

Spatial and Demographic Growth of Delhi since 1947 and the Main Migration Flows

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SPATIAL AND DEMOGRAPHIC GROWTH OF DELHI

The development of Delhi and its metropolitan area reflects a major trend in India's urbanization process which is the growing concentration of the urban population in metropolises of a million or several million inhabitants. Yet the domination of the Indian urban scene by these 'megalopolises' takes place within the context of a country which is predominantly rural and is likely to remain so in the medium term (in 1991 only 26 per cent of the population lived in urban areas).

The demographic evolution of the city of Delhi during the twentieth century is closely linked to the history of the country. Following the promotion of Delhi as the capital of the British Indian Empire in 1911, the population grew from 2,38,000 in 1911 to 6,96,000 in 1947. On the other hand, the spatial expansion of the city according to a widely spread pattern of urbanization led to a dramatic decrease of residential densities from 55 inhabitants per hectare in 1911 to 18 in 1921, followed by a gradual increase up to 40 in 1941 (see Table 13.1).

After Independence in 1947 Delhi became the capital of the newly formed Indian Union and had to face a massive transfer of population following the partition of India. Thus, just after 1947 Delhi, whose population was about 9,00,000 at the time, received 4,70,000 refugees from western Punjab and Sindh, while 3,20,000 Muslims left the capital and migrated to Pakistan. Not surprisingly, 1941-51 is the period of the highest demographic growth in the history of the capital which expanded from almost 7,00,000 inhabitants in 1941 to 1.4 million in 1951, corresponding to an annual growth rate of 7.5 per cent which has not been equalled since.

Such a demographic growth occurred together with the spatial expansion of the urban zone in all directions, including to the east of the Yamuna river. The 'official' urban area almost doubled between 1941 and 1961 (see Table 13.1). The geographical location of Delhi in the Gangetic plain, and, moreover, the absence of any significant physical barrier to the progress of urbanization (the Aravalli hills—the Delhi Ridge—in the west and the south do not constitute an effective obstacle) favoured multi-directional urban

TABLE 13.1. POPULATION, AREA AND DENSITY OF DELHI URBAN AGGLOMERATION FROM 1911 TO 1991

Year	Population			Area		Density
	Number	Decennial growth rate %	Annual growth rate %	sq. km	Decennial growth rate %	Pop/ha
1911	2,37,944	—	—	43.25	—	55
1921	3,04,420	27.94	2.49	168.09	288.64	18
1931	4,47,442	46.98	3.93	169.44	0.80	26
1941	6,95,686	55.48	4.51	174.31	2.87	40
1951	14,37,134	106.58	7.52	201.36	15.52	71
1961	23,59,408	64.17	5.08	326.55	62.07	72
1971	36,47,023	54.57	4.45	446.26	36.76	82
1981	57,29,283	57.09	4.62	540.78	21.17	106
1991	84,19,084	46.94	3.92	624.28	15.44	135

Source: Census of India, Delhi, 1951, 1961, 1971, 1981 and 1991.

expansion, and this trend continued in the decades that followed (see Map 13.1).

Delhi is the third largest Indian metropolis, overshadowed only by Mumbai and Calcutta. Furthermore, of the 12 Indian metropolises with a population of over one million in 1981, Delhi has experienced the highest rate of demographic growth despite this having slowed down in recent decades: 5.1 per cent per year from 1951 to 1961, 4.5 per cent to 4.6 per cent per year from 1961 to 1981, and 3.9 per cent per year from 1981 to 1991. The population of Delhi urban agglomeration had reached 8.4 million at the time of the 1991 Census, and by 2000 it has certainly crossed the 10 million figure.

This overall growth of the urban agglomeration conceals acute differences at a more desegregated level (see Maps 13.2 and 13.3). In particular, the peripheral zones exhibit faster rates of growth whereas a process of deconcentration is occurring in the historical city core known as Old Delhi—a densely populated area which contained as many as 740 inhabitants per hectare within the Walled City in 1961, and 616 in 1991 (as compared to 135 in the entire urban agglomeration for the same year).

In order to understand better the spatial dynamics of urban growth, it is interesting to contrast the centrifugal pattern of population growth with the spatial pattern of residential densities (see Map 13.4).¹ The latter conforms largely to a classical model of population density gradients characterized by high densities in the urban core and a sharp decline towards the periphery, the original causes of which were summed up in three words by J. Brush: 'protection, prestige, and proximity'.² Thus, the superposition of the two maps—population growth and densities—for the 1981-91 period suggests a negative correlation between these two variables. This is confirmed by statistical tests although the extent of association is moderate (correlation

coefficient = -0.292). Nevertheless, this suggests that high population densities tend to deter new dwellers from settling and even to induce exits towards less crowded areas.

The centrifugal pattern of urban growth in Delhi was first highlighted by J. Brush for the decade 1961-71.³ This spatial pattern of population dynamics has not only persisted, but extended beyond the limits of the urban agglomeration. Thus, the rate of population growth between 1981 and 1991 was faster in the rural hinterland of the National Capital Territory than in Delhi's urban agglomeration: 9.6 per cent per year as against 3.8 per cent respectively (in the urban/rural limits as defined in the 1991 Census). These figures can be compared to the rate of natural growth during the same period, that is 2.5 per year on an average in rural areas and 2.1 per cent in urban areas, which underscores the contribution of net in-migration. Admittedly, population densities remain considerably lower in rural areas than in the urban agglomeration (12 inhabitants per hectare as against 135 in 1991); moreover, although the rural zones cover 54 per cent of the total area of 1483 sq. km which constitutes Delhi's National Capital Territory, they harbour only 10 per cent of the total population of the territory. The number of new settlers in the rural parts of Delhi's territory remains small as compared to those choosing to settle in urban areas. Nonetheless, these population moves are revealing of the effective appeal of the capital's rural hinterland to migrants coming from other states, and to those city dwellers who choose to leave the Delhi urban agglomeration in search of less congested and/or cheaper places to live.

The process of metropolization and rurbanization around the capital is also reflected in economic terms. Hence, the sectorial employment structure of the working population residing in the so-called 'rural Delhi' resembles that of Indian urban areas more than rural ones: for example, only 19 per cent of workers in rural Delhi work in the primary sector as compared to 83 per cent of the rural population and 15 per cent of the urban population at the national level according to the 1991 Census. Although the administrative limits of the Delhi urban agglomeration have been extended several times, with an almost twofold increase in the urban area between 1961 and 1991 (see Table 13.1), the rapid growth of the rural population in the National Capital Territory as well as its economic characteristics underline the gap between the administrative delimitation of the urban agglomeration and the actual modalities of the urbanization process.

FACTORS CONTRIBUTING TO URBAN DECONCENTRATION

Beyond the negative relationship between population growth and residential densities, the pattern of population distribution and growth is related to a number of factors: patterns of land-use, the availability and price of land or residential property, and the accessibility of employment opportunities and urban services. If, as mentioned earlier, this last factor helps explain the centripetal force of the past, the actual centrifugal tendency is certainly

associated with the scarcity of land for new residential constructions and its consequent appreciating value in central areas. The less congested peripheral zones provide more affordable housing possibilities, as well as more accessible sites for squatting. Finally, the expansion of the urban periphery is the outcome of the relationship between planning attempts made by the Delhi Development Authority (the central administration in charge of the implementation of the Master Plan and of land development) and private initiatives and responses.

The Delhi Development Authority has played a direct role in the urban spread of the capital through its large-scale acquisition of agricultural land geared towards the implementation of various housing programmes: the construction of flats for sale to private households of different income groups; the development of land and the allotment of plots on a 99-year leasehold basis to private households and cooperative group housing societies; the servicing and allotment of land for the resettlement of slum dwellers and squatters evicted from central areas of the city. This last policy which resorts to coercive measures including the demolition of slum and squatter settlements was pursued most actively during the 'Emergency' (1975-7) during which time about 7,00,000 persons were forcibly evicted and sent to resettlement colonies, all located—at that time—on the urban outskirts (see Map 13.5).

In some cases, these various schemes of flat and plot allotments are part of 'mega-projects' aimed at developing new peripheral zones and leading to the creation of satellite townships. For example, the Rohini project (in the north-western suburb) launched in 1982 was planned to accommodate 8,50,000 inhabitants whilst the Dwarka-Papankala project (in the south-western suburb), launched in 1988 and still under development, is planned to receive ultimately one million inhabitants.

