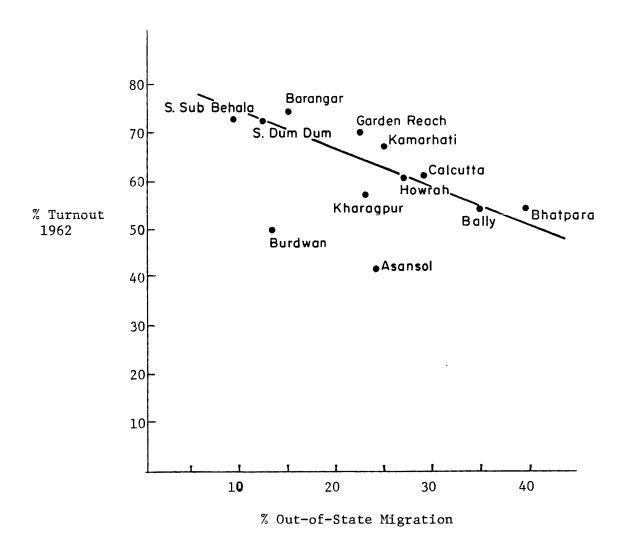
Although we do not have sufficiently detailed data to test this second version of the "fragment" thesis as precisely as would be desirable, the evaluation which can be made supports the thesis that the level of political modernization of the migrant's place of birth affects the level of voter turnout in the urban destination. Ideally, we should know and be able to rank the level of modernization of the exact locality from which the migrant moved. The data available for our analysis, however, do not indicate which city or state the migrant was born in but only whether his place of birth was within or outside the state to which he migrated. Nevertheless, from census and other studies done of Indian migration streams we do know what percent of migration to most cities derives from which state; and we are, then, able to approximate what component of the migrants living in particular urban areas comes from a more backward or more advanced locality.

Knowing this, the best possible test of the fragment thesis concerning the level of modernization is the case of cities in West Bengal. We know that most Indian-born migrants in West Bengal cities from out-of-state come from the nearby regions of Bihar, Orissa, and Uttar Pradesh -- all states where turnout is lower and where politicization is generally well below the level of West Bengal. If the modernization thesis is correct, we would expect that as the percentage of out-of-state migrants rises, the percentage

of turnout would decline. As the scatter plot shows below, this is exactly what happens.

Figure 2

MIGRATION FROM OUT-OF-STATE AND TURNOUT
IN WEST BENGAL



The regression line has been fitted by hand.

Although the West Bengal data are suggestive, they are not enough to allow us to make a generalization about migrant electoral behavior in India as a whole. In order to evaluate satisfactorily whether migrants do bring with them the political behavior learned in their native regions, it would be clearly preferable to employ individual—level data.

The evidence of voting patterns in West Bengal, however, does give credence to the theory that it is the level of political modernization rather than the urban-rural nature of the migrant's native region that is important in explaining migrant political behavior. As we saw, whether a migrant comes from the city or countryside appears to affect the level of turnout only in those regions where there remains a considerable gap between urban and rural voting levels. In areas where rural turnout has "caught up" with the higher urban turnout, a migrant's urban or rural origin becomes inconsequential. This finding suggests that factors associated with the modernization process generally, rather than with urbanization specifically, are useful in "describing" the "cultural baggage" which the migrant brings with him to his urban destination and which condition his inclination for political activity.

CONCLUSION

This study has attempted to formulate and to test several hypotheses about the impact of migration on one form of political behavior, electoral participation. Five variables were identified at the outset as plausible explanations for different rates of electoral participation. Three explanations pertain directly to the process of migration and the other two to the place of origin of the migrant.

The process of migration appears to condition turnout in two distinct ways. The length of time which a migrant has spent in the city increases the likelihood of his participation in politics. As indicated by the incidence of family rather than single-male migration, the commitment of the migrant to his new urban environment also proved favorable to increased electoral participation. No significant relationship, however, emerged between the geographic and cultural distance which the migrant travels and turnout.

Further analysis tested the causal relation between the migrant's place of origin and turnout. The difference between the urban or rural background of the migrant is shown to be unrelated to electoral participation in all cases but one. But even in that one instance — the more backward states of northern India — closer analysis showed the urban/rural distinction to be important only as an artifact of the general level of modernization. To the extent, then, that urbanization and modernization occur independently, it is the latter rather than the former which affects electoral turnout.

