Decentralized Industrialization and Urban Dynamics

The Case of Jetpur in West India

Véronique Dupont

Town and country planners in developing countries have long been seized with the problems of achieving a balanced pattern of urban settlements particularly through decentralizing industrial development. These objective have in turn engendered a focus on the potential role that small and medium-sized towns can play in regional and national development. It is in this framework that Véronique Dupont has undertaken a detailed study of the dynamics of a middle-sized industrial town in India called Jetpur and its relationship with the surrounding rural hinterland.

The major purpose of this study is to investigate the capacity of a medium-sized town such as Jetpur to attract and settle populations in the context of economic and industrial activity and simultaneously to understand what the migrants expect in terms of their economic and social strategies consequent to shifting to a town. Based on a detailed case study, the author evaluates the pull effects of labour markets; patterns of socio-economic integration in the urban context; and the contribution that the migrants have made to the urban growth and industrial development of Jetpur from both a demographic and an economic perspective. In order to better understand the dynamics of these forces, she examines a whole range of issues including the functioning of urban labour markets, the investment and employment strategies of entrepreneurs, and the interaction between population movement and urban economic activities. In conclusion, the author highlights the implications of her findings for the formulation of appropriate industrial and urban policies.

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New Delhi,
February 1994

VÉRONIQUE DUPONT

NOTES

1. Renamed 'Gujarat Institute of Development Research' in 1992.
2. *Centre of d'Etudes de l' Inde et de l'Asie du Sud* (Centre of Indian and South Asian Studies in Paris).
3. *Institut National d'Etudes Démographiques* (French National Institute of Demographic Studies).

Introduction

The decentralization of industrial development and achieving a balanced pattern of urban settlements have been recurrent concerns of town and country planning policies in many developing countries, and have led to a focusing of attention on the potential role of small and middle-sized towns in regional and national development. This book deals with such issues in the context of the second 'most populated' country in the developing world—and in the world—India.

It aims basically at a better understanding of the dynamics of medium-sized industrial towns in relation to their rural hinterland. In this respect a first direction of research investigates the capacity of these towns to attract and settle populations in relation to their economic functions, and to understand what migrants—and other economic agents—can expect from a residence or a job in such towns with regard to their social and economic strategies. From this angle, the scope of the study is twofold: to evaluate the pull effects of the labour markets of medium-sized industrial towns, and to examine the patterns of socio-economic urban integration. A complementary approach is to consider the migrants—like the native city-dwellers—as dynamic agents, or actors, who are in a position to influence the urbanization process. From this angle, the research objective is to appraise the contribution of townward migrants (as compared to natives) to urban growth and industrial development, from a demographic as well as an economic viewpoint. Hence, the functioning of the urban labour markets, the investment strategies of the entrepreneurs and the employment strategies of the workers, and the interactions between population movements and urban economic

activities are some of the major themes running through our research.

Well-documented studies on the dynamics of middle-sized industrial towns as related to their surrounding rural environment, which should constitute the basis for the elaboration of town and country planning policies, are required. The present study responds to this need, and provides original data to advance our expertise in this field.

The research presented is based on the case study of a rapidly growing middle-sized industrial town in Gujarat, which is one of the most urbanized and industrialized states in India, and therefore provides a particularly appropriate context. The selected town, namely Jetpur in the sub-region of Saurashtra (see Figure 1), exemplifies small-scale mono-industrial development, launched by local entrepreneurs, and based on the traditional craft of textile dyeing and printing. The focus on what seems to be a successful regional growth centre enables us to identify the mechanisms of industrial and urban growth at the bottom level.

In order to have a good grasp of the issue at stake, the general debate about the decentralization of urbanization with its theoretical bases and pragmatic rationale is expounded in Chapter 1. How have such issues been tackled by scholars and planners in India, given the context of urbanization in this country? How has the concern with balanced urban and industrial development been taken into account in the policies implemented by the Indian government? These questions are also examined in the first chapter.

The approach followed for the case study and the system of observation which was implemented are both described in Chapter 2. The dynamics of the selected town are related to the surrounding rural dynamics, especially through the analysis of migration and other spatial moves, and the processes of urbanization and industrialization at work are apprehended mainly through their social actors. Hence, the system of investigation combined several levels and angles of observation: the town in its regional background, the villages of origin of the migrants, the industrial establishments, the households (including their urban and rural segments), and the individual residents (entrepreneurs as well as workers).

Several types of surveys, quantitative as well as qualitative, were conducted, They included the following: a preliminary phase of qualitative observation; a statistical survey on migration and employment covering 10 per cent of households in the urban agglomeration and five nearby villages, corresponding to a sample of 14,412 residents; a survey of 50 industrial establishments with in-depth interviews of entrepreneurs; a collection of 64 detailed migration and occupation histories of workers; in-depth interviews in the migrants' places of origin, covering a sample of 10 villages and two small towns. Besides, we implemented the principle of participatory observation during the entire field operations. The variety of the observations aimed at a better grasp of the different facets of the process of urbanization. The methodology of the different surveys and a critical appraisal of data collection are detailed in the second chapter.

The primary data were collected between October 1987 and November 1989, before the Government of India launched its economic reforms in July 1991. The research area was however revisited in August 1992, in order to update our observations and final conclusions. This enabled us to include in our study a tentative analysis of the consequences of the opening of a new era of economic liberalization.

As stated above and argued in the first two chapters, a comprehensive understanding of the economic and demographic dynamics of a middle-sized town requires a regional perspective. Thus, Chapter 3 presents the main socio-economic characteristics of the sub-region in which Jetpur is integrated, namely Saurashtra, and in which most of the migration and other circular population moves affecting this town are rooted.

The historical background of the development of Jetpur is expounded in the second part of the chapter. Unlike many small and middle-sized industrial towns in India, the economic expansion of Jetpur is not based on agricultural processing activities. At the time of the princely states (in the nineteenth century till Independence) Jetpur flourished as a textile trading town. It is shown in this chapter how Jetpur was converted into an industrial centre specializing in textile dyeing and printing, and how the transition from household crafts to a manufacturing type of production gradually took place in the

fifties. There is a further attempt to highlight the factors of industrial growth and concentration in Jetpur, which led to the emergence of this town as a regional growth pole.

The impact of the industrial expansion on urban population dynamics is analysed in Chapter 4, so as to understand the demographic mechanisms of the formation of an urban agglomeration of about 100,000 inhabitants. Particular attention is hence given to rapid population growth, increasing in-migration, the in-migrants' catchment area and urban spread. The differential effect of in-migration on the demographic and socio-economic structure of the urban population is also examined. Lastly, some indications are given concerning out-migration from the urban agglomeration.

Following the demographic analysis of the dynamics of Jetpur, Chapter 5 is devoted to the structure of the urban labour market. Its first objective is to appraise the degree of dependence of the urban economy upon the textile dyeing and printing industry, in terms of employment generated, as compared with the other branches of activities for the population residing not only in the urban agglomeration but also in the surrounding villages. Hence, this will indicate as well the degree of integration of the urban and rural economies.

Another objective of this chapter is to identify the most vulnerable sections of the present-day labour force through an analysis of the disparities in labour status, which includes the criteria of protection, autonomy and regularity in employment. The factors that influence labour supply are also indicated.

The next set of questions deals with the segmentation of the urban labour market: What kind of barriers exist for entry into the urban labour market, according to the branch of industry and the category of employment? What are the most meaningful demarcation lines in the structure of the labour force?

Lastly, there is an attempt to evaluate the migratory attraction effects of the various urban functions with a correlated question: Does the industrial sector exert a specific 'pull' on labour migrants? Does labour migration respond—and contribute—to the dynamism of the urban economy as a whole?

The following two chapters focus on the leading economic sector in the town: the textile dyeing and printing industry. In

order to understand the conditions in which contemporary industrial investment has been taking place in Jetpur, and thus to assess the extent to which this case study can exemplify decentralized small-scale industrialization, the economic characteristics of the textile hand-printing industry are described in Chapter 6.

Beyond this concern, the main purpose of this chapter is to apprehend the process of industrialization in a middle-sized town at the micro-social level, through the analysis of the socio-economic background and investment strategies of the entrepreneurs. In addition to the gradual transition in capital accumulation from family craft to industrial production, two types of sectorial transfer of capital (from trade and agriculture) to urban industry are highlighted. This shows in particular how the development of industry in Jetpur has benefited from the progress in agriculture in the surrounding region. The question of upward socio-economic mobility generated by the process of industrialization is also examined.

In order to identify the factors of entrepreneurship, Chapter 6 explains the role of the extended family, of business and political contacts, and of education in the emergence and success of entrepreneurship. Another important point dealt with is the possible coalescence of the industrialists into an association and beyond it into a social class.

Given the close link between the development of the cloth trade and the emergence of the textile printing industry in Jetpur, another issue to investigate is the role of traders in the current organization of the printing industry and their control over it.

A section on the problems and prospects of Jetpur's dyeing and printing industry closes this chapter. This indicates some of the common difficulties faced by entrepreneurs in the small-scale industrial sector, and the limitations of an urban economic pattern which is based on a single industry.

While Chapter 6 deals extensively with the entrepreneurs of Jetpur's dyeing and printing industry, Chapter 7 focuses on the large proletariat engendered by the expansion of this industry. This chapter examines in detail the working conditions of the different categories of industrial hired workers, including in particular the system of recruitment and payment which is the basic determinant of the workers' welfare.

Following this preliminary description, the main objective of this chapter is to investigate the role of industrial employment as a vehicle of socio-economic upward mobility or, on the contrary, as an agent strengthening segmentation of the labour force. Hence, particular attention is paid to the socio-economic background of the industrial workers, to the channels of access to employment in the textile industry, to the possibilities of promotion within the industrial sector, and to the workers' future prospects.

The question of segmentation of the industrial labour force is further related to the formation of an industrial working class: Does common work experience in the factory contribute to the weakening of communal and caste-based barriers? Do the actual working conditions in this industry generate new forms of discrimination and fragmentation? What is the impact of the trade unions on the workers?

The issues discussed in this chapter will help us to appraise how far the workers have been able to benefit from the process of industrial development to which they contribute.

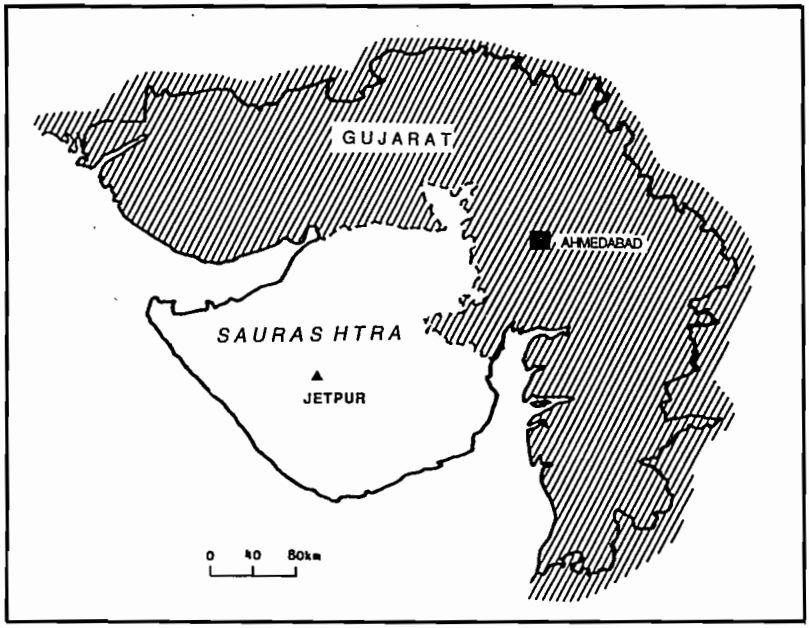
Chapter 8 centres on labour migration as it affects the town of Jetpur, as well as other population movements motivated by economic factors, with the aim of examining their determinants and underlying logic. This investigation concerns more precisely the entrepreneurs and hired workers of the industrial sector. The issues to explore include the rationale of migratory paths, the reasons for migrating or commuting, the choice of the in-migration town, the role of the family and other social networks in the mobility patterns, the migrants' urban insertion and the relations maintained with the place of origin.

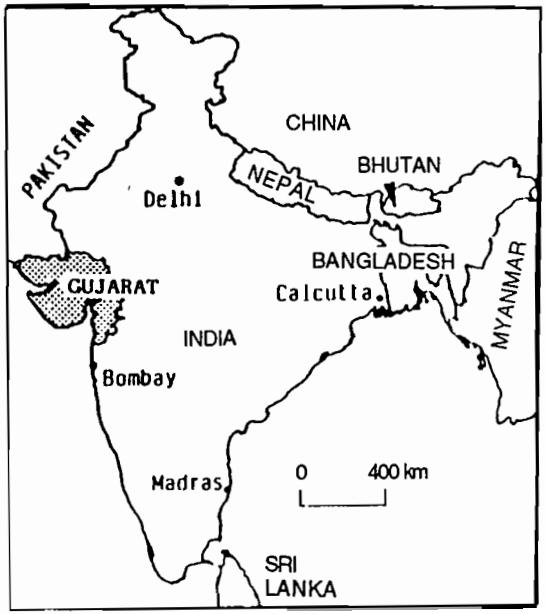
Chapters 6 and 7, which respectively focus on the entrepreneurs and the hired workers in the printing industry, also contribute data on important issues related to the choice of the in-migration town: What conditions do the migrants find in Jetpur to ensure their economic and social survival or prosperity, and to contribute to that of their familial group? In which way can the absorption in the labour market of this town offer them interesting opportunities to achieve their economic strategies? The research findings, completed by the investigation developed in Chapter 8, help us to understand the part played by residence in a middle-sized industrial town like Jetpur in

migratory and occupational paths, and therefore to comprehend better the role of the urban centre in population attraction and settlement, as well as its interactions with the hinterland from where most of the in-migrants hail.

The conclusion, in Chapter 9, summarizes the research findings and draws implications for urban and industrial development and their related policies, the significance of which goes beyond the case of Jetpur. The causes and effects of the *a priori* successful development of this growth centre are discussed. Also examined are the limitations of such a pattern of mono-industrialization for further economic development, and the challenge that the actual condition of the working class presents. Finally, the possible effects of the New Industrial Policy on the small-scale industrial sector are described.

Figure 1
Location of Jetpur in Gujarat





1

Decentralization of Urbanization

The general debate and the Indian position

THE GENERAL DEBATE

Since promoting 'equity with growth'[1] is stated as an objective in the development strategies of developing countries, special attention has to be paid to the spatial structure of human settlements and economic activities. The urban bias of national policies and foreign aid in the fifties and the sixties was denounced (Lipton, 1980). Furthermore, it was realized that such an urban bias gave an advantage to the large cities, and thereby neglected not only the rural sector but also small and intermediate urban centres (Rondinelli, 1983; Blitzer, Hardoy and Satterthwaite, 1983; Mathur, 1982).

We do not intend to tackle here the debate over the positive versus the negative role of urbanization. It is our contention that urbanization is a phenomenon which goes along with the process of development, thus the debate should not focus on urbanization *per se*, but rather on the type of urbanization desirable for a better national development. Further, one should go beyond the traditional urban/rural dichotomy and consider the whole gamut of human settlements in an integrated scheme. We share here the views (already expressed by

other authors) which reflect a consensus reached at international meetings held on this issue.[2]

In many developing countries, especially of Asia and Africa, most of the population still lives in rural areas, and depends on small and intermediate urban centres for numerous economic and social purposes such as the marketing of rural products and access to goods and services. Keeping in view the predominance of the rural and agricultural sector in such economies, and considering rational urbanization as a potential vehicle of development and modernization (or more precisely, provided that it relies upon an adequate pattern of urban settlements), small and intermediate urban centres are therefore likely to play a strategic role in the development process. That has been the stand taken since the seventies by a growing number of governments in developing countries as well as international institutions and agencies, and manifested in international conferences and academic debates.[3]

The justifications for giving more importance to small and medium-sized towns in the national development process should however be examined more thoroughly. These are related to debates on the most appropriate spatial structure of human settlements for promoting not only economic growth, but economic growth with social equity.

Theoretical bases

From the sole viewpoint of economic optimization, theoretical references go back to the neo-classical theory of location and space economy as propounded by German economists: from Thünen's agricultural location theory (1826) and Alfred Weber's theory of location of industries (1909-57)[4] to Lösch's general location theory (1940). It was later reformulated by the American economist Isard (1956), whose ambition was to elaborate a general theory of location and space economy as an extension of the general equilibrium theory. His attempt illustrates the development as well as the limitations of this type of approach. The town is considered by Isard as an agglomeration of economic activities, and its expansion will depend on its capacity to attract or to repel units of production, according to

agglomeration economies and diseconomies generated by this town. Agglomeration factors include large-scale economies, localization economies and urbanization economies.[5] The constitution of the economic space is then dealt with as a problem of optimum location of firms, as a series of individual choices of location to be solved in terms of substitutions between outlays and revenues following the marginal principle of allocation. A set of related issues directly relevant for town and country planners are also tackled:

> A new area is to be developed. ... How should one plan a network of cities for this area? What is the optimum spatial distribution and hierarchy of cities of different sizes? Within each urban–metropolitan region, what is the best spatial distribution of different types of satellite cities and centres? ... Given a network of cities and corresponding patterns of land use, along what channels should changes in the structure of this network and these patterns be fostered in order to attain a situation closer to the optimum? Since cities are conglomerations of economic activities, in what directions should the joint geographic distribution of economic activities be reshuffled when flexibility in the structure exists? (Isard, 1956: 183-84).

Unfortunately, the proposed theory does not help solve such fundamental questions. Beyond the basic economic principle according to which the decision of the location of a firm in an urban centre of a certain size will result from the simple comparison of advantages and disadvantages inherent in this location, this analytical framework is, for example, unable to provide an answer to a critical question: that of the relation between urbanization economies and the population size of the town. Isard acknowledges the incapacity of his current theory to build a total function of net urbanization economies according to the size of the town as the resultant effect of the various economies and diseconomies associated with each aspect of urban activities (transport, energy, education, labour costs, etc.). Isard underlines two main reasons for this limitation. Even though the problem of the construction of each distinct net economy curve according to urban size is supposed to be solved, the

problem of weighting each curve to obtain the resulting one remains. But, to begin with, the interdependence among the various urbanization economies makes it completely artificial to isolate each curve to study its evolution with urban size, *ceteris paribus*. This interdependence does not allow one to consider the different curves as simply additive, 'rather they are multiplicative in a complex fashion' (Isard, 1956: 188). Therefore, it is not possible to derive a total curve of urbanization economies by adding up the various elementary curves. Consequently, the size of the town for which net urbanization economies would be maximized remains indeterminate.

The researches on the standardization of cities, on optimal city size and optimal spatial distribution of urban centres, which are based on the marginal principle of allocation, proved to be inconclusive and of little help to town and country planners. The limitations of the concept of optimal size are further illustrated by the attempts of some researchers to determine empirically the optimal size of cities (like those made, for example, by Bairoch, 1977). Following an analysis of the different criteria of conditions of urban life and economic development, considered separately one by one, Bairoch risks a synthesis without having previously solved the theoretical problems of weighting, of comparability and of juxtaposition of the different factors. This approach can only lead to a subjective and arbitrary evaluation of the optimal city size (around 500,000 to 600,000 in developing countries according to Bairoch's estimates), but not to a rigorous scientific evaluation.

Another theoretical approach, often referred to as the 'central place' theory, is that of Christaller (1933). This approach seems more adequate to deal with the problem of diffusing development through urbanization: urban location is not reduced to a problem of economic viability according to the size of the population; here urban centres are considered to be integrated in a comprehensive pattern of human settlements which takes into account the surrounding space. Thus, Christaller's central place system aims at explaining the size, the number and the spatial distribution of urban centres. The urban network is analysed as a hierarchical system of central places: each town is the centre of a more or less large rural area, from which it receives its food supply and to which it provides urban goods and

services. There is a hierarchy of tertiary functions corresponding to an urban hierarchy of central places of increasing size. The town is mainly viewed as a market centre: it is characterized by its commercial and service functions, and its size is proportionate to its sphere of influence and determined by the importance, variety and radius of the 'central' goods and services provided by the town. Further, the urban centre and its hinterland are closely interconnected, and the prosperity of the town depends directly on the agricultural prosperity of its hinterland. The spatial distribution of towns derives from the principles of competition and economic complementarity of central places. Christaller's model, for example, includes seven grades of central places with increasing population and sphere of influence, and the number of towns at each grade is three times less than the number of towns at the immediately inferior grade. The resulting urban profile is a regular hierarchical distribution with successive stages.

The'central place' theory and its further developments have been used as an analytical framework of reference in numerous studies on urban systems (see, for example, Berry, 1967), as well as a normative model and scientific justification for town and country planning policies. A strong point of this theory (which should be underlined for its relevance for policy-makers) is the linking up of urban and rural dynamics, and the integration of the different urban centres in a comprehensive spatial system. The concept of a market centre whose main function is to provide goods and services for the population of its rural hinterland seems also an adequate model for small towns in agricultural regions.[6]

However, though this functionalist analysis allows us to shed some light upon the current structure of certain urban settlement networks, especially in developing countries, it is not sufficient to explain its very origin. As underlined by Lipietz (1983: 112) in his own criticism of the 'central place' theory, one should reject the following derivation: 'function = aim = origin = reason of existence'. Lipietz advocates a 'genealogical approach' that reintegrates the historical dimension to understand the constitution of the economic space. Another severe limitation of the central place system as a general theory of urban settlement, and of its relevance in the promo-

tion of widespread development, is that industrial activities are not integrated in the constitution of the urban system.

Conversely, the theory of 'polarized economic space', first developed by Perroux (1955), focuses on industrial centres. The town is considered as a potential growth pole, that is, an agglomeration of propulsive or leading economic units which generate spread effects upon its economic and spatial environment. These leading units are key industries which promote the development of the town where they are located into a regional growth pole: the growth of the key industries stimulates other activities through forward and backward linkages. Thus, urban agglomeration and industrial agglomeration are closely linked. As compared to the central place system, the justification for the promotion of an urban centre does not rest only on the prosperity of an agricultural region; the town is also an industrial centre exerting spread effects on its surrounding region. In addition to its function of providing goods and services to its hinterland on the basis of tertiary activities, the town is a producer of industrial goods and a diffuser of wealth on the basis of secondary activities.

The concept of growth poles also leads to a reconsideration of economic space and of the diffusion of economic growth over this space. Perroux stressed that the pattern of equally diffused growth of an economy did not correspond to the observed facts. Growth does not appear everywhere at the same time. Economic growth originates in certain points, or growth poles, and proceeds with unequal intensity, and with diverse long-term effects on the national economy (Perroux, 1955).

This approach raises a set of related questions of primary importance for town and country planning:

- how to select growth poles and leading industries which are at the basis of economic development;
- how to distribute the location of key firms between regional metropolises, medium-sized towns, small towns and villages;
- how to ensure a sufficiently large market area and competitive cost price for these industries.

As a normative theory, the growth pole strategy has ap-

pealed to many governments and planners,[7] and programmes have been launched to promote growth poles by concentrating industrial investment in selected urban centres, along with financial incentive schemes for entrepreneurs. However, as noticed by Lefeber and Datta-Chaudhury, 'the much commented "growth pole" theory, relied on to provide the intellectual framework for dispersal policy in some countries, unfortunately does not offer much policy guidance with respect to the *a priori* identification of potential growth centres' (1971: 15). In addition, the implementation of the 'growth pole' theory faces several obstacles in less developed countries which are characterized by a dual economy and the lack of proper channels to diffuse economic development. In such a context, as underlined by Perroux himself, imported industries, remaining geographically or economically enclosed, cannot have a catalytic role for the regional economy. Without effective integration, key industries cannot develop as 'industrializing industries',[8] and 'growth poles' will be reduced to 'cathedrals in the desert'. No wonder, then, that growth pole policies implemented in developing countries often failed to promote the development of rural hinterlands. As an explicative theory, the growth pole pattern is not self-sufficient to explain the dynamics of urban systems, especially in developing countries where industry cannot be considered as the only driving force.

The theory of 'urban economic base' (Alexander, 1954) makes an attempt to consider the whole range of urban economic activities, while operating a distinction between basic and non-basic economic functions. Basic functions consist of the export of manufactured goods and services for populations living outside the local boundaries; non-basic or residential functions consist mainly of services for the local population and enterprises. The basic functions constitute the economic foundation of the town, and they ensure economic exchanges with other regions. They also generate multiplying effects, especially on employment. Thus, they are the driving force of urban growth.

Pragmatic rationale: The viewpoint of economists and planners

The main spatial economic theories reviewed above may seem

rather deceptive as far as they do not provide a comprehensive and universal scientific scheme to help policy-makers and planners evaluate the advantages and disadvantages of a decentralization of urbanization and economic activities. Economic calculations based on cost–benefit analysis and relating to the concept of optimum city size are not conclusive and neglect the question of social equity; the 'central place' theory ignores industrial forces, while the 'growth pole' theory overemphasizes the role of the latter at the expense of other urban functions without solving the problem of urban–rural integration. Regarding more specifically the role of small and intermediate urban centres in less developed regions, as observed in the United Nations recommendations, 'there is no obvious economic or social rationale behind the often recommended policy for governments to create an articulated hierarchy of small and intermediate centres in backward areas'.[9] Several authors have also underlined the fact that the transformation of the urban network, by itself, cannot induce social and economic development; in particular smaller urban centres cannot generate, by themselves, the development of rural regions.[10] Before specifying the potential role of small and intermediate urban centres in regional and national development, and thus the justification for promoting such centres, it should be clear that in most developing countries 'equity with growth' cannot be achieved unless priority is given to agriculture. Agricultural development is a prerequisite for the efficiency and effectiveness of town and country planning policies. In no way can policies for strengthening small and medium-sized towns be substitutes for agricultural policies aimed at increasing agricultural production and rural income (including land reform, if necessary, in order to ensure a more egalitarian pattern of resource distribution). A major contribution of the 'central place' theory was to show that the economic base of urban centres is directly linked to the demand for goods and services provided by these towns, and thus to the purchasing power of rural populations, especially in the case of the centres at the bottom of the urban hierarchy. Though we shall focus now on urban and industrial decentralization policies, an optimal strategy should integrate them into a broader national development programme which includes agricultural develop-

ment policy in the first place. Furthermore, the justification for strengthening small and intermediate urban centres is only relevant if it is related to national development objectives.

Using some of the above-mentioned theoretical frameworks as guidelines, and on the basis of observation and pragmatic considerations, economists and planners have put forward a set of justifications to advocate decentralized urbanization and the promotion of the development of small and medium-sized towns.

A first range of arguments pertains to the crucial role that small and intermediate urban centres play (or could play) in rural development. Small towns especially have many functions to perform in serving rural areas and stimulating agriculture. These are: promoting agricultural productivity, commercializing agricultural products, supplying services to rural populations (health care, education, transport and communication, banking and administrative services, etc.), commercializing manufactured goods, generating employment opportunities outside agriculture, providing infrastructure to set up agro-based industries, and diffusing social and technical innovations. This would help structure the spatial organization of rural economies, strengthen linkages between town and countryside and thus favour better national spatial integration. This would also contribute to a more equitable distribution of welfare (see, for example, Richardson, 1982)

A second order of arguments in favour of small and intermediate towns is related to urban development. In many developing countries the excessive and rapid growth of the large metropolises has resulted in difficulties of urban management, in increasing urbanization diseconomies, and in subsequent social problems. Since market forces do not seem able to stop this problematic growth, deliberate policies to favour economic and urban decentralization are advocated. Building up the capacity of intermediate urban centres is aimed at creating a counter-magnet for migration flows towards major cites, controlling the growth of the latter and thus alleviating their management problems. A more balanced pattern of urban settlements is also expected to remedy economic and social disparities resulting from the concentration of economic investments and better public services in large cities. Therefore,

policies of dispersed urbanization and of dispersed industrialization are often closely associated.

As far as economic and social equity in developing countries is concerned, a hierarchical pattern of urban centres linked with rural settlements is generally presented as the essential structure in order to spread the benefits of economic and social development, to increase the proportion of population reached by basic services and non-agricultural employment opportunities (especially in industry) and to diffuse innovation and economic stimuli (Hardoy and Satterthwaite, 1988; Rondinelli, 1983). Such 'trickle-down' processes would help reduce urban–rural as well as inter-regional disparities. This strategy of decentralization endows small and intermediate urban centres with a developmental role: they constitute a basic support for local development and resource mobilization—as the local government levels hold a strategic position to assess local needs and resources, and then implement efficiently development programmes (Hardoy and Satterthwaite, 1988).

THE INDIAN POSITION

With reference to the general debate on the decentralization of urbanization in developing countries, this section examines more precisely how the above issues have been tackled by scholars and planners in India, given the context of urbanization in this country.

Main features of India's urbanization

The first striking feature of India's urban scene is the massive size of the urban population.[11] With 218 million in 1991,[12] it ranks second (after China) among the countries of the world. However, the level of urbanization is still relatively low: with 25.7 per cent of the population being urban in 1991, India belongs to the group of the least urbanized countries. While an acceleration of the tempo of urbanization was recorded in the sixties and the seventies, the tempo slowed down in the

eighties: the annual rate of growth of the urban population rose from 3.2 per cent during 1961-71 to 3.8 per cent during 1971-81, and then returned to 3.2 per cent during 1981-91. Such rates, though they can be considered as relatively high, remain moderate as compared to other developing countries.[13] Hence, the Indian population is, and will remain in the medium-term, predominantly rural.

The growth of the urban population should also be compared with the growth rate of the total population—2.2 per cent per year from 1961 to 1991. As underlined by Bose, India's urbanization has to be comprehended in the context of rapid population growth and surplus labour, both in rural and urban areas. Thus, these basic demographic and economic constraints would explain the relatively low pace of rural to urban migration:

> Under conditions of rapid population growth as a result of natural increase, the push factor operates everywhere and not only in the rural areas. In fact there is a 'push-back' factor in urban areas. In India, for example, the urban labour force is sizeable, the urban unemployment rates are high and there also exist pools of under-employed persons. All these factors act in combination as deterrents to the fresh flow of migration from rural to urban areas (Bose, 1980: 6-7).

Das Gupta (1985) has also suggested that informal security systems prevailing in the traditional socio-economic organization in the villages have contributed to population retention in rural India. Another hypothesis has been put forward to explain the moderate tempo of net migration to urban areas and its slowing down, in spite of high rural population densities[14] and increasing pressure on agricultural land. It is possible that the development of transport on the one hand, and the difficulties of housing in urban centres on the other, have encouraged a substitution of commuting or permanent rural to urban migration (Visaria, and Kothari, 1985; Premi, 1991b).

The process of urbanization has also to be related to the process of economic change. While the proportion of urban population to total population has increased appreciably since the beginning of the century (10.8 per cent in 1901, 17.3 per

cent in 1951 and 25.7 per cent in 1991), there has been no significant shift in the distribution of the working force between the main economic sectors. In particular the proportion of workers engaged in the primary sector remained stagnant from 1901 to 1971 (around 72 per cent), and decreased little thereafter (67.4 per cent in 1991), although the proportionate contribution of this sector to the gross domestic product has declined dramatically (56 per cent in 1950-51, 32 per cent in 1990-91). This suggests that, unlike the pattern followed by Western countries, the correlation between industrialization and urbanization in India is not so primordial; the relationship between agricultural development—or the lack of it—and urbanization seems more important to understand in such a context (Bose, 1980: Chapter 1).

It appears from the evidence presented above that India is not faced with an 'urban explosion', and the global pace and level of urbanization should not constitute as such a matter of concern for urban planners. Due attention should rather be paid to the morphology and the economic base of the Indian urban system.

At the outset it may be useful to recall the usual meaning of 'small', 'medium' and 'large' in the Indian urban context. According to the classification given in the census, towns or cities with a population of 100,000 and above (class I) are referred to as 'large-sized'; towns with a population of between 20,000 and 100,000 (class II: 50,000 to 99,999 and class III: 20,000 to 49,999) as 'medium-sized'; and towns with a population of less than 20,000 (class IV: 10,000 to 19,999; class V: 5,000 to 9,999 and class VI: below 5,000) as 'small-sized'.

India is remarkable for its very elaborate urban system which has to be related to the very ancient tradition of urbanization in this country. Unlike many developing countries, there is no primacy at the all-India level.[15] The urban system is, however, dominated by a few metropolises of million plus inhabitants. In 1991, 33 per cent of the urban population of the country (excluding the State of Jammu and Kashmir) lived in 23 metropolitan urban agglomerations/cities with a population of more than one million each, including four 'mega cities' having a population of more than five million each (Greater Bombay: 12.60 million, Calcutta: 11.02 million, Delhi: 8.42

million and Madras: 5.42 million). Thus, the Indian urban hierarchy has been characterized by its 'polymetropolitan apex' (Rao, 1983). The process of urbanization in India has been analysed by Bose (1980) as a process of metropolization, that is, the increasing concentration of urban population in the larger towns. According to the classification and data given in the censuses, class I towns (with a population of 100,000 and above) continuously increased their share in the total urban population, from 23 per cent in 1901 to 65 per cent in 1991. On the other hand, small towns (with a population of less than 20,000) experienced a substantial decline in their proportion of the urban population, from 49 per cent in 1901 to 21 per cent in 1961 and 11 per cent in 1991.[16] On the basis of a detailed analysis for the 1901-61 period, Bose concludes that there has been a stagnation of small towns (Bose, 1980: Chapter 6).

However, the analysis of the evolution of the urban structure over time calls for particular caution in view of the diverging interpretations. From this viewpoint, another feature of the Indian urbanization process has been highlighted by Mohan and Pant: the settlement pattern exhibits a very stable structure, in the sense that 'most of the urban growth was because of the enlargement of existing towns at every level, and not merely because of the addition of new towns'.[17] Therefore, 'the entry of new towns being limited, the proportion of the urban population residing in large-sized towns above any population cut-off point will tend to increase continuously' (Mohan and Pant, 1982: 1537). But (for these authors) it would be an improper deduction to analyse this phenomenon as an indicator of an increasingly dysfunctional urban system.

Moreover, Mohan and Pant (1982), as well as Kundu (1983), have showed that the computation of the urban growth rate for categories of towns of different sizes (using the population of each class of towns at different censuses without taking into account the increase in the size of the towns between the censuses) had created a false alarm regarding the rapid growth of the larger towns in India. A correct computation of the growth rate for each size class of towns, keeping the towns in each category the same as in the base year, leads to a more qualified diagnostic. The cities with more than 100,000 popu-

lation have exhibited a significantly higher growth rate than the lower order towns during the fifties, the sixties and the seventies. In the sixties, the million plus cities were the fastest growing, but their growth rate slightly slowed down in the following decade. In the seventies, the cities in the category 100,000–500,000 population registered the highest growth rate. In all lower size categories, the growth rate is significantly above the rate of natural increase. There are no large variations according to the size class, nor is there a positive correlation between the variations of the rates and the variations of the size class.[18] Thus, there is no evidence of a decay of small and medium-sized towns, or of an excessively rapid growth of the larger cities. Mohan and Pant even conclude their analysis of urban morphology during the 1971-81 decade by a comforting statement: 'the overall settlement pattern continues to be stable and well distributed' (1982: 1340).

As regards the 1981-91 decade, Nanda has analysed the growth rate of population of common towns in 1981 and 1991 according to their size class in 1981, as compared to the growth rate of common towns in 1971 and 1981 according to their size class in 1971: 'The growth rates of urban agglomerations/towns of class I to V lie in a narrow range of 28 per cent to 34 per cent (during 1981-91). In all the size classes the growth rate has declined, as compared to the corresponding growth rate during the previous decade. Class I urban agglomerations/cities are growing slightly faster compared to urban agglomerations/towns in class II to V' (Nanda, 1991: 60).[19] In his 'first thoughts on India's urbanization during the 1980s', Premi has underlined the overall slowing down of the growth rate of population of class I cities (from 3.6 per cent per annum during the 1970s to 3.1 per cent per annum during the 1980s), the same trend being observed for the cities with population above one million (Premi, 1991a: 49-64). Therefore, it would be improper to conclude that there has been an explosion of population in the larger cities in India.

However, further analysis of the morphology and spatial dimension of India's urbanization reveals some disquieting features for planners. As indicated by Kundu (1983, 1986), the percentage of slow or negatively growing towns is higher for the smaller urban settlements, while the disparity of the

growth rates is also higher in this size category. This may be interpreted as an indicator of the weak and unstable economic base of the small towns in India. Moreover, the number of towns in relation to the number of rural settlements appears insufficient: due to the low density of urban centres in some regions, especially in backward states, a substantial segment of the rural population does not get served by the urban system. The hierarchy of settlements suffers from an inadequate base of urban centres. 'Finally, the settlement structure evolved through the historical process in India manifests serious distortions and does not provide the basis for implementing a strategy for balanced economic development' (Kundu, 1986: 56).

Rao's comprehensive study of the spatial dimensions of India's urbanization (1983) also leads to a severe diagnostic of the settlement hierarchy. The apex of the urban system is perceived as lopsided, as it has a high concentration of population as well as economic functions. On the other hand, the urban base in the rural areas is analysed as substandard, while the intermediate link through market towns is weak. Broadly speaking, the urban system appears highly polarized and functionally imbalanced .

Though the spectre of an urban explosion at the apex of the settlement hierarchy may have been exaggerated, the case for strengthening small and medium-sized towns remains entirely legitimate. In a country like India, characterized on the one hand by an urban scene dominated by big metropolises, and on the other hand by a predominantly rural population, the development of small and medium-sized towns constitutes a challenge not only for achieving a more balanced pattern of urban settlements, but also for promoting rural transformation (Bose, 1984). Therefore, these towns have a strategic role to play, both in rural and urban development.

Concern with the decentralization of urbanization in the scientific community

Awareness of such issues in India has been expressed in scientific literature and in the organization of national and

international seminars and conferences. However, a review of this literature does not show any consensus on the type and size category of town that should be promoted within the large range of small and medium-sized towns; nor is there any agreement on the most adequate strategy to implement such a proposal. While the principle of decentralization of urbanization and economic activities is accepted within the objective of a more equitable distribution of wealth, it is realized that economic efficiency and scarcity of financial resources impose drastic constraints which would favour a certain degree of concentration. The conflict between equity through decentralization and efficiency through concentration leads to a large variety of proposals in the field of town and country planning according to the component of the dilemma favoured.

In the early fifties, an international seminar on 'India's Urban Future' raised several basic questions about the various meanings of 'decentralization': 'Does decentralization signify a movement out of the large cities on the part of the population and industry already there? Or does it mean that future urban and industrial growth will be redirected to more suitable locations? What, precisely, are more suitable locations? Are they to be chosen because of the social structure they promote? Or are they to be chosen strictly on a basis of alternative costs?' (Turner, 1962).

Some suggestions have been made to encourage urban growth in the small and medium-sized towns in the areas surrounding big cities, in order to act as counter-magnets to these cities, and thus control their expansion. Other authors have emphasized the need for strengthening the bottom of the urban hierarchy, and the necessary integration between urban settlements and their rural hinterland. For example, the National Council of Applied Economic Research launched an in-depth study on 'Market Towns and Spatial Development in India' (NCAER, 1965), followed a few years later by the organization of a seminar on the same theme (NCAER, 1972). The report suggested the promotion of a large number of market towns as centres of trading and basic services accessible to the rural population, as well as nuclei of dispersed agro-industrial development. In another all-India seminar on the 'Place of Small Towns in India' (Singh and Singh, 1979), a new approach

of 'agropolitan strategy' was advocated. Based on the growth centres, the strategy aims at accelerating rural and agricultural development. Various studies have also argued for the development of small towns as growth centres or service centres primarily oriented to meet the requirements of their rural hinterlands (among others: Sen, 1972; Shah, 1985; Wanmali, 1983; *Nagarlok*, 1986). It has also been acknowledged that, alternatively, agricultural growth has a strategic influence on the dynamics of small towns.

Other studies pay more attention to the relationship between urbanization and industrialization. Inevitably then the debate on dispersal of urbanization and that on dispersal of industrialization concur. Some researchers argue for the selection of industrial nuclei in urban centres of a substantial size rather than small ones, while stressing the constraints of economic viability (see Turner, 1962). More recently, Mohan also recommended, with respect to industrial dispersal, 'a concentration of dispersal rather than a dispersal of concentration' (1985: 641). Furthermore, deliberate schemes of attracting industries to small towns, especially in economically backward regions, have been strongly criticized by some authors on the ground of economic feasibility, whereas others see these towns as a 'lever of industrial spread' and defend such locational choices on the grounds of bringing employment opportunities to semi-urban and rural people where they want them, thus preventing migration to large towns (NCAER, 1972).

Policies of urban and industrial dispersal

How has the concern with balanced urban development been taken into account in the policies of the Indian government, and to what extent have urban policies been linked with industrial policies to that end? Our analysis will be limited to the policies of urbanization and industrialization as such, and will not cover other sector-based policies that may also have indirect impact on the pattern of urbanization. India being a Union of States, we shall consider here the policies implemented by the Central Government, which may be supplemented by the State Governments' actions. The programmes

and measures launched by the government of Gujarat will be reviewed later in another chapter.