However, these public housing policies have failed to respond to the demands of large sections of the urban population, in particular the lower-middle classes and the poor who have had to resort to the informal housing sector. Hence, the proliferation of unauthorized colonies in the urban-rural fringe on agricultural land not meant for urbanization according to the stipulations of the Delhi Master Plan. In 1983, 736 such colonies were enumerated, housing an estimated 1.2 million people, that is almost 20 per cent of the population of the capital;⁴ in 1995, their official number had reached 1300.⁵ A policy which aimed at regularizing 567 unauthorized colonies up until 1990 is again on the agenda of the town planners, but it has not succeeded in preventing the unabated proliferation of such irregular settlements. Furthermore, it seems that this regularization policy had the opposite effect of indirectly encouraging the development of new unauthorized colonies, since prospective buyers hoped their settlement would obtain regular status in the future, thereby guaranteeing the long-term economic profitability of their investments.

As for the poorer sections of the urban population, they are relegated to squatter settlements and precarious forms of habitat (locally known as

jhuggi-jhonpri), which have also continued to proliferate despite the 'slum clearance' and resettlement programmes.⁶ In 1994, according to official estimates, about 4,81,000 families lived in 1080 so-called '*jhuggi-jhonpri* clusters' which varied in size from a dozen dwelling units to 12,000.⁷ This figure corresponds to about 2.4 million persons—that is 20 to 25 per cent of the total population of Delhi. The population density in the big clusters can be very high owing to the cramming together of families in one-room huts and very narrow lanes. Although some of the largest clusters are located in the urban periphery, squatter settlements are found all over the capital, occupying not only vacant land in the urban fringes (at the time of their emergence), but also all the interstices of the urban fabric wherever there is vacant land and where surveillance by the legal authorities is limited (see Map 13.6).

Nevertheless, the uncontrolled urbanization of the outskirts of Delhi is the effect of the residential strategies implemented not only by low-income groups, but also to some extent by high-income ones. For example, the construction in the southern urban-rural fringe of very luxurious and spacious 'farmhouses', built on agricultural land often without respecting the land-use pattern and floor-area ratio stipulated for such zones, has resulted in the emergence of rich unauthorized colonies.⁸

PROCESS OF METROPOLITIZATION: THE DEVELOPMENT OF SATELLITE TOWNS

The slowdown of the population growth rate within Delhi's urban agglomeration (without any decline in the rate of natural increase)⁹ coincides with a redistribution of the population in favour of fast growing peripheral towns. This centrifugal population dynamic stretches out beyond the administrative limits of the National Capital Territory, thereby extending the trend of population deconcentration already observed in the urban agglomeration and its rural hinterland. Thus, the ring towns in the Delhi metropolitan area have increased at a much faster rate than the Delhi urban agglomeration. The difference was already noticeable during the 1961-71 period; it reached a peak during the 1971-81 period (8.6 per cent per year as against 4.6 per cent) and still was remarkable during the 1981-91 period (6.5 per cent as against 3.9 per cent) (see Map 13.7 and Table 13.2).

The development of ring towns was encouraged by the regional policy of town and country planning initiated in the 1960s in order to control the growth of the capital and to curb in-migration flows by reorienting them towards other towns in the region.¹⁰ However, the initial stress put on the development of this first ring of towns around Delhi had the effect of strengthening the attraction of the capital and encouraging intensified commuting within the metropolitan area. Due to their proximity to the capital, these ring towns did not emerge as autonomous, alternative growth centres, and most of them can be considered satellite towns.

The fact that the Delhi administration is in direct control of land suitable

TABLE 13.2. POPULATION GROWTH OF CITIES, TOWNS AND RURAL AREAS IN DELHI METROPOLITAN AREA FROM 1951 TO 1991

Towns/zones	Population					Annual growth rate (%)			
	1951	1961	1971	1981	1991	1951-61	1961-71	1971-81	1981-91
Delhi NCT	17,44,072	26,58,612	40,65,698	62,20,406	94,20,644	4.31	4.34	4.34	4.24
(i) Delhi UA	14,37,134	23,59,408	36,47,023	57,29,283	84,19,084	5.08	4.45	4.62	3.92
(ii) other census towns	-	-	-	38,917	52,541	-	-	-	3.05
(iii) rural Delhi	3,06,938	2,99,204	4,18,675	4,52,206	9,49,019	-0.25	3.42	0.77	7.69
Ghaziabad UA	43,745	70,438	1,37,033	2,87,170	5,11,759	4.88	6.88	7.68	5.95
Loni	3,622	5,564	8,427	10,259	36,561	4.39	4.24	1.99	13.55
Noida	-	-	-	35,541	1,46,514	-	-	-	13.31
Faridabad CA	37,393	59,039	1,22,817	3,30,864	6,17,717	4.67	7.60	10.42	6.44
(i) Faridabad	31,466	50,709	1,05,406	-	-	4.89	7.59	-	-
(ii) Ballabgarh	5,927	8,330	17,411	-	-	3.46	7.65	-	-
Gurgaon UA	18,613	3,868	57,151	1,00,877	1,35,884	7.36	4.20	5.85	3.02
Bahadurgarh UA	11,170	14,982	25,812	37,488	57,235	2.98	5.59	3.80	4.32
Kundli	1,073	1,681	2,669	3,354	5,350	4.59	4.73	2.31	4.78
Total ring towns	1,15,616	1,89,572	3,53,909	8,05,553	15,11,020	5.07	6.44	(a) 8.57 (b) 8.08	6.49

Abbreviations : NCT: National Capital Territory; UA: Urban Agglomeration; CA: Complex Administration.
(a): including population of Noida; (b): excluding population of Noida.

Source : Census of India, 1951, 1961, 1971, 1981 and 1991.

for urbanization within the National Capital Territory has encouraged some large-scale private property developers to implement residential housing schemes outside the administrative limits of the territory of Delhi, in the neighbouring states of Haryana and Uttar Pradesh. Given the lack of a mass transport system in Delhi and the surrounding region, it is the tremendous increase in private means of transportation that has allowed the emergence of such distant townships suitable for those who can afford the price of commuting daily by car, or who compensate for the increased transport cost by the cheaper housing costs.

SIGNIFICANCE OF MIGRATION TO THE POPULATION GROWTH OF DELHI

The dramatic influx of refugees in Delhi following the partition of the country has already been underlined. In the post-Independence era, internal migration played a major role in the demographic expansion of the capital, although the relative contribution of migration has tended to decrease over the last decades. Thus, the share of net migration to the total population growth of Delhi National Capital Territory (urban and rural areas included) was 62 per cent for the 1961-71 period, 60 per cent for 1971-81 period, and declined to 50 per cent for the 1981-91 period. Migrants born outside the Capital Territory constituted 50 per cent of the population of Delhi urban agglomeration in 1971, 47 per cent in 1981 and 40 per cent in 1991. In the five years preceding the 1991 Census, about 8,83,500 in-migrants settled in the Territory of Delhi, almost 90 per cent of whom settled in the Delhi urban agglomeration.

Catchment Area of Migrants in Delhi

The trauma of partition and the massive flow of refugees is directly reflected in the composition of migrants found living in Delhi in 1951, 47 per cent of whom were born in Pakistan. With the direct demographic impact of this specific migration flow fading out over time, the contribution of migrants from foreign countries has declined. At the 1991 Census, 9 per cent of the total migrants in Delhi were recorded as having come from abroad, and only 3 per cent of those who had arrived in the last 5 years.

For a better appraisal of the composition of internal migratory flows, certain salient characteristics of the Indian urban system need to be recalled. The network of Indian cities is quite elaborate without primacy of a single metropolis at the national level. In 1991, 23 Indian cities had more than one million inhabitants. Of these, 5 had a population of over 5 million with Delhi ranking third in size. It is this 'competition' with other big metropolises at the national level that explains why the catchment area of Delhi is mainly regional. More than two-thirds of the migrants (whatever their duration of residence) living in Delhi in 1991 come from the neighbouring states of

north India: Haryana, Punjab, Rajasthan and Uttar Pradesh. This last giant state (the most populous in India) accounts for as much as 46 per cent of Delhi's migrants. This can be explained largely by its size. In 1991 Uttar Pradesh had a population of 139 million, that is 1.7 times more than the population of the other three states put together. Only 20 per cent of Delhi migrants came from the remaining parts of India (beyond the Delhi National Capital Territory and its four neighbouring states) despite the fact that this vast area contains three-quarters of the total population of the country. With the exception of Bihar, the other Indian states have contributed only marginally to the migrant population in Delhi (see Figure 13.1).

While the contribution of the neighbouring states of Delhi was already predominant in previous decades, the emergence of Bihar in the catchment area of Delhi migrants is more recent. This phenomena is best highlighted by examining the evolution of the distribution of recent migrants (with less than 5 years of residence)¹¹ according to their place of origin¹² (see Maps 13.8, 13.9, 13.10 and 13.11). Among the recent migrants residing in Delhi in 1991, 11 per cent had come from Bihar, as against only 1 per cent in 1961.