Explanations which have argued the existence of a link between migra-

tion and politics are insufficient. In order to understand the relation between the two, the process of migration needs to be differentiated into its component parts. Such specification points to an interesting perspective on Indian politics in the decades ahead. With an increasing rate of turnover of urban populations, turnout is likely to decline. This development should be at least partially offset, however, by the changing electoral norms of the regions from which migration occurs. On account of these divergent trends, the impact of migration on political participation will remain substantially unchanged.

		•

APPENDIX

CITIES OF 100,000 OR GREATER, BY STATE,
SHOWING PERCENTAGE MIGRANT

State	City	Percentage Migrant	State Total	
		(%)	(%)	
Andhra	Visakhapatam	41.3	42.0	
	Eluru	47.0		
	Rajahmundry	45.8		
	Kankinada	41.8		
	Vijayawada	61.5		
	Bandar/Masul	37.3		
	Guntur	51.1		
	Nellore	40.8		
	Kurnool	37.2		
	Hyderabad	24.8		
	Warangal	33.7		
Assam*	Gauhati	53.4	53.4	
Bihar	Muzaffarpur	47.2	39.4	
	Darbhanga	31.7		
	Bhagalpur	28.4		
	Patna	39.5		
	Gaya	34.2		
	Jamshedpur	55.4		
	Ranchi	39.3		
Gujarat	Rajkot	42.8	37.1	
	Jamnagar	31.4		
	Bhavnagar	24.5		
	Ahmedabad	49.7		
	Baroda	41.7		
	Surat	27.8		
Madhya Pradesh	Gwalior	32.6	43.8	
	Raipur	55.0		
	Jabalpur	44.7		
	Bhopal	47.9		
	Ujain	41.8		
	Indore	40.7		

State	City	Percentage Migrant	State Total
		(%)	(%)
Punjab	Amritsar Jullundur	33.7 42.8	43.0
	Ludhiana Patiala	47.9 47.7	
Orissa	Cuttack	35.6	35.6
Haryana	Ambala	51.1	51.1
Madras	Madras City Vellore	35.9 33.5	35.8
	Salem Coimbatore	27.0	
	Madura	43.7 33.2	
	Tiruchirap. Thanjavur	37.9 40.9	
	Turicorin	43.1	
	Nagercoil	27.2	
Maharashtra	Bombay	61.9	47.8
	Ulhasnagar	33.0	
	Poona	50.2	
	Kolhapur	40.7	
	Sholapur	38.6	
	Ahmednagar	43.8	
	Nasik	48.8	
	Malegaon	43.9	
	Akola	52.5	
	Amravati	50.3	
	Nagpur	43.7	
	Thana	66.7	
Mysore	Belgaum Hubli	34.6 37.9	35.0
	Mangalore	33.7	
	Kolar Gold Fields	32.0	
	Bangalore	41.0	
	Mysore City	31.4	
Rajasthan	Ajmer	38.9	31.3
	Kotah	45 . 6	21.2
	Udaipur	30.2	
	Jodhpur	21.7	
	Bikaner	21.4	
	Jaipur	29.8	
Kerala*	Calicut	24.9	29.6
	Ernakulam	35.6	
	Alleppey	25.4	
	Trivandrum	32.2	

		Percentage	
State	City	Migrant	State Total
		(%)	(%)
Uttar Pradesh	Moradabad	11.4	30.9
	Rampur	25.7	
	Bareilly	24.6	
	Shahjahanpur	25.7	
	Lucknow	39.9	
	Gorakhpur	41.5	
	Marzapur/Vindya	25.9	
	Varanasi	28.1	
	Allhabad	30.1	
	Kanpur	46.6	
	Jhansi	39.1	
	Agra	28.8	
	Mathura	37.1	
	Alligarh**	16.5	
	Meerut	36.9	
	Sharanpur	28.7	
	Dehra Dun	45.3	
West Bengal	S. Sub Behala	46.7	46.1
_	Garden Reach	35.5	
	Calcutta	41.5	
	Howrah	49.3	
	Bally	64.2	
	Kharagpur	40.4	
	Asanso1	43.1	
	Burdwan	42.6	
	Bhatpara	54.6	
	Kamarhati	45.3	
	S. Dum Dum	44.6	
	Baranagar	44.9	

 $[\]ensuremath{^{\star}}$ The cities in states marked by asterisk are not included in the data set of 98 cities.

 $[\]ensuremath{^{\star\star}}$ The figure for Alligarh may be inaccurate as census volume figures for this city do not sum to proper total.