Gandhian philosophy, with its opposition to urbanization and its plea for an ideal highly decentralized settlement system based on self-sufficient villages, has had a lasting influence on Indian political leaders and planners. This found its first expression in the launching of the Community Development Programme by the Government of India in 1952, under the First Five-Year Plan (1951-56). This programme was an attempt to create a hierarchy of settlements servicing rural communities. The village formed the smallest unit of development; next to it was the market centre of 15 to 25 villages. These market centres, in turn, were linked to the headquarters of the development block which was visualized as a rural-cum-urban township of about 100 villages. Rural India was thus divided into 5,200 community development blocks. However, the block headquarters remained mainly administrative centres, and failed to develop into focal points for economic activities (NCAER, 1972).

In the five-year plans, statements and action programmes related to the decentralization of urbanization and economic activities are justified with reference to the twin fundamental objectives of economic growth and social justice. Thus, 'reduction of inequalities in income and wealth and a more even distribution of economic power' appear among the main objectives of the National Plans and were first stated in the Second Five-Year Plan (1956-61).[20] Despite a visible position encouraging urban development at the level of small and medium-sized towns and, conversely, discouraging concentration at the metropolitan level, effective action programmes geared towards achieving that end were not quick to follow.

After the Community Development Programme, the next programme specifically oriented towards urban–rural integration was initiated in 1970. It was known as the Pilot Research Project on Rural Growth Centres and consisted of a scheme centrally sponsored under the Fourth Five-Year Plan (1969-74). The major objective of this project was to evolve a methodology for the identification and the development of emerging growth centres. The scheme was essentially a research-cum-action experiment in the technique of regional planning and

spatial growth, and was based on 20 selected 'Block Plans' located all over the country (Shah, 1985).

During the Fifth Five-Year Plan (1974-79), the Government of India launched another scheme called the Integrated Urban Development Programme (IUDP). The main objective was to provide financial assistance to the State Governments in an attempt to supplement their efforts for implementing urban development projects. Though small and medium-sized towns were explicitly under the scope of the scheme, metropolitan cities were also included. As the latter were more suited to mobilize resources, they proved to be the main beneficiaries of the scheme, at the expense of the smaller towns (*Yojana*, 1988). By the end of 1978-79 the Integrated Urban Development Programme was discontinued in its original form, and from 1979-80 the Government of India initiated the first regular and substantial central scheme exclusively oriented towards the promotion of small and medium-sized towns.

This new scheme, 'Integrated Development of Small and Medium-sized Towns' (IDSMT), gave shape to the thrust of the urbanization policy during the Sixth Five-Year Plan (1980-85). It had been preceded by a Task Force on Planning and Development of Small and Medium-sized Towns and Cities, appointed in 1975 by the Government of India. The report of the task force, released in 1977, made specific recommendations for a greater degree of attention to be given to towns with a population between 50,000 and 300,000, especially in pursuing the objectives of industrial decentralization. The IDSMT scheme was significantly influenced by this report, though its coverage focused on small and medium-sized towns with a population of less than 100,000 in the 1971 census. The major objective of the IDSMT scheme, as defined by the Planning Commission, was twofold: 'to increase the rate of growth of small and medium-sized towns so as to enable them to act as growth and service centres for rural hinterlands, and to reduce the rate of migration to the metropolitan cities'. It was proposed to increase the investment on the provision of infrastructural and other essential facilities; 235 towns were to be developed under the scheme. The selected towns received assistance from the Central Government, provided matching contributions were allocated by the State Governments and the implementing agen-

cies. The role visualized by the Government for the small and medium-sized towns was comprehensive and oriented towards integrated urban and rural development. These urban centres were expected to positively influence the process of socio-economic change in the countryside through a system of interactions and interdependent needs between towns and their hinterlands, and through a pattern of urban hierarchy.

Despite laudable initial objectives, the achievements of the IDSMT scheme led to critical evaluations (*Nagarlok*, 1986; Nandy, 1985; Wishwakarma, 1985). Apart from problems related to the selection of the towns and organizational aspects, the critics argued that the scheme had neglected the economic base of small and medium-sized towns; while too much emphasis was put on the provision of infrastructure and other facilities with the implicit assumption that economic activities would automatically follow. Though infrastructural investments are indisputably a necessary condition for economic development, they are certainly not sufficient. In addition, the scheme seems to have failed to reinforce linkages between urban and rural settlements, since the guidelines were not clear on the mechanisms for forging these linkages.

During the Seventh Five-Year Plan (1985-90), the IDSMT scheme was renewed and extended to 102 additional towns. However, the criteria for selection of small and medium-sized towns were diluted to include cities with populations of up to 300,000. The Seventh Plan also witnessed a shift in urban policy towards an 'urban basic service' approach, which combined the programmes of urban community development, small and medium-sized town development and low-cost sanitation.

The National Commission on Urbanization, the first ever such commission, issued in August 1988 its final report which revealed the new orientations regarding the spatial distribution of settlements. The Commission supported State intervention in the process of urbanization of the country in order to bring about a more desirable spatial hierarchy of settlements. A critical review of the report showed, however, that the Commission failed 'to demarcate priority areas for action' and did not 'take a clear-cut position in the context of small versus large towns' (Kundu, 1989: 1186-87). For example, the Commission made proposals for the identification of 49 'spatial

priority urbanization regions' and about 329 centres as 'generators of economic momentum' that would be eligible for a special allocation of resources by the Central and State Governments. The programme of 'generators of economic momentum' focused on large cities that already had a population of more than one million or those that were likely to grow in the near future. On the other hand, as noticed by Metha and Metha (1989), the Commission favoured medium-range towns and cities with a population between 50,000 and 500,000. Elsewhere in the report, small urban centres were recognized as 'engines of growth for the rural economy'. Further, the Commission proposed 'user charge' for basic services and recommended to transfer much of the financing of the urban development activities from the government to the banking system. As rightly underlined by Kundu, such measures would tend to handicap small towns and hence were 'unlikely to bring about balanced urban development in the country' (Kundu, 1989: 1188).

This brief review of the government's urban development programmes (aimed at a more decentralized pattern of urbanization) needs to be completed by a parallel review of the main programmes of industrial dispersal, since the manipulation of the location of economic activities—especially of industries—has a direct impact on urban dynamics.

Since Independence (1947), Indian planners and policy-makers have laid stress on the need to achieve a well-dispersed and well-balanced pattern of industrial development. In this context the promotion of small-scale industry was to play a major role. Thus, the Industrial Policy Resolution of 1956 stated:

> The Government would ... stress the role of cottage and village and small-scale industries in the development of the national economy. In relation to some of the problems that need urgent solution, they offer some distinct advantages. They provide immediate large-scale employment, they offer a method of ensuring a more equitable distribution of national income, and they facilitate an effective mobilization of resources of capital and skills which might otherwise remain unutilized. Some of the problems that unplanned urbaniza-

tion tends to create will be avoided by the establishment of small centres of industrial production all over the country (quoted by Sandesara, 1988: 640).

Following this broad orientation, policies and programmes to support small-scale industry have been implemented by the Central and State Governments. They include: protective measures through reservation of items for the small-scale sector, marketing facilities through preferential purchase by governmental agencies, tax exemption or concessional rates of excise duties, supply of machinery on a hire–purchase basis, supply of essential raw materials, financial assistance, provision of consultation and training services for entrepreneurs (see: Sandesara, 1988; Tyabji, 1989; *Yojana*, 1988). In addition to these measures, the dispersal of small-scale industry in rural areas, in small towns and in backward districts was encouraged through specific incentives.

The industrial estate programme, initiated by the Government in 1955, was conceived as another major instrument for promoting industrialization—especially small-scale industries—and spatial dispersal of economic activities. The Government's role was to provide for production space along with the necessary facilities and public utilities, as well as special assistance to the incoming entrepreneurs. The underlying premise was to create external economies on suitable sites, to attract entrepreneurs and favour industrial growth in certain regions and at selected locations. In the early stages of the programme, industrial estates were established in urban areas, in or around cities. Then, from the Third Five-Year Plan (1961-66), the goal of industrial dispersal was given priority,[21] and the new industrial estates were located in rural and semi-urban areas, and in industrially backward districts. The effectiveness of the industrial estate programme as an instrument of spatial dispersal was, however, mitigated (Lefeber and Datta-Chaudhury, 1971). In fact, those industrial estates located within or in the backyard of already industrialized urban centres proved to be, in general, more successful, whereas many industrial estates established in rural and semi-urban areas led to serious underutilization of government-built facilities. This partial locational failure may have resulted from the blunt assumption

that provision of the basic infrastructure will automatically bring about industrial development, without paying sufficient attention to the integration of the industrial estate programme into a much broader area development programme (NCAER, 1965). The strategy of starting new growth centres in backward areas was later condemned by the National Commission on Urbanization in its 1988 report.

Industrial licensing, location of public sector plants, equalization of administered prices of some basic raw materials all over the country, and various location incentives (investment subsidies, interest rate concessions, fiscal concessions, etc.) were also utilized by the Government as instruments to influence the spatial distribution of industries. As shown in a review of the industrial location policies in India, 'the desire to promote the dispersal of industry gathered momentum during the seventies and has continued with greater force during the eighties' (Mohan, 1989:14). Specific incentive schemes were implemented to promote industrial development in backward areas; on the other hand, constraints were imposed in order to discourage industries from locating in and around metropolitan agglomerations (with more than one million population), and within the urban limits of other cities and towns. In 1989, however, the Central Government's capital subsidy scheme (which favoured especially investment in the more backward areas) was discontinued. The new approach advocates the promotion of selected growth centres through a programme of co-ordinated investment.

Evaluations of urban and industrial policies aimed at achieving a more balanced pattern of human settlements and a more equitable distribution of economic activities often conclude that the global effect has been rather limited at the national level (NIUA, 1988; Ramachandran, 1989; Mohan, 1989; *Nagarlok*, 1986). In addition to the limitations put forward for each specific programme or policy measure, a number of scholars have criticized the lack of co-ordination and integration of the different policies.

The economic reforms launched by the Government of India in 1991 and 1992 opened a new era. Though the policy of liberalization was already initiated in the late eighties, the new programme of liberalization involves drastic changes in foreign

trade and industrial policies in a bid to restructure the economy and promote its integration in the international market. Thus, the announcement of the New Industrial Policy in July 1991 was preceded by the devaluation of the rupee and followed in March 1992 by the establishment of its partial convertibility.

What will be the consequences of the policy of liberalization on the location of industrial investment and on the small-scale industrial sector which was to play a major role in achieving a well-dispersed pattern of industrialization, as stated in the Industrial Policy Resolution of 1956 and the five-year plans?

At the outset, concern for a spatially balanced pattern of industrial development seems outdated. One of the principal measures of the New Industrial Policy is likely to have notable consequences on the location of industrial activities and to favour concentration: this is the abolition of industrial licensing for almost all projects, except for a limited list of industries for security and strategic reasons. To be exempt from licensing, the only locational requirement imposed on a project is to establish an industry beyond 25 kilometres from the periphery of cities with more than one million population; this condition will not, however, apply to non-polluting industries. As rightly noticed by Sandesara, 'liberalization of licensing policies and procedures in regard to the location of projects reinforces the attraction of the already developed regions, and thus goes against the regional balance objective' (Sandesara, 1991a: 1871).

As regards the small-scale industrial sector, the Government of India announced (in August 1991) policy measures for the promotion and strengthening of small, tiny and village enterprises, with the objective of imparting more vitality and growth impetus to this sector to enable it to contribute its potential to the economy to the fullest extent, particularly in terms of growth of output, employment and exports. The reservation of products to be exclusively manufactured under the small-scale sector will continue, though the Government is planning to dereserve part of them (233 out of 843 items).[22] Hence, protection for the small and tiny sector is not terminated. However, mere concessions will not be sufficient to help small entrepreneurs, unless they adapt to the changing situation. Furthermore, the New Industrial Policy 'unleashes a strong dose of competitive forces, and ... this cannot but affect

the existing', mostly less advantageously placed, small-scale sector adversely, especially the small units in competition with large ones (Sandesara, 1991b: 2425).

CONCLUDING REMARKS

Achieving a well-balanced spatial structure of human settlement and economic activities has been recognized as a desirable objective by many developing countries, including India. This involves strengthening small and middle-sized urban centres which have a strategic role to play in the context of countries (such as India) characterized by a predominantly rural population and a top-heavy urban system. The Government of India has launched various programmes concerned with the dispersal of urban and industrial development, at least until the recent programme of economic liberalization whose impact on the spatial pattern of industrialization and urbanization remains still to be appraised thoroughly. It seems now necessary to go beyond this global approach. We do not intend to undertake another detailed analysis of the effects of the policies presented above. We would rather advocate the need for well-documented studies on the dynamics of small and middle-sized towns in relation to their rural hinterland, which should constitute the basis for the elaboration of town and country planning policies. Hence, the following chapters focus on the case of a rapidly growing medium-sized industrial town which seems to be a successful regional growth centre. By analysing the mechanisms of industrial and urban growth from the grass-roots, our research can shed some light upon the general field of the dynamics of middle-sized towns.

NOTES

1. This refers to the title of an international conference, 'Equity with Growth: Planning Perspectives for Small Towns in Developing Countries', held in

December 1982 in Bangkok (see Kammeir and Swan, 1985).

2. See, for example, a paper prepared for the 1974 World Population Conference in Bucharest by the United Nations Secretariat on 'Some issues relating to population distribution policies'. 'The Seminar's recommendations reflect a general consensus on the irreversibility of the urbanization process. In the opinion of the majority of the participants, urbanization is an inevitable consequence of development and should be accepted as such. It is also an essential condition for economic and social development' (United Nations, 1975, Vol. II: 174-75).

   As regards India in particular, Bose strongly advocated the case for considering urbanization as 'the best generator of economic growth and social change in India' (Bose, 1980: 319).

3. The 1974 World Population Conference adopted a Plan of Action which included the following recommendations:
   - In planning development, and particularly in planning the location of industry and business and the distribution of social services and amenities, governments should take into account not only short-term economic returns of alternative patterns, but also the social and environmental costs and benefits involved as well as the equity and social justice in the distribution of the benefits of development among all groups and regions;
   - Population distribution patterns should not be restricted to a choice between metropolitan and rural life: efforts should be made to establish and strengthen networks of small and medium-sized cities to relieve the pressure on the large towns, while still offering an alternative to rural living; .....
   - Programmes should be promoted to make accessible to scattered populations the basic social services and the support necessary for increased productivity, e.g., by consolidating them in rural centres (quoted by Bose, 1980: 325).

   The United Nations, in its 1976 Conference on Human Settlements in Vancouver, also emphasized the need for settlement policies and strategies to be oriented towards a better mobilization of resources, a better respect for the environment, and more social equity (United Nations, 1976). More recently, the United Nations Economic and Social Commission for Asia and the Pacific recommended (at the Third Asian and Pacific Population Conference, Colombo, September 1982) economic and spatial development policies aimed at a more efficient distribution of population and economic activities, with the promotion of medium-sized towns as one of the main strategies (see United Nations, ESCAP, 1984).

   See also United Nations Centre for Regional Development (1976, 1983); Mathur (1982); and Rondinelli (1983) for an analysis of the growing concern for policies aimed at a more balanced pattern of urbanization.

4. For an English presentation of Weber's theory, see Friedrich (1929).

5. Isard adopts the following definitions:-
   - Large-scale economies within a firm, consequent upon the enlargement of the firm's scale of production at one point.
   - Localization economies for all firms in a single industry at a single location, consequent upon the enlargement of the total output of that

industry at that location.
- Urbanization economies for all firms in all industries at a single location, consequent upon the enlargement of the total economic size (population, income, output, or wealth) of that location, for all industries taken together (Isard, 1956: 172).

6. For example, Brutzkus (1975: 648) advocates the advantages of a decentralized pattern of urbanization as follows: 'In developing countries, where rural populations still form a majority of the total population and will remain numerically substantial for decades, a hierarchical pattern of towns and rural centres closely related to the findings of the Central Place theory model still remains the most promising and basic solution in spite of changes in technology and transportation.'
7. See, for example, a note prepared by the United Nations Commission on Human Settlements for its seventh session (HS/C/10, 25 January 1984): the consultation with governments showed that in many developing countries strategies of promotion of growth poles were adopted.
8. According to the expression coined by the French economist Destanne de Bernis: '*industries industrialisantes*'.
9. United Nations: 'Planning and management of human settlements with emphasis on small and intermediate towns and local growth points: report of the Executive Director.'Paper HS/C/8/3 presented at the Eighth Session of the United Nations Commission on Human Settlements, February 1985.
10. See in particular Richardson (1982), Blitzer, Hardoy and Satterthwaite (1983), Hardoy and Satterthwaite (1988).
11. Urban population is the population residing in urban areas, defined in the Indian censuses as follows:

    - All places with a municipality, corporation, cantonment board or notified town area committee, etc.
    - All other places which satisfied the following criteria:
        - a minimum population of 5,000;
        - at least 75 per cent of the male working population engaged in non-agricultural pursuits; and
        - a density of population of at least 400 per square kilometre.

    All population data given in this section are based on the decennial censuses.
12. The 1991 census was not held in Jammu and Kashmir; the urban population figures and rates pertaining to 1991 take into account the population of Jammu and Kashmir as projected by the standing Committee of Experts on Population Projections (October, 1989).
13. For example, during the 1971-81 decade: 'As many as sixty out of a total of ninety-four countries belonging to low- and middle-income categories outrate India in urban growth. The annual urban growth rate is 4.2 per cent in Mexico, 4.8 per cent in Nigeria and 6.5 per cent in Bangladesh. The corresponding rate in the high-income oil-exporting countries is still higher, being about 8.2 per cent' (National Institute of Urban Affairs, 1988: 1; source of the figures: World Development Report, 1983).
14. At the national level, the rural population density was 138 inhabitants per

square kilometre in 1961 and 161 in 1981. Unfortunately, in the publications of the 1991 census, figures on area and density are not provided for rural and urban areas separately.

15. In 1991, Greater Bombay, the largest urban agglomeration with 12.60 million population, accounted for only 6 per cent of the total urban population, and was only 1.14 times as big as the second-ranking urban agglomeration, namely Calcutta with 11.02 million population.
16. Changes in the definition of urban areas led to the declassification of some small towns. This explains in part the relative decline of this category of towns. However, as pointed out by Bose (1980: 49), 'since the 1961, 1971 and 1981 censuses had used a rigorous definition of "urban", the decline in the importance of class III (population = 20,000–49,999), IV (10,000–19,999), V (5,000–9,999) and VI (less than 5,000) towns in these decades reflects the true situation'.
    There has been no change in the definition of urban areas between 1981 and 1991. The 1991 figures exclude the State of Jammu and Kashmir, where the census was not conducted.
17. 'While the total urban population increased sixfold between 1901 and 1981, the number of settlements increased by only 80 per cent.' (Mohan and Pant, 1982: 1537).
18. According to the calculations made by Kundu (1983: Table 1) for the 1961-71 and the 1971-81 decades, the growth rates of population in towns of different size categories were as follows:

Size category as in base year	*1961-71 growth rate (per cent)*	*1971-81 growth rate (per cent)*
1,000,000 and above	40.13	39.68
500,000 to 999,999	32.43	36.86
100,000 to 499,999	39.35	45.32
50,000 to 99,999	35.79	37.57
20,000 to 49,999	32.49	38.37

These figures exclude the States of Assam and Jammu and Kashmir.
Other calculations are given in *State of India's Urbanisation* (National Institute of Urban Affairs, 1988: Table 37): 'The technique employed involves taking into account only those towns which are common to both 1971 and 1981 censuses, to group them into population size categories on the basis of the 1971 population, and to calculate the decennial growth rate separately for each category' (p. 52):

Size category in 1971	*1971-81 growth rate (per cent)*
class I (100,000 and above)	41.51
class II (50,000 to 99,999)	36.97
class III (20,000 to 49,999)	39.10
class IV (10,000 to 19,999)	35.37
class V (5,000 to 9,999)	36.86

These figures exclude the State of Assam, where the census was not conducted in 1981.

19. See: *Census of India 1991, Provisional Population Totals: Rural–Urban Distribution*, Series-1 India, Paper 2 of 1991: Table 10.
Population of urban agglomerations/towns (a) common in 1971 and 1981 by their size class in 1971 and (b) common in 1981 and 1991 by their size class in 1981.
India (excludes Assam and Jammu and Kashmir)

Size class of urban agglomerations / towns	*Decadal growth rate of population (per cent) 1971-81*	*Decadal growth rate of population (per cent) 1981-91*
I-VI	39.68	32.81
I (100,000 and above)	41.41	34.49
II (50,000 to 99,999)	36.15	31.60
III (20,000 to 49,999)	39.53	29.57
IV (10,000 to 19,999)	35.00	28.41
V (5,000 to 9,999)	36.99	30.02
VI (less than 5000)	47.74	43.88

20. The other main objectives of the National Plans were: (*a*) a sizeable increase in the national income; (*b*) rapid industrialization; and (*c*) a large expansion of employment opportunities.
21. 'Balanced development of different parts of the country, extension of the benefits of economic progress to the less developed regions, and widespread diffusion of industry are among the major aims of planned development' (Third Five-Year Plan, Government of India, Planning Commission, p. 142).
22. The New Industrial Policy also allows large-scale and medium-sized units to produce reserved items in return for extremely large export obligations.

2

Methodology and Sources of Data

The main contribution of case studies to urban dynamics rests on the possibility of a precise analysis of the phenomena, modes of organization and mechanisms at work and on a better understanding of the processes at the basis of urban development through knowledge of the local cultural, social and economic context and its integration in the analysis. Case studies further permit an analysis of the local effects of macro-economic and macro-political forces, and observation focusing on a micro-territorial area may be more adequate and efficient to analyse the impact of macro variables than surveys covering much larger territories.[1] What should be an adequate approach and methodology to conduct the case study of a middle-sized industrial town in the Indian context? What system of observation was finally adopted and what are its contribution and limitations? These are basic questions to examine before analysing the data collected in Jetpur and its region, and presenting our research findings.

THE GENERAL APPROACH

Integrated urban space and spatial mobility

We intend to follow here an approach that conceives the town

as an integrated urban space (that is, an approach which envisages the town beyond the urban space delimited by the concentration of people) in order to relate it to the surrounding rural dynamics which contribute as well to the urban dynamics. Thus, we also favour an approach that examines urban dynamics through migration and other forms of spatial mobility which may affect the town under study.

In addition to migration in the strict sense of the word, that is, population moves which involve a change in the usual place of residence, we have also to consider the process of circular mobility. According to Zelinski (1971), circular mobility can be defined by a large variety of moves being generally of short distance, repetitive or periodic by nature, but having in common no intended permanent change of residence. With reference to the dynamics of small and middle-sized towns, the role of circular mobility, in particular temporary labour moves and commuting, is essential. As shown in the previous chapter, many of the functions carried out by small and medium-sized towns are oriented towards rural areas. Thus, if a small town succeeds in one of its main functions vis-a-vis the rural population, namely supplying it with non-agricultural employment opportunities, it will lead less to an increase in urban permanent in-migration and more to circular moves (daily, weekly, seasonal ones). In the Indian context especially, the relatively low level of urbanization encourages an investigation of the role of circular mobility as a substitute for permanent migration to the towns.

Population movements have for long been recognized and used as a preferential tool to analyse the urbanization process (Dupont and Dureau, 1988; Dupont and Attahi, 1989). Several arguments can be underlined. At the outset, migration is one of the main components of urban growth and an indirect factor of natural increase in urban areas; moreover, the migration balance is very often the factor which differentiates the population dynamics of towns in the same country. Migration and commuting are also a factor of the economic growth of a town: in-migrants and commuters can boost urban economic activities, through their participation in the labour market and in employment generation, and through the increase in the demand for consumer goods, services and urban amenities. The

movements of population that affect a town further reveal crucial features of urban dynamics: they show the capacity of the urban economy and the urban authorities to attract and settle inhabitants, while circular mobility in particular proves to be a good indicator of the intensity of the relations between town and countryside, and of the degree of integration of the urban economy in its rural hinterland. Last but not the least, the study of the movers enables us to focus observation on the actors of the population concentration process, on the agents of the socio-economic linkages that underlie the relationships between the different towns and between town and countryside: thus, research on urban dynamics is not based on an abstract entity—the town—but on the social actors themselves.

While focusing on the actors of the urbanization process and in order to better understand urban dynamics, it would be however a reductionist approach to relate individuals to a single place of residence and to limit the study of a town to the population residing within the physical limits of the urban area. A more comprehensive conceptualization of the individual is required, allowing us to situate him in his life space, defined as 'the space area where an individual performs all his activities ... not only his places of passage and residence but also all the places to which he is related'[2] (Courgeau, 1980).

The life space of an individual includes also his familial space: especially in the context of traditional societies where familial structures maintain their predominant influence, it is not possible to isolate the individual from his familial group which constitutes the relevant unit of decision. As shown by the psychoanalyst Sudhir Kakar (1982), in the Indian traditional society, the joint family constitutes the psycho-social womb in which the identity of the future adult is moulded. Hence, when he evaluates a situation to take a decision, the individual will act more as a member of a group than according to a self-centred strategy. The individual's actions recover their full meaning only when replaced within their familial context. Furthermore, the concept of family has to go beyond the concept of household related to the residential unit. In order to situate the individual within his family, we have to adopt an extensive conceptualization of the latter, allowing us

to integrate familial segments which are spatially scattered, but linked between themselves by economic and emotional solidarity links (Shah, 1973). Thus, the observation has to extend beyond the urban periphery in order to include villages of the hinterland, where the familial strategies at the basis of urbanward individual moves are elaborated.

Taking into account the life space of the individuals proves to be of primary importance in order to study the various forms of spatial mobility in relation to urban dynamics. This approach enables us to envisage the phenomenon of dissociation between place of work and place of residence: an urban job does not necessarily imply an urban residence. Furthermore, it becomes possible to integrate the phenomenon of plurality of places of residence and places of work for the same individual: for example, a migrant of rural origin can combine a job in town with participation in agricultural work, and he may consider his native village as a place of residence more significant than his urban dwelling, since the village remains the favourite place for emotional, familial and social involvement.

The suggested approach also allows us to integrate the possible reversibility of migratory flows (Domenach and Picouet, 1987). The preference given at one point of time to one of the growth poles which structure the individual's life space is subject to variations, leading to the reversal of the movement. Hence rural exodus appears as a non-ineluctable, and not necessarily definitive, process.

An approach to the town that focuses on social actors, while situating them within their life space and joint family, leads to the conceptualization of the town as an open system animated by a set of flows and interferences. Given the context of urbanization in India, in the case of small and medium-sized towns especially, it further appears that urban dynamics cannot be analysed without relating them to the dynamics of the countryside.

Methodological principles and system of investigation

Within the framework of the general approach expounded above, several methodological principles were applied to estab-

lish the system of investigation implemented for the case study of Jetpur.

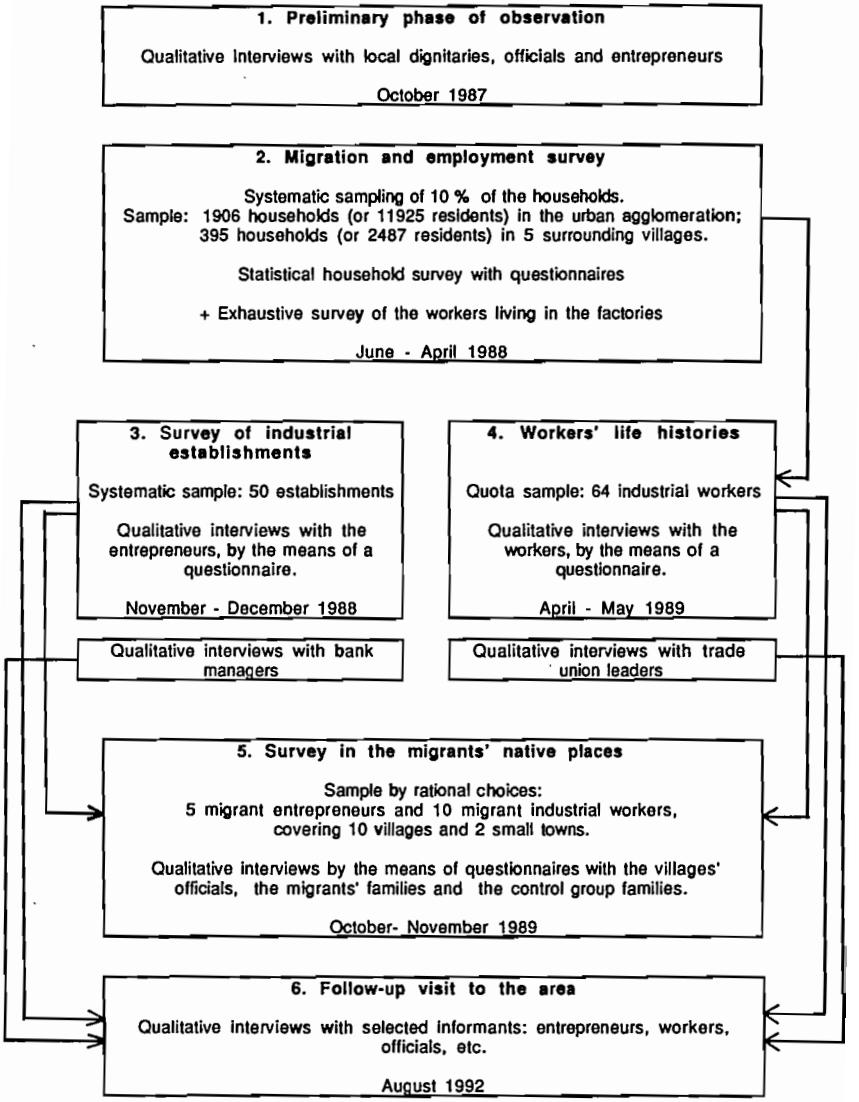
A full realization of the effects of the observation scale on the phenomena under study logically led us to adopt a system of observation which included several levels defined in spatial and social terms:[3] the region, the town, the main sector of activity, the economic agents. In the same way we diversified the units of observation: the household (urban segment and rural segment), the industrial establishment, the individual (migrant as well as native, entrepreneur as well as worker). The variety of the angles of observation guarantees a better grasp of the different facets of the processes of urbanization and industrialization.

In addition, since it is important (in order to understand urban dynamics) to shift the focus towards other spots of the territory with which the town under study maintains preferential relationships, it was also necessary to envisage a geographical diversification of the places of investigation. Hence, in the case of Jetpur, surveys in the urban agglomeration were complemented by surveys conducted in the places of origin of the in-migrants and in the villages sending commuters to the urban industry.

The advantages of combining an anthropological type of observation with statistical demographic surveys have already been acknowledged:[4] these are the two modes of approach to social reality and they highlight and reinforce each other mutually. Thus, in our system of investigation, we have associated qualitative and quantitative enquiries in a dynamic and interactive way.

Finally, the collection of primary data was scheduled to be completed in six phases; it was conducted in Jetpur and its region between October 1987 and November 1989, with a last visit in August 1992. The link-up between the different surveys, and the matching of the information collected whenever possible, strengthened the system of investigation. Thus, the lessons drawn from each phase of field work and the preliminary results of each survey were used in order to better define and orient the next phases of investigation. The period covered by the observation further allowed a follow-up of the area under study.

Figure 2.1
Organization chart of the field observations



The organization chart of the field operations is shown in Figure 2.1; it includes the following:

- a preliminary phase of qualitative observation;
- a statistical household survey of migration and employment;
- a survey of industrial establishments;
- a collection of migration and occupation histories of workers;
- in-depth interviews at the migrants' places of origin;
- a follow-up visit to the area after three years.

In addition, we implemented the principle of participant observation during all the field operations.

Secondary data and some of their limitations

Though the present study is based essentially on primary data, official statistics and other available secondary data were also exploited. For the description of the regional background of the town of Jetpur we used census data and various statistics published by the Directorate of Economics and Statistics (Government of Gujarat, 1987). Data on the industrial development in Gujarat and in the sub-region of Saurashtra were collected from the various specialized institutions at the State or district level and included: the office of the Commissioner of Industries, the office of the Chief Inspector of Factories, the Gujarat Industrial Development Corporation, the Industrial Extension Bureau, the District Industries Centre. Other secondary data were also used to supplement the field surveys for some specific questions; these will be mentioned in the presentation of the related survey, or later in the course of the study, along with their characteristics and contingent limitations. As regards the population of Jetpur, we tried to compare the results of the household survey with the census data whenever possible, so as to impart a further longitudinal dimension to our study. The difficulties raised by such comparisons will be discussed in the relevant chapters.

Before going into the details of each field operation, we would like to tackle some general limitations of the official population statistics for urban and migration study, limita-

tions which bring out the contribution of a case study based on purposely oriented and detailed field surveys. In the Indian censuses as well as in the National Sample Survey (NSS), each individual is attached to a sole place of residence, and the individual's moves that are recorded refer to a change of the usual place of residence, with respect to the place of birth or previous residence. Consequently, temporary and circular moves elude such a registration system; this induces a reductionist approach of the processes of urbanization and spatial mobility (as described above). This limitation is common to the censuses of most developing as well as developed countries.[5]

In addition, the territorial or administrative divisions used in the publication of the population statistics are not always relevant for the scope of a case study. Concerning the NSS data, the sampling procedure itself excludes the possibility of breaking up the data at a micro level, like that of an individual town. As for censuses, for instance, the migration tables and the economic tables at the level of the urban agglomeration were available only for cities with a population of 100,000 and above in 1971; the threshold was even raised in 1981 to one million population in the migration tables for individual cities—which left the town of Jetpur outside the purview.[6]

Thus, even for a first approach to the town under study (prior to the implementation of the main field surveys) the analysis of the available secondary data proved to be very limited, and a preliminary phase of qualitative observation became all the more necessary.

PRELIMINARY QUALITATIVE OBSERVATION

The preliminary phase of qualitative observation consisted of interviews conducted in Jetpur with local dignitaries, officials from the municipality, the industrial associations and the Chamber of Commerce, and with a few entrepreneurs, small as well as big, to whom we had the opportunity to be introduced. This took place in the course of October 1987. The interviews aimed at a better approach to the field: to sharpen, according to the local context, some concepts essential for the study (such

as spatial mobility and economic activity) and to define relevant questions for the subsequent surveys.

This first round of observation enabled us in particular to identify the different forms of spatial and labour mobility induced by the industrialization process in this town. In addition to urban in-migration which results in a durable or permanent change of residence and could be deduced from the high population growth rate of Jetpur, two other types of labour migration were detected. One is the temporary labour migration without permanent urban residence, which corresponds to inter-state industrial labour migrants being housed in the factory premises. The other is the commuting (or the daily journeys) to work by the workers living in the surrounding villages or nearby towns located within a radius of about 25 to 30 kilometres around Jetpur.

The type of informal discussions that we had with seven entrepreneurs also helped us to better understand which were the delicate issues, and hence to foresee some of the expected difficulties of conducting a survey in industrial establishments In particular, it became obvious that the collection of employment data could not rely on the official registers maintained in the factories because of the high risk of underreporting.

Lastly, this first visit to the field allowed us to locate concretely the relevant physical limits of the areas to be covered for the household survey and for the survey of industrial establishments (as detailed in the following pages for each survey).

MIGRATION AND EMPLOYMENT SURVEY

Purpose and content of the survey

The second phase of observation consisted of a quantitative survey on migration and economic activities, conducted from January to April 1988. It aimed at describing the population and determining in particular its occupational pattern as well as its migration pattern.

The unit of observation of the survey was the household[7] and the data were collected at the places of residence by the means of a household schedule. The questionnaire was a rather short one, with most of the questions being closed-ended. The questions pertained to household characteristics as well as demographic, educational and occupational characteristics of every member of the household. Stress was put on migration and economic activities.

The data collected on in-migration included place of birth, year of arrival in the present locality and reason for migration. Data on out-migration concerned the previous members who had left the household during the last five years preceding the survey, along with the year of departure, place of destination and reason for departure. The period of reference of five years to record out-migration was chosen in order to appraise the possible effects of a severe drought which affected the region from 1985-86 to 1987-88. Furthermore, over this short period, the memory of the respondents concerning important events, such as the departure of a member from their household, can be considered as mostly reliable, and at least not likely to introduce differential reporting between more recent and less recent out-migration within the five-year period of reference.

Regarding economic activities, the data collected included the main as well as the secondary activity together with occupation, branch of industry, status and nature of employment, number of months worked during the year preceding the survey and place of work.

Spatial demarcation of the area of the survey

In any study aimed at understanding the dynamics of a town, the spatial demarcation of the area of a migration and employment survey calls for special attention. In particular, it is crucial not to miss out any of the most recent zones of settlement of the urban agglomeration, zones in which the proportion of 'fresh' in-migrants is likely to be very high. For this purpose, the administrative boundaries of the town are usually not adequate. It is more appropriate to follow the physical limits of the urban agglomeration, which often extend beyond

the administrative ones, in order to include all the peripheral settlement zones. In an industrial town like Jetpur, it is also necessary to include all the industrial zones in the area covered by the household survey, to be in a position to survey the temporary migrant workers living in the factories, which is a non-exceptional situation in India, as will be shown in another chapter.

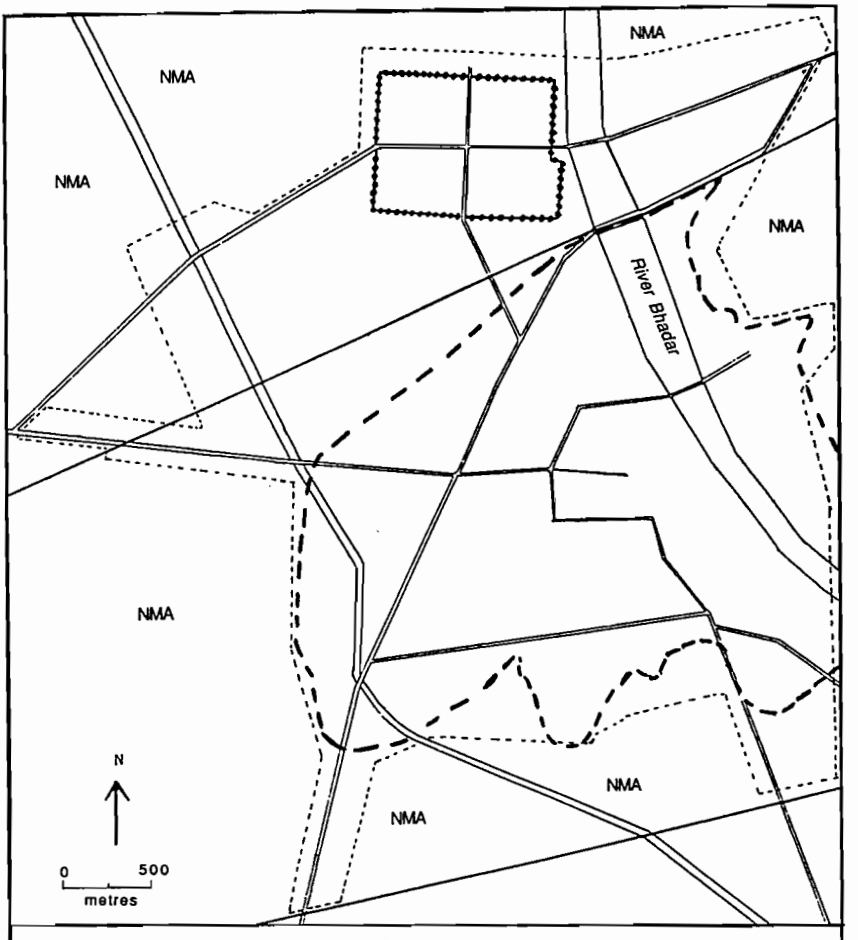
The implementation of these recommendations for the delimitation of the area of the survey at Jetpur led us to include in the urban area to be surveyed an entire adjoining agglomeration, namely Navagadh (see Figure 2.2). In the 1981 census, Navagadh was registered as a village with a population of 6,811 inhabitants. Its territory is just contiguous to Jetpur town, and in 1987-88 Navagadh looked more like a part of a single urban agglomeration along with Jetpur, than like a distinct rural centre. First of all, there was no physical discontinuity in the built-up area between the two agglomerations. Moreover, from the viewpoint of economic dynamics, with the setting up of many printing factories in the territory of Navagadh, this centre appeared to be integrated into the economic system of Jetpur. Therefore, it was not relevant to carry on a research on the economic and demographic dynamics of Jetpur town without extending the scope of the field study to Navagadh. As a matter of fact, Navagadh was officially recognized as a part of the Jetpur urban agglomeration in the 1991 census.

In order to observe the commuters who were working in the town while maintaining their rural residence, the household survey in the urban agglomeration had to be completed by a similar survey in the surrounding villages.

To select the villages for the survey, a representative sampling procedure would have consisted of listing all the villages located within a radius of about 25 kilometres around Jetpur, classifying them into strata according to their distance from Jetpur, and then drawing a simple random sample of villages in each stratum. But due to our schedule constraints and because of the relative significance of the household survey in the whole investigation system to be implemented, we had to limit the objectives of the survey in the villages and opted for a shorter field operation.