Rural/Urban Origin of Migrants

Although majority of the migrants in Delhi come from rural areas, it is worth noting that as many as 44 per cent of the total migrants residing in the territory of Delhi in 1991 were from urban areas. This is all the more remarkable given that India is a predominantly rural country (in 1991, 74 per cent of the population of India were living in rural areas). The relative proportion of migrants coming from rural and urban areas varies according to both the state of origin and distance from the capital. With the exception of Punjab,¹³ migrants coming from Delhi's neighbouring states and from Bihar are mostly from rural areas: for example, 71 per cent of migrants from Bihar, 61 to 63 per cent of those from Haryana, Rajasthan and Uttar Pradesh. On the other hand, the majority of migrants (67 per cent) from the rest of India come to Delhi from urban places. A similar pattern of rural/urban differentiation according to state of origin was also found in previous decades.

Demographic and Socio-Economic Characteristics of the Migrant Population in Delhi

As in other big Indian metropolises, majority of the migrants in Delhi are male, due to the large numbers of men who come to the capital in search of work, leaving their families behind in their native places. For example, 54 per cent of the total migrants residing in the territory of Delhi in 1991 were male, and this proportion has remained almost unchanged since 1961 (56 per cent).

The age structure of the migrant population in Delhi reveals an over-

representation of the age group 15-29 years among both males and females: hence in 1991, 51 per cent of migrants residing in Delhi for less than 5 years belonged to this age group, as against only 30 per cent of the total population of the territory of Delhi. This is also a common characteristic of migration flow towards other Indian cities.

In terms of educational level, the comparison between migrants living in Delhi for less than 5 years and the total population of the National Capital Territory reveals two interesting features. In the population aged 15 and above, the percentage of illiterates among migrants is higher than among the total population, although the gap is not very wide (25 per cent as against 20 for males, and 41 per cent as against 38 for females in 1991). At the top of the educational scale, the proportion of migrants educated up to graduate level or above is almost similar to that observed in the total population (16 per cent as opposed to 17 per cent). These characteristics underline the diversity of the migrant population in terms of educational capital, and reveal that Delhi attracts not only large number of illiterate migrants but also highly qualified sections of the population.

The socio-economic diversity of the migrant population in Delhi is confirmed by the occupational structure of migrants, as analysed on the basis of the 1981 Census data on migrants who have come to Delhi for employment reasons¹⁴ (a group which represents 51 per cent of male migrants, but only 5 per cent of female migrants). A comparison between the occupational structure of the total working population of urban Delhi and that of migrants who had been in the capital for less than 5 years in 1981 revealed no salient distortions between the two distributions, although migrant workers were proportionally over-represented in production, transportation and construction work (54 per cent as against 41 per cent) and in service work at the expense of clerical and sales work. As one would expect of a multi-functional diverse capital of the size of Delhi, the urban labour market attracts very diverse categories of workers, from unskilled casual labourers and construction workers to highly qualified civil servants and professionals.

Reasons for Migration: The Specific Pull of the Labour Market

Employment constitutes the most significant factor of migration for men: 68 per cent of migrants of rural origin residing in the territory of Delhi in 1991 and 59 per cent of those of urban origin had come to Delhi for employment reasons. Yet, among female migrants only 4 per cent had migrated for this reason, without any particular variation between those of rural and urban origin. The main reasons for female migration were families moving house and marriage which altogether accounted respectively for 48 per cent and 40 per cent of the female migrants living in the territory of Delhi in 1991.

The migration survey conducted by the National Sample Survey

Organization in 1987-8 (forty-third round) revealed clearly the specific pull of the capital's labour market, by comparison to other Indian towns and cities. Whereas 66 per cent of male migrants who arrived in the last 10 years came for employment reasons, only 49 per cent of those arriving in other Indian towns and cities gave employment as their main reason for migrating; the corresponding proportions among female migrants were 10 and 5 per cent respectively.

To conclude, let us synthesize the main characteristics of the process of metropolization at work in and around Delhi. The population growth of the capital in the post-Independence period has been remarkably rapid for an urban agglomeration of this size, notwithstanding its slowdown over the last decades. This took place along with a trend of population deconcentration, including depopulation of the old city core, combined with a process of suburbanization which is reflected in the fast growth of peripheral zones. This centrifugal pattern of population dynamics has spread beyond the administrative boundaries of the National Capital Territory with the rapid development of satellite towns. Migration has played a major role in the demographic evolution of Delhi. As expected of a large multi-functional metropolis providing ample employment opportunities, the capital city has attracted a great diversity of migrants, both in terms of their socio-economic backgrounds and their rural/urban origin. Yet, the catchment area of the capital remains dominated by the neighbouring states.

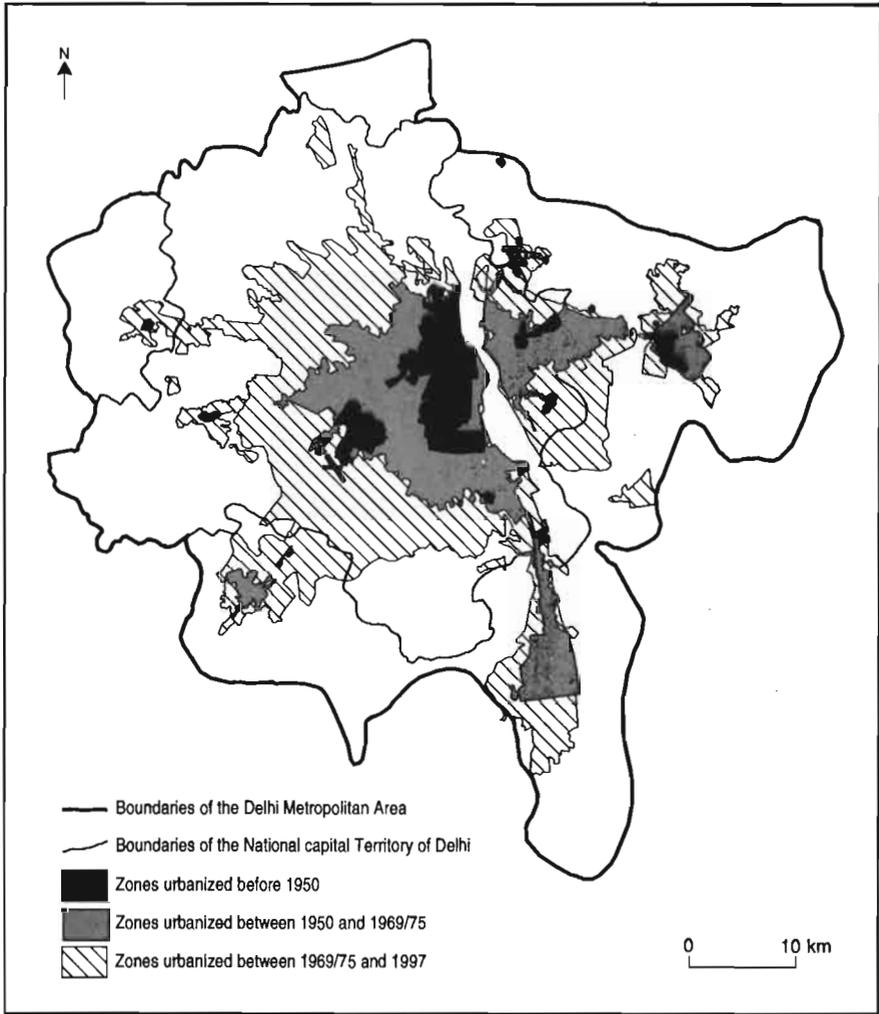
SOURCE OF POPULATION STATISTICS

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NOTES

1. A detailed analysis of the spatial differentials of population growth and densities at the charge (census division) level according to 1981 and 1991 Census data can be found in V. Dupont and A. Mitra, 'Population Distribution, Growth and Socio-economic Spatial

- Patterns in Delhi. Findings from the 1991 Census Data', *Demography India*, vol. 24, 1995, nos. 1 and 2, pp. 101-32.
2. J. Brush, 'Growth and Spatial Structure of Indian Cities', in A.G. Nobel and A.K. Dutt (eds.), *Indian Urbanization and Planning, Vehicles of Modernization*, New Delhi: Tata McGraw Hill, 1977, pp. 64-93.
 3. J. Brush, 'Recent Changes in Ecological Patterns of Metropolitan Bombay and Delhi', in V.K. Tewari, J.A. Weistein and V.L.S.P. Rao (eds.), *Indian Cities: Ecological Perspectives*, New Delhi: Concept, 1986, pp. 121-49.
 4. Ch. J. Billand, *Delhi Case Study: Formal Serviced Land Development*, New Delhi: USAID, 1990, pp. 2-7.
 5. Government of National Capital Territory of Delhi (Planning Department), 'Back-grounder', State Level Seminar on Approach to Ninth Five Year Plan (1997-2002), Delhi: Government of National Capital Territory of Delhi, December 1996, p. 11.
 6. For a glimpse of everyday life in a squatter settlement, see Saraswati Haider's essay, and for insight into the development of slum clearance and resettlement programmes, see Emma Tarlo's essay, in this volume.
 7. Slum & Jhuggi-Jhonpri Department, Municipal Corporation of Delhi.
 8. For insight into the development of rich unauthorised colonies, see Anita Soni's essay, in this volume.
 9. According to estimates from the Sample Registration System, the average natural rate of increase in the urban areas of Delhi was 2.0 per cent per year from 1971 to 1980, and 2.1 per cent from 1981 to 1990.
 10. National Capital Region Planning Board, *Regional Plan 2001, National Capital Region*, Delhi: Ministry of Urban Development, Government of India, 1988, p. 9.
 11. Except in the 1961 Census where it corresponds to a duration of residence in Delhi of 5 years or less.
 12. 'Place of origin' refers to the place of birth in the 1961 Census and to the place of last previous residence in subsequent censuses (1971, 1981 and 1991). The Maps 13.3, 13.9, 13.10 and 13.11 pertain only to migrants whose place of origin was located in India. For an appraisal of the evolution of the share of foreign countries among the migrants' places of origin, see Figure 13.1.
 13. Only 28 per cent of migrants coming from Punjab are of rural origin.
 14. The corresponding table for the 1991 Census has not been released.



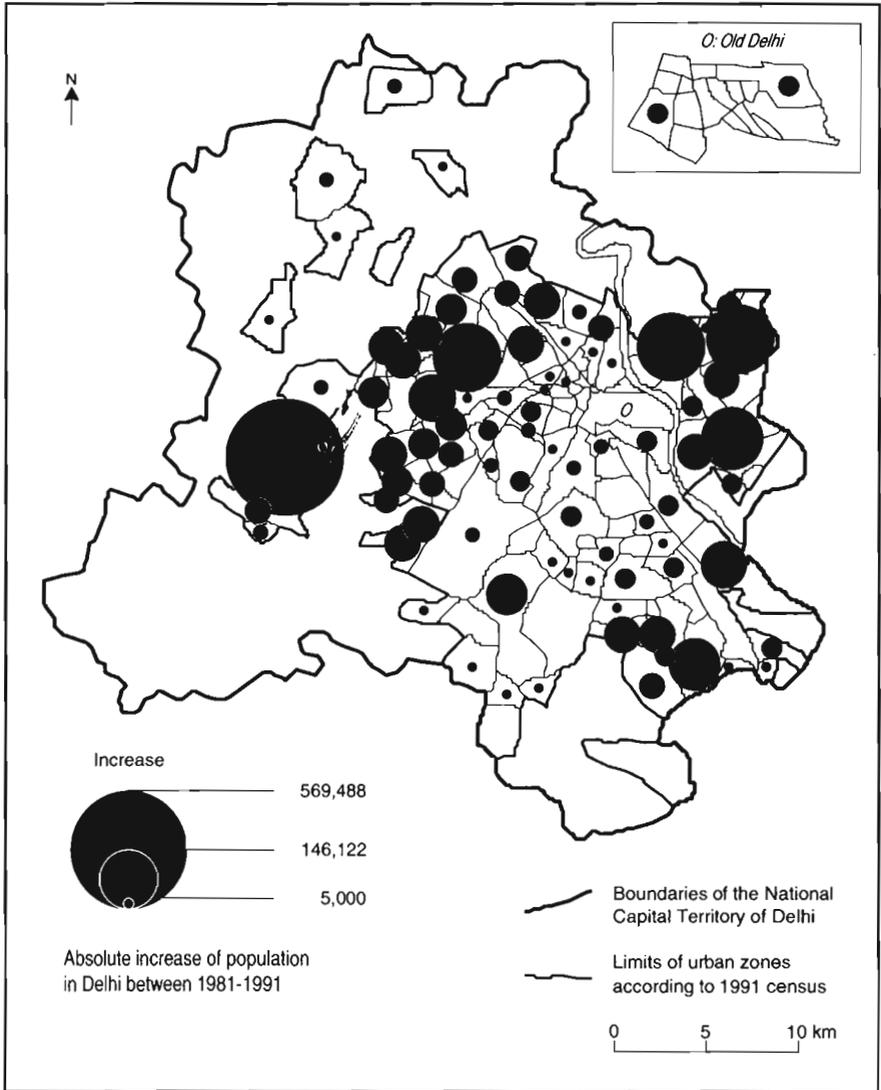
Sources : Survey of India, 1950, scale 1:63,360,
 Survey of India, 1970, 1976, 1980, scale 1:50,000,
 Image IRS1-C 1997.

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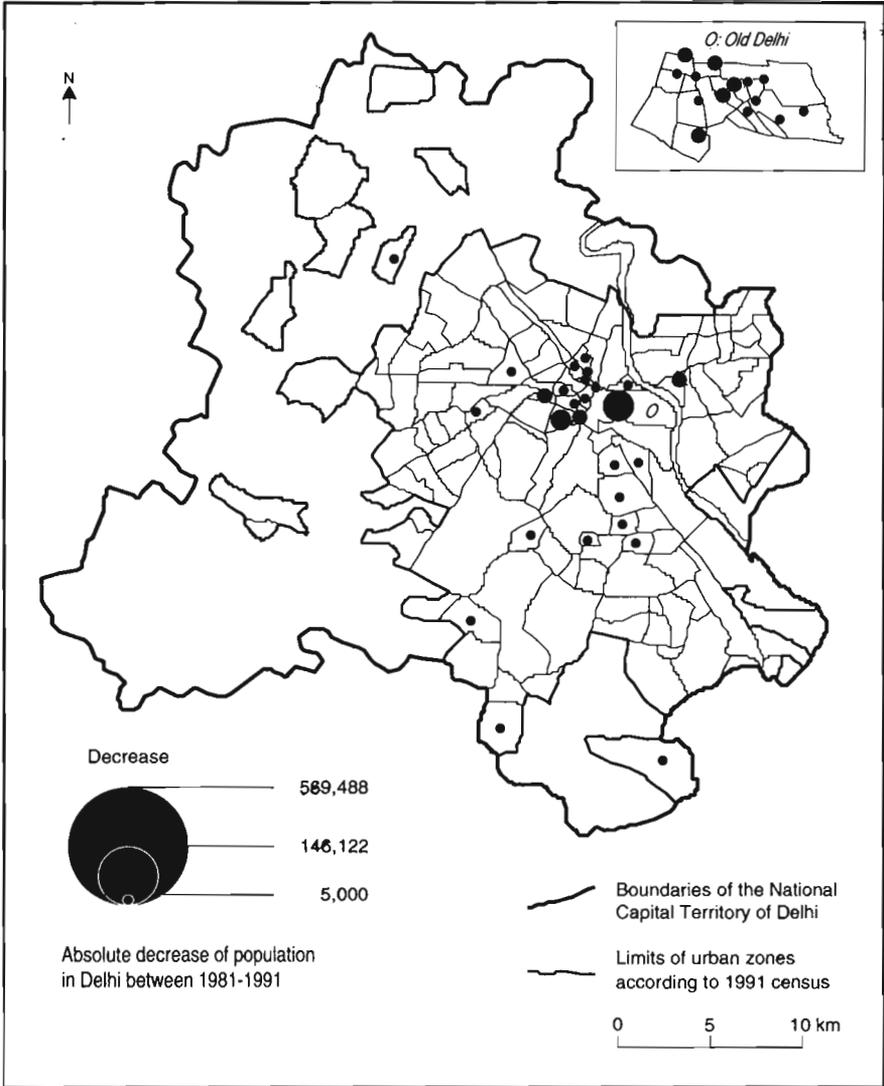
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MAP 13.1 SPATIAL EXPANSION OF URBANIZED ZONES IN THE
 DELHI METROPOLITAN AREA FROM 1950 TO 1997.



Source of data: Census of India, District Census Handbook, Delhi, 1981 & 1991. © V. Dupont, IRD
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MAP 13.2a INCREASE AND DECREASE OF POPULATION FROM 1981 TO 1991 IN DIFFERENT ZONES OF THE NATIONAL CAPITAL TERRITORY OF DELHI.