Finally, the sample of villages was not drawn randomly; we

Figure 2.2
Spatial demarcation of the field of the migration and employment survey in the Jetpur urban agglomeration (January – April 1988)



Jetpur Municipality boundary
Village wall of Navagadh
Limit of the urban area covered by the migration and employment survey
Railway
Canal
Road
NMA Non-municipal uninhabited cultivated area

The location of the industrial zones is shown in Figure 3-3.

rather selected deliberately five villages (located within a radius of eight kilometres around Jetpur) which were known for the large number of commuters sent to the urban industry. Due to this method of selection, the migration and employment survey conducted in these villages is not expected to provide a representative picture of the attraction exerted by Jetpur's labour market on the population of the entire hinterland. Nevertheless, this survey provides an illustration of the influence of the urban economy on the nearby villages and shows the extent to which this rural population depends for its living on the employment opportunities supplied by the urban labour market.

The five villages selected for the survey are shown in Figure 2-3. They are:

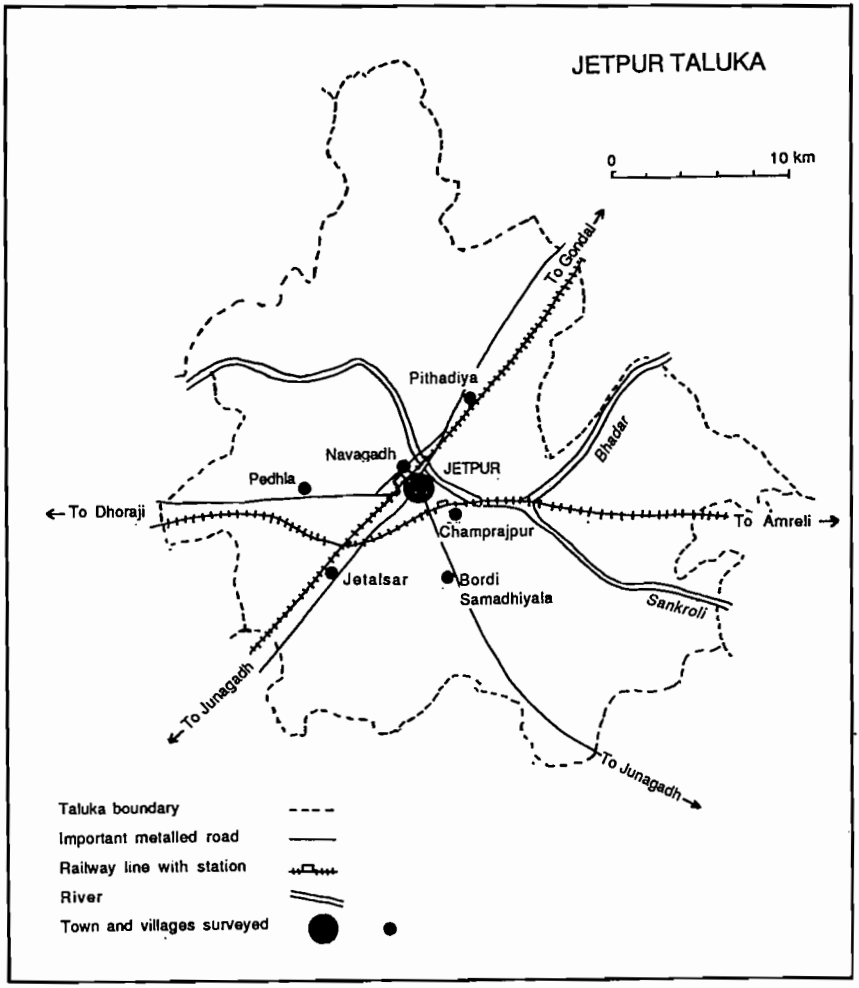
- Champrajpur, located 2 kilometres from Jetpur, with a population of 1,569 inhabitants in the 1981 census;
- Bordi Samadhiyala, located 5 kilometres from Jetpur, with a population of 3,753 in 1981;
- Pithadiya, located 6 kilometres from Jetpur, with a population of 3,398 in 1981;
- Pedhla, located 5 kilometres from Jetpur, with a population of 2,661 in 1981;
- Jetalsar village, located 7 kilometres from Jetpur, with a population of 3,690 in 1981.

Sampling method

The reference population for the survey is the *de jure*—or resident—population living in the Jetpur urban agglomeration (including Navagadh) as well as the *de jure* population living in the five selected villages. The population size of the urban agglomeration (in the 1981 census: 63,074 in Jetpur and 6,811 in Navagadh) necessitated a sample survey. The unit of sampling—and observation—is the household, defined (according to the Indian census criteria) as: 'a group of persons normally living together and taking food from a common kitchen'.

In the case of the migrant workers living in the factories, we considered that each team of workers (depending on the same

Figure 2.3
Location of the town and villages surveyed in Jetpur *taluka*
(household survey of migration and employment, January – April 1988).



foreman or supervisor, having the factory as a common place of residence and taking meals from a common kitchen) formed a distinct collective household. Although these migrant workers do not intend to settle permanently in the town where they work under temporary engagement, the duration of their employment and stay normally exceeds several months, eight to 10 at the minimum. Therefore, they must be included in the resident population and be surveyed in their current place of residence, namely the factory.

Regarding the sampling frame, the lists of households which could be available, like the registers of voters drawn up by the municipality or the village *panchayat* (the local administrative body), are neither exhaustive nor updated. The most recent in-migrants may not be registered; nor are the temporary migrant workers housed in the factories.

To draw the sample of the household survey we adopted a spatial approach which allowed us to control the dispersion of the sample all over the area to be surveyed. For any survey on migration and economic activities to be conducted in an urban area, an adequate dispersion of the sample is crucial. This is the first condition to ensure the representativeness of the sample population, in particular as regards the socio-cultural characteristics of the population, its occupational pattern and its geographical origin.

Many urban studies have underlined the links between social structure and spatial organization in Indian towns, and the fact that the in-migrants' settlement in a town was far from being a haphazard process (Brush, 1977; Rao, 1983; Gandhi, 1983; Schenk, 1986). This is also true for Jetpur, as will be shown in Chapters 4 and 5.

To conduct the survey in the urban agglomeration, we used town maps which were completed and updated through carefully checking in the field in order to add the most recent zones of urban and industrial extension. The maps helped divide the whole territory into operational survey blocks. To ensure the maximum spatial dispersion of the sample, the survey covered all the blocks of the urban agglomeration. For every block another detailed map was designed; it was then used for a direct count of the households and to carry out simultaneously a systematic sampling of 10 per cent of the households. This

sampling rate was fixed in order to ensure that a sufficient size of the sample allowed a good quality of the estimates, while taking into account the time and cost constraints of the survey.

In each village selected, we followed a sampling method similar to that applied in the urban agglomeration: division of the village area into survey blocks, counting of households and a 10 per cent sample drawn in every block.

The resulting sample consists of 1,906 households in the urban agglomeration (corresponding to 11,925 residents) and 395 households in the surrounding villages (corresponding to 2,487 residents).

Critical appraisal of data collection

The rate of refusal during the survey was very low: out of the 2,301 households in the sample, only 45 cases refused to answer (namely 1.9 per cent). In such cases a procedure of substitution was applied with the next household of the count. Due to their marginal effect, these substitutions are not likely to introduce any significant bias in the representativeness of the sample.

A potential source of bias is related to the sampling procedure. The population referred to in the survey was the population normally residing in the urban agglomeration (or the selected villages) at the time of the survey. But some ambiguities remained in the case of houses closed at the time of the enumeration. For the count of the households as well as for the selection of the households to be surveyed, when the investigators did not find anybody in a house, they had to enquire from the neighbours to determine whether the house was usually occupied, and by how many households. But in the case of households which had been absent for a long period, the neighbours might not always know with accuracy if the household was only temporarily absent, or if it had moved to another place of residence. In the case of a landowner who had several places of residence—for example, a familial house in Jetpur and another dwelling in a bigger town for the purpose of work or business—it was not possible (in the absence of the concerned person) to determine which place of residence had to be

considered as the main one, and thus to decide whether the household had to be counted or not.

Due to these ambiguities, the total number of households counted may include a certain percentage of a 'floating population' of households whose main place of residence is not accurately determined. But it is difficult to predict whether this source of bias will tend to overestimate or underestimate the effective total number of households residing in the area under study, or whether there will be a neutralization of the counting errors.

The substitution procedure in case of absent households, similar to that applied in case of refusal, introduces another possibility of distortion. Normally, substitution could be done only in the case of an absence of at least several days. However, it is not unlikely that sometimes the investigators tended to substitute an absent household by the next one, to avoid returning to the same place later on. If this happened, that would mean an under-representation in the sample of households composed only of earning members working outside their house all day long. In this category of households there are, in particular, the one-member households of isolated workers. But, considering the time that we devoted to follow the field investigators during the survey and to control their work, this should remain marginal. Moreover, in most of the cases, at least one adult member was present in the household to be surveyed, more frequently women, and even when the household head was not present at the time of the interview, the other members in the household were able to answer all the questions of the household schedule.

Exhaustive survey of the workers living in the factories

In order not to omit the workers living in the factories when counting the households and drawing the sample, all the factories were systematically checked. We took the opportunity of this methodological verification to conduct, in addition to the 10 per cent sample survey, an enumeration of all the workers living in the factories and to fill the household schedule for every team. As there was no information available concerning these temporary migrant workers, this enabled us

to collect a first set of basic data on this sub-population, particularly meaningful for a study on mobility and economic activity. However, this attempt at an exhaustive enumeration-cum-survey of the workers living in the factories raised more difficulties than the survey in the private households.

First, the migrant workers living in the factories are approachable only through their employer who controls the access to the plant. Thus, the factory owner's consent was necessary to conduct the survey. The industrialists who do not respect the laws relating to inter-state migrant workers and contract labour were rather reluctant to allow us inside the factory to collect information. During the survey some cases of deliberately incorrect information given by the entrepreneurs or their staff could be detected. But in the case of a negative answer given to us while enquiring about the presence of workers living inside the factory, we did not have the means to check systematically the veracity of the information given to us. Therefore, it is likely that some teams of workers were missed out due to possible misinformation. Nevertheless, we limited the risk of omission by participating as direct observers during the entire field operation, and by working with field investigators belonging to the place and whose local knowledge could be used fruitfully.

Another limitation of this enumeration, cross-sectional by nature, is due to the high degree of mobility of temporary migrant workers. They go and visit their native place regularly, generally once a year for at least one month. The supervisors or contractors do not necessarily report the absent workers as members of their team, as in fact there is often no certitude about the duration of their absence or even their return. When they come back, the workers may also join another team or factory.

In addition, the recruitment of inter-state temporary migrant workers follows the seasonal fluctuations of the textile printing industry. Since the enumeration took place during a period of industrial slackness, their number at that time was also at its lowest level (as will be discussed further in Chapter 7).

Hence, taking into account the risk of omission and the seasonal fluctuations, the population of 1,113 migrant workers enumerated in the factories in January–April 1988 should be

considered as a minimum estimate of the employment potential of the Jetpur textile printing industry for this specific category of workers.

SURVEY OF INDUSTRIAL ESTABLISHMENTS

Purpose of the survey

The third phase of observation focused on the textile printing industry which is the predominant sector of activity in Jetpur. The main purpose of the survey of industrial establishments was to collect information on the development of this local leading industry and to appraise better the role that it played in the economic development of the town and its region. More specifically, the data collected aimed at an improved understanding of the process of industrialization in Jetpur at the micro level, through the analysis of the profiles and investment strategies of the entrepreneurs.

Spatial demarcation of the area of the survey

The survey of industrial establishments concerned the textile dyeing and printing industry of Jetpur. Following the lessons drawn from the first round of observation, the area of this survey could not be limited to the administrative boundaries of the Municipality of Jetpur. Many industrialists have set up their factories outside the municipal boundaries, on the territory of adjoining or nearby villages. Thus, in order to take into account all the industrial zones, we had to include in the area of the survey the outskirts of Jetpur, the adjoining agglomeration of Navagadh, and the printing industries located in two nearby villages (Pedhla and Champrajpur).

Sample

A preliminary methodological question to examine before draw-

ing a sample was the definition of the most relevant sampling unit for the purpose of this survey: this relates to some difficulties commonly met in the Indian context when carrying out a survey of industrial establishments. The industrial unit referred to in official statistics (the records of the District Industries Centre, of the municipality and village *panchayat*, of the Chief Inspector of Factories, or of the local industrial association) corresponds more to administrative than to economic criteria. The entrepreneurs of Jetpur adopt the common practice of dividing their industrial concern into small-sized units, for administrative registration purposes, in order to avoid extra taxes[8] and to escape the labour legislation. The units attached to the same 'holder' (an individual entrepreneur or a familial group in partnership) may be located in the same premises or in the same estate, but they are sometimes scattered in different places in Jetpur. As a result of this dividing practice, although the printing industry in Jetpur boasts about 1,100 to 1,200 printing 'units', all of them belonging to the small-scale sector,[9] these correspond to only about 500 distinct individual concerns or industrial familial groups (the Jetpur Dyeing and Printing Association estimates). To draw a representative sample for the survey of industrial establishments, it thus appeared important to take account of the clustering of the 'administrative units' into bigger industrial concerns. Several lists of industrial units were examined in order to find an adequate sampling frame.

A first list of establishments in the dyeing and printing industry could be extracted from the Jetpur Municipality's records of the Shops and Establishments Act. This Act applies to the establishments located on the territory of the municipality. All the establishments using power and employing less than 10 workers, and those not using power and employing less than 20 workers, have to be registered under this Act. About 1,300 printing units have been listed from 1955 to April 1988. However, in addition to the possible under-registration of the establishments falling under the purview of the Act, this list presents too strong limitations to be used as a sampling frame. First of all, the establishments located outside the municipal boundaries are not registered, which would leave out all the recent locations of factories. Second, the list is not updated: in

the case of the closure of an establishment, the mention of the closure and its date are not systematically recorded. Third, the establishments employing 10 workers or more (when using power) or 20 workers or more (when not using power) are not to be registered with the municipality (under the Shops and Establishments Act) but with the Chief Inspector of Factories in Ahmedabad (under the Indian Factories Act, 1948).

Other lists of printing factories were available and could have been used to complete the list from the municipality. The *mamladar* of the Jetpur *taluka* issued us a list of the establishments located on Jetpur revenue land outside the residential site, on non-agricultural land used for industrial purposes; but this list of 366 establishments overlaps with the municipality's one. A list of 246 printing factories located on the territory of Navagadh was also obtained from the village *panchayat*. Lastly, the office of the Chief Inspector of Factories in Ahmedabad provided the list of the establishments registered under the Indian Factories Act, 1948; however, in 1988, only eight units in the dyeing and printing industry were registered in the Jetpur area. This shows the extent of under-registration resulting from the practice of dividing the industrial concerns and from under-reporting the workers employed (see following pages). Making an exhaustive and accurate list of the industrial establishments from the different lists available, would have been a very long operation. Besides, the updating of the list from the register of the Shop and Establishment Act, in order to retain the names of only those establishments still functioning, raised considerable difficulties.

The inadequacies of the official statistics on industrial establishments as the basis of a sampling frame led us to use another type of list: the list of the printing units registered with the Jetpur Dyeing and Printing Association. This Association represents the entrepreneurs running textile dyeing and printing factories that may be located in Jetpur town, on the territory of the adjoining village of Navagadh, or on the periphery of the urban agglomeration. Though only 603 printing units out of an estimated total of 1,100 to 1,200 units were registered with the Association in October 1988, this list actually enabled us to cover most of the entrepreneurs of the printing industry because of their practice of dividing their concern into small-

sized administrative units. Very frequently, the entrepreneurs running several printing units do not register all of them with the Association, but only one or some. According to the Association, out of about 500 distinct 'parties' or 'holders' (distinct individual entrepreneurs or familial groups), the number of those who are not members of the Association would not exceed 50. As will be shown later, membership of the Association involves certain advantages for the entrepreneurs; this explains its large representative nature (about 90 per cent of the 500 distinct business concerns). Therefore, the list given by the Association could provide a reasonable sampling frame. In addition, the organization of the records allowed us to easily identify the printing units run by the same entrepreneur or by the same familial group, and thus to take account of this clustering effect in order to draw a sample. Finally, a random sample of 50 distinct individual entrepreneurs or familial groups was drawn from the list provided by the Association. Later, two substitutions were made to include in the sample some entrepreneurs who were not members of the Association. Thus, the sampling rate approximates 10 per cent.

Content of the survey

Following a pilot survey in October 1988, we conducted the field enquiry with the concerned entrepreneurs in November and December 1988. In-depth interviews were carried out by the means of a structured questionnaire which included open-ended questions, and were completed with the help of field notes. The survey aimed at collecting both quantitative and qualitative information pertaining to:

- the entrepreneur's characteristics;
- his migration and occupation history;
- the geographical origin and occupation of his father and grandfather;
- the setting up of the establishment and the choice of Jetpur;
- the economic characteristics of each industrial unit (initial investment, form of organization of business, main equipment, processing capacity, marketing places);

- employment generation;
- the working period and fluctuations in the level of activity;
- the problems faced and future prospects.

Critical appraisal of data collection

The general difficulty experienced in a survey of industrial establishments by the means of a questionnaire is to establish a relationship of confidence with the entrepreneur so as to be in a position to collect reliable data. Concealing the real facts and misrepresenting the real figures are common practices amongst Indian industrialists who attempt to avoid extra taxes, to escape the labour legislation and to economize on labour costs. In particular, the labour legislation is mainly connected with the Indian Factory Act, 1948, which applies to establishments using power and employing 10 or more workers, and those not using power and employing 20 or more workers. The Act contains regulations covering hygiene and safety, sets the number of obligatory paid holidays, places restraints on child labour, etc. The undertakings registered under the Factory Act are also submitted to other laws, like the Payment of Bonus Act, 1965, relating to the implementation of profit-sharing in a specific proportion. Thus, employment proves to be one of the most touchy issues, and the industrialists as a general rule try to keep the number of workers declared per 'industrial unit' under the threshold of 10 or 20. As a result, a systematic investigation which included the collection of accurate data—especially employment details—at the level of the industrial unit was likely to be perceived as a kind of control and treated as highly suspicious.

The full agreement and support of the Jetpur Dyeing and Printing Association was thus a prerequisite to conduct this survey and to help dissipate the industrialists' suspicion. In spite of that, evidence from the field work showed that employment data collected during the survey cannot be considered as reliable as far as the numbers of employed workers are concerned. These figures can only provide minimum estimates, which have to be cross-checked with other estimates, based for example on the processing capacity and the actual level of

production, and other sources of information, like the household survey. These expected limitations, which were fully revealed by the pilot survey, led us to reorient the interviews to give more importance to qualitative information. This proved less problematic. Hence, the major contribution of the survey of industrial establishments is to help us to comprehend the entrepreneurs' economic strategies and thus grasp the mechanisms of the industrial development at the micro level of the enterprise.

To complete this survey, additional secondary data were collected from the Jetpur Dyeing and Printing Association, the District Industries Centre, the municipality and other local administrations; some of these data have already been mentioned above, others will be presented when used in the course of the analysis.

Interviews at the credit institutions

In the interviews conducted with the entrepreneurs for the survey of industrial establishments, apart from a question about the modalities of the initial investment, the issue of indebtedness was not broached. The financial management of the printing industry was not part of the main topics of that survey. Moreover, during the interviews with the industrialists, direct questions on profit, loss, indebtedness and other financial aspects were deliberately avoided, as these issues proved to be too touchy to expect reliable responses and were likely to increase the industrialists' suspicion and thus to spoil the climate of the entire interview. Interviews at the credit institutions, completed by an interview with an independent chartered accountant who had many clients among the Jetpur industrialists, proved to be a more relevant and pragmatic approach to collect information on financial issues. The six most important banking institutions (each having a branch in Jetpur[10]) were visited in May 1989. These interviews aimed at collecting information on the role of the credit institutions in the financing of the printing industry, as well as on the financial position and difficulties of the entrepreneurs in the usual management of their firm and during periods of indus-

trial slackness like that resulting from the recurrent drought of 1985-86 to 1987-88.

The main points of the interviews with the bank managers included the following:

- credit facilities (together with their conditions) provided by the banks for financing the fixed capital and the working capital of the enterprises;
- main financial requirements of the entrepreneurs of the printing industry, their level of indebtedness, the part of banking credit in the financing of their working capital;
- sickness in the printing industry: current position and position during the drought.

WORKERS' LIFE HISTORIES

Purpose and content of the survey

The fourth phase of observation followed a qualitative approach, at the micro-social level, and focused on the workers of the leading economic sector, the dyeing and printing industry. It aimed at apprehending the question of settlement pattern and occupational insertion in a medium-sized industrial town like Jetpur from the viewpoint of the workers themselves and their own economic strategies. The main purpose of the survey was to collect detailed migratory and occupational histories from the workers, in order to better understand the rationale behind the different forms of spatial and occupational mobility as well as the role of the urban industrial labour market in population attraction and settlement.

The survey, based on in-depth individual interviews with a sample of industrial workers, took place in April and May 1989. We conducted this field enquiry at the place of residence of each selected worker. A detailed questionnaire with largely open-ended questions provided guidance for the interviews. These included the following items:

- information on the geographical origin and occupation of the

worker's father and grandfather;
- reconstruction of the worker's migration and occupation history;
- reason for in-migrating to Jetpur and the choice of the town;
- reason for not migrating and preference for a rural residence in the case of commuters;
- insertion in town;
- entry into the urban labour market;
- system of payment and working conditions;
- relations maintained with the native place;
- the worker's future plans.

Sampling procedure

The unit of sampling was the worker of the dyeing and printing industry, and the sampling frame was the individual file of the household survey on migration and employment. The sample was drawn in order to represent the different categories of workers with respect to their occupational group in the industry as well as their place of residence and migration status (native urban residents, in-migrants who have settled in town, inter-state migrants living in the factories, commuters living in the surrounding villages). An initial sample of 50 workers was drawn following the quota method from the individual file of the household survey, and for each selected individual a second worker with the same characteristics was also drawn to be used for substitution if necessary. Thus, for each worker to be interviewed we had already in hand his household schedule filled one year earlier, and his address.

Substitutions were made with another worker in the following situations: the house of the selected worker could not be located (one case); the selected worker had migrated out of the agglomeration or moved to another non-identified place within the agglomeration (six cases); the interview proved to be too difficult to arrange with the selected worker (two cases); the selected worker refused to answer at the interview (six cases). The refusals were motivated by the respondent's suspicion and fear of the survey and its possible consequences, or merely by a complete lack of interest regarding the survey, thus leading

to a non-co-operative attitude. But apart from these cases, we must on the contrary underline the very good co-operation of the respondents who agreed to devote time for a long and extensive interview, even after an exhausting day of work, and to answer detailed questions enquiring far back into their past.

Necessary adjustments for the sample of migrant workers living in the factories

The peculiar situation of the inter-state migrant workers living in the factories led us to introduce some modifications into the general sampling scheme. In their case the workers to be interviewed were not selected from the individual file of the household survey, as it did not seem appropriate for two reasons. First, the high degree of mobility of these workers (in Jetpur itself from one factory to the other, and between Jetpur and their native place) increased the risk of not finding the pre-selected individuals. Moreover, we had to consider the possibility of a refusal coming from industrialists who controlled access to their factories. In order to limit this possibility, we listed the factories employing inter-state migrant workers, based on the information collected during the previous surveys, and we selected a few factories where the entrepreneurs had proved to be particularly co-operative. Previous surveys also equipped us with the experience of locating factories which employed migrant workers performing specific types of work and recruited from a specific region. Though we did not prepare a list of workers with names, we fixed in advance the number of workers to be interviewed for each type of occupation and region of origin, along with the name of the factories where they could be approached easily without objection from their employer. In the course of the field work, we also included in the survey certain exceptional informants, like the pioneers of some migration channels or a famous labour contractor.

Limitations of the interviews conducted with the workers living in the factories

For most of the workers who live outside their work site, in the urban agglomeration or the surrounding villages, the interview conducted at their place of residence allowed them to answer in a more independent way than they would have done

at their place of work. But in the case of the migrant workers living inside the factories, this condition of independence could not be fulfilled. Moreover, the interviews of the latter could be arranged only through the factory owner whose authorization was required and who called the workers according to our specifications. In a few cases, the entrepreneurs or some member of the managerial staff even attended the interview, or at least part of it. The employer's presence obviously caused a certain reticence among the workers and in such circumstances we avoided asking questions likely to embarrass the workers (for instance, about the union, the working conditions, etc.). Some industrialists also added their own comments on certain topics of the interview. Notwithstanding these limitations, the detailed life histories collected from the inter-state migrant workers allowed us, as for the other workers, to understand the rationale governing their spatial and occupational mobility as well as the formation of specific migration and recruitment channels.

Composition of the sample of workers interviewed

In all 64 workers' life histories were collected. The composition of the sample is shown in the appendix to this chapter. Interviews containing only partial and unreliable information have been excluded. The comparison of the distribution of the occupational and residential characteristics of the industrial workers (namely: occupational group, place of residence, migration status) in the population surveyed in 1988 for the household survey, and in the sub-sample of workers interviewed to collect migration and occupation histories, shows that the latter is not proportionally representative for the selected characteristics (see Appendix). This results from a deliberate procedure responding to the following considerations:

- Since the study lays stress on labour migration, priority was given to interviews with primary migrants[11] for employment reasons. However, some non-migrants and secondary migrants[12] were maintained in the sample, in order to better appraise the specificity, if any, of the labour migrants' strategies, in particular regarding absorption into the urban labour market.

- The interviews also focused on the workers directly involved in the production process, as compared with the office staff, since the former constitute the core of the industrial labour force.
- The size of the workers' sub-sample being limited to about 60 the application of a strict rule of proportionality for certain minority categories would not have allowed us to collect a sufficient number of life histories so as to understand the rationale of the corresponding types of migration and occupation strategies. This consideration led us to proportionally over-represent certain categories of workers, like inter-state migrant workers living in the factories, and among them those involved in pressing and folding operations.
- On the contrary, for some prevalent categories of workers, like printers, the level of saturation[13] in the information provided by the life histories was reached before we had interviewed the total number of individuals corresponding to the sampling rule of strict proportionality.
- In the course of the survey, some additional informants were also integrated into the sample. The cases of the pioneers of certain migration channels and that of a famous labour contractor in Jetpur have already been mentioned. We also took advantage of our personal network of relations in Jetpur to interview some workers we knew specially well. The privileged relation of confidence we could establish for the interview enabled us to collect very rich information, concerning not only their own life histories, but also more generally about the channels of recruitment, the system of payment and the working conditions in the printing industry.

Thus, the sample of workers eventually interviewed was the combined result of the predetermined quota sample of individuals drawn from the file of the household survey and of some necessary adjustments realized in the course of the field work. Here, a strict quota sampling did not seem a prerequisite for the collection of workers' life histories. In fact this survey did not aim at measuring migration variables and estimating their values for the whole population of industrial workers; it aimed at understanding the rationale governing the migration processes through a qualitative observation conducted at the

micro level. Therefore, the integration of certain exceptional informants into the sample or the introduction of some distortion, as compared with a strict quota sampling structure, proved to be a commendable procedure in order to collect more comprehensive and richer information.

In addition to the collection of workers' life histories, and in order to complete the information on the working conditions and labour strife in the dyeing and printing industry, we also interviewed some trade union leaders and collected information from the District Labour Office.

Contribution of the survey

As a phase of observation in the whole system of investigation implemented, the collection of workers' life histories makes a twofold contribution. The main one relates to the general contribution of migration and occupation histories to migration studies: this also applies to the entrepreneurs' histories collected during the survey of industrial establishments. Furthermore, the significance of the methodological reflections developed in the following pages goes far beyond the specific case of our study (Dupont and Dureau, 1988). The second contribution of the workers' survey relates to the second round of observation that this survey constitutes with reference to the household survey conducted a year earlier.

Contribution of the migration and occupation histories

As compared to a quantitative migration survey (like the household survey) which allows one to measure the impact of migration in the observed population and to appraise the main characteristics of the phenomenon, the migration and occupation histories collected by the means of in-depth interviews can provide a better understanding of the mobility processes through a qualitative approach. Not only does it help to interpret the results of the statistical analysis of the migration variables, but above all it enables us to reconstruct the migratory paths, to take account of the life space of the individual, and to reveal the interdependence of the migratory and occupational behaviours.

The qualitative analysis of the migration histories allows us to reconstruct the continuity of the individuals' spatial moves, while situating them within their respective familial and occupational life paths. Taking account of the time and space unity of the individual paths[14] is a major step forward, as compared to the cross-sectional surveys which can give only partial information on the migratory movements and lead ineluctably to a time division of the phenomenon, thus making it hard to understand the whole migration process. Moreover, some migration and occupational strategies can be understood only by considering the duration, the entire life course of the migrant and the whole life history of the individual. It can also prove necessary to go beyond the continuity of the individual migratory paths and to situate the account of the migrant's life within the history of the community to which he belongs.

As mentioned earlier, the introduction of the concept of life space also marked a considerable progress in research on migration. This concept allows us to go beyond the reductionist view which consisted in relating each individual to a sole place.[15] Taking account of the life space of the individual appears to be of primary importance in the study of many forms of mobility—like daily commuting, temporary labour migration, chain migration, etc.—to mention only some forms of mobility observed in the Jetpur case study. The detailed biographical interviews are particularly suited to provide information on the migrant's conceptualization of his life space and work space, thus making it easier to understand his pattern of mobility. Insofar as the geographical and socio-economic situation of an individual is not always 'a status likely to be identified independently of the individuals themselves' because 'the individuals do not necessarily consider any move as a geographical mobility or any change in his social status as a social mobility'[16] (Collomb, 1985), the individual's conceptualization of his mobility and his past and present places of residences is essential to an understanding of his moves and their meaning.

Another strong point of the life histories results from the simultaneous and integrated collection of information pertaining to the different spheres of an individual's life and therefore from the ability to relate the events observed in each of them

(occupation, family etc.) and to study how 'these changes result in modifications of the individuals' integration in time and space'[17] (Courgeau, 1984). Then a framework of approach particularly suited for a detailed analysis of the interactions between migration and economic activities is available: the analysis of life histories can show the extent to which the migratory and occupational paths interpenetrate, reveal the various types and functions of migration in the occupational strategies, and more generally contribute to a better understanding of the decision-making processes in these two fields.

However, migration and occupation histories are totally effective only if one can replace each of the stages of the individual paths within its social and economic background in order to better understand the determinants and functions of migration. In a study on labour migration focused on a specific town, this can be definitely done to explain the population movements affecting the town under consideration. Thus, in the case study of Jetpur, the persons interviewed had in common the fact of having chosen the same town as their place of residence and/or work, which allows us to integrate the local economic and social conditions into the analysis of the individual strategies. The analysis of the life histories can therefore give us information not only on the internal logic of the individual behaviours but also on the dynamics of the local population. This type of approach helped us to determine the extent to which the spatial and labour movements observed in Jetpur correspond to the attraction exerted by the urban economy, and can in return stimulate the urban development.

Contribution of the second-round survey

The sample of workers interviewed was drawn from the individual files of the household survey[18] conducted in January–April 1988: consequently, the households of the selected workers were revisited after an interval of 12 to 17 months (in April–May 1989). This allowed us to update and check the data collected at that time. Hence, on the basis of the verification of the questionnaires for the households revisited, it was possible to evaluate the general quality of the data collected during the household survey, draw indications about the types of response errors likely to occur and the degree of accuracy of the res-

ponses. This quality check helped us to be more aware of the limitations of the household survey on migration and employment, and thus to take the necessary precautions to interpret the results in a better and safer way.

SURVEY IN THE MIGRANTS' NATIVE PLACES[19]

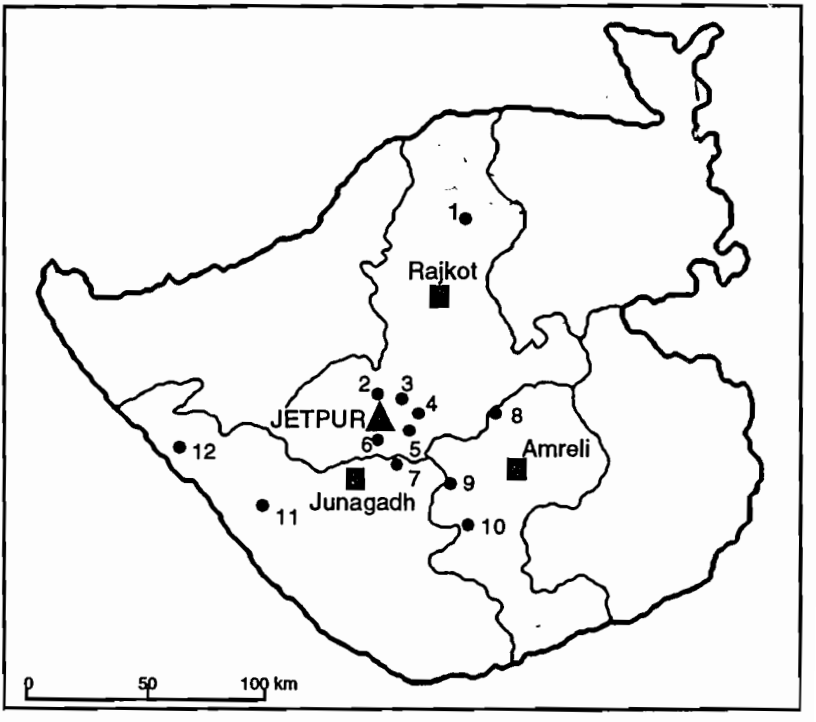
Purpose of the survey

The fifth phase of the system of observation consisted of a qualitative survey in the migrants' native places, and was conducted in October and November 1989. The objective was to complete the observation carried out in the urban agglomeration, together with some investigation conducted in the migrants' native villages, in order to collect the villagers' perception of urban life and urbanward migration, and to have a better appraisal of the social and economic conditions prevailing in the villages sending labour migrants to town. This investigation also aimed at a better understanding of the interactions between the town of Jetpur and its hinterland from where most of the in-migrants hail.

Sample

The sample of native places to be surveyed (villages or small towns) was selected from the sample of the 50 entrepreneurs interviewed and the sample of the 64 workers. Taking into account the problems of feasibility of the survey, only three districts of origin were selected; those directly surrounding Jetpur, and from where 75 per cent of the migrants in the Jetpur urban agglomeration have come. These are the districts of Rajkot, Junagadh and Amreli (see Figure 2.4). From these districts, five migrant entrepreneurs and 10 migrant workers were selected in order to represent the different castes and (in the case of the workers) the different types of occupation performed in the textile printing industry. The migrants who had no relative left in their native village/town and had stopped

Figure 2.4
Location of the towns and villages surveyed in Saurashtra
(survey in the migrants' native places, October – November 1989).



▲ Town studied

● Villages or small towns surveyed

■ District headquarters

— District boundary

— Boundary of Saurashtra

Names of the villages and small towns (*) surveyed:

1 - Rati Devli
2 - Haripar
3 - Virpur
4 - Vada Sada
5- Charan Samadhiyala
6 - Akala
7 - Ranpur Sorat
8 - Devaliya Mota
9 - Bagasara*
10 - Dhari*
11 - Nakra
12 - Amardad

maintaining relations with it were excluded from the selection procedure. This was the case of three migrant workers out of the 29 coming from Gujarat.[20] The 15 selected migrants corresponded to 10 villages and two small towns (Figure 2.4).

Content of the survey

The survey carried out in each village/small town included three types of interviews conducted on the basis of structured questionnaires which included open-ended questions: interviews with a village official, the migrant's family, a control group family.

The interview with a village official, the locally elected *sarpanch* or the *talati* appointed by the Government (or sometimes both of them), aimed at establishing a village profile. The information collected pertained to:

- the economic and demographic characteristics of the village;
- its amenities and institutions;
- the perception of urbanward out-migration and of urban life as compared to village life.

The questionnaire for the migrant's family included:

- a household schedule with the characteristics of all the resident members as well as information on the out-migrant members;
- information on the assets owned in the village; and specific sections concerning:
- the departure of the migrant to Jetpur;
- the relations maintained between the village and the migrant in town;
- the impact of the migrant's departure on the family in the village;
- the perception of urbanward migration and of urban life as compared to village life.

As the migrants were selected from among the entrepreneurs and the workers already interviewed extensively, the

interviews with the migrant's families also enabled us to confront the detailed information given, on the one hand, by the migrants in town and, on the other hand, by their families in the villages, especially with regard to the circumstances of the migrant's departure and the relations maintained between the migrant in town and his village of origin.

For each migrant's family interviewed, a control group family was identified on the basis of the following criteria: a family without any out-migrant member or commuter into town, and with characteristics similar to those of the migrant's family with respect to caste, occupation, size of landholding, number of sons in the same generation as the migrant's one. Out of the 15 migrants' families interviewed, only nine control group families could be identified, as some of the communities covered by the survey did not have any family without a migrant member or commuter in town. The questionnaire for the control group family included:

- a household schedule with the characteristics of all the members;
- information on the assets owned in the village;

and specific sections concerning:

- the knowledge about Jetpur;
- the reasons for not having any out-migrant family member in town and the possibility of future migration;
- the perception of urbanward migration and of urban life as compared to village life.

The combination of the last two interviews, namely with the migrant's family and with the corresponding control group family, enabled us to elucidate the factors explaining the departure of a member from the joint family, or the absence of migration.

FOLLOW-UP VISIT TO THE AREA

The area under study was revisited at the end of August 1992, in order to update our observations and final conclusions. It

seemed important to discuss the recent demographic evolution of the town in view of the provisional results of the census carried out in March 1991, and to appraise the changes which might have occurred in urban dynamics since our last surveys. Besides, unprecedented economic reforms were launched by the Government of India in July 1991; hence the purpose of this last round of observation was also to attempt a first evaluation of the impact of the policy of liberalization on the small-scale industrial sector in Jetpur.

To that end, in-depth interviews were conducted with a few selected informants: officials from the municipality and from the *taluka panchayat*; the leaders of the industrial association; bank managers or officers; professors of economics at the local college; industrialists running enterprises of various sizes; industrial workers and the leader of a trade union. We knew already most of these informants and had had the opportunity of discussing extensively with them during our previous periods of field work in Jetpur. In particular, the industrialists and workers were selected from among those who had been already interviewed for the previous surveys, and who proved to be especially co-operative. This allowed us to better understand their reaction to the changing economic context, and made this type of micro follow-up enquiry more fruitful.

The implementation of a system of investigation combining different surveys linked up with each other, involving statistical as well as anthropological types of approach and various angles of observation, allowed a meticulous analysis of the processes and mechanisms at work in the urban and industrial development of Jetpur, and hence a better understanding of them. This was further enhanced by the long and repeated periods of field work that enabled us to improve our knowledge and comprehension of the local environment. It is through such a research methodology that the contribution of a case study can be optimized. Yet, the question inherent in any case study is to appraise the significance of the research findings and the limits to their possible generalization. In this respect, we have tried to evaluate the findings of the enquiry in Jetpur against the findings of other studies on similar topics and thus to go beyond the scope of the case study.

APPENDIX

Composition of the sample of industrial workers interviewed in 1989

Table A2.1

Occupational structure of the hired workers of the dyeing and printing industry: Comparison between the sub-sample of workers interviewed in 1989 and that of the 1988 household survey

Occupational categories	*1989 sub-sample of workers*		*1988 household survey (No.= 1764)*
	No.	*%*	*%*
Screen-maker, designer	5	7.8	5.7
Dyer	7	10.9	8.3
Printer	20	31.3	40.3
Washerman	9	14.1	13.8
Folding and pressing worker	15	23.3	9.6
Packer	1	1.6	2.2
Ancillary production worker	5	7.8	7.7
Clerical worker and salesman	1	1.6	7.5
Service and transport worker	1	1.6	4.9
Total	64	100.0	100.0

Source: The 10 % household survey (1988); workers' life histories (1989)

Table A2.2
Distribution of the hired workers of the dyeing and printing industry by place of residence: Comparison between the sub-sample of workers interviewed in 1989 and that of the 1988 household survey

Place of residence	*1989 sub-sample of workers*		*1988 household survey (No.= 1764)*
	No.	*%*	*%*
Inside the factories	10	15.6	7.7
Outside the factories:			
–Jetpur–Navagadh urban agglomeration	43	67.2	79.8
– Five surrounding villages	11	17.2	12.5
Total	64	100.0	100.0

Source: The 10 % household survey (1988); workers' life histories (1989)

Table A2.3
Distribution of the hired workers of the dyeing and printing industry by migration status: Comparison between the sub-sample of workers interviewed in 1989 and that of the 1988 household survey

Migration status	*1989 sub-sample of workers*		*1988 household survey (No.= 1764)*
	No.	*%*	*%*
Native	18	28.1	44.0
Secondary in-migrant (induced move)	3	4.7	24.8
Primary in-migrant (made the decision)	43	67.2	31.2
Total	64	100.0	100.0

Source: The 10 % household survey (1988); workers' life histories (1989)

NOTES

1. For a general discussion of the contribution of the micro approach to demographic research, see: Seminar on 'The Micro Approach to Demographic Research', International Union for the Scientific Study of Population, Canberra, Australia, 3-7 September 1984, and in particular the papers presented by Caldwell; Caldwell, Reddy and Caldwell; Hugo; McNicoll.
2. Our own translation.
3. For a discussion of this methodological issue, see Caldwell, Reddy and Caldwell (1984), Hugo (1984), Winter (1984).
4. See, for example, the proceedings of the *Chaire Quetelet 1985* on quantitative and qualitative analysis in demography (Gérard and Loriaux, 1988).
5. In the 1971 Census of India data were collected on the place of work. This could have provided information on commuting. However, for undisclosed reasons, the data on this item were not tabulated.
6. On the basis of the tabulation plan of the 1991 census, some migration tables will be presented for each city with a population of one million and above, some tables for each city with a population of half a million and above, and a few new tables for each city with a population of 100,000 and above.
7. See the definition of 'household' in the paragraph on 'Sampling method'.
8. For example, excise duties are levied for units printing more than 7.5 million square metres of cloth per year (1988 criteria).
9. According to the official criteria applied from 1986 to May 1990, an industrial undertaking belongs to the category of 'small-scale industry' if it is: 'an undertaking having investment in plant and machinery, whether held on ownership basis or by lease or by hire purchase, not exceeding 3.5 million rupees', or an ancillary unit which is an 'undertaking having investment in fixed assets in plant and machinery whether held on ownership basis or by hire purchase not exceeding 4.5 million rupees'. In May 1990, the thresholds were raised to 6 million and 7.5 million respectively.
10. These are: the State Bank of Saurashtra, the Central Bank of India, the Rajkot Co-operative Bank (Rajkot Nagarik Saharkari Bank), the State Bank of India, the Bank of Baroda, the Dena Bank.
11. According to the *Multilingual Demographic Dictionary— English Section* (International Union for the Scientific Study of Population, Ordina Editions, Liège), 'a primary migrant is the person who makes the actual migration decision while a secondary migrant is an individual such as a young child whose migration is the result of another person's decision' (p. 95).
12. See the previous note.
13. Saturation is 'the phenomenon by which over a certain number of interviews, the observer has the impression of not learning anything new, at least as far as the sociological subject of the survey is concerned' (Bertaux, 1980—our own translation).
14. Without yielding to the 'biographical ideology' revealed by Bertaux (1980), namely to the assumption according to which any life shows unity and

coherence while, in reality, we deal rather with successive fragments of life (Le Bris, 1981-83).