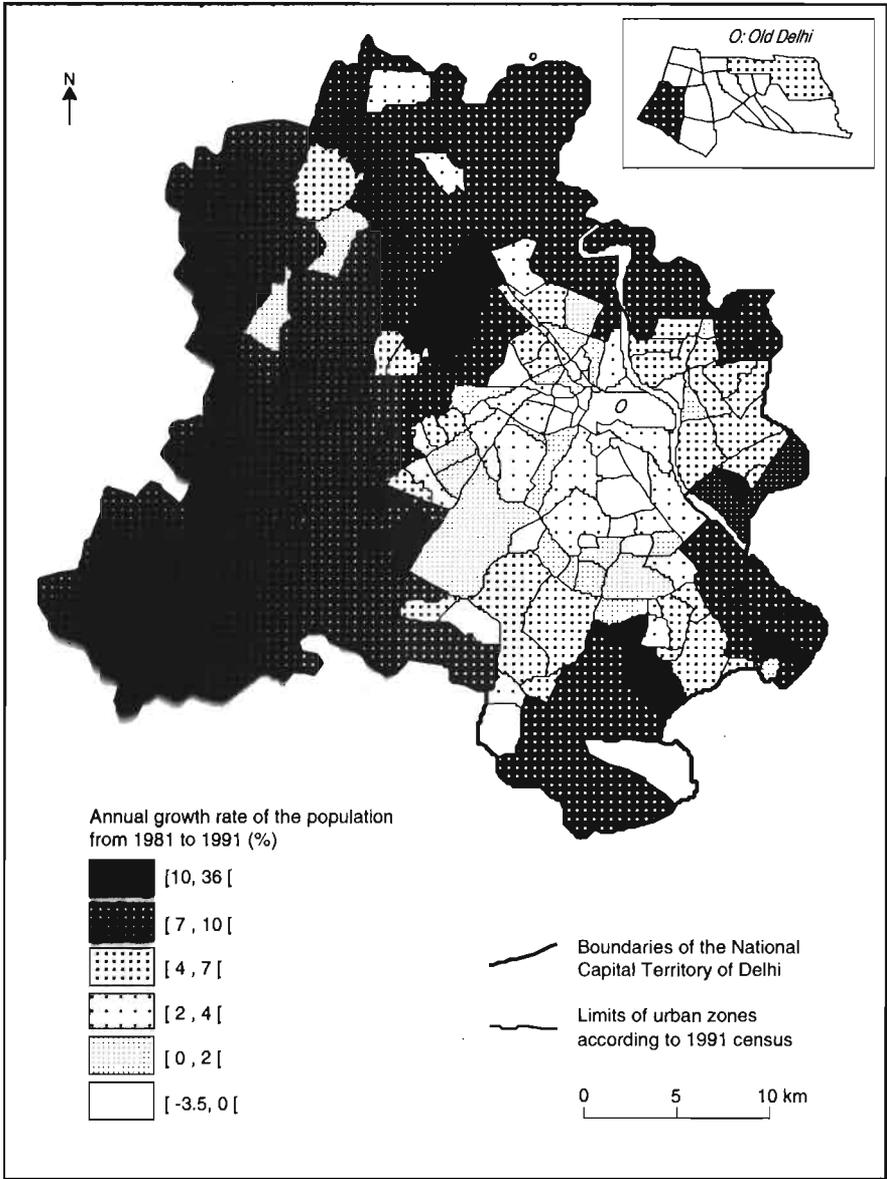


Source of data : Census of India, District Census Handbook, Delhi, 1981 & 1991.

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MAP 13.2b INCREASE AND DECREASE OF POPULATION FROM 1981 TO 1991
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 OF DELHI.

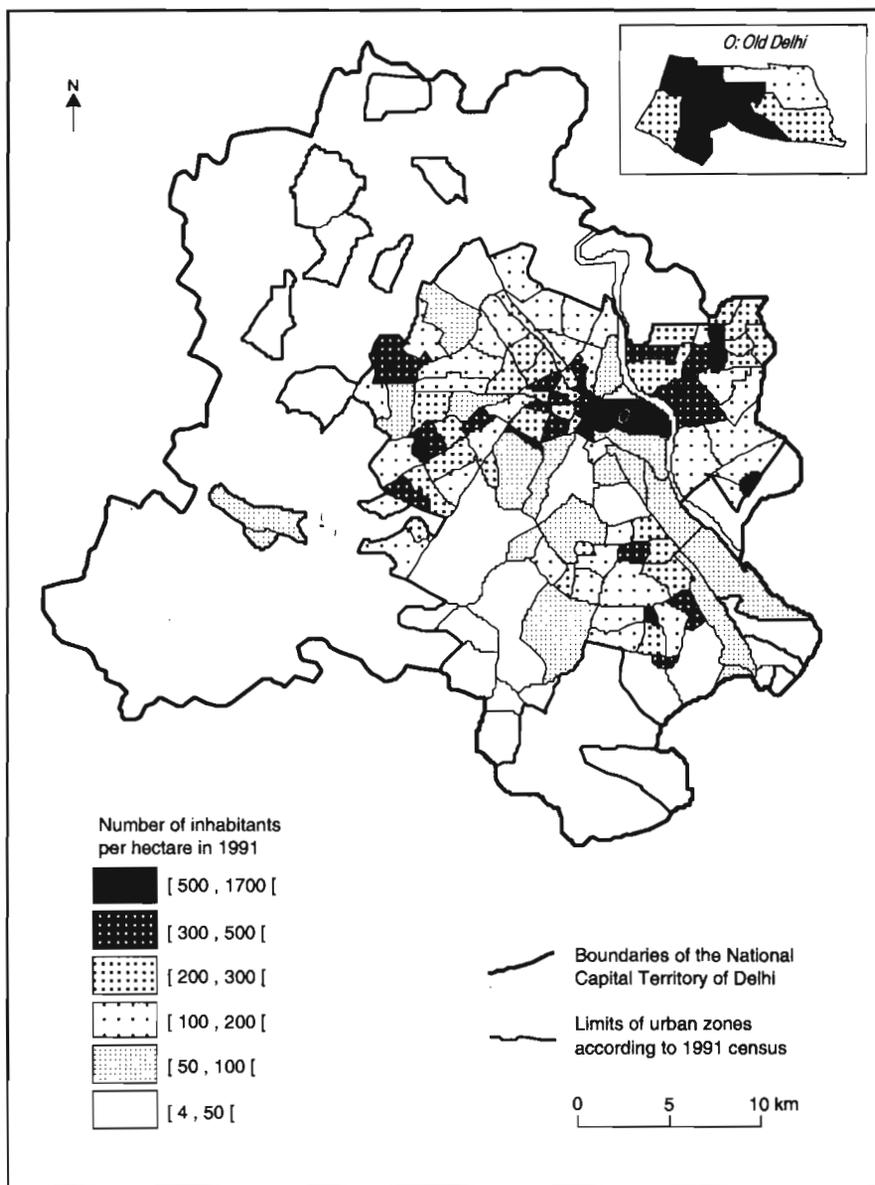


Source of data : Census of India, District Census Handbook, Delhi, 1981 & 1991.

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MAP 13.3 ANNUAL GROWTH RATE OF THE POPULATION FROM 1981 TO 1991 IN DIFFERENT ZONES OF THE NATIONAL CAPITAL TERRITORY OF DELHI.

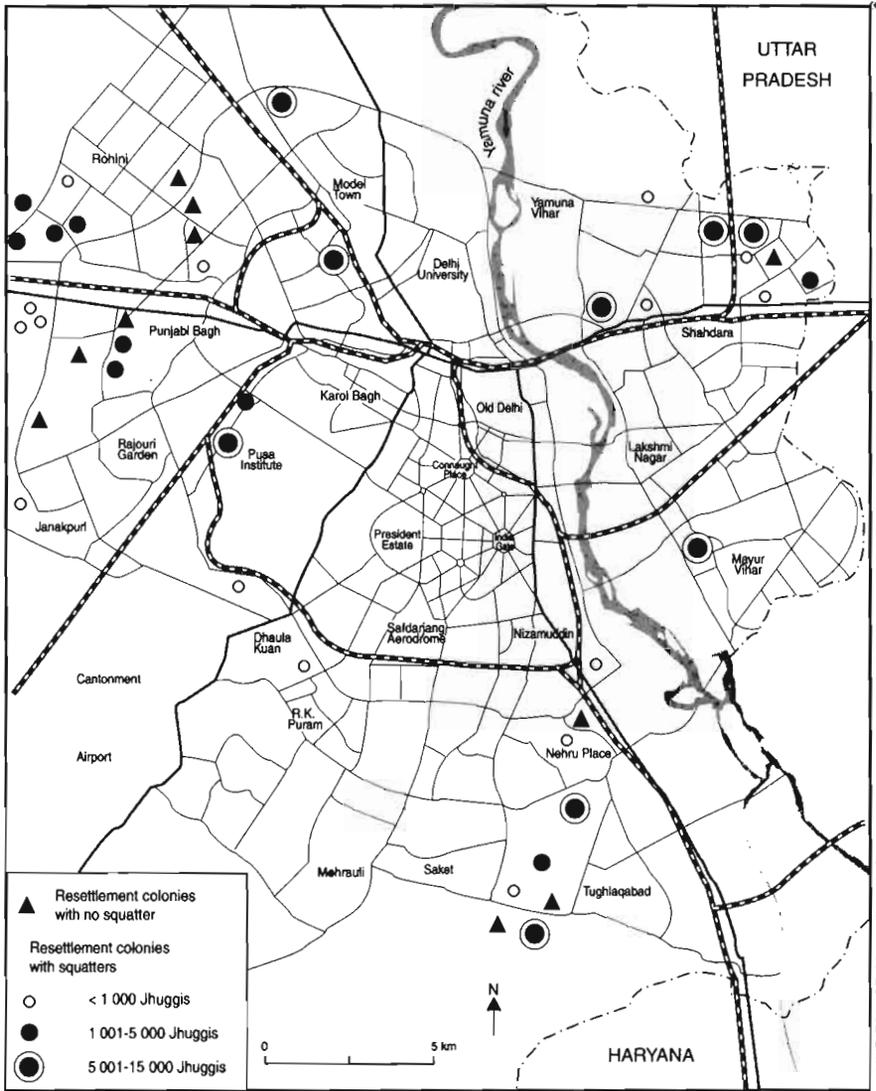


Source of data : Census of India 1991, District Census Handbook, Delhi.

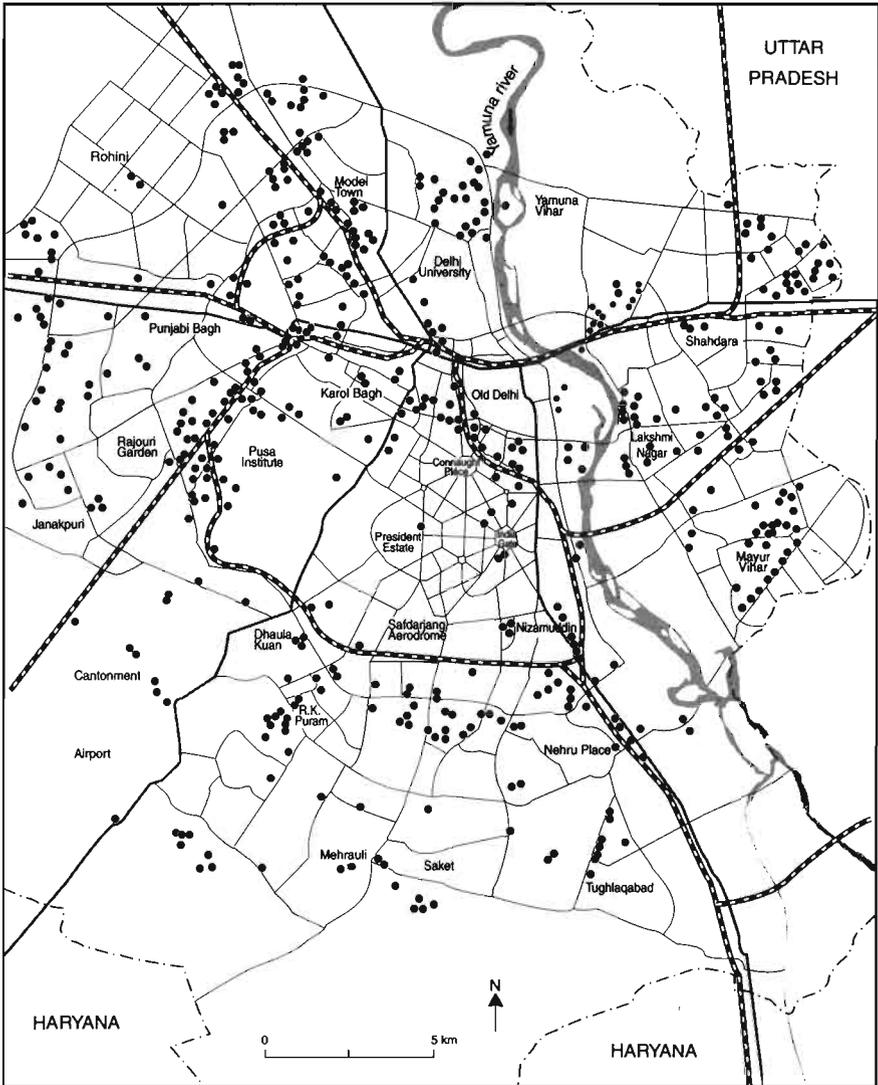
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 F. Dureau (UMR Regards CNRS-IRD, Bordeaux).

MAP 13.4 POPULATION DENSITIES IN DIFFERENT ZONES OF THE NATIONAL CAPITAL TERRITORY OF DELHI IN 1991.



MAP 13.5 LOCATION OF RESETTLEMENT COLONIES IN DELHI URBAN AGGLOMERATION.

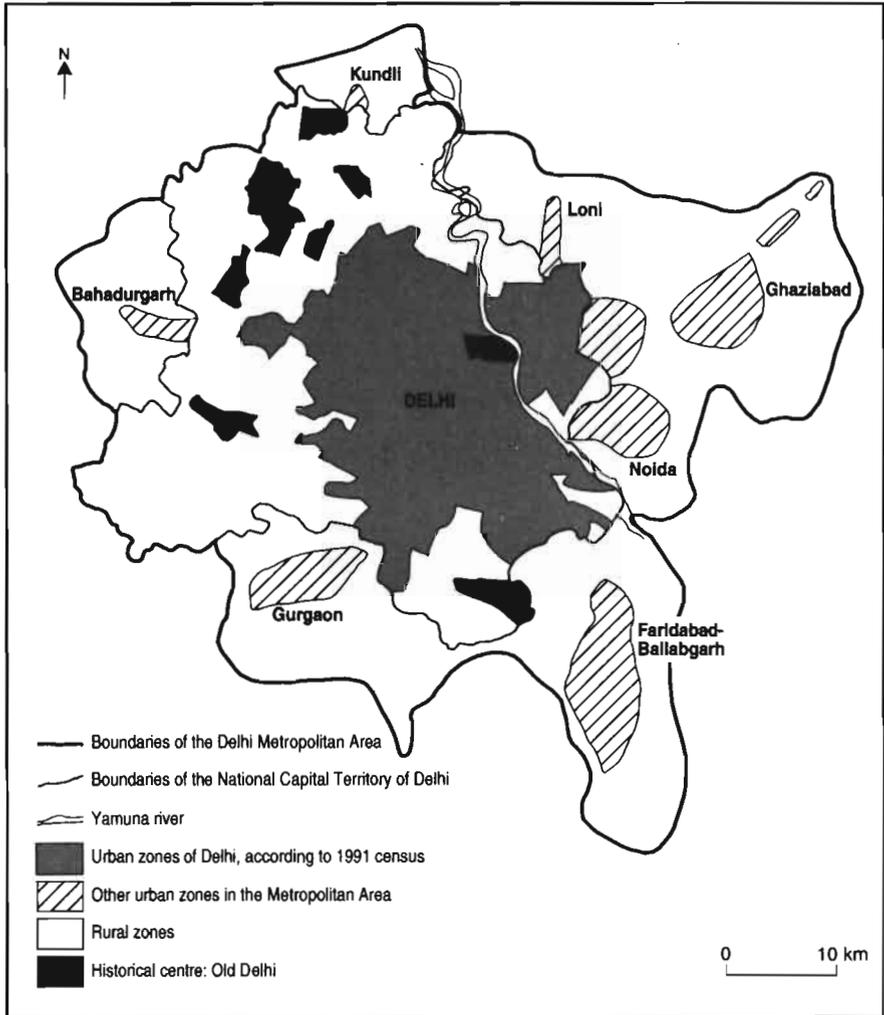


Source: Slum & Jhuggi Jhonpri Department, Municipal Corporation of Delhi.

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MAP 13.6. LOCATION OF SQUATTER SETTLEMENTS IN DELHI URBAN AGGLOMERATION.