15. Relating each individual to a sole place is the underlying assumption in the conventional definition of migration as a 'change in usual place of residence'.
16. Our own translation.
17. Our own translation.
18. Except for the workers living in the factories and for some exceptional cases mentioned earlier.
19. The survey in the migrants' native place was conceived and conducted in collaboration with Eva Lelièvre, from the *Institut Français d' Etudes Démographiques* (INED), Paris.
20. The 64 workers' life histories include those of 29 migrants from Gujarat, 15 from other States, and 20 natives of the Jetpur urban agglomeration.

3

Regional and Historical Background to the Economic Development of Jetpur

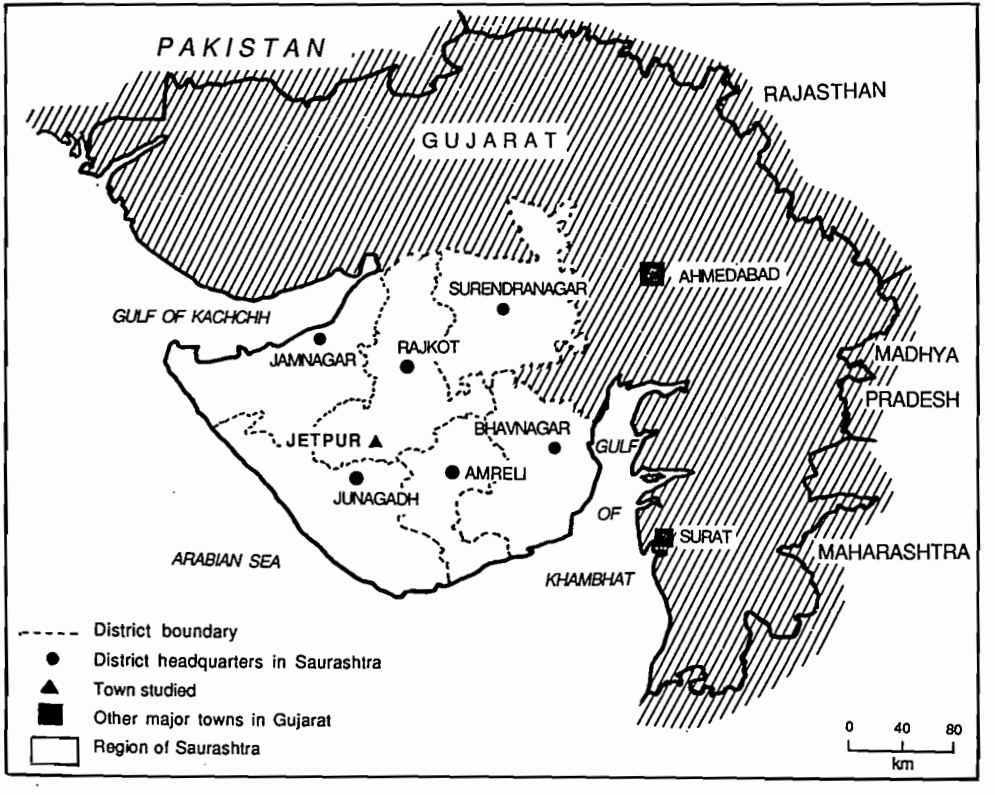
The middle-sized town selected for the case study, namely Jetpur in Gujarat, exemplifies a pattern of small-scale industrialization based on a single branch of economic activity originating in traditional crafts. At the outset, this chapter presents the main socio-economic characteristics of the sub-region of Saurashtra in which the demographic as well as the economic dynamics of the town of Jetpur are rooted. The second part of the chapter focuses on the historical background to the development of Jetpur and on the factors of industrial growth in this town. It shows how this ancient textile trading town was converted into an industrial centre specializing in textile dyeing and printing, and how the transition from household crafts to industrial production gradually took place, along with industrial agglomeration and concentration, leading to the emergence of Jetpur as a regional growth pole.

THE SAURASHTRA REGION

Location and administrative set-up

Saurashtra is the western peninsula of Gujarat, stretching out into the Arabian sea between the Gulf of Kachchh to the north

Figure 3.1
The region of Saurashtra in Gujarat: Administrative divisions



and the Gulf of Khambhat to the south-east, with a coastline of 829 kilometres (see Figure 3.1). This peculiar location explains the historical integration of the region in sea-borne trade with Arabian Gulf countries, East Africa, East Asian countries as well as with other parts of the Indian sub-continent.

As an administrative unit the Saurashtra region covers an area of 64,338 square kilometres and accounted for 11.23 million inhabitants in 1991. It includes six districts: Jamnagar, Rajkot (where the town of Jetpur is located), Surendranagar, Bhavnagar, Amreli and Junagadh.

The present administrative set-up is the outcome of successive political changes. Historically, from the eighteenth century up to Independence, the region was known as Kathiawar (i.e., the land inhabited by the Kathis). It was a conglomeration of princely states, small principalities and estates (or *giras*) with varying territories and jurisdictions, and as many as 222 were enumerated on the eve of Independence. This state of political fragmentation ended in 1948 with the formation of the United States of Saurashtra, resulting in the dissolution of the princely states and their integration into one political entity tied into the national structure of the Indian Union. Rajkot was the capital of the new State. However, the State of Saurashtra ceased to exist as a separate identity in 1956 when it was merged into the bilingual Bombay State comprising all Gujarati and all Marathi-speaking areas. Lastly, with the formation of the Gujarat State on 1 May 1960, the region of Saurashtra was integrated into Gujarat.

Agriculture: remarkable progress despite unfavourable natural conditions

Saurashtra is not favourably endowed with natural resources used in agriculture: land and water. Admittedly the rural density of population in the region is relatively low as compared to the whole of Gujarat or the whole of India (103 inhabitants per square kilometres in 1981 against respectively 123 and 161). However, the quality of the land leaves much to be desired, and the coastal areas face serious problems of salinity and sea water intrusion. Though the average size of an operational holding in

Saurashtra is still favourable as compared to the rest of Gujarat (4.9 hectares against 2.99 in 1980-81), it has undergone a continuous decline over time (in 1970-71 it was 6.89 hectares).[1]

Overall, scarcity and irregularity of water resources remain a main concern. Saurashtra is a drought-prone region with a long history of scarcity and famine conditions. Most parts of the region are arid or semi-arid.[2] Today, agriculture is still subject to the vagaries of climate. The average rainfall is not only inadequate but precipitation is unevenly spread during the monsoon. Moreover, geophysical characteristics such as hard rocky soil, low level of underground water with low rate of recharge, little surface water, rapidly flowing and non-perennial rivers, put constraints on irrigation facilities.

Nevertheless, agriculture in Saurashtra has undergone major changes since Independence, with some remarkable adjustments to make it more profitable.

At the outset, the land reforms which quickly followed the formation of Saurashtra State changed the rural scene radically. Prior to Independence the cultivators were mostly tenants-at-will on their rulers' holdings, with no landownership rights. The then Government of India, by its proclamation of 15 April 1948, conferred full occupancy rights to tenants, and further enacted four specific Acts: (*a*) the Saurashtra Land Reform Act of 1951; (*b*) the Saurashtra Barkhali Abolition Act of 1951; (*c*) the Saurashtra Estates Acquisition Act of 1952; and (*d*) the Saurashtra Prohibition of Leases of Agricultural Land Act of 1953. As a result of these reforms, intermediaries on land were totally abolished, along with the ancient *girasdari* and *barkhali* systems.[3] By 1953-54, Saurashtra had 'one of the most even distributions of landholdings of any region of India' (Spodek, 1976: 77).

Although dry farming is still prevalent in the region, irrigation facilities have noticeably increased. In 1950-51 the area under irrigation was only about 5 per cent of the net cultivated area; in 1983-84 the corresponding proportion reached 21.7 per cent. However the irrigation system shows an excessive dependence on a single source of irrigation—wells. In 1983-84 wells accounted for 80 per cent of the total irrigated area, while the share of alternative sources still remained limited: 18 per cent for canals and 2 per cent for tanks.[4]

The main trend in the cropping pattern has been the shift in favour of non-food crops which have become predominant over food crops in the cultivated area of Saurashtra. The proportion of the area under non-food crops progressed from 26 per cent of the gross cropped area in 1948-49 to 71 per cent in 1978-79 and 66 per cent in 1983-84.[5] In the same way, cash crops have also occupied an increasing portion of the irrigated area. Today, the major non-food crops are groundnut and cotton and the major food crops are millet, sorghum and wheat. During the nineteenth century and till Independence, cash crops played an important part in the regional economy; at that time cotton was the leading commercial crop which nourished a flourishing trade and gave rise to the local textile industry. It is only after Independence that groundnut rapidly replaced cotton in this leading role and provided new opportunities for agro-based processing industries.

The cultivators of Saurashtra have also adopted more modern methods of cultivation. Improved seeds have been introduced, the consumption of fertilizers has risen, and the use of mechanized agricultural implements, especially diesel engines and electric pump-sets for irrigation purposes, has increased. As a result, improvements in productivity have taken place (Joshi et al.,1988).

Agriculture remains the main sector of employment for the population of Saurashtra. In 1991, 50 per cent of the total male labour force and 82 per cent of the female force worked as cultivators or agricultural labourers. In the region agriculture is mainly carried out with the help of family labour; hired agricultural labourers account for only 37 per cent of the workers engaged in this sector.[6] This situation is partly the result of the post-1960 land reforms. Yet the number of landless agricultural labourers shows a rising trend. Besides, animal husbandry and the dairy industry have evolved as complementary to the farming of food and non-food crops.

A sizeable but unbalanced industrial development

The region has an ancient craft industry. In the past, crafts related to textiles were especially famous. Industrialization,

however, began in the second half of the nineteenth century with the establishment of the first ginning and pressing factory in 1866 at Wadhwan. A few years later, in 1873, the first spinning and weaving mill was started at Bhavnagar. The availability of the raw material (cotton) from the region itself greatly influenced the development of the textile industry. This became the most important manufacturing industry in Saurashtra, from the viewpoint of both employment and investment, till at least the early fifties (Vakil et al., 1953). The early stage of industrial development in Saurashtra was marked by a strong local resource base, and this characteristic has persisted in the present industrial structure. In addition to the cotton textile industry, cement, vegetable oil, solvent extraction, salt, soda ash, ceramics, sugar, etc., constitute significant lines of regional production. Even the sector of general engineering, which is now a major industry in Saurashtra,[7] started in the pre-Independence period as an ancillary industry for carrying out repairs and maintenance of plants and machines of the main resource-based industries.

The integration of the former princely states gave shape to a new unified regional economic space, integrated into the national one and thus also open to competition. In the general context of the country's underdevelopment, Saurashtra was a relatively backward region industrially; the scarcity of water was one contributory factor, besides the paucity of infrastructure. The then Government of India recognized the importance of state aid and encouragement to promote industrialization and took various policy measures to this end. Altogether, this created radically new conditions for industrial development (Vakil et al., 1953). In order to provide an adequate infrastructure, the Government developed roads and road transport, power generation (which was—and is still—an important bottleneck), communication, and the banking system through the State Bank of Saurashtra created in 1950. The thrust of the new economic policy in the fifties was towards small-scale industrialization, through the establishment of several supporting institutions: the Saurashtra Cottage Industry Board in 1949, the Saurashtra Small-scale Industries and Handicraft Board in 1953, supplemented by the Saurashtra Industrial Finance

Corporation and the Saurashtra Small Industries Bank in 1956.

Industrial development gathered further momentum with the formation of the State of Gujarat in 1960. New specialized institutions were created to channel state assistance—the Gujarat State Financial Corporation in 1960 (GSFC), the Gujarat Industrial Development Corporation in 1962 (GIDC), and the Gujarat Industrial Investment Corporation in 1968 (GIIC). The performance of Gujarat's economy has been quite remarkable; from 1970-71 to 1987-88 (last available figures) this State ranked second in the country in terms of value of output and net value added in the manufacturing sector, next only to Maharashtra.[8] This impressive record is, however, marked by the uneven regional spread of industrialization within the State. While there is a heavy concentration of industries in the Ahmedabad–Vapi corridor (in South Gujarat towards Bombay), Saurashtra lags behind.

In the Saurashtra region itself the spatial distribution of industrial development is unbalanced, with a concentration in some nodal points, especially in the Rajkot district, and stagnation in other areas. Out of the six districts, four have been declared 'industrially backward' since the early seventies (namely Surendranagar, Bhavnagar, Amreli and Junagadh) and have thus become eligible for special financial incentives under central and State schemes. These include cash subsidies for investment in fixed assets, income tax benefits, sales tax incentives and concessional interest rates. Certain *talukas* were also recognized as backward by the State so that they could get the benefit of State incentive schemes. In addition, for encouraging the growth of industries at specific locations, the government of Gujarat initiated a growth centre policy in 1977. Out of 120 growth centres selected in Gujarat, 44 (including Jetpur) were located in Saurashtra. These were divided into three groups with graded incentives; they benefited from cash subsidies and sales tax benefits up to 1982, and then from sales incentives alone up to the end of 1985. The location of industries was also determined through the establishment of industrial estates. Since the establishment at Rajkot (in 1955) of the first industrial estate built in India under the Central Government's scheme, the number of in-

dustrial estates developed in Saurashtra by the GIDC was 44 in 1989-90 (out of 145 in Gujarat).

The New Industrial Policy announced by the State Government of Gujarat for 1990-95 'emphasizes the need for rapid industrialization to encourage balanced growth of industries and to generate employment in the rural and less developed areas'.[9] The new package of incentives includes, in particular, provision for special incentives to 140 out of 184 *talukas* and, in addition, to eight special backward areas. There is also a specific scheme to boost industrial development in Saurashtra. In June 1992, the Saurashtra and Kachchh Development Committee was created to make recommendations for investment in certain fields. More recently, in September 1993, the State Government announced the establishment of the Gujarat Growth Centres Development Corporation, to develop three growth centres (plus one 'mini' centre) in order to boost industrial development in backward areas of the State; this programme is part of the Central Government's policy to promote the development of 70 selected growth centres all over the country.

For Saurashtra as a whole, the official records indicate a sizeable industrial growth after 1960. In the small-scale industry sector, there has been a remarkable increase in the number of registered units, from 703 in 1961 to 22,599 in 1986 (that is, plus 3,114 per cent) and to 23,373 in 1988.[10] In the factory sector (which corresponds to those undertakings registered under the Factories Act) the progression is more moderate, and it has been slower in employment than in the number of factories: the number of reported working factories increased from 968 in 1960 to 2,846 in 1985 (or plus 194 per cent), with a corresponding rise in the number of workers from 57,246 to 117,476 (or plus 105 per cent).[11] However, as already shown in the previous chapter in the case of Jetpur, the interpretation of official statistics on industries calls for caution. Firstly, those two sectors (namely the small-scale sector and the factory sector) overlap, since the former refers to criteria involving the amount of investment in fixed assets, and the latter to criteria involving the number of workers employed (see Chapter 2). Further, registration with the Directorate of Industries is not compulsory for the small-scale industries, although it is required in

order to get assistance under the State Government or Central Government schemes; thus many already functioning units may have registered in the sixties, following the establishment of the various supporting institutions. On the other hand, not all registered units are really functioning: some may have not gone into production, some may have closed. In the factory sector, registration is compulsory for the units concerned; however, as mentioned earlier, the industrialists frequently resort to the practice of under-reporting the number of workers or dividing their industrial concern into small-sized units, in order to avoid labour legislation. Nevertheless, though the figures of reported units and workers cannot give a real picture of the industrial structure and its evolution, the trend that they suggest corresponds to an indisputable industrial development.

The industrial sector in Saurashtra is dominated by small-scale industries, whereas large-scale industries lag far behind, and its structure is characterized by the co-existence of modern and traditional sectors.

As regards industrial employment, the proportion of workers employed in household industries declined from 8.0 per cent in 1961 to 3.0 per cent in 1981, while that of workers employed in non-household manufacturing, processing, servicing and repairing industries increased from 5.3 per cent in 1961 to 9.7 per cent in 1981.[12] Thus, the process of industrialization in Saurashtra has had a very limited impact on the sectoral structure of regional employment during these two decades. As already noticed by Joshi et al. (1988), industrial development in Saurashtra has moved in the direction of an increased adoption of labour-saving techniques of production, even in the small-scale sector. In 1991, the manufacturing sector employed 16.6 per cent of the main workers (1.8 per cent in household industries, and 14.9 per cent in non-household industries), thus indicating that the significance of industrial employment is however on the rise.[13]

An urban pattern marked by its historical and political roots

The overall rate of urbanization in Saurashtra is significantly

higher than the national average (36 per cent as against 26 per cent in 1991), and even higher than that of Gujarat (34 per cent in 1991). It remained, however, almost unchanged from 31 per cent in 1951 to 33 per cent in 1981, while the all-India figure rose from 17 per cent to 24 per cent (Table 3.1).

Table 3.1
Urbanization in Saurashtra, Gujarat and India (1951-91)

Year	*Saurashtra*		*Gujarat*		*India*	
	(a)	*(b)*	*(a)*	*(b)*	*(a)*	*(b)*
1951	31.3	20.0	27.2	16.4	17.3	11.8
1961	31.0	22.2	25.8	19.9	18.0	13.7
1971	31.4	20.7	28.1	22.0	19.9	16.1
1981	33.1	25.9	31.1	26.1	23.7	20.4
1991	35.9	30.2	34.5	30.9	25.7	22.9

(*a*) percentage of urban population to total population
(*b*) percentage of population in towns of 20,000 and above to total population
Source: *Census of India (1951-91)* and *District Census Handbook* (of each of the six districts of Saurashtra).

This peculiar position and virtual stagnation over several decades has historical roots. Before the formation of the United States of Saurashtra, each princely state, even small principality, had a capital of its own. This contributed to the development of a large number of towns. Following the integration, the former princely capitals lost their historical political functions (Spodek, 1976), while other urban activities which had flourished in the earlier conditions were likely to suffer in the new political and economic set-up (Lakdawala, 1988). In addition, part of Saurashtra's urbanization is artificial: some of the places classified as towns because of the size of their population have rural characteristics as regards the composition of their working population or their population density (*Rajkot District Gazetteer*, 1965). In 1981, there were still 34 per cent of such artificial towns among the total number of census towns and cities in Saurashtra, and the corresponding proportion was even higher at the previous censuses (Lakdawala, 1988). If urbanization is measured by the proportion of the population in towns of 20,000 and above to the total population, Saurashtra

recorded a noticeable rise from 22 per cent in 1961 to 30 per cent in 1991, and these rates remain higher than the all-India figures (Table 3.1).

Notwithstanding the stability of the aggregate level of urbanization in the region as a whole till 1971, some structural changes have occurred. In line with the national trend, there has been an increasing concentration of the urban population in the larger size class of towns (100,000 inhabitants and above), from 26 per cent in 1951 to 54 per cent in 1991. The share of the next larger class (50,000 to 99,999) also increased, from 12 per cent to 17 per cent during the same period. Conversely, the share of the smaller towns (less than 10,000 inhabitants) has declined from 25 per cent of the total urban population in 1951 to 3 per cent in 1991 (Table 3.2).

Table 3.2
Percentage of population of each size class of towns to total urban population. (Saurashtra 1951-91)

Census year	*Size class of town*						
	I *100,000 and above*	*II* *50,000 to 99,999*	*III* *20,000 to 49,999*	*IV* *10,000 to 19,999*	*V* *5,000 to 9,999*	*VI* *<5,000*	*Total*
1951	25.9	12.2	26.2	10.5	20.3	5.0	100.0
1961	29.2	14.6	27.8	12.8	13.6	2.0	100.0
1971	36.5	17.2	18.5	18.1	9.6	0.1	100.0
1981	40.5	24.6	13.1	17.0	4.7	0.1	100.0
1991	54.0	16.9	13.3	12.8	2.8	0.2	100.0

Note: The definition of 'town' changed in 1961 with the adoption of more rigorous criteria. Therefore, the variation from 1951 to 1961 in the share of class VI towns and—to a lesser extent—of class V towns results partly from this change of definition.

Source: *Census of India (1951-91)* and *District Census Handbook* (of each of the six districts of Saurashtra).

Urban growth occurred in relation to the development of industrial and commercial activities, and the creation of urban job opportunities. In particular, the growth of some industrial centres has attracted workers and given support to substantial rural–urban migration. The emergence of such industrial–

urban agglomerations was often based on specialization in one or two main production lines: the machine tools and the diesel engines industry at Rajkot; the brass parts and the button industry at Jamnagar; the tiles and the clock industry at Morvi, the screen-printing industry at Jetpur, etc.

In a historical perspective, the comparative analysis made by Spodek (1976) of Saurashtra's urban development under the British rule and in the post-Independence period introduces some meaningful features. The marked shift in sex ratios of Saurashtra towns, as compared to rural areas, reveals the extent of change in urban economy.

> Until 1951, the cities of Saurashtra had a higher ratio of females to males than did the rural areas. This pattern ran counter to the general pattern of Indian cities in which job opportunities induced men to come in search of work, leaving their families behind in the villages. In Saurashtra, on the contrary, men had evidently left their families in the cities to seek jobs outside the peninsula. ... Saurashtra cities had not generated adequate jobs to retain the trading community,[14] much less to attract rural people. ... Only after 1951 does the percentage of males in the population become greater in the urban than in the rural areas. ... The increase in urban job opportunities attracted workers. A comparison of sex ratios for the largest cities of the peninsula suggests that here in particular growth nodes were being created[15] (Spodek, 1976: 89).

Analysing more specifically the 1951-71 period, Joshi et al.(1988) have also shown that 'a system of satellite townships girdling the fast developing large-sized towns is gradually emerging in Saurashtra' (p. 344). It is suggested that industrial policies, both at the level of the Gujarat State Government and of the Central Government, which have promoted programmes of dispersed industrial development, have allowed certain medium-sized towns to develop and act as a buffer between the traditional rural sector and the modern industrial sector emerging in bigger cities.

As regards regional urban–rural integration, and still following Spodek's historical study, the formation of Saurashtra

State also opened a new era. Before Independence, the British policies had called for 'an enclave pattern of development of individual urban areas' rather than an integrated development of the peninsula (including the countryside), while the policies of the princely states had favoured 'encapsulation and isolation' of their states.

> The merger of the states into one political unit and the much closer weaving of Saurashtra into the national political fabric reduced the autonomy of the individual cities and rendered the city inappropriate as the focus of study. ... The creation of an active, powerful, state-wide government and the end of the politically autonomous city-states terminated the significance of the local urban areas for the development of city-state micro regions. Individual cities, their immediate hinterlands, and indeed the whole of the peninsula were subsumed into much more comprehensive political units. This change in the scale of political units may be the most important change brought to Saurashtra by Independence (Spodek, 1976: 62).

Spodeks conclusion of his analysis of the post-Independence political and economic transformation can be further summarized by this evocative chapter title: 'Saurashtra since Independence: the achievement of an urban–rural regional balance' (1976: 60).

Main phases of evolution in the social sphere

The partition of the country at Independence with the subsequent exodus of a significant part of the Muslim population to Pakistan and the influx of Hindu refugees from Sind to Saurashtra in 1948 and 1949 altered the composition of the population by religion. As a result the proportion of Muslims in Saurashtra decreased from 14 per cent in 1931 to 10 per cent in 1953, whereas during the same period that of Hindus increased from 81 per cent to 87 per cent (Vakil et al.,1953). In 1981, the proportion of Muslims and Hindus was respectively 9 per cent and 90 per cent of the total population.

In terms of politico-economic dominant groups, two major phases of evolution marked Saurashtra's social sphere in the post-Independence period. As analysed by Spodek (1976), the integration in 1948 of the principalities meant for the former princes, *girasdars* and *jagirdars* of the Rajput and Kathi castes, the loss of their political and economic power. Other leading urban groups, the Brahmin and Bania professional and business classes, came to dominate the region's politics during the construction of the new Saurashtra State. The peaceful revolution brought in by integration 'replaced the "*Bhom Raj*", based on aristocratic landlord values, with "*Bania Raj*", based on merchant values' (Spodek, 1976: 64). The political dominance of the Brahmin and Bania urban elite in Saurashtra was ended in the mid-sixties by a newly rising group, the Kanbis, (also locally called Patels).

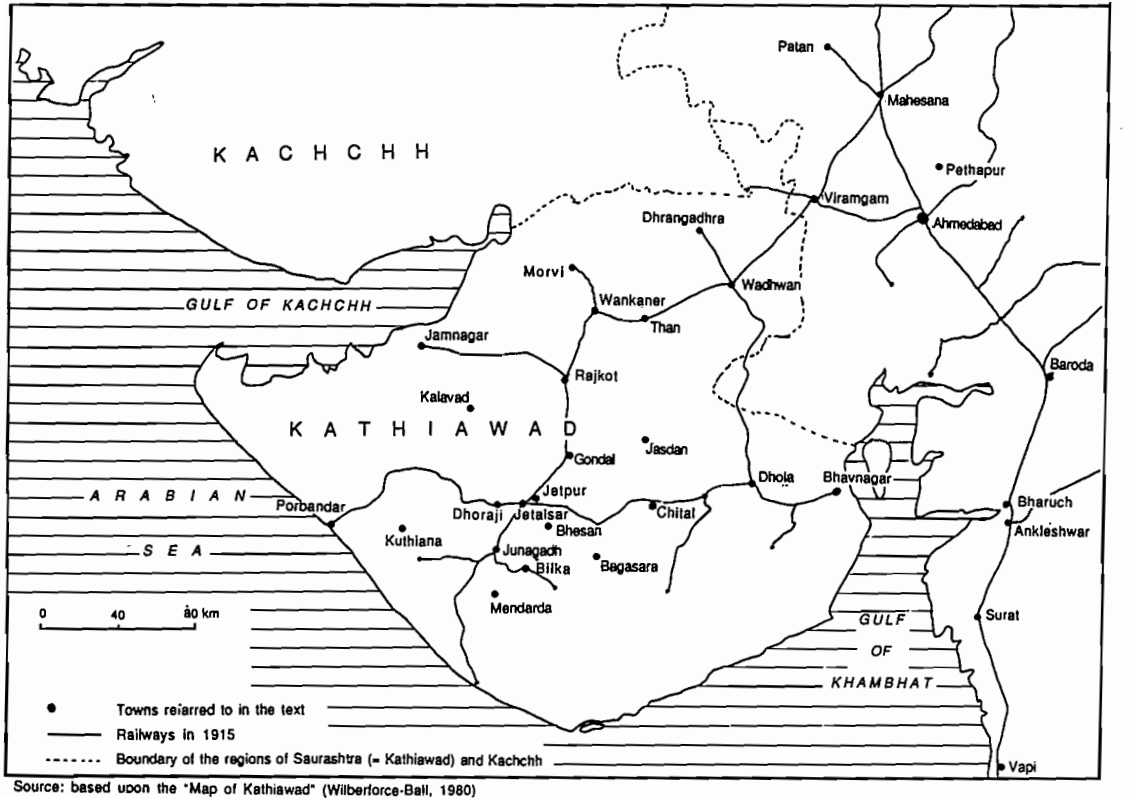
This second social change originated in rural areas as a consequence of the land reforms of 1951-55. The Kanbis, who form a majority caste of agriculturists, were tenants-at-will of the former landlords and they gained ownership of land after the integration of Saurashtra into Gujarat. Their entrepreneurial capabilities as cultivators made them contribute to and benefit from the transformation in agriculture. The shift in favour of cash crops in particular enabled them to draw surplus from agricultural incomes, which they invested in agro-based industries and other industries and businesses. The rise of the Kanbis' economic power was accompanied by their growing political influence, reinforced in the democratic system by their numerical strength.[16] As will be explained later, the economic and political emergence of the Kanbis has also played a direct and significant role in the industrial development of Jetpur.

JETPUR TOWN

Political history

The town selected for the case study, Jetpur, is located in the district of Rajkot, 72 kilometres south from Rajkot city, on the west bank of the Bhadar river.

Figure 3.2
The region of Saurashtra: Historical landmarks



Source: based upon the "Map of Kathiawad" (Wilberforce-Ball, 1980)

At the time of the princely states, Jetpur was ruled by the Kathis of the Vala branch. The Kathis are originally a tribe of nomads hailing from Sind. They first moved to Kachchh and from there entered the peninsula, probably as predatory bands in the fourteenth century (Amarji, 1882). Their advent is, however, 'more or less completely shrouded in mystery' (*Rajkot District Gazetteer,* 1965: 27). By the eighteenth century the Kathis had made themselves so notorious through their continuous raids into the peninsula that the Marathas, who came into contact with them in their forays, extended the name of Kathiawar (or Kathiawad)—the land of the Kathis—to the whole peninsula, although the portion effectively inhabited by the Kathis was limited to some centrally located estates.[17] Their chief towns were Than, Chital, Jetpur, Jasdan and Mendarda (see Figure 3.2).

The acquisition of Jetpur by the Kathis is controversial. Three different versions are mentioned in the *Rajkot District Gazetteer* (1965: 36-37). According to the first one, quoted from Amarji's *Tarikh-i-Sorath* (1882), Jetpur was given by the first Nawab of Junagadh, Bahadur Khan, to Vala Vira. It does not seem, however, that Vala Vira could have been a contemporary of Bahadur Khan who set himself up as an independent ruler of Junagadh in 1748.

The second account, the legendary one, gives no reference to any date. According to this version:

> Vala Viro Najo of Chital aided the Valas of Bagasara in their feud with Vaijo of Mitiala, and Vala Samat of Bagasara was slain in the battle. In consideration of Viro's aid the Valas of Bagasara gave him Jetpur. These Bagasara Valas acquired their share in Jetpur from the Khadia Baloch who received it from the local Muhammadan governors of former time. Jetpur is said originally to have been a holding of the former Valas and to have been conquered from Vala Champraj by Shamskhan at the same time as the Vala town of Kileshwar in the Bardas was sacked. It is said that Vala Champraj had a beautiful daughter whom he refused to give to Shamskhan in marriage upon which that noble sacked Kileshwar and took Jetpur, Vala Champraj and eighteen hundred Kathi horses being left dead on the field. But Vala Champraj is said

to have killed his daughter, hence Shamskhan failed to obtain her. The great-grandfather of this Vala Champraj was Jeti who founded and named Jetpur (*Kathiawar Gazetteer*, 1884: 457).

The third version, taken from 'The Ruling Princes', presents a more credible account: 'Chital which was the principality of the Sarvaya Rajputs was taken by the Kathis in 1735, and in 1760 the Nawab of Junagadh made over to them the districts of Jetpur, Bilkha and Mendarda as they were mainly inhabited by Khant, Kolis and other lawless and turbulent tribes' (*Rajkot District Gazetteer*, 1965: 36-37).

This last version is also coherent with the report of Colonel Walker—a British political agent—on the province of Kathiawar (1808). However, it is likely that prior to this event, the Jetpur estate had a fate similar to that of the majority of the possessions of the Kathis. These were conquered by the Kathis during the fifteenth and sixteenth centuries when they overran the peninsula, part of their conquests being subsequently wrested from them by the Muhammadans, and part recovered by them on the downfall of the Mughal power (*Kathiawar Gazetteer*, 1884: 290).

As reported in the *Kathiawar Gazetteer* (1884: 457), at the end of the nineteenth century, the *taluka* of Jetpur was 'large and wealthy', consisting of 143 villages, ruled by 16 Kathi *talukdars*,[18] descended from the common ancestor Vala Vaja Desa. On the eve of the formation of Saurashtra State in 1948, Jetpur was still ruled by a Kathi *darbar*, Surug Vala.

The development of Jetpur as a trading centre at the time of the princely states

More significant to an understanding of the historical roots of the economic dynamics of the town, is information given in the report of Colonel Walker (1808) and in the *Kathiawar Gazetteer* (1884: 185-86). The exemplary development of the town of Chital into a prosperous trading centre under the protection of their Kathi chiefs encouraged the Nawab of Junagadh to cede to the Vala Kathis other *talukas* (estates), among which was

Jetpur. The Nawab, however, reserved for himself the right to take a fourth part of the revenue of each place. Some decades later, following the attack of Chital around 1793 by the ruler of Bhavnagar, the Kathis of Jetpur took the precaution of building a fortress. Whereas Chital never regained entirely its former glory, Jetpur became the headquarters of the Kathis, and a major part of the population of Chital migrated to the capital. When Colonel Walker entered the peninsula in 1807 in order to pacify it, 'the country was in a state of chronic disorder and desolation'[19] (Wilberforce-Bell, 1980: 179). In marked contrast to the Kathis' predatory habits and lack of prosperity, Colonel Walker pointed out the orderly and flourishing estate of Jetpur–Chital, under the sway of the so-designated reformed Kathis.

The insertion of Jetpur into the communications network further fostered the commercial activities of the town. As long ago as the twelfth century, Jetpur was a fortified stage along the military road constructed by the Solankis of Anhilvada (1094-1143) to link their capital Patan to Junagadh. Trade followed this route for many years, and subsequently this direct link between the mainland and the peninsula supplanted the more circuitous coastal road, except for the religious pilgrims (*Rajkot District Gazetteer*, 1965: 29).

In 1865, the then British Political Agent in Kathiawar, Colonel Keating, began systematic construction of roads, several of which passed through Jetpur, in particular the Rajkot–Junagadh road which was later improved into a bridged and metalled road. The bridge over the Bhadar river at Jetpur, built of stone masonry, was opened in 1877 and is mentioned in the *Kathiawar Gazetteer* as one of 'the chief bridges in the province' (1884: 222).

Jetpur has also been well connected by rail since the construction of the first railway lines in the peninsula. The first line which linked Wadhwan to Bhavnagar was opened for traffic in December 1880, with a branch line (opened in January 1881) which linked Dhola to Dhoraji and passed through Jetpur. In 1893, a railway line from Jetalsar to Rajkot was constructed; it passed through Navagadh, a village on the outskirts of Jetpur town (see Figure 3.2).

By the end of the nineteenth century, Jetpur was a town with a population of 13,085 (1881 census), and is described in

the *Kathiawar Gazetteer* (1884: 242) as one of the chief centres of trade in the province:

> The leading merchants in these trade centres are among Hindus, Vanias, Bhatias, and Lohanas, and among Mussalmans, Vohras [Bohras], Memons, and Khojas. Some of the traders of the seaports and of Wadhwan, Jetpur, and Dhoraji own capital up to £100,000 (Rs. 10,00,000). They trade direct with Bombay and other larger markets, sending cotton, grain, clarified butter and other local produce, and bringing cloth, timber, groceries, and metals.

During the nineteenth century and until 1947, Jetpur became a flourishing and prosperous town under the protection of its Kathi rulers. One specific factor gave an impetus to the commercial development of Jetpur: in this former Kathi estate no duty was levied on the goods imported into the town and this attracted both traders and artisans. Jetpur emerged as an important centre of trade in textiles, as cloth was also exempted from octroi. As reported by Trivedi (1970: 38):

> This concession made it profitable for the traders of Jetpur to import cloth from Japan and western countries and sell it in other parts of the country. ... It is reported that in the past cloth merchants of Jetpur had brought cloth from Japan by chartered steamers. Bosky satin–duck imported by Jetpur from Japan had acquired a market all over India at one time.

During the three decades preceding Independence, a Muslim community of traders, the Memons, also played a particularly important role in the development of the town. Halai Memons of Saurashtra (from Jamnagar, Dhoraji, etc.) had started migrating to Burma around 1850-55, and prospered in business there (Engineer, 1989: 173). For the Memons of Jetpur, however, the event which triggered off their migration occurred in 1885. Following a clash between the Muslim and Hindu communities on the occasion of the Moharram festival, the Memons were prosecuted for rioting. They were able to escape to Burma, but they continued to maintain their wives and families in Jetpur. Initially, the Memons of Jetpur were

petty traders. They built their fortune on trade in Burma, especially during the First World War, and eventually reinvested their savings in Jetpur in the construction of spacious houses. Some entire sections along the main streets of the bazaar and in the centre of the town were built by the Memons at that time. Their prosperity had spread effects on the economic life of Jetpur, as well as on its social development. Charitable institutions were set up, a hospital and a high school were constructed, both free, and finally opened to all communities. The most famous and richest of the Memons of Jetpur was Adamji Haji Daud who started a jute business in Burma, and later in Calcutta where he subsequently established and owned a large jute mill. He was also the founder of the old hospital in Jetpur, and in 1928 he was knighted by the British.

The advent of Independence radically altered the political and economic background in which the commercial development of Jetpur was rooted. The integration of the former princely states meant open competition within the regional and national territories. Following a regularisation of the system of sales tax and octroi all over the country, Jetpur lost its comparative advantage in the cloth trade. This adversely affected its commercial prosperity.

In addition, the disturbances which accompanied the partition of the country slowed down the process of development of Jetpur. The town was subject to communal riots in 1948 and 1949. The neighbouring State of Junagadh, to which was attached Navagadh, an adjoining village of Jetpur, was previously under a Muslim ruler who was eager to merge with Pakistan. Jetpur was used as a military base for the army sent to crush the rebellion, and eventually the Nawab of Junagadh escaped to Pakistan. The Memon community of Jetpur had financially supported the Muslim League and its leader Mohammed Ali Jinnah, the founder of Pakistan, whose family also hailed from Saurashtra.[20] Following these events, a large part of the Muslim community of Jetpur, especially the Memons, also migrated to Pakistan. The group migration of this prosperous community led to an economic depression, which was further aggravated by the successive departures of other sections of the population. Many artisans left the town, and most

of the Vaniya traders migrated to Bombay, which had been for long an out-migration place for Gujarati traders.

Subsequently the population of Jetpur diminished dramatically in the years following Independence: according to estimates provided by the municipality, the decrease would approximate 15,000 people. The census data also reflect a dramatic inversion in the population trend of the town. Between 1921 and 1941 the population of Jetpur increased at a decennial growth rate of about 23 per cent, from 18,694 inhabitants in 1921 to 28,406 in 1941. A decade later, the population was almost at the same level: 28,444 inhabitants in 1951. This apparent stagnation masks, in fact, a continuation of the demographic growth of the town up to 1947, followed by considerable out-migration.

While the development of the textile dyeing and printing craft in Jetpur under the Kathi *darbars* followed the general expansion of the town as an important trading centre, after the political events which put an end to the commercial prosperity of Jetpur in 1947-49, the printing industry took over and gradually emerged as the leading economic sector of the town. The merchant economy had nevertheless laid the foundation for future industrialization. This transition is examined in the following sections.

Origin and development of the dyeing and block-printing industry in Jetpur

Gujarat has been famous for its textiles and especially for the ancient and traditional dyeing and printing craft: 'Before the beginning of the Christian era up to the rise of the British power in India, textiles from Gujarat were popular all over the known world' (Trivedi, 1970: 3). Various modes of dyeing and printing were highly developed in this region, especially in Saurashtra.