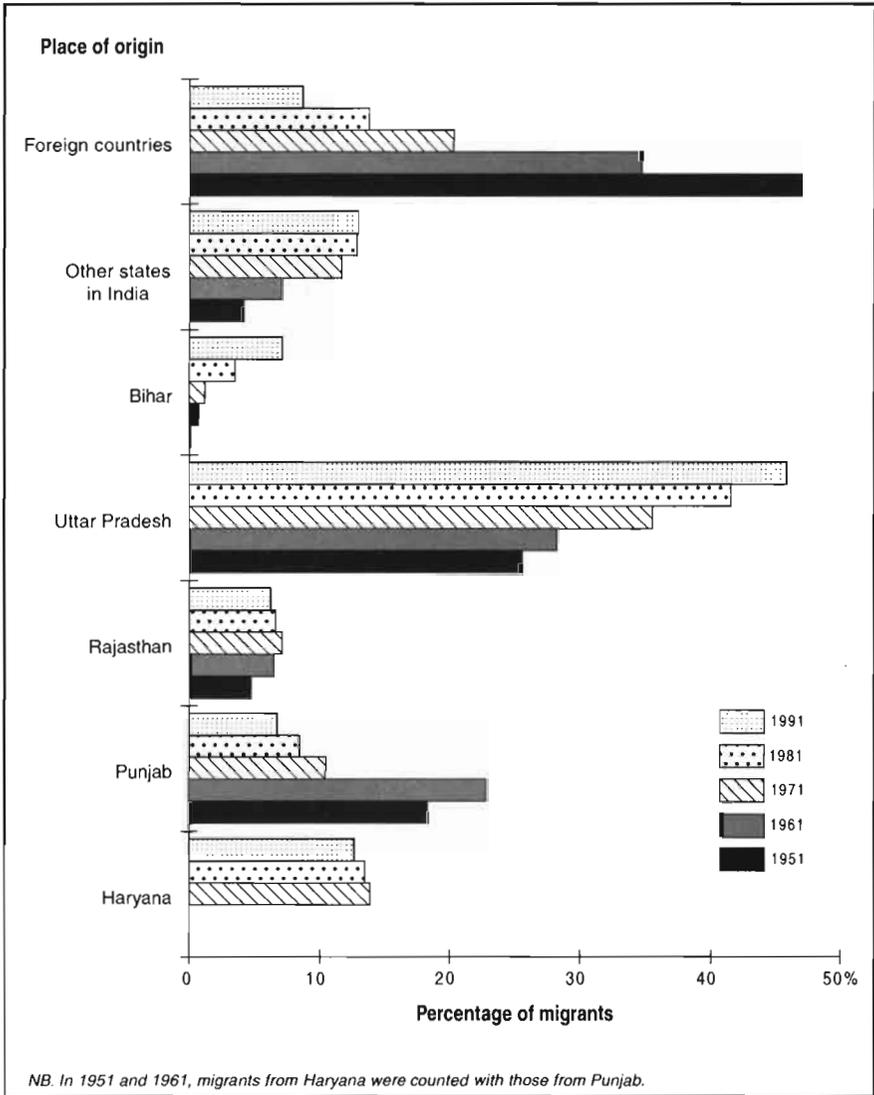
UMR ESPACE, Montpellier, 1999



Sources : Composed on the basis of the following maps: © V. Dupont, IRD
 'Map of Delhi' in *Census of India 1991, District Census Handbook*, Delhi, Directorate of Census Operation, Delhi;
 'Land use 1986-87' in *Regional Plan 2001, National Capital Region*, National Capital Region Planning Board, New Delhi, Dec. 1988;
 'Delhi Metropolitan Area' in *Master Plan for Delhi, Perspective 2001*, Delhi Development Authority, New Delhi, August 1990;
Eicher City Map of Delhi, Eicher Goodearth Ltd. New Delhi, 1996.

Digitized map : R.M.S.I. (New Delhi),
 Laboratoire de Cartographie IRD (Bondy),
 F. Dureau (UMR Regards CNRS-IRD, Bordeaux).

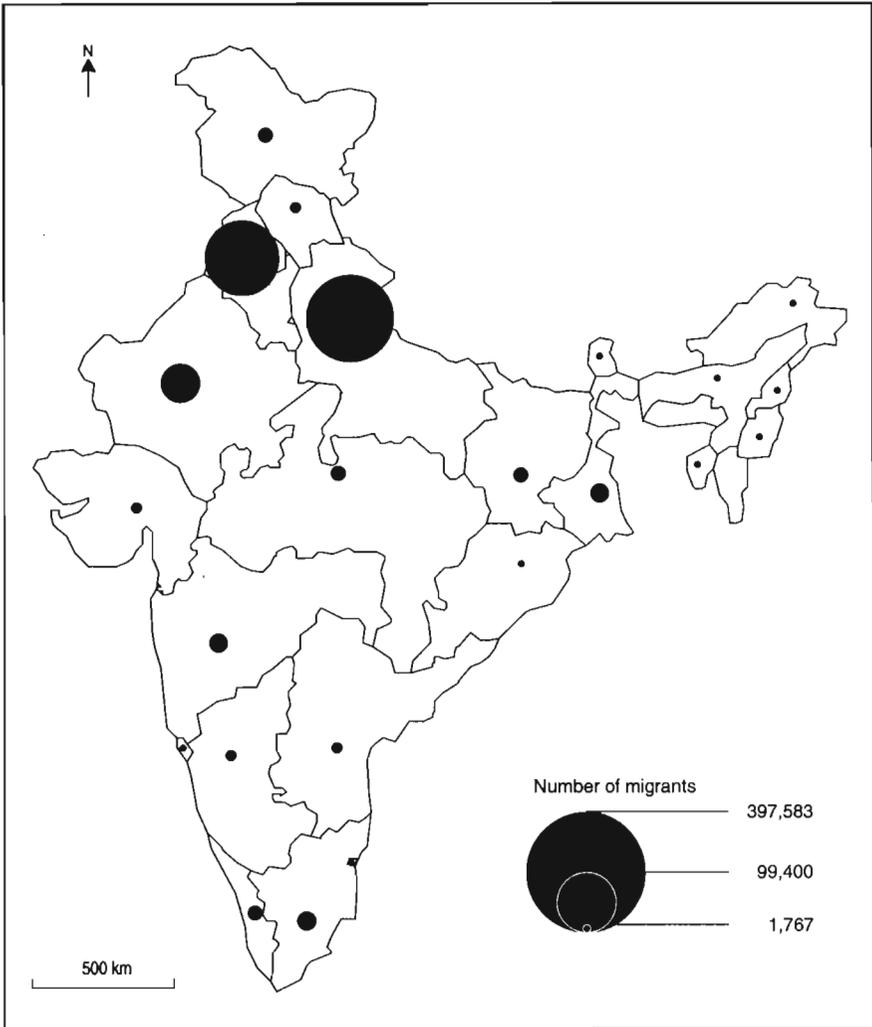
MAP 13.7 DELHI METROPOLITAN AREA: THE CENTRAL URBAN AGGLOMERATION AND ITS PERIPHERAL TOWNS.



Source: Census of India, Migration Tables, 1951, 1961, 1971, 1981, 1991.

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FIG. 13.1 PERCENTAGE DISTRIBUTION OF MIGRANTS IN THE NATIONAL CAPITAL TERRITORY OF DELHI BY PLACE OF ORIGIN (1951-91).

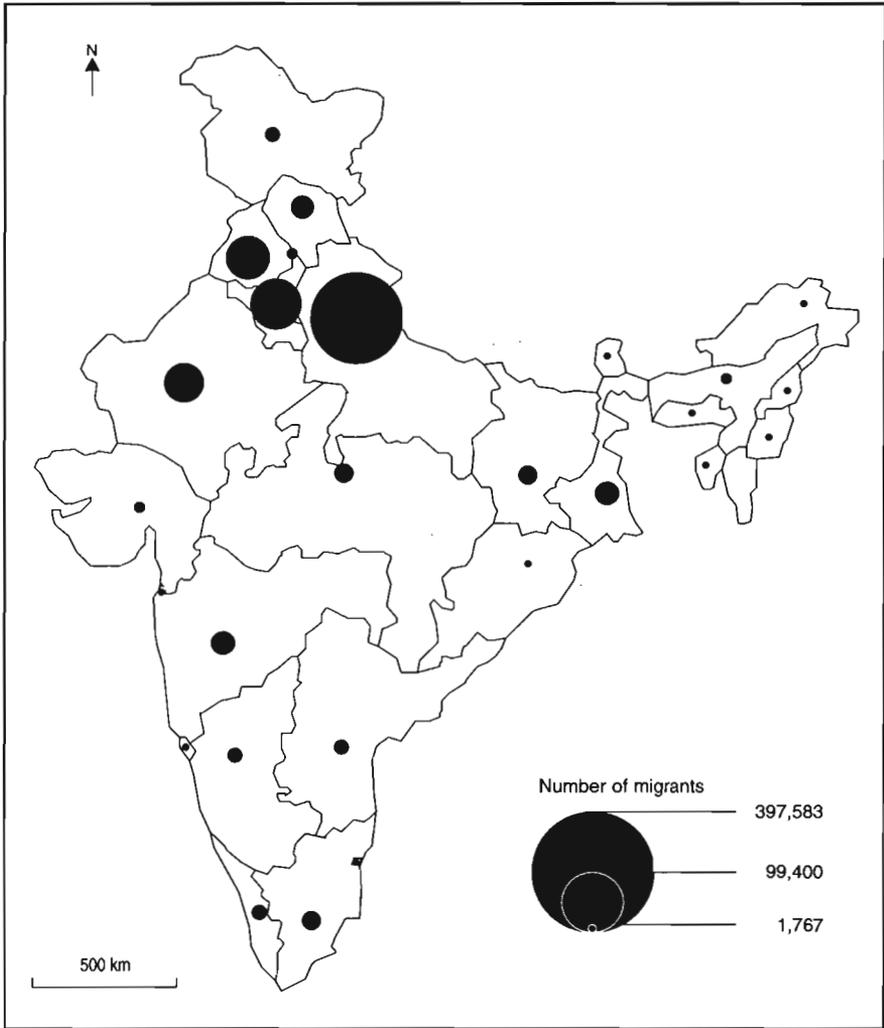


Source of data : Census of India 1961, Vol. XIX Delhi, Migration Tables.