The origin of the dyeing and printing craft in Jetpur can be traced to the beginning of the nineteenth century (Sampatram, 1868). Gopalji Chatrabhuj Kamdar, who was the counsellor of a local ruler of Jetpur at that time (namely Shardul Vala), called upon various artisans as well as traders, from different

places of Saurashtra, in order to promote the economic expansion of the town. Around 1813, the first families belonging to the Khatri community[21] were called from Kalavad in the Jamnagar district to develop the dyeing and printing craft and trade in Jetpur. Some were traders in dyed cloth, and others were skilled craftsmen working for the former. They were followed by other Khatri artisans coming from textile printing centres located in the neighbouring districts of Junagadh and Amreli (like Kuthiana, Bhesan, Majevdi and Bagasara). Craftsmen specializing in engraving the wooden blocks used for block-printing were also attracted to Jetpur, especially from Kuthiana. In those earlier times, the migration of merchants and artisans (and even farmers) from place to place in search of better opportunities was a common phenomenon. It was favoured by the competition among the numerous states of the peninsula (*Kathiawar Gazetteer*, 1884: 260; Spodek, 1976: 24-27).

It is also said that the concentration of the dyeing and printing craft in Jetpur was further encouraged by a locational factor: the town is situated on the bank of the Bhadar river, just downstream its confluence with its tributary, the Sankroli river, and the water from this freshly mixed flow is alleged to have special properties which aid in the development of colours and prints.

The development of the cloth dyeing and printing industry in Jetpur progressed along with the expansion of the textile trade, as those two activities have always maintained close links. The dealers in cloth supplied the main raw material to the artisans, and the marketing of their finished products was handled by the cloth traders. In some cases the artisans were entirely dependent on the cloth traders, when the latter gave out the raw material and paid piece-work wages to the artisans for the dyeing and printing work. Presumably, the widening of the market for Jetpur's printed textiles contributed to the craftsman's loss of independence, and strengthened the position of the dealer, as occurred more generally in the early stages of the industrialization process (Gadgil, 1971; Raychaudhury, 1982).

According to Trivedi's monograph (1970: 38), around 1915, nearly 100 artisans were engaged in the dyeing and block-

printing craft in Jetpur. Then block-printing is reported to have received a considerable impetus during the Second World War. Earlier, the wooden blocks used in block-printing were also engraved in Jetpur, but they were subsequently replaced by blocks made at Pethapur (in the Mahesana district in north Gujarat). In 1947-48, the technique of screen-printing was introduced in Jetpur, and the rapid development of this new mode of printing gradually supplanted block-printing. Trivedi (1970: 46) mentions only 'a few' establishments engaged in block-printing in 1964. In the seventies, block-printing had disappeared from Jetpur, except for one or two units which may still be functioning today.

Development of the screen-printing industry since 1947

Introduction of screen-printing in Jetpur

As explained above, following the Partition, the economy of Jetpur underwent a serious depression. The introduction of a new technology for the printing of textiles, screen-printing, marked the beginning of a new era of industrial development for the town.

The screen-printing industry in Jetpur was pioneered and developed by Shri Gordhandas Karsanji Bosamia, popularly known as Bachubhai, who started the 'Jagdish Textile Dyeing and Printing Works' in 1947-48. Bachubhai was a direct descendant of Manji Parsottan Bosamia (a trader in dyed cloth from Kalavad) who was the first Khatri called to develop the dyeing and printing craft in Jetpur at the beginning of the nineteenth century. At the time of Independence, Bachubhai was involved in the cloth trade in Ahmedabad. His foresight and business acumen enabled him to visualize Jetpur as an ideal place for the development of the printing industry. The slackness and unemployment, which had prevailed in Jetpur after the sizable out-migration of traders and artisans, also prompted him to return to his native place and to try to give an impetus to its economy. In addition to block-printing, Bachubhai started screen-printing on a very small scale. This technique, though already known in parts of western India, had not yet been introduced in Saurashtra. The method of screen-printing

originated from the Japanese so-called Yuzen style, which was carried out with screens made from especially prepared rice paper cut in stencil form (Trivedi, 1970). In 1954, Bachubhai went to Japan to increase his knowledge of screen-printing and other modern techniques of dyeing, bleaching and printing. This brought a new outlook to his industrial group which progressively expanded in Jetpur itself, as well as in Ahmedabad. He also established trading companies in Bombay, Delhi, Madras and Indore.

Following the establishment of the first screen-printing unit in Jetpur, other units of the textile industry shifted gradually from block-printing to screen-printing in the fifties and early sixties, while traders and entrepreneurs of the Khatri caste came to settle in Jetpur. Later, the prospects of the printing industry attracted many entrepreneurs from other communities, in particular Vaniya traders and Kanbis.

From household to industrial production

In the early stages of the development of the textile hand-printing industry in Jetpur, when block-printing was not as yet supplanted by screen-printing, this economic activity had the characteristics of a household industry. The pioneer entrepreneurs (Khatris) were artisans pursuing their ancestral activity; they had acquired specific skills while working and assisting in family enterprises. The workshop was usually situated within the premises of the house. The labour force mainly consisted of the members of the family, and as such, the presence of hired workers was relatively marginal. The owner usually engaged himself in a variety of functions, including dyeing and printing. Thus, there was proximity of working space and living space, and low socio-occupational differentiation in this industry.

The introduction of screen-printing in 1947-48, and further improvements in this technique, led to the expansion of the industry on a larger scale. Factories were gradually set up in more spacious buildings, adequately equipped, and the need for a hired labour force increased. This industrial development was accompanied by a dissociation of working and living spaces for the entrepreneurs, and by the creation of an industrial working class.

The study of block- and screen-printing at Jetpur in 1964, conducted by Trivedi (1970), shows the decline of the household industry and a twofold process of differentiation: spatial differentiation between the workshops and the dwellings, and residential as well as social differentiation between the entrepreneurs and the hired workers. It was also observed by Trivedi that the entrepreneurs' places of residence were more concentrated in the city centre, whereas the workers' residences extended to a larger radius. Another study of the Jetpur printing industry, conducted in 1981-82 by Ashraf (1985), with a retrospective analysis over the previous decade, also showed the decline of the home-based dyeing and printing industry, and the corresponding expansion of an industrial proletariat. Today, the 'household' dyeing and printing industry (in the strict sense of the word) has disappeared from Jetpur, and the industrial working class has gained a considerable size.

Growth and spread of the dyeing and printing industry

Following the industrial redeployment from block-printing to screen-printing, the textile-printing industry in Jetpur developed considerably, with the main period of expansion occurring from the mid-sixties to the mid-eighties. Since then the industry has faced several economic difficulties, mainly due to increasing competition and relative stagnation of demand, compounded in 1986-88 by the adverse effect of a three-year recurring drought. Trivedi (1970) reported that there were 110 screen-printing units in 1964. According to the estimates of the Jetpur Dyeing and Printing Association, the maximum number of units was reached in 1985, with 1,200 units set up in the urban agglomeration and its immediate surroundings; since then the number has fluctuated between 1,100 and 1,200, all of them belonging to the small-scale sector.[22] The average total production, under good conditions of production and marketing, is further estimated at 2 million metres of printed cloth per day, corresponding to 400,000 cotton saris, the major item printed in Jetpur. As confirmed during our last visit in August 1992, the level of production has not increased in recent years.

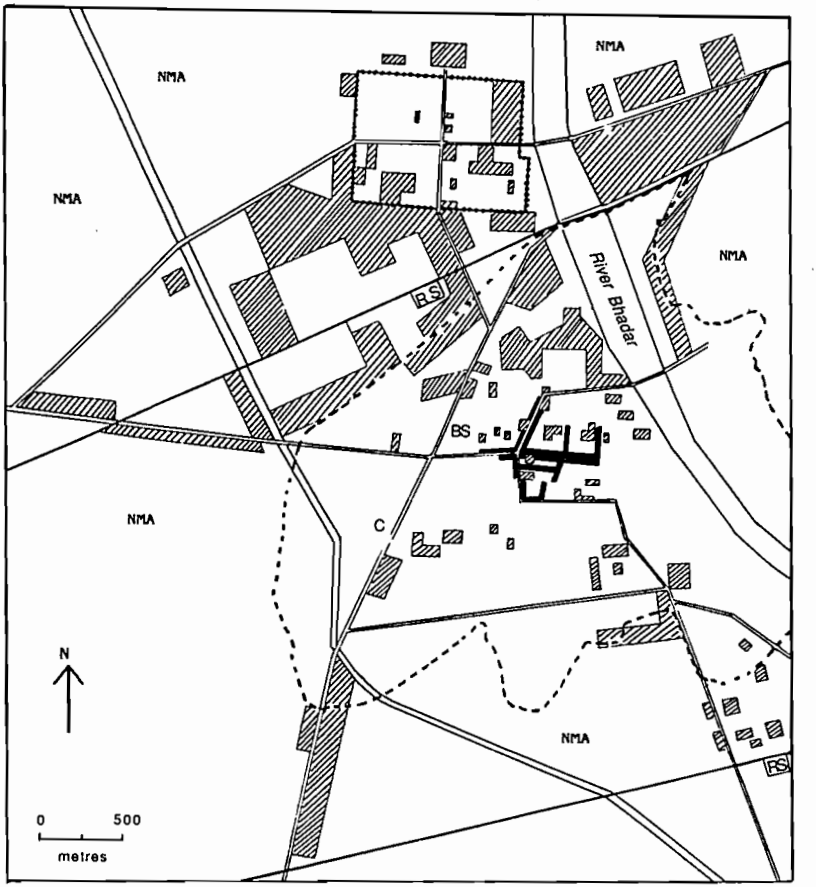
The development of the screen-printing industry in Jetpur also promoted several ancillary manufacturing and servicing

activities: about 200 to 300 small units manufacturing screens, about 100 small units engaged in finishing operations, and about 20 to 30 units manufacturing dyes or other chemicals used in the printing process. All these are located in the town and nearby villages. Together with the manufacturing activities of the textile dyeing and printing industry, trade (of cloth, dyes and chemicals, packaging material and other accessories) as well as transport facilities (from handcart to truck) also expanded.

Since the entire process of production is manual (see Chapter 7), the employment generated by Jetpur's textile printing industry is considerable. According to a report of the Jetpur Dyeing and Printing Association of March 1990, the total capacity of employment approximates 31,000. This figure is estimated for a daily production of 2 million metres of printed cloth by 1,000 printing units. It is based on the labour requirement for each single operation of the printing process, including transport of cotton bales, manufacturing of screens, finishing operations and trade in chemicals and packaging material. But it excludes the employers themselves (entrepreneurs or traders) who are exclusively engaged in managerial functions. Another rough estimate, also provided by the Industrial Association but without detailed calculations, puts the maximum capacity of employment at 40,000. This figure includes employment in ancillary industries, services and trades, and all types of work and status in employment (employers, own account workers as well as wage workers, and unpaid helpers). The maximum capacity further means the maximum employment which would be generated, provided all the production units function at their full capacity. Yet, it must be recalled that these optimal economic conditions have not been fulfilled since the mid-eighties.

The increase in the number of industrial establishments has been accompanied by an extension and decentralization of the industrial area. Initially, the printing units were located in the inner city, in close proximity to the Bhadar river. Though there are still today many establishments remaining in the inner city, progressively factories were set up in the peripheral zones of the town, and then outside the Municipality boundaries, on the territory of adjoining villages like Navagadh and Champrajpur (Figure 3.3). For example, in March 1988, 364 printing units situated on Jetpur's revenue land but outside the resi-

Figure 3.3
Location of industrial zones in the Jetpur urban agglomeration in 1988
(dyeing and printing establishments)



	Industrial area (dyeing and printing establishments)
	Main bazaar area
	Railway
	Canal
	Road
	Jetpur Municipality boundary
	Village wall of Navagadh
NMA	Non-municipal uninhabited cultivated area
RS	Railway station
BS	State Transport bus station
C	Arts and Commerce College

Source: Figure based on the map of "Jetpur Urban Land Use" in 1981 (Census of India, 1981, Series V - Gujarat, Part X-A - Town Directory), updated during the surveys conducted in 1988

dential site (non-agricultural land used for industrial purposes) were registered in the land revenue records. In Navagadh, at the same date, 246 printing units located on the territory of this locality were registered with the *panchayat*. The first reason for this centrifugal movement is the scarcity of land in the inner town as well as its increasing price. The second set of reasons pertains to taxes, which are higher within the civic administrative boundaries, whereas outside the Municipality limits entrepreneurs in particular avoid the octroi tax. The urban morphology of Jetpur, characterized by an urban and industrial sprawl towards the periphery, fits into the 'dual' structure of the Indian city, with the juxtaposition of a 'traditional core' (the bazaar) and 'industrializing belts' and 'strips along transport axes' (Rao, 1983).

Factors of industrial growth and concentration in Jetpur

The industrial development of Jetpur corresponds to a case of endogenous dynamics which did not benefit from an exclusive governmental programme. Nevertheless, Jetpur's entrepreneurs proved capable of taking advantage of the general industrial measures aimed at promoting small-scale industry and favouring industrial decentralization out of metropolitan areas. Within this general context, several specific factors played an important role in the concentration and growth of the screen-printing industry in Jetpur.

As mentioned above, the quality of the water of the Bhadar river, which flows through Jetpur, is said to be especially favourable for dyeing and printing work. This locational advantage might have been important in the past, as long as the saris were washed directly in the river. From another report: 'The [locational] advantages appeared to occur from some geographical feature which caused just that much current in the river flow as to be suitable for the requirements of the washing process in the industry' (Modi, 1983, Vol. III: 102). Nowadays, however, the flow of the river is quite insufficient to fulfil the requirements of the increased number of printing factories. Besides, the construction (completed in 1964-65) of a dam on the Bhadar river, 22 kilometres upstream from Jetpur,

along with an irrigation canal, has reduced its flow in Jetpur.

After the Partition, the out-migration of the prosperous community of the Memons from Jetpur, which (on the one hand) ruined the economy of the town, turned out to be (on the other hand) a favourable factor for the establishment of new industries in Jetpur. The Memons left behind all their properties, spacious houses and vast properties, which were sold at very low prices. Some Khatri artisans, the first entrepreneurs in Jetpur, took advantage of this situation and converted the properties evacuated by the Memons into printing factories. At the same time there was an influx of Sindhi refugees from Pakistan to Gujarat and to Jetpur; among them Sindhi Khatris who belonged to the traditional dyeing and printing community of Sind. Taking advantage of the custodian property system under which the refugees of India and Pakistan, on mutual agreement, could exchange their properties, the Sindhis acquired spacious buildings. And they gradually turned them into printing units.

Technological innovations also favoured the expansion of screen-printing on an industrial scale: in particular, improvements in the method of screen-printing and the adoption of new types of dyes.

The first screens used in Jetpur were made with a silk fabric very tightly strained on a wooden frame. The screen designs were hand-cut, following the principle of a stencil: the material forming the screen was treated with lacquer in such a way that the design to be printed appeared positively and remained porous, while the background became waterproof. The size of the screen was adjusted to the width of the sari—or other cloth to be printed. Later, improvements were introduced in the screen technique: metallic frames which are more durable and light in weight replaced wooden frames, nylon fabric was used instead of silk, and a photographic process was adopted to prepare the stencil. Now the design is first drawn (by artists) with ink on tracing paper and then transferred onto nylon fabric by a photographic process. This improved type of screen can be utilized to print 2,000 to 3,000 saris on an average. It replaced the more traditional Japanese stencil method after 1960 and contributed to a greater efficiency of the screen-printing technique.

As regards dyes, several classes can be used for dyeing and

printing cotton cloth. Indigo dyes, initially vegetable ones, were used for a long time, in block-printing as well as screen-printing. Then from the mid-sixties reactive dyes and rapid dyes were adopted in Jetpur. Their properties allowed simpler and economic processes, while the use of vegetable indigo dyes required higher skills and longer experience. The synthetic reactive dyes were advertised to be 'equally suitable for sophisticated techniques of application in dyeing and printing as well as the simple techniques adopted in our [Indian] cottage industry' (Jadhav, 1972: 53). Hence, this technological progress facilitated the access to dyeing techniques even for non-traditional craftsmen, and allowed a further development of the dyeing and printing industry.

Some administrative measures taken in 1963 by the Municipality of Jetpur also gave a major impetus to the development of the local industry. In 1950, Jetpur got the status of a Municipality, and its trade thus became subject to high octroi taxes. That constituted an additional force of dissuasion for trade and commerce, in the context of an already depressed economy. The Municipality, aware of such a hindrance, managed to lower the classification of Jetpur for the purpose of collection of octroi, which resulted in a reduction of 25 per cent octroi. A further modification in the rules governing the octroi system was introduced. In the initial system, the merchants importing goods (like cloth) had 15 days to pay the octroi tax. The Municipality of Jetpur extended this delay up to 60 days, which created a unique situation among all the towns in Saurashtra. This comparative advantage allowed the printing industry, which was entirely dependent on cotton cloth coming from outside, to flourish.

The rapid expansion of the screen-printing industry can be then explained by its economic characteristics. To start with, it is not a capital-intensive industry: it does not require high initial investment, or specific machinery, or sophisticated technology. Easily obtainable bank credit facilities for plant and equipment up to 1982-83 were an additional favourable factor. Raw materials were also available on credit and cloth supply was abundant. As the entire process of dyeing and printing is manual and the main equipment consists of printing tables and screen plates, this enabled the entrepreneurs to

start their concern on a small scale (even in rented premises sometimes already equipped) and to expand it progressively. Moreover, the system in which the entrepreneurs undertake printing work on contract (according to orders placed by traders) allowed the entrepreneurs to minimize the expenses as well as the risks, since the traders provide them with the cloth and market the finished products.

The concentration of printing factories in Jetpur induced further industrial growth and concentration as the new entrepreneurs were assured of finding appropriate conditions and infrastructure to start their concern: factory premises on a rental basis, skilled labour and a network of traders. As long as the level of demand was high, this industry offered good and fast profits, with a minimum of economic and technological constraints. This explains why it attracted many entrepreneurs who did not necessarily belong to the traditional communities of craftsmen or traders.

Good infrastructural facilities contributed to the promotion of the industry in Jetpur. This town is situated on the National Highway from Rajkot to Porbandar; State Transport buses regularly pass through it and connect it with the main towns in Gujarat. In addition, it is linked by rail to the major cities of the State and the country. On 1 January 1950, Jetpur became a municipality as well as the headquarters of a *taluka* with 49 villages. The town is thus equipped with the corresponding administrative infrastructure. Among other noticeable urban facilities, Jetpur has eight major banks, a government hospital, and an Arts and Commerce College.

CONCLUSION

The region of Saurashtra has a long tradition of trade and of the craft of dyeing and printing textiles, two branches of activity that have shaped the economy of the town of Jetpur. The expansion of Jetpur as an important trading centre (especially known for its textile market from the end of the nineteenth century till Independence) prepared the ground for the emergence of the textile-printing industry. Since its origin in Jetpur, the dyeing

and printing craft had been closely associated with the cloth trade, and the insertion of the town in commercial routes and networks constituted an asset for further industrial development. Cloth merchants and dealers in printed textiles have always played a strategic role in supplying raw material to craftsmen (later to entrepreneurs) and in marketing their finished products. This system of contract, which is a common feature in the history of the cottage and small-scale industry, still prevails today in the Jetpur printing industry. This reveals the high degree of dependence of the entrepreneurs upon the traders. This also indicates that it was a factor contributing to the expansion of this industry as it attracted a large number of entrepreneurs without substantial capital base. Besides, the industrial policy implemented by the State Government of Gujarat, in particular the measures aimed at promoting small-scale industry, created a favourable context for industrial investment. The increasing number of printing factories and their concentration in Jetpur further exemplifies the advantages of industrial agglomeration, as clearly expounded by Johnson in his report on 'Market towns and spatial development in India':

> When similar enterprises co-exist in the same locality, there is a probability that demand for their product will increase, since more buyers will be attracted by the prospects of a wider choice. On the supply side, costs may be lower because skilled labour will be available in places were many young people are regularly being trained in requisite skills and techniques of specialized production. Service industries, repair and replacement facilities, credit accommodation by specialized financial institutions, all these and other 'external economies' will grow up in a single industry investment cluster (National Council of Applied Economic Research, 1965).

At the time of our last visit to Jetpur, in August 1992 after a lapse of three years, the town exhibited developments and changes—new constructions, including shopping centres and a large market for agricultural products, an increased number of Maruti cars, a proliferation of collective parabolic aerials to receive international satellite television channels, and STD[23]

and ISD[24] booths for making direct national and international telephone calls. All these are signs of urban and economic dynamism, as well as of prosperity and modernization, with an enlarged opening to the outside world.

The risks involved in an urban economic pattern based on a single industry as in Jetpur, depending moreover on a rare natural resource, water, will be questioned later in this book. The next chapter will show how the emergence of Jetpur as a regional industrial pole is reflected in the population dynamics of the town.

NOTES

1. Source: Office of the Director of Agriculture, Gujarat State.
   This disquieting process of the fragmentation of holdings was already noticed by Trivedi (1943) for the 1912-13 to 1934-35 period and later by Joshi et al. (1988) from 1970-71 to 1976-77.
2. 'Out of 69 talukas 56 have been declared as arid and semi-arid by the Central Arid Zone Research Institute (CAZRI, Jodhpur), 29 talukas in Saurashtra are recognized as drought-prone areas out of 69 in India'. (Lakdawala, 1988: 2).
3. *Girasdars* and *barkhalidaris* were both landlords: '*Girasdars* held their land by virtue of historical control, usually by conquest', whereas '*barkhalidars* had been granted their land at some time in the past for services rendered to the ruler' (Spodek, 1976: 72).
4. Source of data on irrigation: For 1950-51: Vakil et al., 1953, Table V-I, p. 58; for 1983-84: Office of Director of Agriculture, Gujarat State.
5. Source of data on the cropping pattern: For 1948-49: Vakil et al., 1953, Table III-8, p. 32; for 1978-79 and 1983-84: Office of Director of Agriculture, Gujarat State.
6. Source of data: *Census of India (1991): Final Population Tables.*
7. For example, the share of Saurashtra in the national production of diesel engines was 50 per cent in 1982.
8. Source: *Annual Survey of Industries*, Central Statistical Organization, Department of Statistics, Ministry of Planning. The *Annual Survey of Industries* covers only the industrial concerns registered under the Factories Act, 1948, which refers to establishments using power and employing 10 or more workers, and those not using power and employing 20 or more workers.
9. *Gujarat where Growth is Natural*, Industrial Extension Bureau, Ahmedabad, 1991: 48.

10. Source: Office of the Commissioner of Industries, Gujarat State, Ahmedabad.
11. Source: Office of the Chief Inspector of Factories, Gujarat State, Ahmedabad.
12. To compare the 1961 census data on workers with those of 1981 (or 1991) despite changes in definitions, it is necessary to consider the total working force which includes in 1981 and 1991 two categories of workers: the main workers and the marginal workers. This has been done for the 1981 census figures given here. The data of the 1991 census (released at the time of writing) provide the distribution of workers by industrial category only for the main workers and are hence not rigorously comparable with the 1961 census data.
13. For a rigorous appraisal of the recent evolution these figures should be compared to the corresponding proportion of main workers in 1981, that is, 2.9 per cent in household industries, and 10.8 per cent in non-household manufacturing, processing, servicing and repairing industries.
14. There had been in particular a sizeable out-migration of business and professional men from Saurashtra to Bombay.
15. Parts of the tables established by Spodek are given below :

Number of females for 1,000 males in Rajkot division (Saurashtra peninsula and Kachchh)

Year	*Entire division*	*Urban areas*
1901	965	985
1911	972	1,009
1921	977	1,008
1931	979	994
1941	979	984
1951	986	1,000
1961	961	945
1971	953	936

Number of females for 1,000 males in some towns of Saurashtra

Year	*Rajkot*	*Bhavnagar*	*Jamnagar*	*Junagadh*	*Gondal*
1901	883	898	1,012	919	957
1911	934	904	1,038	908	975
1921	927	929	994	925	1,009
1931	928	895	979	881	950
1941	959	891	972	861	982
1951	964	924	942	995	997
1961	927	916	914	911	932
1971	920	908	913	894	920

Source: Spodek (1976), Table 33, p. 90.

16. 'The emergence of the Kanbi cultivators as a dominant middle-order caste in Saurashtra' has been analysed by Joshi (1989).

17. Before the peninsula was officially named Kathiawar by the Marathas, its ancient name, in the imperial official language, was the *'Sarkar of Sorath'*, and the name of Kathiawar only applied to the possessions of the Kathis.
18. In the land administration pattern of the Kathiawar province, *talukdars* were designated as estate-holders.
19. This state was primarily the result of the annual Maratha expeditions to collect tribute from the Kathiawar chiefs for the Gaikwar of Baroda, as well as of the continuous feuds between the local chiefs. Following the alliance of the Gaikwar and the British government in 1805, Colonel Walker was sent to Kathiawar in order to establish the permanent settlement of the tribute of the Kathiawar chieftains. 'In addition, a number of chiefs, which included ... the Kathis of Chital, Jetpur and Kundla, had applied to the British for assistance against their more powerful oppressors' (Wilberforce-Bell, 1980: 178).
20. Jinnah, however, belonged to another Muslim Gujarati community, the Shia Isna-Ashari Khojas.
21. The Gujarati Khatris call themselves Brahma Kshatris, and they claim a Kshatriya origin, although in *The Tribes and Castes of Bombay Presidency* (1922: 205), Enthoven identified the meaning of their caste name as 'weavers' and further typified them as 'hereditary silk and cotton weavers'.
22. The difficulties raised by the definition of an industrial 'unit' are discussed in Chapter 2, (see section on 'Survey of industrial establishments').
23. Subscriber Trunk Dialling.
24. International Subscriber Dialling.

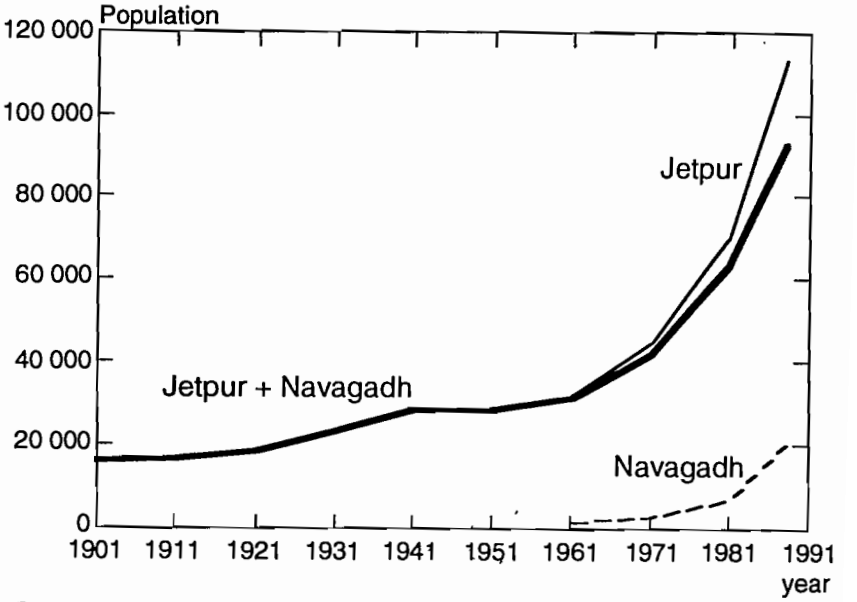
4

Population Growth and Migration

The central focus of this chapter is on the population dynamics of Jetpur, with particular stress laid on migration. Several questions are examined in this respect:

- To what extent have population growth and urban spread followed the industrial expansion of the town? How far are these processes reflected in the sex and age structure of the urban population?
- What is the contribution of in-migration to the formation of the urban population? What can the different types of migratory flows and their catchment areas tell us about the dynamics of the town? As will be shown, the settlement pattern of in-migrants in town reveals other aspects of the urbanization process.
- Beyond the quantitative contribution of in-migration to population growth, the differential impact of in-migration on the main socio-economic characteristics of the urban population calls for further investigation.
- Though the design of the household survey does not allow us to provide a comprehensive picture of out-migration from the urban agglomeration, the last section of this chapter attempts to present some estimates and insights on the basis of the available information.

Figure 4.1
Population growth of Jetpur (1901 – 1988).



Source: 1901 to 1981 = census data; 1988 = the 10% household survey.

POPULATION GROWTH

Rate of growth and its components

The considerable expansion of the dyeing and printing industry in Jetpur during the four decades following Independence has been associated with rapid population growth and spatial spread of the urban agglomeration. The census data show that the population growth of Jetpur took off after 1961 (Table 4.1 and Figure 4.1). The population of the town increased from 31,186 in 1961 to 41,943 in 1971, and 63,074 in 1981. This corresponds to a growth rate of 34.5 per cent during the first inter-census period and of 50.4 per cent during the second one. In the same period, the Gujarat towns belonging to the same size class as Jetpur in 1971 (namely class III with a population ranging from 20,000 to 49,999) recorded an average growth rate of only 32.6 per cent from 1971 to 1981.

Table 4.1
Population growth of the Jetpur urban agglomeration (1901-88)

Year	*Population*	*Growth rate (%)*	*Annual growth rate (%)*	*Sex ratio (o/oo)*
		*Jetpur Municipality**		
1901	15,919			1.077
1911	16,513	3.7	0.4	1.152
1921	18,694	13.2	1.2	1.085
1931	22,973	22.9	2.1	1.069
1941	28,406	23.6	2.2	1.075
1951	28,444	0.1	0.0	1.042
1961	31,186	9.6	0.9	989
1971	41,943	34.5	3.0	957
1981	62,806	49.7	4.1	948
1988	88,153	40.4	5.0	942
		Jetpur outgrowth		
1981	268			411
1988	5,157	1,824.3	52.6	614
		Jetpur Municipality + outgrowth		
1961	31,186	9.6	0.9	989
1971	41,943	34.5	3.0	957
1981	63,074	50.4	4.2	945
1988	93,310	47.9	5.8	920
		Navagadh		
1961	1,626			957
1971	2,726	67.7	5.3	910
1981	6,811	149.9	9.6	922
1988	20,710	204.1	17.2	806
		Jetpur Municipality + outgrowth + Navagadh		
1961	32,812			987
1971	44,669	36.1	3.1	954
1981	69,885	56.5	4.6	943
1988	114,020	63.2	7.2	899

* Jetpur has the status of municipality since 1950.
The confidence intervals at 95 % of the total population are:
Jetpur Municipality: 84,456-92,445
Jetpur outgrowth: 4,386-6,234
Jetpur Municipality + outgrowth: 89,505-97,680
Navagadh: 19,062-22,689
Jetpur Municipality + outgrowth + Navagadh: 109,935-118,862
Sex ratio: number of females for 1,000 males.

The confidence intervals at 95 % of the estimated sex ratios in 1988 are:
Jetpur Municipality: 906-979
Jetpur outgrowth: 519-722
Jetpur Municipality + out-growth: 887-955
Navagadh: 743-874
Jetpur Municipality + outgrowth + Navagadh: 869-930
Source of data:
- from 1901 to 1981: Census of India (1901-81)
- 1988: estimates (on 1 March 1988) based on the 10 % household survey.

The comparison of the census data with the estimates based on the 10 per cent household survey conducted in 1988 raises some methodological difficulties related to the definition of the population of reference and to the delimitation of the urban area taken into consideration. This may lead to an over-estimation of the growth rate of the population between the 1981 census and the 1988 survey.[1] Notwithstanding these reservations, the 1988 estimates suggest that the population growth of Jetpur has continued at an increasing rate after 1981: 4.2 per cent per year on an average from 1971 to 1981, and about 6 per cent from 1981 to 1988 (Table 4.1). This rate should, however, be interpreted with caution as it results from three components: natural increase of population, net migration, and reclassified population of areas which have been annexed to the urban agglomeration. This last component operates more precisely in the so-called urban outgrowths. A better appraisal of the respective role of natural increase and net migration can be obtained by estimating the population growth within the limits of the Jetpur Municipality: the corresponding annual growth rates are 4.1 per cent from 1971 to 1981 and about 5 per cent from 1981 to 1988.[2] These figures can be compared with the average annual rate of natural increase in the urban areas of Gujarat, based on the sample registration system: 2.15 per cent for 1971-80, and 2.11 per cent for 1981-90. If we assume similar rates of natural increase in Jetpur, this would indicate increasing net in-migration rates: of about 2 per cent per year from 1971 to 1981 and 3 per cent from 1981 to 1988.

Today, the urban and industrial spread of Jetpur also includes an adjacent village, Navagadh, which has developed into a suburb at an exploding growth rate (9.6 per cent on an average from 1971 to 1981, and about 17 per cent per year from

1981 to 1988—accounting for natural and migratory population increase as well as for spatial extension, including reclassified population). Jetpur, Navagadh and their outgrowths together constitute an urban agglomeration[3] of around 114,000 inhabitants as per 1988 estimates. Despite difficulties of comparison between the census population figures and the estimates based on the household survey, the trend over the 1961-88 period[4] clearly suggests accelerating growth of the urban population, increasing in-migration and spatial spread together with a process of suburbanization. This last process often characterizes the expansion of large growing cities; in Gujarat, for instance, Ahmedabad and Surat have experienced a similar process of suburbanization 'with a much faster growth of suburban population than of that resident within the municipal limits' (Visaria et al., 1985:12).

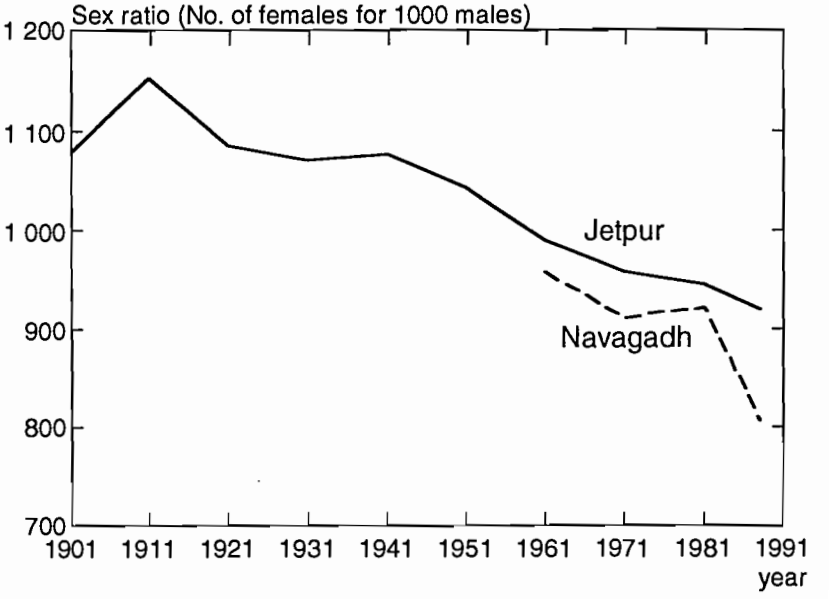
Sex ratio and age structure as indicators of urban population dynamics

The evolution of the sex ratios (Figure 4.2 and Table 4.1) reveals an increasing excess of males over females in the urban population. It affects more precisely the age groups between 15 and 40. Changes in the population pyramid of Jetpur town (excluding Navagadh) from 1971 to 1988 also point to an increase of the relative share of male adults between 15 and 39 years old, and to a lesser extent of females between 15 and 29 years (Figure 4.3).[5]

The compared population pyramids of Jetpur town and of Navagadh in 1988 illustrate the differential population dynamics between the original urban centre and its fast developing industrial suburb. In Navagadh, the imbalance in favour of males is more pronounced, especially for the 15-29 age group (Figure 4.4). The sex ratio is also particularly low in urban outgrowths: 614 females for 1,000 males, as compared with 806 in Navagadh and 942 in Jetpur municipal territory (Table 4.1).

All these indicators suggest an appreciable male-dominated labour in-migration, relatively more perceptible in industrial urban suburbs.

Figure 4.2
Sex ratio of Jetpur and Navagadh populations (1901 – 1988).



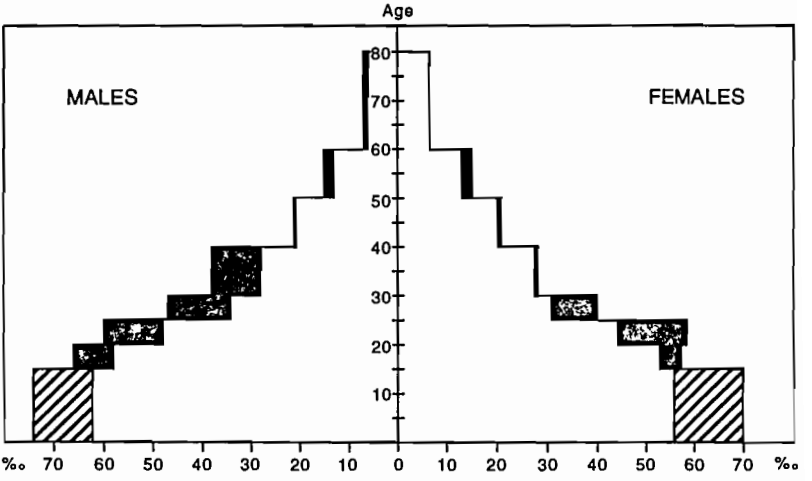
Source: 1901 to 1981 = census data; 1988 = the 10% household survey.

IN-MIGRATION TO THE JETPUR URBAN AGGLOMERATION

Contribution of in-migration to the formation of the urban population

The contribution of in-migration to the population dynamics of the Jetpur urban agglomeration can be better appraised by examining the respective share of natives and lifetime in-migrants for age and sex groups (Figure 4.5 and Table 4.2).[6] In the total population of the agglomeration, the lifetime migrants account for 44 per cent. Their proportions are necessarily higher among adults: between 50 and 60 per cent for males aged 25 or more, and between 80 and 90 per cent for females of these age groups. The higher frequency of lifetime migration among females results from the widespread rule of village-specific exogamy and patrilocal post-marital residence. As a

Figure 4.3
Population pyramid of Jetpur in 1971 and 1988.
Distribution for 1,000 persons of both sexes at each date.



Relative excess in 1988 as compared to 1971

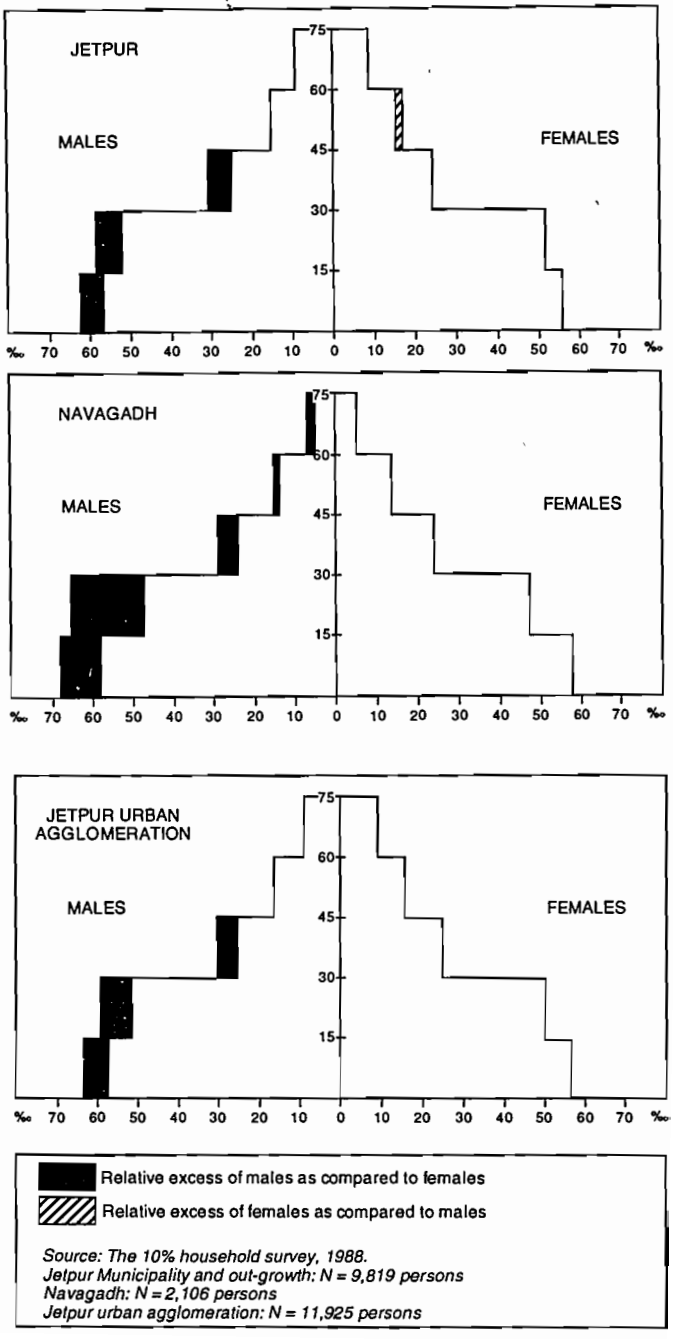
Relative deficit in 1988 as compared to 1971

1971: Jetpur Municipality
Source: Census 1971, Series 5-Gujarat, District census Handbook, Rajkot district Part X-C-I Departmental statistics and fullcount census tables.

1988: Jetpur Municipality and out-growth
Source: The 10% household survey, N = 9,818 persons

result too, the overwhelming majority of the urban households (96 per cent) count at least one in-migrant member. About 68 per cent of the male in-migrants and 59 per cent of the female in-migrants arrived in Jetpur within the 10 years preceding the 1988 survey.[7]

Figure 4.4
Population pyramids of Jetpur, Navagadh and the Jetpur urban agglomeration in 1988.
Distribution for 1,000 persons of both sexes in each pyramid.



Source: The 10% household survey, 1988.
Jetpur Municipality and out-growth: N = 9,819 persons
Navagadh: N = 2,106 persons
Jetpur urban agglomeration: N = 11,925 persons

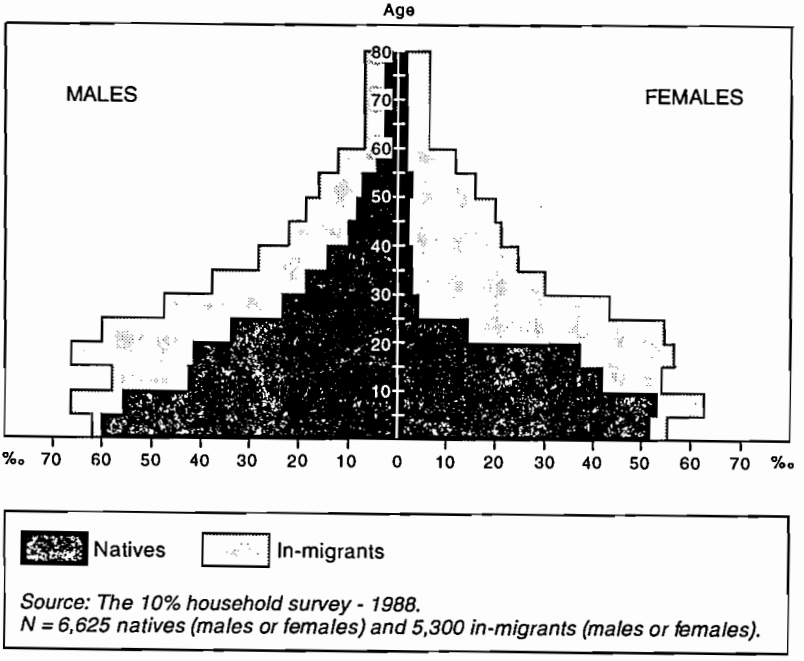
Table 4.2
Percentage of in-migrants in the population of the Jetpur urban agglomeration in 1988 by age group and sex.

Age group	*Males*	*Females*	*Total population*
0 - 4	4.8	6.3	5.5
5 - 9	16.6	14.3	15.5
10 - 14	26.6	22.8	24.8
15 - 19	37.6	34.7	36.3
20 - 24	43.2	73.1	57.3
25 - 29	51.0	89.6	69.2
30 - 34	52.2	88.5	68.3
35 - 39	52.8	86.4	68.3
40 - 44	54.8	85.0	69.6
45 - 49	57.0	89.7	74.0
50 - 54	54.2	80.5	67.4
55 - 59	63.9	86.9	75.3
60 and +	54.7	78.8	66.6
Total	36.9	52.8	44.4
No. of in-migrants	2,320	2,980	5,300
No. of residents	6,279	5,646	11,925

Source: The 10% household survey (1988).

The migratory attraction effect of Jetpur can be roughly evaluated against that of other Indian towns. According to the National Sample Survey of 1987-88, the proportion of migrants (identified by the criteria of last usual place of residence) to total population in urban areas of all India was 27 per cent among males and 40 per cent among females, and in urban areas of Gujarat 21 per cent and 37 per cent respectively. In the Jetpur urban agglomeration, the proportion of lifetime migrants recorded in the beginning of 1988 was 37 per cent among males and 52 per cent among females. The number of migrants is logically higher when defined vis-à-vis the last place of residence than when defined vis-à-vis the place of birth, since return migration is not taken into account by the latter definition.[8] Hence, the comparison between Jetpur and the urban areas of all India and of Gujarat remains valid; this stresses the relative position of Jetpur as an urban centre which appears particularly attractive for migrants.[9]

Figure 4.5
Population pyramid of the Jetpur urban agglomeration in 1988.
Distribution of in-migrants and natives per age and sex for 1,000 residents of both sexes.



Source: The 10% household survey - 1988.
N = 6,625 natives (males or females) and 5,300 in-migrants (males or females).

The different types of migratory flows and their catchment areas

The majority of the female in-migrants (53 per cent) have moved after their marriage, while the remaining part corresponds to ancillary moves (that is, moves induced by the movement of others, usually the head of the family or the husband). The male lifetime migrants have come to Jetpur mainly because of ancillary moves (49 per cent) and employment reasons (47 per cent) (Table 4.3). A better appraisal of the different reasons at the origin of the decision to migrate to Jetpur can be obtained by considering only the category of primary in-migrants (those who made the actual migration decision, that is excluding the ancillary or secondary migrants)

(Table 4.3). The gender-based dichotomy of decision-making on migration becomes then even more obvious: the almost exclusive reason for female autonomous migration is marriage (97 per cent of cases) while for males employment reasons are predominant (93 per cent of cases). Other reasons for in-migration (such as better civic or other amenities and facilities, studies, social or political tensions, etc.) remain marginal in the case of Jetpur.

If the direct as well as induced impact of employment reasons is now taken into account,[10] these appear at the origin of the great majority of population moves to the Jetpur urban agglomeration (60 per cent of the in-migrants). From another viewpoint, almost half the number of the urban households (49 per cent) are concerned with employment related in-migration. As already suggested, labour in-migration has played a significant role in the population dynamics of the urban agglomeration.

The geographical origin of lifetime in-migrants is essentially regional: 86 per cent were born in Saurashtra, and among them nearly half in the Rajkot district (where Jetpur is located). Besides, 61 per cent of the in-migrants come from rural areas (Table 4.4). The native places of the female in-migrants are more concentrated in the nearest districts than those of the males (77 per cent in the Rajkot, Junagadh or Amreli districts as against 68 per cent), but they are less frequently rural (55 per cent as against 68 per cent). This suggests that the geographical recruitment area of the urban labour market is more extended but more rural than the marriage catchment area. Anyhow, from the point of view of its population dynamics, Jetpur appears as a regional urban centre deeply rooted in its rural hinterland.

Spatial distribution of in-migrant's residences

As stressed by many studies on various Indian towns or cities and as reviewed by Gandhi (1983) or Schenk (1986), the settlement of in-migrants in a town follows a clear pattern. The new entrants to an area invariably tend to cluster in neighbourhoods where they can find members of their kin, caste or community, of their regional or linguistic group or

Table 4.3
Distribution of in-migrants in the Jetpur urban agglomeration in 1988 by reason for in-migration and sex.

Reason	*Male in-migrants*		*Female in-migrants*		*Total in-migrants*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Employment	1,087	46.9	23	0.8	1,110	21.0
Marriage	11	0.5	1,568	52.7	1,579	29.8
Induced migration	1,143	49.3	1,361	45.7	2,504	47.3
Other reasons	77	3.3	25	0.8	102	1.9
Total	2,318	100.0	2,977	100.0	5,295	100.0

Reason		*In-migrants* *No.*	*Reason*	*Total in-migrants* *No.*	*%*
Employment		1,110	Employment-direct and induced.	3,175	60.0
Marriage		1,579	Marriage	1,579	29.8
Induced migration	-not specified	256	Induced- not specified	256	4.8
	-employment	2,065			
	-other reasons	183	Other reasons- direct and induced	285	5.4
Other reasons		102			
Total		5,295	**Total**	5,295	100.0

Primary in-migrants
(persons who made the actual migration decision)

Reason	*Males*		*Females*		*Total*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Employment	1,087	92.5	23	1.4	1,110	39.8
Marriage	11	0.9	1,568	97.0	1,579	56.6
Other reasons	77	6.6	25	1.5	102	3.6
Total	1,175	100.0	1,616	100.0	2,791	100.0

Number of missing observations = 5
Source: The 10 % household survey (1988).

Table 4.4
Distribution of in-migrants in the Jetpur urban agglomeration in 1988 by native place.

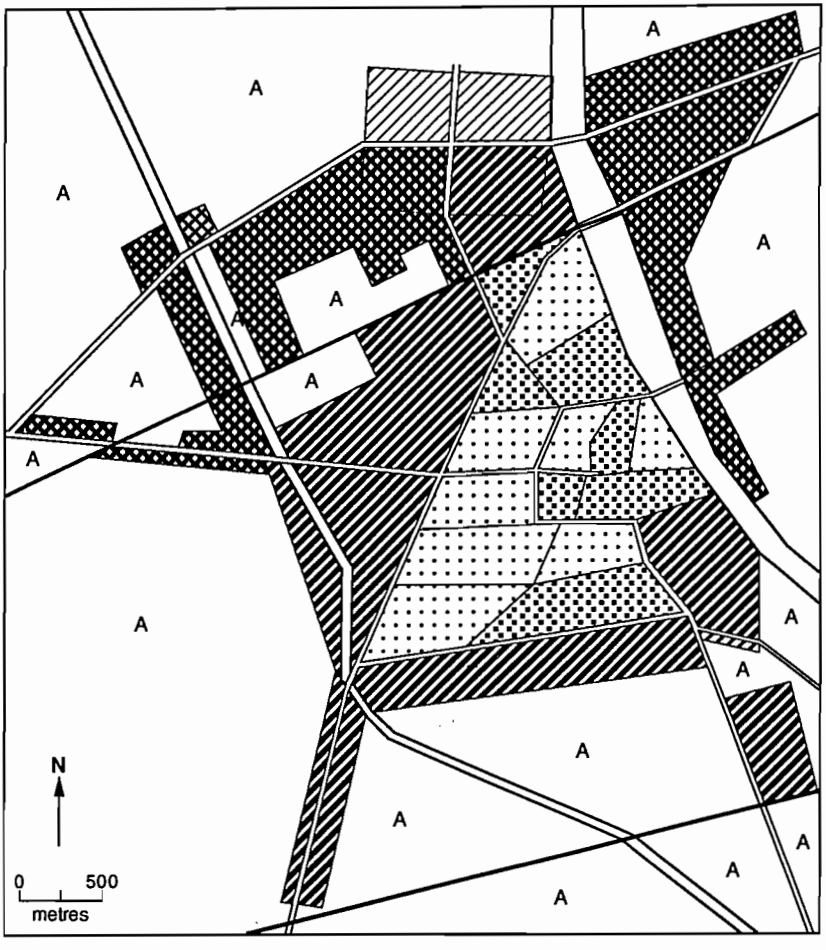
Native place	*Males*		*Females*		*Total*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Gujarat: Saurashtra:						
- Rajkot district	858	37.0	1,300	43.6	2,158	40.7
- Junagadh district	554	23.9	735	24.7	1,289	24.3
- Amreli district	175	7.5	267	9.0	442	8.4
- Other districts	322	13.9	351	11.8	673	12.7
Gujarat: other districts	127	5.5	141	4.7	268	5.1
Gujarat: districts not known	9	0.4	9	0.3	18	0.3
Other states in India	210	9.0	101	3.4	311	5.9
Pakistan	53	2.3	54	1.8	107	2.0
Other foreign countries	11	0.5	21	0.7	32	0.6
Total	2,319	100.0	2,979	100.0	5,298	100.0
No. of missing observations = 2						
Rural	1,558	68.1	1,628	55.3	3,186	60.9
Urban	729	31.9	1,316	44.7	2,045	39.1
Total	2,287	100.0	2,944	100.0	5,231	100.0
No. of missing observations = 69						

Source: The 10% household survey (1988).

other migrants belonging to the same economic status. This tendency results from what Schenk identified as the preference to settle in 'socially homogeneous areas' and which constitutes one major 'societal force upon the socio-spatial structure of urban residence' (Schenk, 1986: 183).

The in-depth interviews conducted with in-migrants settled in the Jetpur urban agglomeration revealed that the familial and social networks play a definite and significant role in the process of in-migration and urban insertion, including the choice of the residential areas. In Jetpur too the in-migrants are not distributed uniformly within the urban agglomeration.[11] The in-migrants' residential pattern shows a pronounced tendency towards decentralization, which confirms the above conclusion on the process of suburbanization at work in Jetpur. The in-migrants are strongly over-represented in the population

Figure 4.6
Percentage of in-migrants among residents in 1988 by zone of residence.
Population of the Jetpur urban agglomeration (deviations from the average percentage).



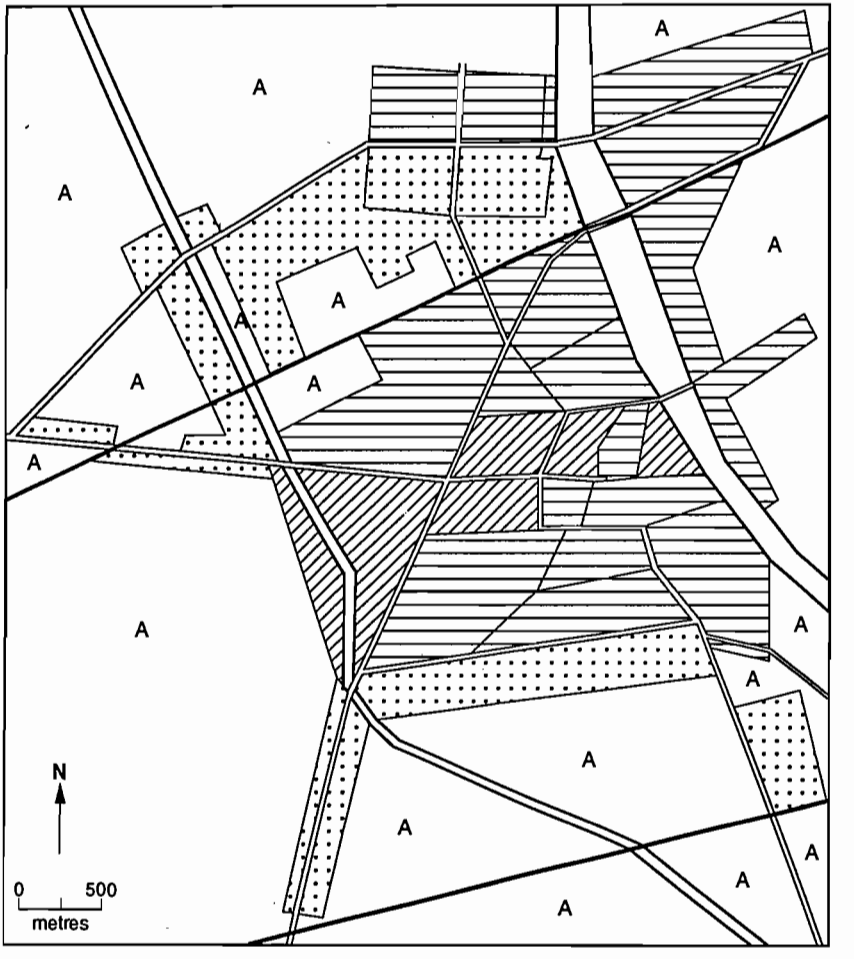
Deviation of the percentage of in-migrants among the residents of the zone under consideration, from the average percentage of in-migrants among the residents of the whole urban agglomeration.

A arable land, open space

- 17.4 to - 10.5
- 10.4 to - 3.5
- 3.4 to + 3.5
+ 3.6 to + 10.5
+ 10.6 to + 17.5
+ 17.6 to + 24.5

Source: The 10% household survey - 1988.

Figure 4.7
Percentage of in-migrants prior to 1979 among residents in 1988 by zone of residence.
Population of the Jetpur urban agglomeration (deviations from the average percentage).



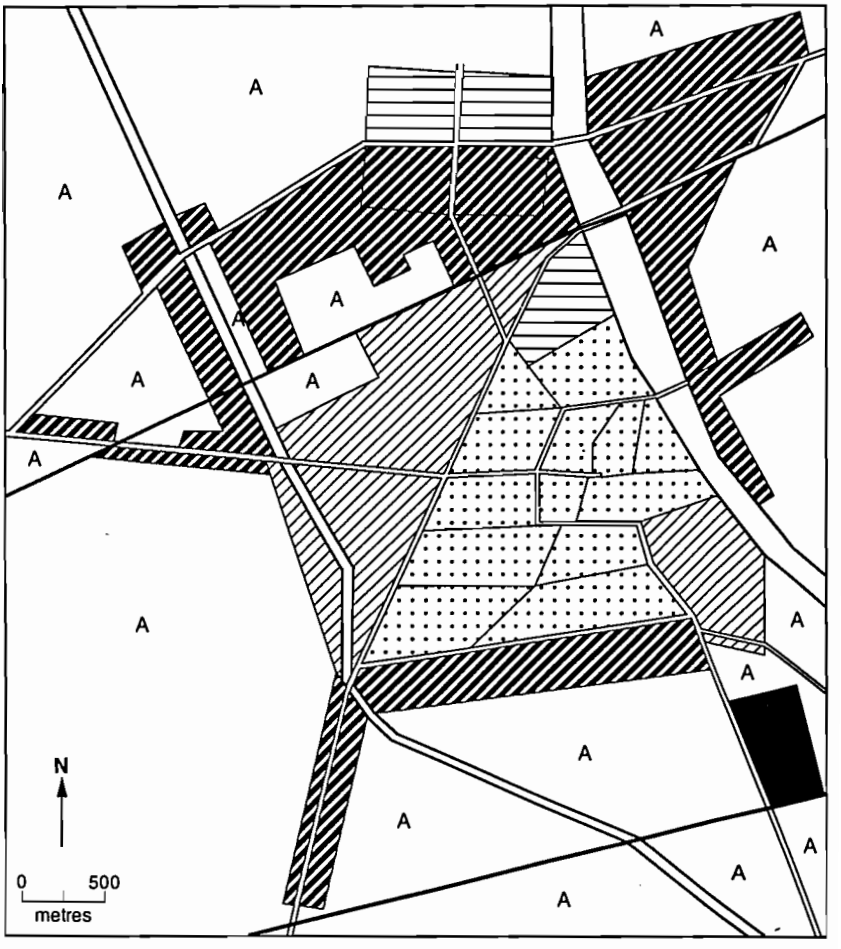
Deviation of the percentage of in-migrants prior to 1979 among the residents of the zone under consideration, from the average percentage of in-migrants prior to 1979 among the residents of the whole urban agglomeration.

- 10.4 to - 3.5
- 3.4 to + 3.5
+ 3.6 to + 10.5
A arable land, open space

Source: The 10% household survey - 1988.

Figure 4.8

Percentage of 1979-84 in-migrants among residents in 1988 by zone of residence. Population of the Jetpur urban agglomeration (deviations from the average percentage).



Deviation of the percentage of 1979-84 in-migrants among the residents of the zone under consideration, from the average percentage of 1979-84 in-migrants among the residents of the whole urban agglomeration.

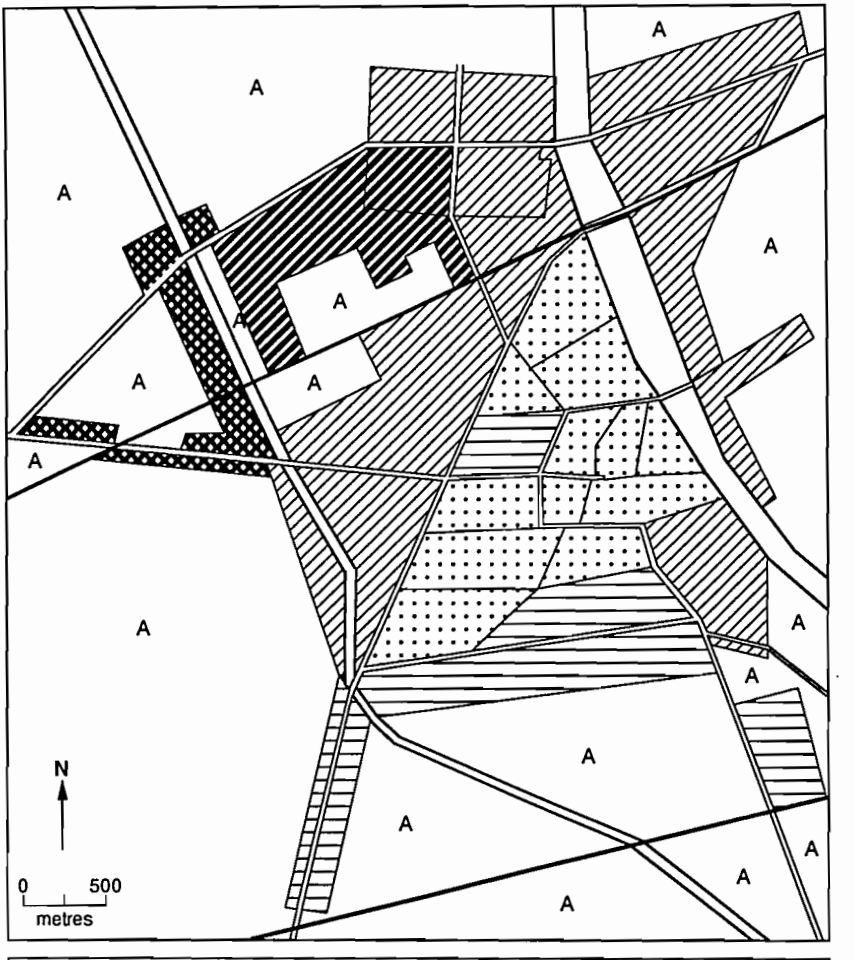
A arable land, open space

- 10.4 to - 3.5
- 3.4 to + 3.5
+ 3.6 to + 10.5
+ 10.6 to + 17.5
+ 17.6 to + 24.5
+ 24.5 to + 31.5

Source: The 10% household survey - 1988.

Figure 4.9

Percentage of 1985-88 in-migrants among residents in 1988 by zone of residence. Population of the Jetpur urban agglomeration (deviations from the average percentage).



Deviation of the percentage of 1985-88 in-migrants among the residents of the zone under consideration , from the average percentage of 1985-88 in-migrants among the residents of the whole urban agglomeration.

- 10.4 to - 3.5
- 3.4 to + 3.5
+ 3.6 to + 10.5
+ 10.6 to + 17.5
+ 17.6 to + 24.5
A arable land, open space

Source: The 10% household survey - 1988.

living in the outer fringes of the agglomeration, where their proportion ranges from 55 per cent to 69 per cent (as compared to 44 per cent on the average). Yet, in the core of the town they are relatively under-represented (Figure 4.6).

The residential location patterns of recent in-migrants, those who arrived in 1979-84 as well as those who arrived in 1985-88, fit in with this general pattern. The three corresponding maps (Figures 4.6, 4.8, 4.9) clearly point out a similar demarcation between, on the one hand, the zones where the percentages of in-migrants among residents are lower than the corresponding average percentage for the whole urban agglomeration and which are all located in the core of the city, and, on the other hand, the zones where the percentages of in-migrants are higher than the average, all of which are located in Navagadh and the remaining part of the urban periphery.

The 1985-88 cohort of in-migrants deserves special attention as their residential location at the time of the 1988 survey reflects more truthfully than for the older cohorts their initial spatial pattern of settlement. In terms of population concentration, half of the 1985-88 in-migrants have settled in areas accounting only for 24 per cent of the total urban population. The corresponding zones are also located in Navagadh and in the outer fringes. As measured by Gini's coefficient,[12] the degree of spatial concentration of recent in-migrants is higher than for the older cohort: 0.386 for 1985-88 in-migrants and 0.366 for 1979-84 in-migrants, as against 0.111 for in-migrants prior to 1979. This suggests that the access to the first residence in the urban agglomeration follows strongly oriented channels which buttress spatial clustering, as confirmed by the in-migrants life histories.

The residential location of the in-migrants' older cohort shows a different pattern: the in-migrants prior to 1979 are relatively under-represented in Navagadh and the outer urban fringes, whereas they are over-represented in certain central zones (Figure 4.7). However, as compared with recent in-migrants, the spatial distribution of in-migrants prior to 1979 is much more diffuse, with a low degree of spatial concentration (for instance, half of those migrants reside in areas accounting for 42 per cent of the total urban population), and smaller deviations of their proportions by zone from the average. In

addition, the present residential pattern of the older in-migrant cohort is tricky to interpret: the longer the duration of stay in town, the higher the probability of internal moves within the urban agglomeration having occurred, thus interfering with the initial pattern of settlement. Nevertheless, as suggested by the comparison of the residential location patterns of the in-migrants according to their duration of stay in town, it is quite likely that the oldest in-migration cohort had a tendency to settle in Jetpur town proper rather than in Navagadh or the outer fringes at a time when the latter were not developed as yet as industrial suburbs. At the same time, more recent in-migrants gradually tended to settle more frequently in the urban periphery where space was available, as they followed—and contributed to—the spatial expansion of the urban agglomeration.

The juxtaposition of the maps of the proportions of in-migrants per zone of residence (Figures 4.6-4.9) and that of the location of the sari-printing factories (Figure 3.3) clearly shows a tendency among the 1979-85 and 1985-88 in-migrants to settle in the industrial areas which have been relocated towards the urban periphery. The peripheral suburbs which function as industrial zones are also systematically zones of particularly high in-migration.

MAIN SOCIO-ECONOMIC CHARACTERISTICS OF THE URBAN POPULATION AND OF THE DIFFERENTIAL IMPACT OF IN-MIGRATION

Distribution by caste and religion (Table 4.5)

The Kanbis, originally engaged in agriculture, form the most numerous caste in the urban population (22 per cent). The Khatris, who played a primary role in the introduction and development of the dyeing and printing activities in Jetpur represent only a minority group (7 per cent of the urban population). The castes listed under the category of 'Other Backward Classes' (OBC) form another important group (OBC [Hindus]:23 per cent, and OBC [Muslims]: 9 per cent). On the

other hand, the Scheduled Castes (SC) form a very small minority group (6 per cent), and the proportion of Scheduled Tribes (ST) is negligible (less than 0.1 per cent). This is a common feature of the Saurashtra population: according to the 1991 census, for example, the population of Scheduled Castes represented 8.1 per cent of the total population of Saurashtra, and the Scheduled Tribes 0.3 per cent, which is much lower than the national averages (16 per cent and 8 per cent respectively). The proportion of Scheduled Castes in Saurashtra is somehow higher in rural areas than in towns, and within the Jetpur urban agglomeration, it is higher in the former village of Navagadh (13 per cent in 1988) than in Jetpur town proper (4 per cent). An upward trend is also noticeable: in the 1961 census the proportion of Scheduled Castes was only 2 per cent in Jetpur town proper and 4 per cent in Navagadh. As regards the distribution of population by religion (in 1988), the Hindus represented 84 per cent of the population of the Jetpur urban agglomeration, the Muslims 14 per cent, whereas the proportion of Jains was marginal (2 per cent) and that of Christians and Sikhs negligible (0.1 per cent each).

In-migration has affected differently the various caste and communal groups,[13] but it did not alter dramatically the population structure. Nevertheless, some significant trends deserve mention. Recent in-migration (1979-88) has strengthened the demographic weight of the Hindu backward classes (18 per cent among natives aged 15 or more, as compared to 29 per cent among in-migrants of the same age groups arrived since 1979), whereas it reduced that of the Kanbis (27 per cent among natives as compared to 18 per cent among in-migrants since 1979) (Table 4.5).[14]

Educational standard and in-migration

The literacy rate in the Jetpur urban agglomeration is 70 per cent for the population aged 15 years and above. Educational standards vary considerably according to generation and sex. As usually observed, they are systematically higher among males than among females, and among the young generations as compared to the older ones. For example, the percentage of

illiterates increases from 15 for the 15-29 year old males to 39 for males aged 60 and above, and from 25 for 15-29 year old females to 74 for females aged 60 and above. A large majority of male literates have passed the primary level, while half of the female literates have not (Table 4.6).

Table 4.5

Percentage of in-migrants by caste/community among all residents and distribution by caste/community according to the duration of residence among residents aged 15 or more. Population of the Jetpur urban agglomeration in 1988.

Caste / Community	*All residents*			*Residents aged 15 or more*			
	Residents	*Residents*	*In-migrants / residents*	*Natives*	*<1979 in-migrants*	*1979-88 in-migrants*	*Total*
	No.	*%*	*%*	*%*	*%*	*%*	*%*
Brahmin	652	5.5	54.1	4.5	6.9	6.7	5.9
Kshatriya	472	4.0	62.3	2.0	4.2	6.1	3.9
Vania	581	4.9	41.1	6.4	6.6	3.0	5.4
Kanbi	2,622	22.0	37.5	27.4	21.3	17.7	22.6
Khatri	850	7.1	39.6	7.4	9.4	4.3	7.1
OBC (Hindus)	1,595	13.4	47.4	13.1	15.5	14.1	14.1
Other Hindu classes (not backward)	2,800	23.5	49.2	18.3	20.1	28.6	22.0
OBC (Muslims)	524	4.4	43.1	4.7	3.4	5.0	4.4
Other Muslim castes (not backward)	1,095	9.2	36.1	10.9	7.4	7.0	8.7
SC/ST	707	5.9	45.3	5.2	5.1	6.8	5.7
Christian, Sikh	27	0.2	70.4	0.0	0.1	0.6	0.2
Total	11,925	100.0	44.4	100.0	100.0	100.0	100.0
No. of observations	11,925	11,925	11,925	2,996	2,295	2,347	7,638
No. of missing observations			0				8

Chi-square/significance:
(1) 264.73598/significance = 0.0000
(2) 348.19354/significance = 0.0000
(3) 148.36636/significance = 0.0000
(1) Chi-square test between the variables 'caste' and 'migration status' computed for all residents.
(2) Chi-square test computed for all residents aged 15 or more.
(3) Chi-square test computed only for in-migrants aged 15 or more.
OBC = other backward classes; SC = Scheduled Castes; ST = Scheduled Tribes.
Source: The 10% household survey (1988).

Table 4.6
Distribution of population in the Jetpur urban agglomeration in 1988 by educational standard for each age group and sex in 1988.

Educational standard	*Males*					*Females*				
	15-29	*30-44*	*45-59*	*60 & above*	*15 & above*	*15-29*	*30-44*	*45-59*	*60 & above*	*15 & above*
	%	%	%	%	%	%	%	%	%	%
Illiterate	14.9	20.6	27.0	38.9	19.9	25.0	47.1	63.2	73.9	40.8
Primary (1-4)	11.0	16.0	29.9	28.8	16.3	9.4	13.6	196	20.8	13.1
Middle (5-7)	19.6	16.1	15.1	18.4	17.9	20.6	17.9	10.8	3.9	16.9
Secondary (8-10)	37.5	26.9	14.6	9.2	29.3	27.9	11.7	3.6	1.3	17.7
Higher Secondary (11-12)	8.5	7.3	6.8	2.5	7.5	9.3	4.8	1.2	0.0	6.1
College & above	8.6	13.1	6.6	2.2	9.0	7.8	4.9	1.5	0.0	5.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of observations	2,106	1,050	562	316	4,034	1,825	898	582	307	3,612

No. of missing observations = 3
The age group '15-29' includes students who have not reached their final educational standard and are still attending school or college.
Source: The 10 % household survey (1988)

As compared to other Gujarat towns, the literacy rates of the population of Jetpur rank as average. For instance, the literacy rate observed in Jetpur in the population aged 15 years and above in 1988 can be roughly compared with the literacy rate of the population aged 8 years and above in the urban areas of Gujarat in the 1981 census;[15] the corresponding percentages are almost similar, respectively: 80 per cent as against 81 per cent for males, and 59 per cent as against 60 per cent for females.

At the aggregate level of the adult population, males as well as females, in-migration has lowered the literacy rate of the urban population. Among males, this effect is even more pronounced with recent in-migration flow. Male age-specific illiteracy rates are systematically higher among in-migrants arrived since 1979, as compared to more ancient in-migrants and to natives[16] (Table 4.7). The in-migrants' lower literacy has to be related to their majority rural origin. Despite a considerable increase in the literacy rate in Saurashtra[17] (from where most of the in-migrants in Jetpur hail) as a result of the government policy of eradicating illiteracy and promoting education, wide disparities persist between urban and rural areas (73 per cent of literates as against 54 per cent in the total population of Saurashtra aged seven and above in the 1991 census).

Table 4.7

Percentage of illiterates in the population of the Jetpur urban agglomeration in 1988 by age group, sex and migration status.

	Males				
Age group	*Natives*	*In-migrants before 1979*	*1979-88 in-migrants*	*All residents*	*No. of observations*
15-29	8.4	17.2	26.3	14.9	2,105
30-44	15.4	18.2	32.7	20.5	1,049
45-59	24.9	21.5	40.8	27.0	562
60 and above	39.2	35.8	46.2	39.0	315
15 and above	14.1	20.9	30.6	19.9	4,031
No. of observations	2,069	918	1,044	4,031	

Table 4.7 *continued*

Age group	*Natives*	*Females*			
		In-migrants before 1979	*1979-88 in-migrants*	*All residents*	*No. of observations*
15-29	16.3	26.4	30.9	25.0	1,824
30-44	57.6	41.7	54.5	47.1	898
45-59	74.4	59.2	70.2	63.3	581
60 and above	80.0	70.5	82.1	74.0	304
15 and above	31.2	48.3	39.8	40.8	3,607
No. of observations	927	1,377	1,303	3,607	

Chi-square test of the difference of illiteracy ratio between natives, in-migrants before 1979 and in-migrants since 1979, for each age group and sex

Age group	*Males*		*Females*	
	Chi-square	*Significance*	*Chi-square*	*Significance*
15-29	103.69	0.01	43.60	0.01
30-44	33.06	0.01	16.47	0.01
45-59	15.86	0.01	9.08	0.02
60 and above	1.86	not significant	3.76	0.20

No. of degrees of freedom = 2
No. of missing observations = 3
Source: The 10 % household survey (1988).

Activity and in-migration

Some striking differences appear between native and in-migrant populations with regard to the distribution by activity (Table 4.8). The percentages of employed prove to be considerably higher among in-migrants than among natives, for males (77 per cent as against 42 per cent) as well as for females (13 per cent as against 4 per cent). Conversely, the proportions of students and of young children are significantly lower among in-migrants. In terms of migration differentials, the proportion of in-migrants is higher in the employed population (55 per cent) than in the total population (44 per cent) (Table 4.9).

This differential can be explained mainly by the specific age structure of the in-migrant population, characterized by its

Table 4.8

Percentage distribution of population in the Jetpur urban agglomeration in 1988 by activity among natives and in-migrants for each sex.

Activity	*Males*			*Females*			*Males + Females*		
	Natives	*In-migrants*	*Total*	*Natives*	*In-migrants*	*Total*	*Natives*	*In-migrants*	*Total*
Working	42.4	76.5	55.0	4.4	12.5	8.7	27.1	40.5	33.0
Unemployed	1.0	1.2	1.1	0.1	0.0	0.0	0.7	0.5	0.6
Household duties	0.3	0.3	0.3	25.2	70.5	49.1	10.3	39.8	23.4
Students	33.9	11.8	25.7	43.6	7.1	24.3	37.8	9.2	25.1
Young children	18.6	3.1	12.9	24.1	2.0	12.5	20.8	2.5	12.7
Old, aged, handicapped	2.7	4.4	3.3	2.2	6.8	4.6	2.5	5.7	4.0
Other non-workers	1.1	2.7	1.7	0.4	1.1	0.8	0.8	1.8	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of observations	3,956	2,320	6,276	2,665	2,980	5,645	6,621	5,300	11,921

No. of missing observations = 4

Source: The 10 % household survey (1988).

Table 4.9
Percentage of in-migrants in the population of the Jetpur urban agglomeration in 1988 by activity and sex.

Activity	*Males*	*Females*	*Total*
Working	51.4	76.3	54.5
Unemployed	39.7	n.c	38.6
Household duties	n.c	75.8	75.6
Students	17.0	15.4	16.3
Young children	8.9	8.7	8.8
Old, aged, handicapped	48.6	77.1	64.4
Other non-workers	59.0	72.7	63.1
Total	37.0	52.8	44.5
No. of observations	6,276	5,645	11,921

n.c = percentage not computed (less than 30 observations)
No. of missing observations = 4
Source: The 10 % household survey (1988).

greater proportion of adults (the persons aged 15 or more account for 88 per cent of the in-migrants as against 45 per cent of the natives). The comparison of age-specific rates between natives and in-migrants does not show systematically higher percentages of the employed among the latter[18] (Table 4.10). The age-standardized percentage of the employed remains higher for in-migrants than for natives, for males as well as females, but the difference is significantly reduced when compared with the difference between crude rates.

At the macro level, in-migration has indisputably played a major role in the development of the urban economy by increasing the labour supply as well as the work force participation rate in the urban population. However, this global effect results more from the demographic characteristics of the in-migrants than from their economic characteristics *per se*.

OUT-MIGRATION

The household survey enabled us to collect information on out-migrants (who had left between 1983 and 1988) from the households surveyed at the beginning of 1988. But if all the

Table 4.10

Percentage of the employed in the population of the Jetpur urban agglomeration in 1988, by age group, sex and migration status.

Age group	*Males*				*Females*			
	Native %	*In-migrants* %	*Total* %	*Total No. of observations*	*Natives* %	*In-migrants* %	*Total* %	*Total No. of observations*
0-14	2.8	14.1	4.5	2,243	0.7	4.8	1.3	2 032
15-29	73.0	89.7	80.2	2,104	9.4	12.9	11.6	1,824
30-44	98.0	97.1	97.5	1,050	20.3	16.2	16.7	898
45-59	86.1	89.2	87.9	562	18.2	14.2	14.8	582
60 and above	46.2	44.5	45.3	316	4.6	5.0	4.9	307
all ages	42.4	76.5	55.0	6,275	4.3	12.5	8.7	5,643
No. of observations	3,956	2,319	6,275	—	2,665	2,978	5,643	—
No of missing observations				4				3

Table 4.10 *continued*
Chi-square test of comparison of the percentages of the employed between in-migrants and natives for each age group and sex.

Age group	*Males*		*Females*	
	Chi-square	*Significance*	*Chi-square*	*Significance*
0-14	89.75	0.001	29.95	0.001
15-29	90.27	0.001	5.19	0.05
30-44	0.63	n.s.	1.11	n.s.
45-59	1.09	n.s.	1.02	n.s.
60 and above	0.05	n.s.	0.00	n.s.

No. of degrees of freedom = 1
n.s. = not significant

Standardized percentage of the employed among natives and in-migrants in the population of the Jetpur urban agglomeration in 1988.
(Residents' age structure applied to the natives and the in-migrants, for each sex.)

	Natives	*In-migrants*
Males	51.9	56.6
Females	8.6	10.2

Source: The 10 % household survey (1988)

members of a household out-migrated together, they could not be recorded by the survey. Consequently, the structure of the out-migrants' sample is not representative of the entire out-migrant population and the interpretation of the results calls for special caution.[19] Nevertheless, though partial, the data collected provides interesting insights.

Estimation of out-migration and selectivity

The various indices reveal a certain selectivity of out-migration (Table 4.11).[20] Out-migration is significantly higher for females than for males: this results from marriage–migration which accounts for 80 per cent of female moves. Due also to the prevalence of marriage–migration in the pattern of spatial

Table 4.11:
Indices of out-migration from the Jetpur urban agglomeration (1983-88)

Concerned population		$p = E / (P + E)$ (%)		$t = E / (P+E/2+O/2-I/2-B/2)$ (%)
		E: 1983-88	*E: 1987-88*	*E: 1983-88*
Total population in the private households* of Jetpur UA	persons	3.5	1.5	4.0
	males	1.8	1.0	2.0
	females	5.3	2.0	6.2
Total population in the private households* of Jetpur town.	persons	3.5	1.5	4.0
	males	1.8	0.9	2.0
	females	5.3	2.0	6.1
Total population in the private households* of Navagadh.	persons	3.3	1.4	4.1
	males	1.7	1.1	2.1
	females	5.1	1.8	6.5
Native population in the private households* of Jetpur UA	persons	4.1	1.6	4.6
	males	1.6	0.8	1.7
	females	7.5	2.7	8.7
In-migrant population in the private households* of Jetpur UA	persons	2.7	1.4	3.3
	males	2.1	1.3	2.5
	females	3.2	1.4	3.8
In-migrant workers living in the factories	males	38.5	—	70.3

P = population surveyed in 1988.
E = observed out-migrants left from 1983 to 1988, or in 1987-88 (up to 1/3/1988), from the households/factories surveyed in 1988.
O = persons who left the household/factories surveyed in 1988 from 1983 to 1988 to move to another place in the Jetpur urban agglomeration.
I = in-migrants arrived from 1983 to 1988 in the population surveyed in 1988.
B = native population of the age of 0-4 years in 1988 (approximate of births from 1983 to 1988).
p = observed crude proportion of 1983-88 out-migrants from the households/factories.
t = approximation of the observed crude rate of out-migration from the households/factories.
* excluding the teams of workers living in the factories.
UA = urban agglomeration.
Source: The 10% household survey and the exhaustive enumeration of workers living in the factories (1988).

mobility of women, female out-migration is higher among natives than among in-migrants (as a majority of those female in-migrants have already come for the purpose of marriage). Conversely, male out-migration is lower among natives than

among in-migrants: as employment reasons dominate migration decisions of male adults, it is not surprising to detect a higher frequency of mobility among those who have no ancestral attachment in the place, and who have already had a migratory experience. The specific case of the inter-state male migrant labourers housed in the factories exemplifies labour migration associated to a very high turnover: the observed proportion of 1983-88 out-migrants is 38 per cent.