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Digitized map : Ph. Cadene at the French Institute of Pondicherry,
 Laboratoire de Cartographie IRD (Bondy),
 F. Dureau (UMR Regards CNRS-IRD, Bordeaux).

MAP 13.8 NUMBER OF RECENT MIGRANTS IN THE NATIONAL CAPITAL TERRITORY OF DELHI IN 1961 BY STATE OF ORIGIN (DURATION OF RESIDENCE: 5 YEARS OR LESS).

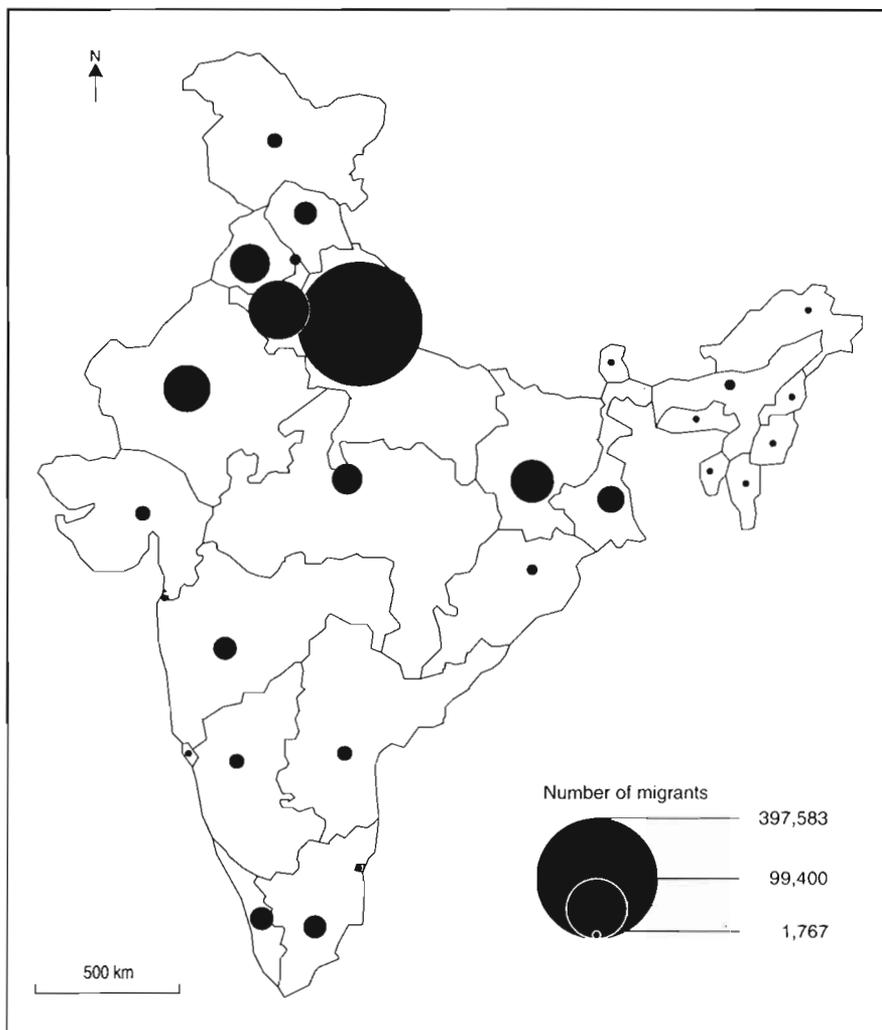


Source of data : Census of India 1971, Series 27 Delhi, Migration Tables.

© V. Dupont, IRD

Digitized map : Ph. Cadène at the French Institute of Pondicherry,
 Laboratoire de Cartographie IRD (Bondy),
 F. Dureau (UMR Regards CNRS-IRD, Bordeaux).

MAP 13.9 NUMBER OF RECENT MIGRANTS IN THE NATIONAL CAPITAL TERRITORY OF DELHI IN 1971 BY STATE OF ORIGIN (DURATION OF RESIDENCE: LESS THAN 5 YEARS).

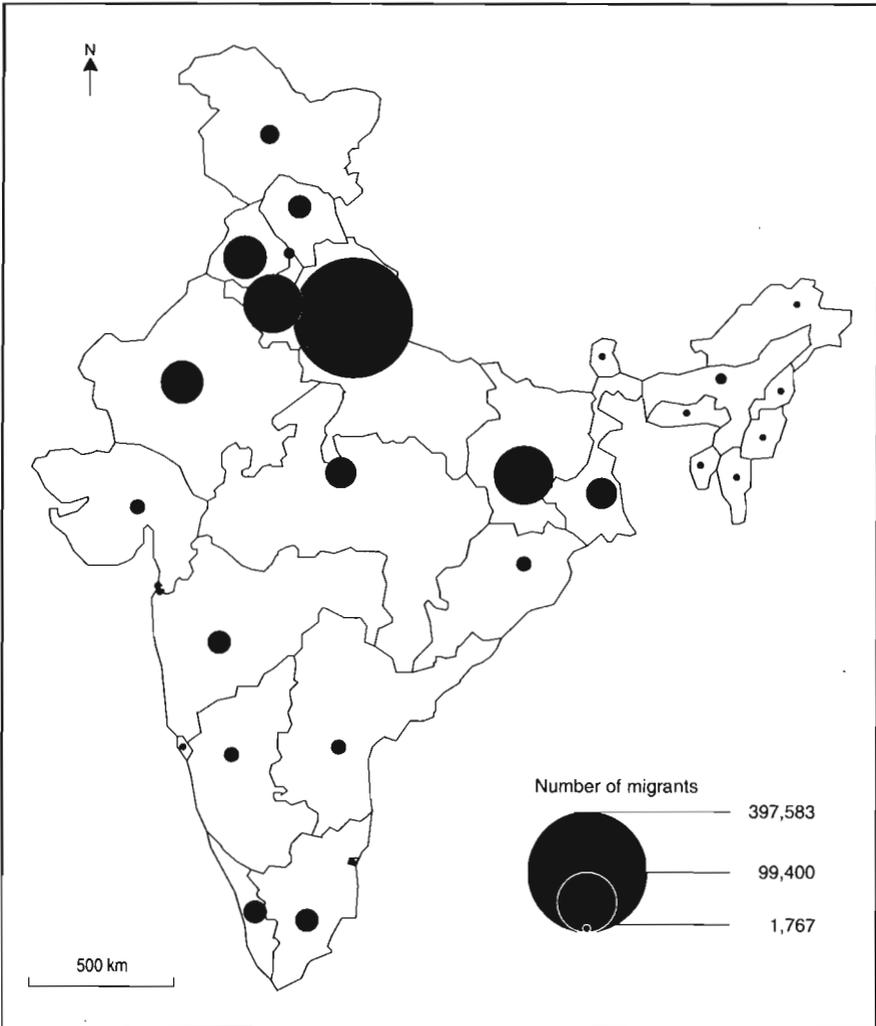


Source of data : Census of India 1981, Series 28 Delhi, Migration Tables.

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Digitized map : Ph. Cadène at the French Institute of Pondicherry,
 Laboratoire de Cartographie IRD (Bondy),
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MAP 13.10 NUMBER OF RECENT MIGRANTS IN THE NATIONAL CAPITAL TERRITORY OF DELHI IN 1981 BY STATE OF ORIGIN (DURATION OF RESIDENCE: LESS THAN 5 YEARS).



Source of data: Census of India 1991, Series 31 Delhi, Migration Tables.

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Digitized map: Ph. Cadène at the French Institute of Pondicherry,
Laboratoire de Cartographie IRD (Bondy),
F. Dureau (UMR Regard CNRS-IRD, Bordeaux).

MAP 13.11 NUMBER OF RECENT MIGRANTS IN THE NATIONAL CAPITAL TERRITORY OF DELHI IN 1991 BY STATE OF ORIGIN (DURATION OF RESIDENCE: LESS THAN 5 YEARS).



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