However, the last example concerns only a marginal section of the whole urban population (0.9 per cent). The indices of out-migration from private households are considerably lower: for instance, the observed proportion of 1983-88 out-migrants is 3.5 per cent for the whole urban agglomeration, and that of 1987-88 out-migrants 1.5 per cent. They suggest a moderate impact of out-migration, in Jetpur proper as well as in Navagadh. Appropriate information is unfortunately lacking to allow us to generalize for the entire population at risk the estimates of the relative frequency of out-migration.

Yet, despite the recurring drought of 1985-87 and the resulting economic recession which hit the dyeing and printing industry,[21] massive out-migration does not seem to have occurred. In the context of majority regional and state migration this could be explained by the lack of better opportunities elsewhere in the region and around, as the drought affected not only Saurashtra but also other parts of Gujarat, as well as many parts of the country, especially in 1987. In addition, returning to the native village in order to get support from familial agricultural activity (if any) offered no scope as agriculture was the first sector to be hit by the drought. However, some people among the lower economic strata may have tried to go back temporarily to their village in order to benefit from the programme of relief works implemented by the government in the rural areas of Saurashtra in 1987-88. As a matter of fact, native place accounts for only 8 per cent of the out-migrants' places of destination. The specific impact of the recurring drought on out-migration can, be however, be detected from the frequency distribution of departures per year since 1983,[22] especially among male out-migrants who respond more than females to economic factors. Thus, 11 per cent of the 1983-88 male out-migrants left in 1985, 21 per cent in 1986 and 45 per cent in 1987 (Table 4.12).

Table 4.12
Year of departure of the 1983-88 out-migrants from the private households* of the Jetpur urban agglomeration

Year of departure	*Male out-migrants*		*Female out-migrants*		*Total out-migrants*	
	No.	*%*	*No.*	*%*	*No.*	*%*
1983	8	7.2	36	11.7	44	10.5
1984	7	6.3	48	15.6	55	13.1
1985	12	10.8	57	18.5	69	16.5
1986	23	20.7	52	16.9	75	17.9
1987	50	45.0	96	31.2	146	34.8
1988: up to 1/3/88	11	9.9	19	6.2	30	7.2
Total	111	100.0	308	100.0	419	100.0

* excluding the teams of workers living in the factories.
No. of missing observations = 8
Source: The 10 % household survey (1988)

Another possibility is the development of strategies of circulation in response to economic difficulties, as a substitute for permanent out-migration from Jetpur. Although we cannot measure the frequency of this phenomenon, this hypothesis is supported by the in-depth interviews conducted in the following phases of the field observation. Thus, there is a certain percentage of 'floating population' in the population of Jetpur, people who circulate between Jetpur and other places, in search of better employment or business opportunities. They will maintain a residential base in Jetpur, often with part of their family, and come back when the economic situation improves, or after an unsuccessful attempt in another town. Further, some individuals organize their life space between two poles of residence; for instance, between Jetpur and a bigger town, like Ahmedabad or Bombay, which presents opportunities for entrepreneurs and businessmen.

The different types of out-migration flows from the households

The decision of out-migration as appraised through the category of primary migrants shows again a pattern of mobility dominated by marriage reasons for females (92 per cent of

cases) and by employment reasons for males (66 per cent of cases) (Table 4.13). However, in contrast to the pattern of in-migration towards the urban agglomeration, higher education and studies appear as a notable reason for out-migration, especially among males (24 per cent of cases).

The comparison between the places of destination of the out-migrants and the places of origin of the in-migrants reveals some noticeable features (Table 4.14). The gender differentiation is similar in both streams: the female out-migrants' destinations are more concentrated in the nearby districts than those of the male out-migrants (70 per cent in Rajkot, Junagadh or Amreli districts as against 36 per cent). This confirms the preservation of a marriage circulation area which is much more restrictive than the labour circulation area.

Turning to the spatial specificity of out-migration stream, the places of destination are less concentrated, geographically more diversified and more urban than the in-migrants' places of origin, especially for males. For instance, 32 per cent of male out-migrants chose a district in Gujarat State but outside Saurashtra, 20 per cent another State in the country (essentially Maharashtra), and an overall 77 per cent chose an urban place, while the corresponding figures for male in-migrants' native places were 6 per cent, 9 per cent and 32 per cent respectively. This could point to the existence of a process of step by step migration from rural areas to an intermediary town—like Jetpur—in the same micro-region, and then to more distant urban destinations beyond regional boundaries. This also suggests that the range of possible places of destination is probably wider for urban candidates for out-migration—urban natives or new city-dwellers—than for rural candidates. The interpretation based on such comparisons should be considered, however, as a hypothesis which might require some revision or at least qualification, since we have no information on family out-migration and their destination.

SUMMARY OF MAIN FINDINGS

The considerable expansion of the local industry has resulted

Table 4.13
Reason for out-migration of the 1983-88 out-migrants from the private households* of the Jetpur urban agglomeration.

Reason	*Male out-migrants*		*Female out-migrants*		*Total out-migrants*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Employment	60	54.1	2	0.6	62	14.7
Marriage	1	0.9	247	79.7	248	58.9
Studies	22	19.8	8	2.6	30	7.1
Induced migration	20	18.0	42	13.5	62	14.7
Other reasons	8	7.2	11	3.5	19	11.6
Total	111	100.0	310	100.0	421	100.0

Primary out-migrants (persons who made the actual migration decision)

Reason	*Male out-migrants*		*Female out-migrants*		*Total out-migrants*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Employment	60	65.9	2	0.7	62	17.3
Marriage	1	1.1	247	92.2	248	69.1
Studies	22	24.2	8	3.0	30	8.3
Other reasons	8	8.8	11	4.1	19	5.3
Total	91	100.0	268	100.0	359	100.0

* excluding the teams of workers living in the factories.
No. of missing observations = 6
Source: The 10% household survey (1988).

in an accelerating growth in population as well as in the spatial spread of the urban agglomeration. In-migration has contributed in a significant way to this twofold process and has strengthened the trend to suburbanization. On the other hand, there is no evidence of intense out-migration. In terms of population growth and migratory attraction effect, the performance of Jetpur seems better than the average scores of Gujarati towns.

The predominantly regional as well as rural origin of the in-migrants shows a town deeply rooted in its countryside. In-migration has not altered dramatically the structure of the urban population as far as its composition by caste and communal groups is concerned, but it has brought down the literacy

rate. Nevertheless, in-migration played a major role in the expansion of the urban economy by increasing the labour supply as well as the labour force participation rate in the urban population.

Table 4.14
Place of destination of the 1983-88 out-migrants from the private households' of the Jetpur urban agglomeration.

Place of destination	*Males*		*Females*		*Total*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Gujarat: Saurashtra:						
- Rajkot district	22	19.8	128	41.3	150	35.6
- Junagadh district	14	12.6	70	22.6	84	20.0
- Amreli district	4	3.6	18	5.8	22	5.2
- Other districts	10	9.0	28	9.0	38	9.0
Gujarat: Ahmedabad district	6	5.4	15	4.8	21	5.0
Gujarat: Vadodara district	6	5.4	6	1.9	12	2.9
Gujarat: Surat district	14	12.6	6	1.9	20	4.7
Gujarat: other districts	9	8.1	11	3.5	20	4.7
Maharashtra	20	18.0	20	6.5	40	9.5
Other states in India	2	1.8	8	2.6	10	2.4
Foreign countries	4	3.6	0	0.0	4	1.0
Total	111	100.0	310	100.0	421	100.0
No. of missing observations = 6						
Rural	26	23.4	100	32.6	126	30.1
Urban	85	76.6	207	67.4	292	69.9
Total	111	100.0	307	100.0	418	100.0
No. of missing observations = 9						
Native place	9	8.1	23	7.4	32	7.6
Other than native place	102	91.9	287	92.6	389	92.4
Total	111	100.0	310	100.0	421	100.0

No. of missing observations = 6
* excluding the teams of workers living in the factories.
Source: The 10% household survey (1988).

NOTES

1. The difficulties raised by the comparison between the census data and our sample survey data, along with the possible biases inherent in each type of data collection, are detailed in Appendix I.
2. This estimate cannot, however, be corrected for the differences in the definition of the population of reference.
3. Therefore, whenever in this study we shall refer to the 'Jetpur urban agglomeration' it includes the Jetpur outgrowth (already identified in the 1981 census) **and** Navagadh. As already mentioned in a previous chapter, Navagadh was recognized as a part of the Jetpur urban agglomeration in the 1991 census.
4. The results of the 1991 census have not been integrated to the analysis, as they show some apparent lack of internal consistency, which could not be explained with the information made available. A first analysis of the 1991 data is presented in Appendix I.
5. The distribution of the population by age group and sex was not tabulated for Jetpur town separately in the publications of the 1981 census.
6. In this study in-migration is apprehended vis-à-vis the birth place. Therefore, the term 'in-migrant' here means more exactly 'lifetime migrant' in the area under consideration. However, the person born at his/her mother's native place (or that of another relative), but whose parents were both already settled in the Jetpur urban agglomeration at the time of birth, is considered as 'native'. The proportions of lifetime migrants among the urban residents are not, however, a straightforward indicator of the 'pull' effect of a town, but rather a combined indicator of its capacity of absorption and fixation of the newcomers. In fact, the number of lifetime migrants observed at a given date is the result of several components: in-migration to the town, deaths and out-migration from the town of those in-migrants. Only those lifetime in-migrants still residing (that is not deceased and not out-migrated) at the time of the survey can be observed. Besides, the ancientness of the in-migration flow lessens the sensitivity of the proportion of lifetime migrants as an indicator of migratory attraction effect, as in-migrants children who were born after their parents' arrival in town are counted with natives. Due to these limitations, spatial and time-based comparisons of proportions of lifetime migrants require caution. For comparative purposes, this indicator can be improved by calculating the proportion of lifetime migrants among the population aged 15 or more (see, for example, Table 4.5).
7. It is risky to draw conclusions about the evolution of the volume of in-migration on the basis of the distribution of lifetime migrants observed at a given date per year of arrival in town, as those deceased or out-migrated in-migrants are beyond observation. Some conjectures can, however, be attempted on the most recent period for which mortality probably plays a secondary role as 74 per cent of the in-migrants in the sample were 5 to 29 years old at the time of their arrival. The annual number of lifetime migrants

(who arrived between 1980 and 1988) fluctuates around a constant average level. This steady trend—considering sampling errors—is also observed among the category of labour in-migrants. This might suggest a stabilization of the effective annual volume of in-migration with marginal subsequent out-migration, or a downward trend in the effective volume of annual in-migration with a constant probability of subsequent out-migration, or an upward trend in the volume of out-migration among those in-migrants.

8. For instance, in the 1981 census, the proportion of migrants identified on the basis of the question on the place of last residence was 38.8 per cent in urban areas of all India as against 38.3 per cent for the proportion of migrants identified on the basis of the question on the birth place. Further, the number of lifetime migrants identified by the census includes those persons born outside their actual place of residence merely because of the custom of the pregnant mother being sent to her parents' house for delivery. This factor of overestimation of the real number of lifetime migrants has been corrected in the household survey in Jetpur (see Note 6).
9. See the reservations made in Note 6 on the use of proportions of migrants as an indicator of migratory attraction effect.
10. The family members who followed a migrant coming for employment reasons are counted among in-migrants for 'induced employment reasons'.
11. The chi-square test of independence between the variable 'in-migration' and 'zone of residence' in the population surveyed shows an association significant at the 0.1 per cent level.
    The delimitation of the different zones of residence is presented in Appendix II.
12. Gini's coefficient measures here the concentration of the in-migrants—or of a specific cohort of in-migrants—among the various zones of the urban agglomeration, as compared with the distribution of the total urban population in these zones. Gini's coefficient varies between 0 (the population of the category under consideration is uniformly distributed among the different zones) and 1 (all the population of the category under consideration is concentrated in a single zone). The division of the territory of the urban agglomeration in 24 zones (see Appendix II) has been kept unchanged in order to allow comparisons. Yet one notable limitation of Gini's coefficient for comparisons is that it does not differentiate between the zones according to whether they are adjoining or not.
13. The chi-square test of independence between the variables 'caste' and 'migration status' in the surveyed population is significant at the 0.1 per cent level (rejection of the hypothesis of independence).
    Though the Khatris claim a Kshatriya origin (see Chapter 3, Note 19), due to their specific role in Jetpur they have not been included with the other Kshatriyas in the tables by caste presented in this study, but kept as a distinct group.
14. The distribution by caste according to the duration of residence has been computed for the population aged 15 and above, so as to yield a more sensitive comparison by eliminating the in-migrants' children born after their arrival in town (in the last 15 years) and who are counted as natives.
15. This comparison does not take into account the effect of the mortality rate in the cohort aged 8 years and above in 1981, which should slightly raise the

rate of literacy of this cohort if observed in 1988, as deaths would have affected first the oldest persons who are also the least educated due to the effect of generation.

16. The differences observed between the proportions of illiterates among natives, in-migrants before 1979 and in-migrants since 1979 are significant at the 1 per cent level for each age group separately, except for the group 60 and above.
17. The literacy rate has increased from 19 per cent in 1951 to 42 per cent in 1981, as measured in the corresponding censuses by the proportion of literate persons to the total population of Saurashtra; this record is significantly better than the national average (36 per cent in 1981). In the 1991 census, the population below seven years was by definition treated as illiterate, and literacy was canvassed only for the population aged seven years and above, unlike the practice (till 1981) of canvassing literacy for the population aged five years and above and considering the younger population as illiterate. Hence, the proportion of literate persons to the total population in 1991 is not exactly comparable with that proportion in the previous censuses. In 1991, the proportion of literate persons aged seven years and above to total population was 51 per cent in Saurashtra, as against 43 per cent for all India, while the proportion of literate persons aged five years and above to total population would have been slightly higher at the most.
18. The higher percentages of employed among in-migrants in the age group 0-14 is again due to their age structure: the proportion of young children is significantly lower than among the natives, whereas the proportion of students is more or less similar.
19. There are 427 (1983-88) out-migrants in the sample, 111 males and 316 females, from private households surveyed in 1988. Private households mean households living in the common urban residential system, in contrast to the teams of inter-state out-migrant workers living in the factories. Unless otherwise stated, the data on the 1983-88 out-migrants (which are presented in this chapter) pertain only to out-migrants from private households.
    Out-migrants from teams of workers living in the factories have been considered as a separate category for the computation of out-migration indices. In their case, we could collect information on out-migrants not only from the current teams surveyed but also from the factory as a whole. In addition, these data are based on an exhaustive enumeration of all the workers living in the dyeing and printing factories, and not only on the 10 per cent household sample. For the two above reasons, data on out-migrant workers housed in the factories cannot be aggregated with the data on out-migrants from the private households of the sample.
20. These indices of out-migration should be corrected for the effect of mortality, for which the survey does not provide any data. However, as only recent out-migrants (for the last five years preceding the 1998 survey) are considered, and given the age of most of the out-migrants at the time of their departure (79 per cent between 15 and 29 years), the effect of mortality is not likely to introduce any significant bias.
21. The effect of the 1985-87 drought on the Jetpur dyeing and printing industry is analysed in Chapter 7.
22. For further methodological considerations, see Chapter 2.

APPENDIX I

CRITICAL APPRAISAL OF THE 1988 SURVEY DATA AND THE FIRST RESULTS OF THE 1991 CENSUS

Factors of discrepancy between the estimates based on the household survey and the results of the 1991 census

Delimitation of the urban area

A first source of discrepancy between the household survey and the census may be the delimitation of the urban area taken into consideration for the enumeration of the population of the Jetpur urban agglomeration. In the 1988 survey we followed the physical limits of the urban agglomeration, and we included all the peripheral settlement zones (and the precarious housing zones) irrespective of the administrative boundaries. This might have led to a broader urban area than that adopted in the 1991 census, especially for those outgrowths located outside the boundaries of the Jetpur Municipality or the Navagadh village territory.

Population of reference

A second factor of discrepancy lies in the criteria of the urban population to be enumerated. The population of Jetpur enumerated in the 1991 census is the actual population or the *de facto* population, made up of the persons present in the urban agglomeration at the time of the enumeration; it includes visitors and excludes temporary absentees, with a period of reference of 20 days (from 9 February to 28 February). The population of reference for the 1988 household survey was the resident population or the *de jure* population, made up of the people who habitually live in the Jetpur urban agglomeration; it includes temporary absentees and excludes visitors.

The two methods of enumeration give different results although, to a certain extent, there may be a partial compensation at the level of the total population between the number of visitors and the number of temporary absentees. Yet, the discrepancy resulting from these two different methods of enumeration will be more pronounced if the

proportion of 'floating population' in the urban area is significant. Floating population refers to individuals for whom it is not possible to determine a single place of residence or to determine without ambiguity a permanent or usual place of residence. This is because they tend to organize their life space between two poles of residence, or circulate between several places in search of better employment or business opportunities while maintaining a residential base in Jetpur. Such individuals constitute potential temporary absentees. The proportion of a floating population is likely to be a notable feature in a mono-industrial town like Jetpur, which is thus very vulnerable to economic fluctuations occurring in the textile printing industry which is furthermore a sector characterized by casual employment (see the following chapters). Since the temporary absentees are included in the resident population enumerated by the 1988 survey (while they are excluded from the *de facto* population enumerated by the 1991 census), the total urban population estimated on the basis of our survey should provide higher estimates than the census counts (if both operations were conducted at the same date).

Omission rate

Post-enumeration quality checks of the total census counts show a net omission of 1.1 per cent in 1951, 0.7 per cent in 1961, 1.7 per cent in 1971 and 1.8 per cent in 1981. The increase in the level of net omission in 1971 and 1981 could have been due to better coverage of the sample population in respect of which the verification was made (Sinha, 1982: 399). Hence, the net omission rate estimated on the basis of post-enumeration checks should be considered as a minimum estimate of the effective omission rate. In all four censuses the omission rate in urban areas was higher than in rural areas: for example, 2.7 per cent against 1.5 per cent in 1981. The omission level is probably more important where the proportion of population involved in migration or other forms of spatial mobility is high: this is especially so in the case of towns with significant proportions of recently arrived in-migrants not yet well settled and integrated in town, and thus more likely to be omitted in the census. Commenting on the quality of enumeration of the 1991 census, Bose comments: 'In my view, the extent of undercount may be even 20 per cent in big cities' (Bose, 1991: 31).

In general, the conditions of data collection in small-scale surveys allow one to expect lower omission rates than in censuses. During the 1988 household survey, the work of the field investigators was continuously followed and controlled, and special attention was paid to the migrant population not yet well integrated in the common urban residential system (like the in-migrant workers living in the factories,

families in precarious settlements at the fringe of the urban agglomeration) as well as to the newly arrived persons in the households surveyed. Such care should minimize the risk of omission.

Critical appraisal of the estimates based on the 1988 household survey

Estimates based on the 1988 survey are first of all subject to sampling errors, and the corresponding confidence intervals at the 95 per cent level have been given along with the estimates. In addition to sampling errors, observation errors may also affect estimates. The main sources of bias (already examined in the chapter devoted to the methodology) are recalled below.

A first source of potential bias is related to the question of the inclusion of the houses found closed at the time of the survey: this may have led to an over-estimation of the number of usually inhabited houses, and hence the total number of households. This points to a more general question tackled above: the existence of a floating population in urban areas.

Second, it is possible that the procedure of substitution in case of absent households has tended to overestimate the average size of the households in the urban population, and hence the total population. (See the section under the subhead 'Critical Appraisal of Data collection in Chapter 2) The comparison of the average size of the households surveyed in Jetpur and Navagadh in 1988 with the results of the preceding censuses shows, however, the consistency of our estimates (Table A4.1). The definition of the household adopted in 1988 followed the census criteria. The 1988 estimates confirm the continuation of the trend observed from 1971 to 1981: that is, a slight increase in the average size of the households in Jetpur, and a slight decrease in the average size of households in Navagadh. This may result from differential population dynamics and migratory patterns, dominated in Jetpur by the strengthening of the joint family with the expansion of the households by the addition of new members, and in Navagadh by the arrival of migrants forming households of a smaller size than those settled for a longer period of time.

To sum up, the analysis of the factors of discrepancy between the population estimates based on the 1988 household survey and the results of the 1991 census allow us to predict:

- higher population estimates on the basis of the survey as compared to the census counts (if both operations were conducted at the same date), due to differences in the urban area of reference as well as in the population of reference within this area;

Table A4.1
Average size of the Jetpur and Navagadh households in 1971, 1981 and 1988.

	1971 census	*1981 census*	*1988 survey*
Jetpur M + OG	6.2	6.3	6.4
Navagadh	6.2	5.7	5.6

M = Municipality; OG = outgrowth (in 1981 and 1988)
Source: Censuses of India (1971 and 1981); the 10% household survey (1988).

- a possible overestimation by the 1988 household survey of the effective urban population of reference, due to the sampling procedure;
- a likely underestimation by the counts of the 1991 census of the effective urban population of reference, due to risks of omission.

Analysis of the first results of the 1991 census

Table A4.2
Population of the Jetpur urban agglomeration in 1988 and 1991.

Urban area	*1988 survey*		*1991 census*
	Estimate	*Confidence interval (at 95 % level)*	
Jetpur Municipality	88,153	84,456 - 92,445	73,560
Jetpur outgrowth	5,157	4,386 - 6,234	3,730
Navagadh	20,710	19,062 - 22,689	18,007
Jetpur UA	114,020	109,935 - 118,862	95,297

UA = urban agglomeration
Source: Census of India (1991); the 10% household survey (1988).

Following the above analysis, different results were expected from the estimates based on the household survey on the one hand, and on the counts of the 1991 census on the other. However, what was not expected was the magnitude of the difference: the population of the Jetpur urban agglomeration in 1991 was noticeably lower than the population estimated three years earlier by the household survey (Table A4.2). If part of the difference in the Jetpur outgrowth and Navagadh could be explained by a more restrictive delimitation of the urban area taken into consideration at the census as compared to the survey, this argument cannot stand for the population of the Jetpur

Table A4.3
Population growth of the Jetpur urban agglomeration according to the results of the 1991 census

Name and civic status of town	*Population*			*Decennial growth rate (%)*		*Annual growth rate (%)*		*Sex ratio No. of F/1,000 M*		
	1971	*1981*	*1991*	*1971-81*	*1981-91*	*1971-81*	*1981-91*	*1971*	*1981*	*1991*
Jetpur M	41,943	62,806	73,560	49.74	17.12	4.12	1.59	957	948	938
Jetpur OG	——	268	3,730	——	1,291.79	——	30.12	—	411	870
Navagadh VP	2,726	6,811	18,007	149.85	164.38	9.59	10.21	910	922	879
Jetpur M + OG	41,943	63,074	77,290	50.38	22.54	4.16	2.05	957	945	934
Jetpur UA = M + OG + Navagadh	44,669	69,885	95,297	56.45	36.36	4.58	3.15	954	943	924

M = Municipality;
OG = outgrowth;
VP = village *panchayat*;
UA = urban agglomeration.
Source: Census of India (1971, 1981, 1991).

Municipality for which the corresponding area remained unchanged. This calls for a closer scrutiny of the census data.

The two striking features of the last inter-census decade are: (*a*) a pronounced slowing down of population growth at the level of the whole urban agglomeration, and (*b*) the opposite trend between the population growth within the municipality limits and outside in Navagadh and the outgrowths (Table A4.3). A differential in the population dynamics of the urban centre and its suburbs is not unusual and the 1988 survey already revealed a process of suburbanization: Navagadh and the urban outgrowth increased at a faster rate than the Jetpur Municipality itself, and the proportion of recently arrived in-migrants was higher in the peripheral zones than in the core of the city. However, the surprising fact here is that the 1991 results would imply a completely opposite evolution between the two main urban components, showing a continuation of the previous trend in the case of Navagadh and the outgrowths, and a reversal in the case of the Jetpur Municipality. Thus, there is an acceleration of the population growth in Navagadh and the other outgrowths, indicating an increasing in-migration as compared to the previous decade, whereas the population growth within the municipality limits slowed down dramatically below the rate of natural increase (2.1 per cent in urban Gujarat for the 1981-90 period), indicating a net out-migration from the area, in contrast to the previous net in-migration.

These two opposite developments seem, however, difficult to explain in the context of a town like Jetpur. First of all, the municipality territory is far from being saturated with built-up areas. There is still open space left for possible new housing or more precarious settlement, the extension of which could be observed during the 1987-89 field work. The 1988 household survey showed that the zones with a particularly high proportion of recently arrived in-migrants were located towards the periphery of the urban agglomeration, yet several of them were still within the municipal limits (see Chapter 4).

Population moves within the urban agglomeration from Jetpur town to Navagadh did occur, as is also shown by the 1988 survey and the biographical interviews. However, the stream they represent does not seem important enough to affect significantly the dynamics of Jetpur town. For example, the persons born in Jetpur town and residing in Navagadh in 1988 accounted for 4 per cent of the population born in Jetpur proper and residing in Jetpur or in Navagadh in 1988, and for 9 per cent of the population of Navagadh in 1988 as compared to 60 per cent for the proportion of lifetime in-migrants in Navagadh coming from outside the urban agglomeration. Data pertaining to the 1983-88 out-moves from the households surveyed in 1988 further show that the number of persons who left their households in Jetpur proper

to settle in Navagadh is negligible. As suggested by the Development Officer of the *taluka*, while discussing the issue of intra-urban moves in the Jetpur urban agglomeration, the lack of public water supply in Navagadh is likely to act as a deterrent for those city-dwellers already residing in Jetpur town where they benefit from the pipe water supplied by the Municipality, which is particularly valuable in a drought-prone area.

As regards in-migrants who could have settled in Jetpur town and later moved to Navagadh, the spatial settlement pattern of newly arrived in-migrants shows that Navagadh is an area of particularly high in-migration directly from outside the urban agglomeration (see Chapter 4), and does not suggest important internal moves from Jetpur to Navagadh as related to the total in-migration stream.

Consequently, it appears quite unlikely that intra-urban moves could be a major determinant of net out-migration from the municipality territory and thus of the differential population dynamics within the urban agglomeration.

The low growth rate of the population of the Jetpur Municipality could be then mainly the result of out-migration from the urban agglomeration—and not only from the municipal territory. However, this explanation is not coherent with the high and increasing in-migration observed in the suburbs. From the economic point of view, Jetpur and Navagadh are both highly dependent on the dyeing and printing industry. Moreover, Navagadh has developed as an industrial suburb: many sari-printing factories have been set up there, and the proportion of industrial salaried workers among the working population is particularly high in Navagadh and in the urban outgrowths, as well as the proportion of in-migrant workers (see Chapter 5). Thus, in the case of an economic recession or at least stagnation in the dyeing and printing industry, which could explain the slowing down of the growth of the urban agglomeration, one should expect the industrial suburbs to be the most affected and to register a higher rate of out-migration. From this viewpoint, statistics based on the results of the 1991 census are inconsistent with this deductive logical argument.

In addition, as shown in Chapter 4, the data on out-migration collected at the 1988 survey, though partial, do not suggest massive out-migration.

The analysis of the population totals of the 1991 census pointed to some serious inconsistencies; for that reason we decided not to include these data in our study and rather to focus the analysis of the population growth of Jetpur on the period extending up to the 1988 household survey. Yet, the percentage distribution of workers by industrial categories as per the 1991 census seems coherent with the trend observed from the previous censuses, as well as with the results of the 1988 survey (see Chapter 5).

APPENDIX II

DELIMITATION OF THE DIFFERENT ZONES IN THE JETPUR URBAN AGGLOMERATION

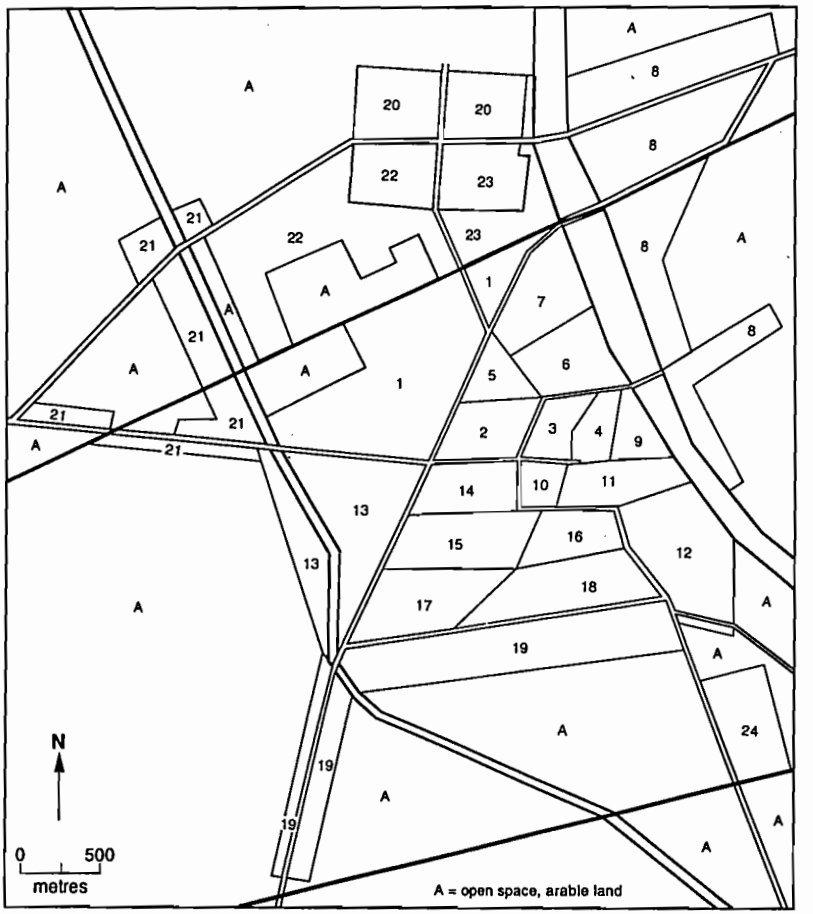
Table A4.4
Number of households counted, and number of households and population surveyed in the different zones of the Jetpur urban agglomeration in 1988.

Zone number		*Households counted*	*Households surveyed*	*Population surveyed*
Jetpur	1	721	73	388
	2	585	60	297
	3	533	56	405
	4	683	70	457
	5	644	67	509
	6	861	99	668
	7	631	64	394
	8	1,119	115	582
	9	758	78	551
	10	733	77	495
	11	593	61	436
	12	561	58	404
	13	815	83	456
	14	699	84	584
	15	839	90	608
	16	850	88	620
	17	1,190	123	819
	18	713	74	524
	19	452	47	294
Navagadh	20	1,267	128	682
	21	859	88	514
	22	600	61	306
	23	906	92	559
Bojadhar	24	568	59	373
Total		18,180	1,895	11,925

Source : The 10% household survey (1988).

In order to analyse the spatial patterns of residence of the population in Jetpur, the territory of the urban agglomeration has been divided into 24 zones, shown in Figure A4.1. The delimitation of the zones is based on the maps used to conduct the household survey, in which the territory of the Jetpur urban agglomeration was divided into urban blocks for the purpose of household counting and sampling. The 24 zones were constituted by grouping several adjoining blocks and by following two criteria. First, each zone had to contain a sufficient number of households surveyed, in order to allow us to estimate significant ratios. The number of households counted as well as the number of households and the population surveyed in each zone are given in Table A4.4. Second, the adjoining blocks grouped to form a single zone had to present a certain degree of homogeneity with respect to the type of settlement and to the socio-economic composition of the population. These criteria were applied on the basis of the results of the household survey and our field observations.

Figure A4.1
Delimitation of the different zones of the Jetpur urban agglomeration.



5

Structure of the Urban Labour Market

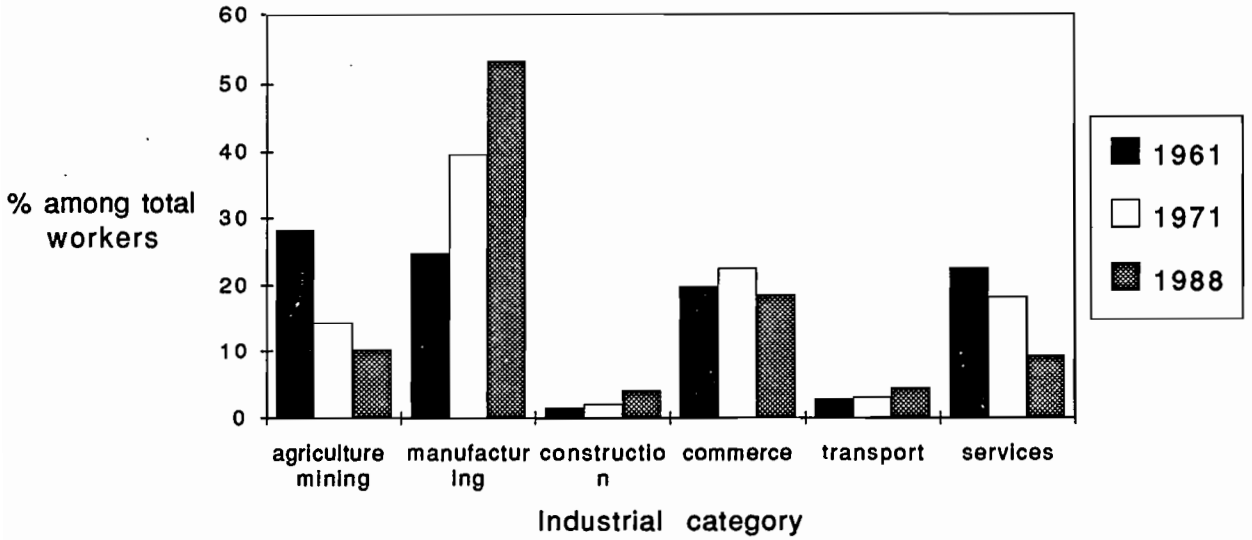
This chapter is devoted to an analysis of the current structure of the urban labour market. A first thing to assess in the context of a mono-industrial centre like Jetpur is the effective share of the textile dyeing and printing industry in terms of employment generated as compared with the other branches of activity. Daily commuting to work and the economic resources of the population residing in the surrounding villages also deserve due attention. This will help us to evaluate the degree of integration of urban and rural economies.

Another purpose of this chapter is to examine the pattern of stratification of the urban labour market in terms of disparities of labour status with an underlying question: what are the most vulnerable sections of the labour force?

Turning to labour supply, the investigation points out the factors which influence labour force participation rates.

An important set of questions arises at this point: the segmentation of the labour market, specific recruitment channels, factors of discrimination and fragmentation of the labour force. Factors based on the workers' geographical origin and other migration variables require a thorough analysis, so as to evaluate the 'pull' effect of the different urban functions including, in particular, the importance of the industrial sector and (from a complementary angle) the role of migrant workers in the urban economy.

Figure 5.1
Percentage distribution of Jetpur's workers by industrial category in 1961, 1971 and 1988.



The detail of the different industrial categories is given in appendix.
Source: *1961, 1971: census data*
1988: The 10% household survey

STRUCTURE OF EMPLOYMENT

The findings presented here are based on the data collected during the 1988 household survey, in which the reference period for the employment data was the 12 months preceding the survey. The first three sections pertain to the employment details of the main workers and their principal occupation.[1] A specific section examines the occurrence of subsidiary activities and the combinations of different occupations.

Importance of the industrial sector

The development of the textile dyeing and printing industry in Jetpur is reflected by the increasing share of workers employed in manufacturing and allied activities, as shown by the census data: from 32 per cent in 1961 to 40 per cent in 1971 and 53 per cent in 1991, mainly at the expense of agriculture and services[2]

Table 5.1
Distribution of employed persons by industry and sex. Workers residing in the Jetpur urban agglomeration in 1988.

Industry	*Males (M)*		*Females (F)*		*Total (T)*		*F/T*
	No.	*%*	*No.*	*%*	*No.*	*%*	*%*
Agriculture, mining, quarrying	236	6.8	170	34.8	406	10.3	41.9
Dyeing & printing	1,697	49.2	34	6.9	1,731	44.0	2.0
Household industry	32	0.9	44	9.0	76	1.9	57.9
Other manufacturing industry	274	7.9	23	4.7	297	7.5	7.7
Construction work	89	2.6	69	14.1	158	4.0	43.7
Commerce	688	20.0	42	8.6	730	18.5	5.7
Transport, communication	169	4.9	5	1.1	174	4.4	2.9
Other services	263	7.6	102	20.9	365	9.3	27.9
Total	3,448	100.0	489	100.0	3,937	100.0	12.4

Test of independence between 'industry' and 'sex':
Chi-square = 915.29750; significance = 0.0000
No. of missing observations = 4
Source: The 10% household survey (1988).

(Figure 5.1). More precisely, as per the 1988 survey, 44 per cent of the workers residing in the urban agglomeration were concentrated in the dyeing and printing industry (including screen manufacturing and finishing units) (Table 5.1). The impact of this industry becomes even more striking for male workers: it gives employment to almost half of them. This sector includes 12 per cent of entrepreneurs, 76 per cent of production workers, and 12 per cent of clerical, service and transport workers, and salesmen. The distribution of employed persons by occupational category again shows the importance of the industrial working class among the total working population (Table 5.2).

Table 5.2
Distribution of employed persons by occupation and sex. Workers residing in the Jetpur urban agglomeration in 1988.

Occupation	*Males (M)*		*Females (F)*		*Total (T)*		*F/T*
	No.	*%*	*No.*	*%*	*No.*	*%*	*%*
Professional, technical workers	149	4.3	37	7.6	186	4.7	19.9
Entrepreneurs in DP	210	6.1	1	0.2	211	5.4	0.5
Other managerial workers	114	3.3	1	0.2	115	2.9	0.9
Clerical workers	187	5.4	5	1.0	192	4.9	2.6
Sales workers	531	15.4	39	8.0	570	14.5	6.8
Services workers	179	5.2	64	13.1	243	6.2	26.3
Farmers and related workers	231	6.7	187	38.2	418	10.6	44.7
Production workers in DP	1,279	37.1	30	6.1	1,309	33.2	2.3
Other production workers	332	9.6	52	10.6	384	9.7	13.5
Construction workers	79	2.3	69	14.1	148	3.8	46.6
Transport workers	161	4.7	4	0.8	165	4.2	2.4
Total	3,452	100.0	489	100.0	3,941	100.0	12.4

Test of independence between 'occupation' and 'sex':
Chi-square = 828.14211; significance = 0.0000
DP = dyeing and printing industry.
Source: The 10 % household survey (1988).

Furthermore, the Jetpur labour market, especially the industrial sector, is also a significant source of employment opportunities for the rural population. In the five villages covered by the household survey, located within eight kilometres around Jetpur, 22 per cent of the total employed population commute daily to work in the urban agglomeration, and this percentage amounts to 35 per cent for the male employed population. The distribution of the rural employed population by branch of economic activity shows more precisely the high contribution of the textile dyeing and printing industry to the livelihood of the village people. In the rural sample, 21 per cent of the total number of employed persons and 33 per cent of the male employed are engaged in this sector, and they are essentially production workers (94 per cent of them).

According to the industrialists who were surveyed, the proportion of commuters among the production workers of the textile dyeing and printing industry would approximate 50 per cent. They mostly came from villages located within a radius of 25 kilometres around Jetpur and also from towns, even bigger than Jetpur, situated up to 32 kilometres from the industrial centre.[3] Hence, commuting workers play a vital role in the labour force of the urban industry.

The contribution of the textile dyeing and printing industry to the sources of livelihood of the urban as well as rural population becomes even more striking if those are considered at the household level: 53 per cent of the households in Jetpur and 43 per cent of the households in the surveyed villages have at least one member employed in this sector.

It has already been mentioned that the places of origin of the population settled in the urban agglomeration indicate that Jetpur is a regional centre deeply rooted in its countryside; from the economic viewpoint as well, in terms of employment opportunities provided, Jetpur appears as a growth centre that is highly integrated with its hinterland. The strategic role of the textile dyeing and printing industry for the economy of the town as well as its valuable impact on the surrounding areas have also been underlined.

In the following sections, the analysis of the structure of the urban labour market will focus on the workers residing in the urban agglomeration. The objective is to highlight the disparities

Table 5.3
Distribution of employed persons by employment status and sex. Workers residing in the Jetpur urban agglomeration in 1988.

Employment status	*Males (M)*		*Females (F)*		*Total (T)*		*F/T*
	No.	*%*	*No.*	*%*	*No.*	*%*	*%*
Employer	409	11.9	8	1.6	417	10.6	1.9
Own-account worker	782	22.7	116	23.7	898	22.8	12.9
Employee in public sector	228	6.6	86	17.6	314	8.0	27.4
Employee in private sector	1,785	51.8	137	28.0	1,922	48.8	7.1
Unpaid helper	244	7.1	142	29.0	386	9.8	36.8
Total	3,448	100.0	489	100.0	3,937	100.0	12.4

Test of independence between 'employment status' and 'sex':
Chi-square = 367.33967; significance = 0.0000
No. of missing observations = 4
Source: The 10% household survey (1988).

Table 5.4
Distribution of employed persons by nature of employment and sex. Workers residing in the Jetpur urban agglomeration in 1988.

Nature of employment	*Males (M)*		*Females (F)*		*Total (T)*		*F/T*
	No.	*%*	*No.*	*%*	*No.*	*%*	*%*
Regular, permanent	2,193	63.6	239	48.9	2,432	61.8	9.8
Temporary, seasonal	200	5.8	150	30.7	350	8.9	42.9
Contract labour	125	3.6	6	1.2	131	3.3	4.6
Casual	929	27.0	94	19.2	1,023	26.0	9.2
Total	3,447	100.0	489	100.0	3,936	100.0	12.4

Test of independence between 'nature of employment' and 'sex':
Chi-square = 330.25657; significance = 0.0000.
No. of missing observations = 5
Source: The 10% household survey (1988).

in terms of labour status. These include criteria of status in employment, nature of employment, period of employment and combinations of activities. This approach aims at exploring the pattern of stratification of the urban labour market in terms of vulnerability of the different strata of the labour force.[4]

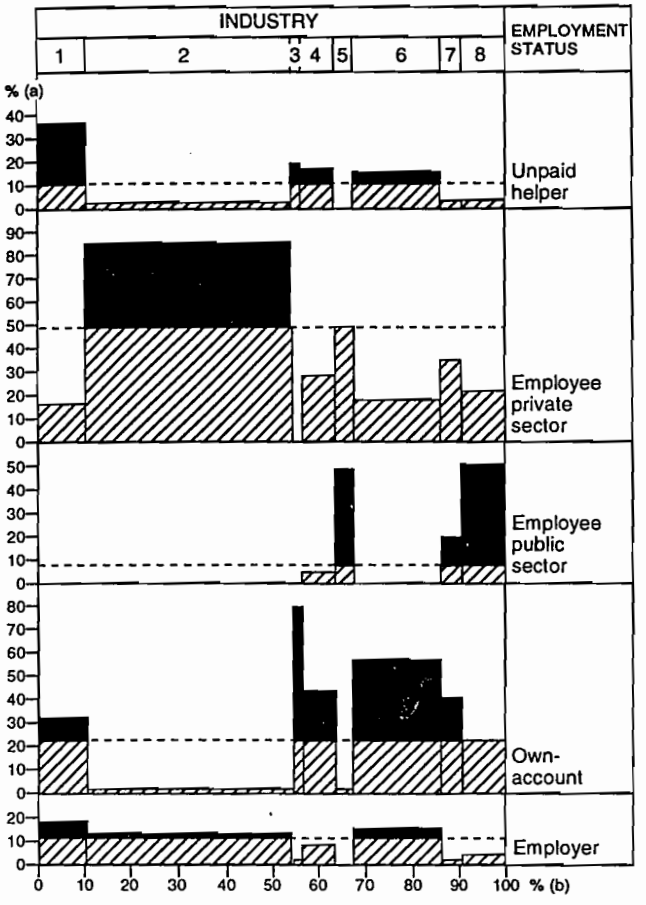
Status and nature of employment

The status in employment and the nature of employment (defined by criteria of regularity and security of employment) are the two main components of the labour status. Tables 5.3 and 5.4 show their general distribution in the urban working population, while Figures 5.2 and 5.4 point to the existence of marked variations according to industrial category and occupation.

Almost half of the employed persons are employees—wage or salary earners—in the private sector, which is the predominant status in the dyeing and printing industry (84 per cent of the employed). On the other hand, employees in the public sector form a minority group of the total employed (8 per cent), but they are strongly represented in the sector of services (51 per cent) and in construction work (49 per cent). Own-account (self-employed) workers form a notable group with 23 per cent of the total employed, and their share is not only remarkable—by definition—in household industry but also in commerce (56 per cent) and, to a lesser extent, in manufacturing and allied activities (other than textile dyeing and printing), transport and agriculture. Unpaid helpers account for only 10 per cent of the total employed, but they take a significant part in agriculture (36 per cent). Lastly, employers form 11 per cent of the total employed, and they are relatively more frequent in agriculture and commerce.

There are obvious relationships of interdependence between the status in employment and the nature of employment (Figure 5.3); in addition, the nature of employment has not the same meaning for employers or self-employed workers, and for dependent workers (wage or salary-earners and unpaid helpers). For the former this refers essentially to the regularity of their economic activity, whereas for the latter this refers also to the conditions of engagement and includes criteria of employment security and protection. Thus, regular employment is the most frequent situation except for a major group, namely, the employees in the private sector (only 40 per cent of them have regular employment as against 62 per cent of the total employed). In addition, apart from the case of the employees in the public sector, for other wage or salary-earners, regularity

Figure 5.2
Percentage distribution of employed persons
by employment status in each industry.
Workers residing in the Jetpur urban agglomeration in 1988.



INDUSTRIES:

1: agriculture, mining, quarrying
2: dyeing and printing industry
3: household industry
4: other manufacturing, processing, servicing and repair
5: construction
6: commerce and trade
7: transport, storage, communication
8: other services

(a) percentage of workers in each employment status in the category of industry under consideration.
(b) percentage of workers in each industry among all workers.

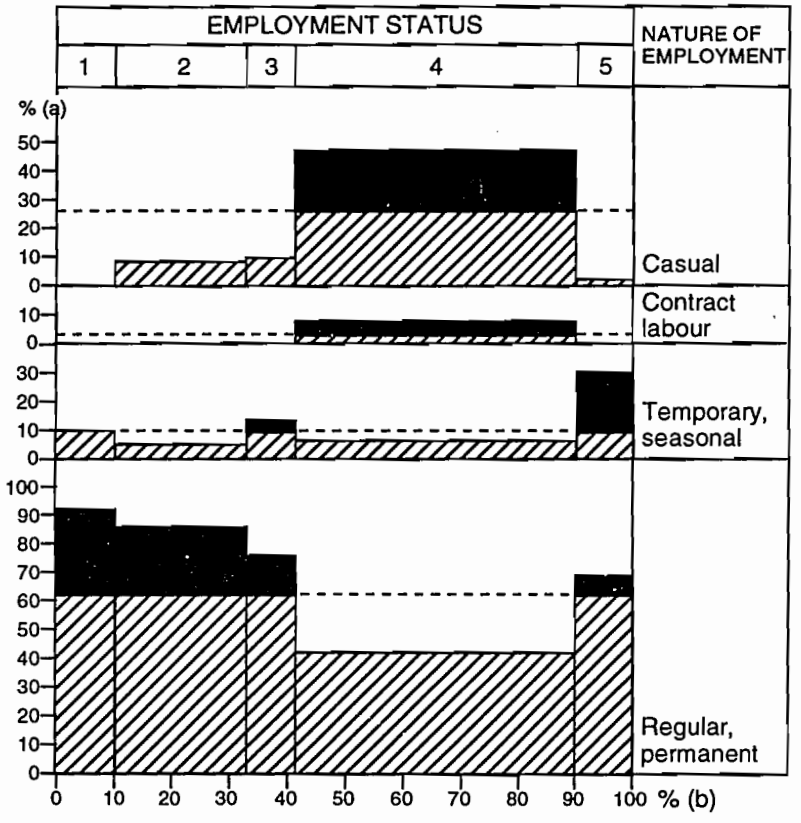
--- average percentage of workers in each employment status among all workers.

■ above the mean

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

Figure 5.3
Percentage distribution of employed persons by nature of employment in each employment status.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account workers
3: employee in public sector
4: employee in private sector
5: unpaid helper

(a) percentage of workers in each nature of employment in the category of employment status under consideration.

(b) percentage of workers in each employment status among all workers.

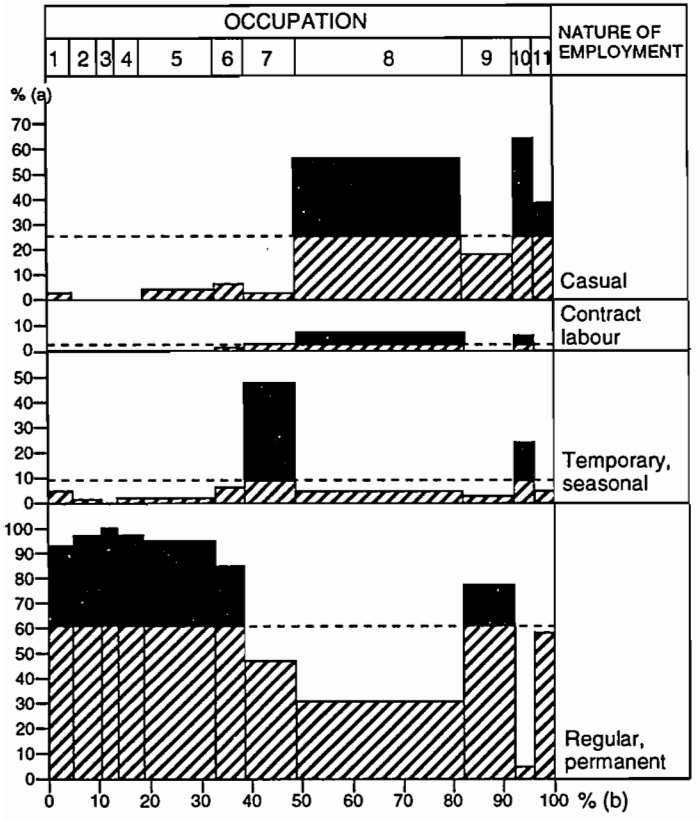
--- average percentage of workers in each nature of employment among all workers.

above the mean

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

Figure 5.4
Percentage distribution of employed persons by nature of employment in each occupation.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

(a) percentage of workers in each nature of employment in the category of occupation under consideration.
(b) percentage of workers in each occupation among all workers.

- - - average percentage of workers in each nature of employment among all workers.

■ above the mean

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

of work does not mean a permanent and secure job. Furthermore, the casual workers who represent 26 per cent of the total workers account for 47 per cent of employees in the private sector.

Temporary and seasonal workers represent only 9 per cent of the total employed but they account for 29 per cent of the unpaid helpers, whose frequency is also relatively high in agriculture. Contract labour is a category limited to employees in the private sector (7 per cent of them), and found only in certain sectors of Jetpur's labour market: in the textile dyeing and printing industry, in construction work and in agriculture. In the first two sectors, this corresponds to a specific mode of recruitment and control of manpower through an intermediary agent called a 'contractor'. In agriculture, contract workers (or *sathi*) are attached farm servants engaged usually on a yearly basis according to a fixed payment.

The distribution of employed persons by nature of employment and occupational group (in which certain criteria of employment status are also included) enables us to point more precisely to the existence of some vulnerable groups in terms of regularity and protection in employment (Figure 5.4). For example, the proportion of casual workers is considerably superior to the average among the production workers of the dyeing and printing industry (56 per cent as against 26 per cent). To a lesser extent, this is also the case for transport workers, 39 per cent of whom are casual. More remarkably, casual workers account for 65 per cent of the construction workers. As expected, the share of temporary and seasonal workers is especially high among farmers and related workers (47 per cent); but it is also above the average among construction workers (24 per cent). Contract labour is notable among the production workers of the dyeing and printing industry and among the construction workers (respectively 8 per cent and 6 per cent of the employed as against 3 per cent on the average). On the other hand, professional and technical workers, entrepreneurs of the printing industry and other managerial workers, clerical and sales workers mostly benefit from regular employment (more than 90 per cent of them).

Unemployment and underemployment

As mentioned above, employment data were collected in the beginning of 1988 (more precisely from mid-January to mid-March in the urban agglomeration), with the 12 months preceding the survey as the reference period. Saurashtra suffered from three consecutive years of rain scarcity in 1985, 1986 and 1987, which hit not only agriculture but also urban-based activities. Hence, part of the employment data collected are probably sensitive to the conditions of an economic crisis. We do not believe, however, that this situation was likely to alter the basic structure of Jetpur's labour market as far as the main lines described above are concerned. First of all, though the 1985-87 drought was particularly severe, drought conditions are unfortunately not exceptional in a region like Saurashtra. Besides, there was not much scope for economic diversification in the town at that time as the negative impact of the drought affected the whole urban economy. For the reference year, only 1.3 per cent of the workers reported having changed to a new job which entailed a different occupational category or a different branch of industry. The lack of significant occupational mobility is also confirmed by the analysis of the entrepreneurs' and industrial workers' job histories. Lastly, as argued in the previous chapter, there is no evidence of considerable labour out-migration.

Nevertheless, specific data on the periods of employment and unemployment definitely reflect the conditions of employment under economic difficulties. But such a context can be treated as privileged conditions in the analysis of social and economic disparities in the labour market, since inequalities are likely to be exacerbated and the most vulnerable groups highlighted.

Total open unemployment, during the entire year of reference, remains marginal: it affects only 2 per cent of the urban workers. This is not really surprising, as most people simply cannot afford to remain without a source of income for such a long period, and they have to find at least some casual work. For example, there is no case of open unemployment reported among construction workers who are predominantly casual manual workers. Conversely, the only two occupational groups

Table 5.5
Percentage distribution of employed workers by number of working months and work-days during the reference year (1987). Workers residing in the Jetpur urban agglomeration in 1988.

No. of working months	*Number of work-days per month*						
	1-7	*8-15*	*16-24*	*25-30*	*Total*	*No.*	*%*
1-6	1.4	42.7	23.8	32.2	100.0	143	3.8
7-8	0.4	63.3	18.6	17.7	100.0	452	12.1
9-10	0.3	23.3	52.1	24.4	100.0	386	10.3
11-12	0.2	3.7	2.9	93.2	100.0	2,760	73.8
Total	0.3	14.4	10.6	74.7	100.0	3,741	100.0
Number	11	539	398	2,793	—	3,741	—

Chi-square = 2,395.30807
significance = 0.0000
(No. of working months = 11-12) and (No. of work-days per working month = 25-30):
69.9 % of male workers
59.8 % of female workers
68.8% of total (male and female) workers
Missing observation = 1
The workers who took up their first job or changed to a new job during the reference year have been excluded (i.e., 199 cases out of 3,942 employed workers). Totally unemployed workers are also excluded.
Source: The 10% household survey (1988).

that show a rate of open unemployment noticeably higher than the average are the professional and technical occupations (6 per cent) and the clerical occupations (5 per cent).[5] These are mainly qualified jobs which require a certain level of education (see section on segmentation of the urban labour market). The level of education of unemployed workers is higher than that of the employed workers: 56 per cent of the former have attended secondary school or above, as against 39 per cent of the latter. The initial investment in human capital, to acquire those qualifications, may well justify a longer period of unemployment so that an adequate job may be found. In fact, the two mentioned occupational groups can provide regularity of employment, as shown by the characteristics of those employed (Figure 5.4 and Table 5.8). Most of the unemployed are particularly young (87 per cent are less than 30 years old as against 51 per cent of the employed), and their unemployment period most often corresponds to the period of search for the first job. Further, the

unemployed qualified workers are more likely to belong to relatively well-off families, which can support an unemployed member. No wonder then that among the different caste groups the rate of unemployment is the highest among the Brahmins (4 per cent)[6] who belong to the privileged socio-economic groups, and whose level of education is also one of the highest.

Yet, underemployment is frequent among the urban workers. If we define the full-time employed as those who reported having been employed 25 days or more per month for 11 or 12 months of the reference year, this category accounts for 69 per cent of the total employed persons.[7] On the other hand, the 'underemployed' accumulate two disadvantages in terms of irregularity of work: those who were employed less than 9 months a year are also those who reported fewer days worked per working month. For example, among workers employed 6 months or less during the reference year, 43 per cent were employed only 8 to 15 days per working month, and among those employed 7 or 8 months, the corresponding proportion is 63 per cent, whereas it is 4 per cent for those employed 11 or 12 months in the year (Table 5.5).

Though the numbers of months and days of employment as reported by the respondents for the reference year are probably not very accurate, the average annual number of corresponding days that was computed on the basis of this information can provide an approximation of the duration of the employment period over one year. However, this indicator is not a measure of the number of actual days worked, but rather an approximate number of the days involving potential gain, that is days worked as well as paid holidays and other paid leave included in the total period of employment, and what could be called for our purpose 'average number of days employed'. This indicator can be used to highlight the main disparities between different groups of workers. The average duration of employment for all employed persons approximates 300 days.[8] Although the dispersion within sub-populations is often high, employment and occupational characteristics of the workers generate statistically significant variations of the mean (Tables 5.6, 5.7 and 5.8).

By definition, the annual duration of employment varies with the nature of employment: there is a clear stratification from temporary or seasonal workers (148 days) and casual

workers (196 days), up to regular or permanent workers (full year) (Table 5.6). The differentiations introduced by the status in employment are less accentuated; nevertheless they draw a demarcation line between two groups: on the one hand there are employers, own-account workers and public-sector employees who stick to full-time employment; on the other, there are unpaid helpers and employees (in the private sector) whose duration of employment is below the general average (Table 5.7). Three occupational groups proved to be especially affected by underemployment: construction workers (229 days employed), farmers and related workers (233 days), and production workers in the dyeing and printing industry (250 days) (Table 5.8). Moreover, this situation results from the combination of two handicaps: fewer months with work, and fewer days worked per working month. Those three groups of workers are engaged in activities subjected to seasonal swings. The monsoon in particular is the slack season for the textile printing industry, as a humid atmosphere is not suitable for printing and frequent rain does not allow the printed cloth to be dried out in dry air and sunlight. The system of recruitment in construction work and in the textile industry, with the prevalence of casual labour employed on a daily basis, contributes further to irregularity of employment and thus underemployment. This also shows that underemployment and total unemployment do not affect in the first place the same categories of occupations and do not result from the same adjustment problems in the labour market. Total unemployment of qualified professional and clerical workers corresponds to a longer period of job search and to the structural disequilibrium between the profiles of labour demand and labour supply in terms of level of education and professional skills. Underemployment of casual manual workers corresponds to the forced flexibility of the labour force according to the requirements of the production, and it is hence very sensitive to economic fluctuations and seasonal swings.

Secondary activity

The combination of two occupations among Jetpur's workers is a limited practice which concerns only 7 per cent of the

Table 5.6

Average number of days employed during the reference year (1987) by nature of employment and sex among the employed. Workers residing in the Jetpur urban agglomeration in 1988.

Nature of employment	*Males*			*Females*			*Total workers*		
	Mean	*SD*	*Cases*	*Mean*	*SD*	*Cases*	*Mean*	*SD*	*Cases*
Regular, permanent	358	17	2,153	358	17	233	358	17	2,386
Temporary	166	98	180	121	75	120	148	92	300
Contract	287	78	103	255	125	6	286	81	109
Casual	197	78	874	186	96	71	196	79	945
Total	303	92	3,310	262	123	430	298	97	3,740
F			2,652.7934			485.8481			3,194.4988
Significance			0.0000			0.0000			0.0000

No. of missing observations = 2

SD = standard deviation; F = between groups mean square/within group mean square.

The workers who took up their first job or changed to a new job during the reference year have been excluded (i.e., 199 cases out of 3,942 employed workers).

Source: The 10 % household survey (1988).

Table 5.7

Average number of days employed during the reference year (1987) by employment status and sex among the employed. Workers residing in the Jetpur urban agglomeration in 1988.

Employment status	*Males*			*Females*			*Total workers*		
	Mean	*SD*	*Cases*	*Mean*	*SD*	*Cases*	*Mean*	*SD*	*Cases*
Employer	337	74	409	360	0	8	338	73	417
Own-account worker	334	71	767	333	72	110	334	71	877
Employee in public sector	348	51	215	352	39	47	349	49	262
Employee in private sector	270	99	1,681	237	118	123	267	101	1,804
Unpaid helper	338	68	239	194	130	142	284	118	381
Total	303	92	3,311	262	123	430	298	97	3,741
F			130.4433			39.6140			128.2975
Significance			0.0000			0.0000			0.0000

No. of missing observation = 1

SD = standard deviation; F = between groups mean square/within group mean square.

The workers who took up their first job or changed to a new job during the reference year (1987) have been excluded (i.e., 199 cases out of 3,942 employed workers).

Source: The 10% household survey (1988).

Table 5.8

Average number of days employed during the reference year (1987) by occupation and sex among the employed. Workers residing in the Jetpur urban agglomeration in 1988.

Occupation	*Males*			*Females*			*Total workers*		
	Mean	*SD*	*Cases*	*Mean*	*SD*	*Cases*	*Mean*	*SD*	*Cases*
Professional, technical workers	344	59	141	360	0	34	348	53	175
DP entrepreneur	360	0	210	360	0	1	360	0	211
Other managerial workers	359	11	113	360	0	1	359	11	114
Clerical workers	358	19	186	336	54	5	357	21	191
Sales workers	353	37	520	330	70	37	351	40	557
Service workers	355	30	164	336	73	59	350	46	223
Farmers	253	125	230	209	131	187	233	130	417
DP production workers	250	98	1,201	240	98	26	250	98	1,227
other production workers	327	77	322	300	105	47	324	82	369
Construction workers	229	109	65	205	116	29	222	111	94
Transport workers	321	73	159	225	102	4	319	75	163
Total	303	92	3,311	262	123	430	298	97	3,741
F			131.8725			13.6140			146.0967
Sgnificance			0.0000			0.0000			0.0000

No. of missing observation = 1

SD = standard deviation; F = between groups mean square/within group mean square.

DP = dyeing and printing industry

The workers who took up their first job or changed to a new job during the reference year (1987) have been excluded (i.e., 199 cases out of 3,942 employed workers).

Source: The 10 % household survey (1988).

employed.[9] Some significant variations are, however, noticeable according to the characteristics of the main occupation, which further reveals the vulnerability of certain groups.

The highest relative frequencies of the subsidiary occupation are registered by the construction workers (15 per cent) and by the farmers and related workers (13 per cent) (Table 5.9). These correspond to the two occupational groups which are the most affected by underemployment. Conversely, clerical workers, who have the privilege of full employment, have a subsidiary occupation only in exceptional cases. In the range of the subsidiary occupations reported by the main workers, agricultural activity is the most frequent: 44 per cent, while its share among total main workers is only 11 per cent. On the other hand, clerical

Table 5.9
Employed persons with two occupations by main and secondary occupation. Workers residing in the Jetpur urban agglomeration in 1988.

Occupation	*Total workers*	*Workers with two occupations*	
	% of workers with a secondary occupation by main occupation	*Percentage distribution by main occupation*	*Percentage distribution by secondary occupation*
Professional, technical workers	5.1	3.7	3.7
Entrepreneurs in DP	6.2	5.3	0.8
Other managerial workers	7.0	3.3	2.8
Clerical workers	0.5	0.4	0.4
Sales workers	6.1	13.8	16.3
Service workers	4.5	4.1	1.6
Farmers and related workers	12.5	21.1	44.3
Production workers in DP	7.2	35.8	12.6
Other production workers	3.8	5.7	9.8
Construction workers	14.9	5.7	4.5
Transport workers	1.8	1.2	3.3
Total no. of workers	6.6	100.0	100.0
No. of observations	3,741	246	246

The workers who took up their first job or changed to a new job during the reference year (1987) have been excluded (i.e., 199 cases out of 3,942 employed workers).
DP = dyeing and printing industry
Source: The 10% household survey (1988).

jobs and managing an enterprise in the dyeing and printing industry are almost excluded from the subsidiary occupations.

The most frequent combination between the main and subsidiary occupations is 'production worker in the dyeing and printing industry' as the main occupation and 'farmer or related worker' as the subsidiary one. This combination accounts for 21 per cent of the workers with two occupations. The frequency of the subsidiary occupation among the production workers in the dyeing and printing industry is average, but since they account for an important part of the total working population they also represent a major group among workers with two occupations. The other combinations of occupations show a great variety of possible associations without any one representing more than 7 per cent of the total cases.

Table 5.10
Employed persons with two occupations by employment status in main and in secondary occupation. Workers residing in the Jetpur urban agglomeration in 1988.

Employment status	*Total workers*	*Workers with two occupations*	
	% of workers with a secondary occupation by employment status in main occupation	*Percentage distribution by employment status in main occupation*	*Percentage distribution by employment status in secondary occupation*
Employer	7.2	12.2	11.8
Own-account worker	8.7	30.9	48.0
Employee in public sector	2.3	2.4	2.0
Employee in private sector	6.6	48.4	26.4
Unpaid helper	3.9	6.1	11.8
Total no. of workers	6.6	100.0	100.0
No. of observations	3,741	246	246

The workers who took up their first job or changed to a new job during the reference year (1987) have been excluded (i.e. 199 cases out of 3,942 employed workers).
Source: The 10% household survey (1988).

The employment status in the main occupation does not generate important variations in the relative frequencies of the subsidiary occupation (Table 5.10). The employment status in

the subsidiary occupation displays more interesting features: the share of own-account workers is 48 per cent as against 23 per cent of the total main workers, whereas the share of employees in the private sector is notably lower for the subsidiary activity than it is among the total main workers. The most frequent combinations of employment status between the main and subsidiary occupations are, respectively: 'employee in the private sector' and 'own-account worker' (22 per cent of the workers with two occupations), 'employee in the private sector' in both the main and subsidiary occupations (18 per cent of cases) and 'own-account workers' in both occupations (18 per cent of cases). Evidently, these combinations also reflect the general employment structure of the workers for their main occupation.

Table 5.11
Employed persons with two occupations by nature of employment in main and in secondary occupation. Workers residing in the Jetpur urban agglomeration in 1988.

Nature of employment	*Total workers*	*Workers with two occupations*	
	% of workers with a secondary occupation by nature of employment in main occupation	*Percentage distribution by nature of employment in main occupation*	*Percentage distribution by nature of employment in second occupation*
Regular, permanent	4.6	44.3	37.0
Temporary, seasonal	8.0	9.8	34.6
Contract	32.1	14.2	0.4
Casual	8.3	31.7	28.0
Total no. of workers	6.6	100.0	100.0
No. of observations	3,740	246	246

The workers who took up their first job or changed to a new job during the reference year (1987) have been excluded (i.e., 199 cases out of 3,942 employed workers).
Source: The 10 % household survey (1988).

As regards the nature of employment, the salient feature is the remarkably high proportion of workers among contract labourers who have a subsidiary occupation (32 per cent)

(Table 5.11). These correspond to contract labourers who are employed in the dyeing and printing industry and return to their native region (mainly Uttar Pradesh, Bihar and Rajasthan) during the monsoon (which is the slack season for this industry) and work in agriculture, usually in the familial fields.

As expected, the distribution of workers with two occupations by nature of employment in the subsidiary occupation shows the significance of temporary or seasonal employment: 35 per cent of the concerned workers as against 9 per cent of all main workers. However, due to the effect of the employment structure for both the main and subsidiary occupations, the most frequent combination of nature of employment between the main and subsidiary occupations is 'regular employment' in both occupations (31 per cent of the workers with two occupations). The next most frequent combinations are: 'casual employment' in both occupations (16 per cent of the cases); 'contract labour' in the main occupation and 'temporary or seasonal employment' in the subsidiary one (14 per cent of the cases); and 'casual labour' in the main occupation and 'temporary or seasonal employment' in the subsidiary one (11 per cent of the cases).

An important question to examine at this point is the extent to which the subsidiary occupation is likely to compensate underemployment in the main activity, and to reduce the disparities in terms of period of employment between different socio-economic groups.

As a result of the low frequency of the subsidiary occupation among the total number of main workers, the additional number of days employed due to the subsidiary occupation are not substantial either (13 days on the average over the reference year). Underprivileged groups in terms of annual duration of employment remain the same after the subsidiary occupation has been taken into account. The additional period of employment is, however, appreciable for farmers and related workers (32 days over the year) and for construction workers (20 days). But this is not the case for the production workers in the dyeing and printing industry, who gain only 8 days. On the other hand, some groups benefiting already from full employment (entrepreneurs in the dyeing and printing industry and other managerial occupations) strengthen their position with

subsidiary occupations. In fact, those who are employers or self-employed in their main activity gain relatively more than wage-earners and unpaid helpers from subsidiary employment (respectively 22 and 21 days, as against 8 and 11 days). Turning to the nature of employment in the main occupation, the contract labourers extend their employment period by 33 days on the average by carrying out a secondary activity in their native place, generally agriculture.

To sum up, a subsidiary occupation can increase effectively the employment period of certain categories of workers who are underemployed in their main occupation, but not systematically, nor exclusively, and its overall impact remains limited. Thus, a subsidiary occupation is not in a position to reduce significantly the inequalities of employment periods between socio-economic groups.

The analysis of the structure of the urban labour market allowed us to identify two particularly vulnerable groups both in terms of lack of protection and irregularity of employment: the construction workers and the production workers in the dyeing and printing industry. The high vulnerability that characterizes the construction workers in Jetpur seems a common feature of this sector in India, already stressed in other studies of the urban labour market (Harris et al., 1990). The vulnerability of the production workers in the textile printing industry denotes a more disquieting feature in the context of Jetpur, as this occupational group accounts for a major share of the urban labour force (their working conditions will be examined in more details in Chapter 7). These two examples further reveal a marked pattern of stratification of the urban labour market in Jetpur along labour status groups. The significance of such a pattern of stratification was clearly demonstrated in the case of Coimbatore (Harris et al., 1990). Based on research in South Gujarat, Breman (1980) also has described labour markets characterized by disparities in labour status as much more complex than a simplistic formal versus informal distinction, though he argued that 'fragmentation' is a more appropriate term for such a situation. Turning back to the case of Jetpur, we need now to investi-

gate the hypothesis of segmentation and discrimination according to the various personal characteristics of the workers. Beforehand, an examination of the factors which influence the labour supply is in order.

LABOUR SUPPLY

The overall labour force participation rate in the urban population is 34 per cent, 56 per cent for males and 9 per cent for females. While the rates are superior to 95 per cent for males aged 25 to 49, the female labour force participation rates remain low in all age groups, the maximum being 19 per cent for females aged 35 to 39 (Figure 5.5).

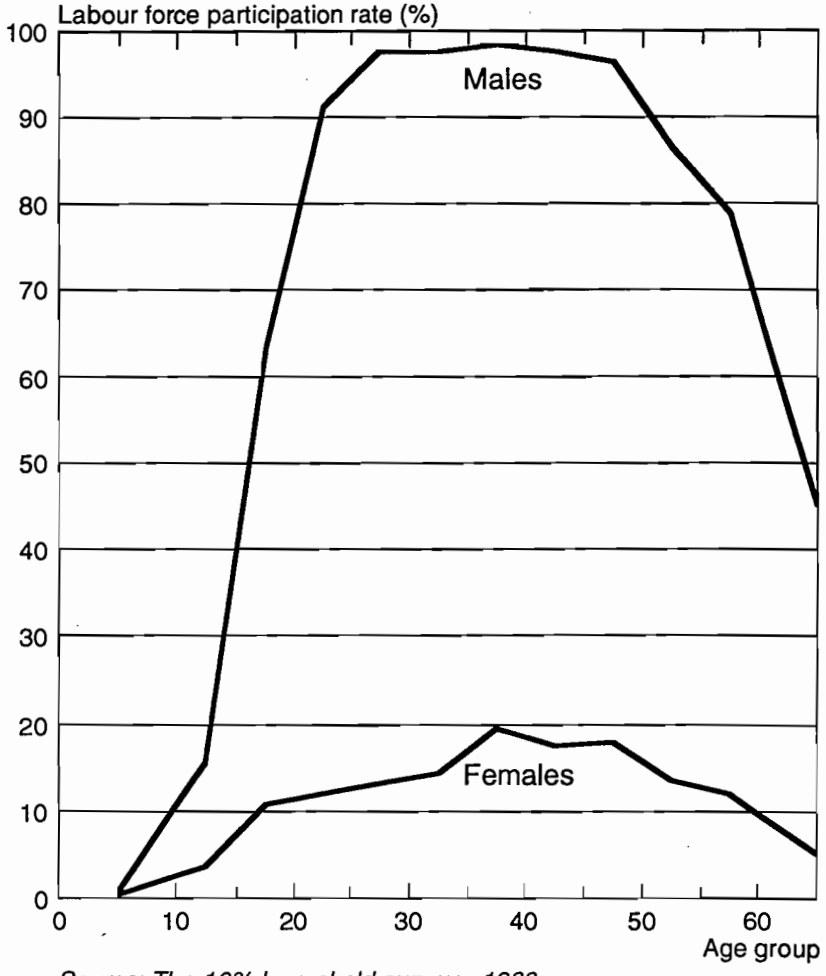
Table 5.12.
Labour force participation rates by caste/community and sex. Population of the Jetpur urban agglomeration in 1988.

Caste/community	*Males*		*Females*		*Males + Females*	
	%	*No.*	*%*	*No.*	*%*	*No.*
Brahmin	55.8	353	4.0	299	32.1	652
Kshatriya	57.6	262	5.7	210	34.5	472
Vaniya	57.5	292	4.5	289	31.2	581
Kanbi	54.3	1,381	11.4	1,241	34.0	2,622
Khatri	52.0	442	2.5	408	28.2	850
Other Hindu castes (not backward)	58.2	834	5.8	761	33.2	1,595
OBC (Hindus)	57.3	1,479	12.0	1,317	35.9	2,796
Other Muslim classes (not backward)	61.4	280	3.3	244	34.4	524
OBC (Muslims)	56.2	564	5.1	531	31.4	1,095
SC/ST	52.0	377	17.6	330	35.9	707
Christian, Sikh	n.c	12	n.c.	15	n.c.	27
Total	56.1	6,276	8.7	5,645	33.6	11,921
Chi-square		13.35809		152.78617		28.82447
Significance		0.2043		0.0000		0.0000

No. of missing observations = 4
OBC = other backward classes; SC/ST = Scheduled Castes/Scheduled Tribes.
n.c. = percentage not computed (less than 30 observations)
Source: The 10% household survey (1988).

The caste group does not introduce significant variations in the labour force participation rates for males, whereas it

Figure 5.5
Labour force participation rates by sex and age group.
Population of the Jetpur urban agglomeration in 1988.



Source: The 10% household survey - 1988.

definitely does for females (Table 5.12). Economic as well as cultural factors create these disparities. For instance, economic necessity probably explains why the highest female labour force participation rate is registered for women from Scheduled Castes (18 per cent), followed by the group of Hindu backward classes (12 per cent). Yet, the participation rate of Muslim women from backward classes is very low (5 per cent) and closer to that of other Muslim women (3 per cent): in this case the religious identity appears to be a more important determinant than the similarity in economic conditions. The labour force participation rate of Kanbi women is also noticeable (11 per cent), due to their contribution to familial agriculture, the traditional activity of this caste.

The educational standard is another factor of differentiation (Table 5.13). Among women, two opposite groups have a labour force participation rate significantly higher than the others, the illiterates and those who have attended college or university: 19 per cent and 14 per cent respectively among those aged 15 or more as against less than 11 per cent for the other educational standards—the differences are even greater among women aged 30 to 44 (respectively 24 per cent and 34 per cent as against less than 11 per cent). Stringent economic conditions explain again the higher participation rate of illiterate women, as illiteracy is generally associated with economic backwardness. On the other hand, women with very high educational standards usually hail from relatively better-off families which have invested in the education of their daughters, and are probably also more prone to accept their professional commitment.

As for males aged 15 or more, labour force participation rates are slightly lower among those who attended higher secondary school or above, as their entry into the labour market is postponed by the length of their studies.

Nevertheless, the variations in female labour force participation rates show how labour supply is influenced not only by the people's economic conditions but also by familial cultural characteristics (caste, religion) and individual acquired characteristics (education).

Table 5.13
Labour force participation rates by educational standard, age group and sex. Population of the Jetpur urban agglomeration in 1988.

Males					*Age group*				
Educational standard	*0-14*	*15-29*	*30-44*	*45-59*	*60 & above*	*Total*	*Total*	*15 & above*	*15 & above*
	%	*%*	*%*	*%*	*%*	*%*	*No.*	*%*	*No.*
Illiterate	6.0	96.5	96.3	83.6	39.0	43.6	1,690	85.2	802
Primary (1-4)	3.1	96.5	97.0	83.9	47.3	37.7	1,592	86.6	658
Middle (5-7)	8.0	92.0	97.6	89.4	53.4	66.0	1,023	89.9	724
Secondary (8-10)	6.6	79.2	99.3	97.6	n.c.	77.3	1,304	84.5	1,183
Higher secondary (11-12)		54.7	100.0	94.7	n.c.	71.2	302	71.2	302
College & above		60.8	98.6	100.0	n.c.	78.6	364	78.8	363
Total	5.1	82.5	98.0	88.4	45.3	56.1	6,275	84.4	4,032
No. of observations	2,243	2,104	1,050	562	316	6,275	6,275	4,032	4,032
Chi-square	15.029	259.81	8.3138	19.948	3.8413		708.97181		68.45027
Significance	0.0046	0.0000	0.1398	0.0013	0.5725		0.0000		0.0000

Table 5.13 *continued*

Females					*Age group*				
Educational standard	*0-14*	*15-29*	*30-44*	*45-59*	*60 & above*	*Total*	*Total*	*15 & above*	*15 & above*
	%	*%*	*%*	*%*	*%*	*%*	*No.*	*%*	*No.*
Illiterate	2.5	20.9	24.1	17.1	5.7	12.6	2,336	18.5	1,473
Primary (1-4)	0.4	11.0	9.0	8.8	1.6	3.5	1,259	8.7	472
Middle (5-7)	0.4	12.0	10.6	3.2	n.c.	7.3	885	10.5	612
Secondary (8-10)	0.0	7.3	3.8	n.c.	n.c.	6.1	742	7.0	639
Higher secondary (11-12)	n.c.	6.5	4.7	n.c.		6.3	224	6.4	220
College & above		4.2	34.1	n.c.		14.2	197	14.4	195
Total	1.3	11.7	16.8	14.8	4.9	8.7	5,643	12.9	3,613
No. of observations	2,032	1,824	898	582	307	5,643	5,643	3,613	3,613
Chi-square	19.258	59.154	52.552	39.974	5.9652		106.09239		80.68315
Significance	0.0017	0.0000	0.0000	0.0000	0.1133		0.0000		0.0000

No. of missing observations = 10
n.c. = percentage not computed (less than 30 observations)
Source: The 10% household survey (1988).

SEGMENTATION OF THE URBAN LABOUR MARKET AND 'PULL' EFFECTS

The hypothesis of the segmentation of the urban labour market is examined through various questions:

- Is access to the different occupations and employment categories discriminatory according to the workers' personal characteristics? In particular, to what extent and in which way does caste differentiation operate in this process of segmentation?
- Are the differences in economic activities and labour status connected with distinct geographical origins of the workers, including some specific migratory channels? Do they call for different types of labour movements?
- Are some socio-occupational groups associated with spatial residential segregation?

From this overall analysis, we shall try to indicate the most meaningful demarcation lines in the structure of the labour market, and the kind of barriers which may exist at its entry. Tentative conclusions will be also drawn on the migratory attraction effects of the various urban economic functions and on the capacity of the different labour sub-markets to absorb workers.

The following analysis pertains to the workers who were employed, even partially, during the reference year. Only those who remained totally unemployed during the entire period of reference (and who form a marginal group whose main characteristics have already been presented) are not included.

Workers' personal characteristics

Different types of personal characteristics can be distinguished: inherited characteristics (gender and caste), life course variable (age), and acquired characteristics (education).

Gender

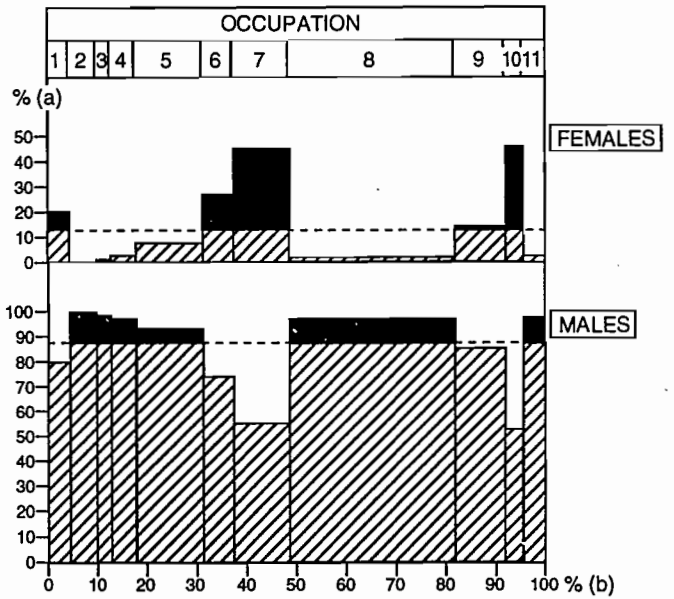
Due to the low level of the overall female labour force participation rate, women account for only 12 per cent of the total workers. Their share is, however, subject to significant variations according to occupational categories (Figure 5.6).

At the outset, women are almost excluded from the most important sector of activity in Jetpur, the dyeing and printing industry. They are absent from the ranks of the entrepreneurs (as from managerial jobs in other sectors), and they represent only 2 per cent of the production workers of this branch. Moreover, they are confined to marginal and unskilled operations, such as picking up and folding the saris spread in the open air. Yet, a study of the Jetpur hand-printing industry conducted by Trivedi (1970) in 1964 shows women working as printers at that time. The transition from cottage craft to industrial production has led to the exclusion of the female labour force from the main operations of the process of production and to their marginalization. This seems to be a frequent process in the development of the hand-printing industry in India, as shown by studies in other textile printing centres (Jain and Kapadia, 1984; Bhatt, 1980; GIDS, 1980).

On the other hand, women form a substantial part of the labour force in construction work (47 per cent of the workers) and in agriculture (45 per cent). In addition, they are relatively well represented (26 per cent) in service occupations which include usually some unskilled jobs. Some women also have qualified jobs among the professional and technical occupations (20 per cent). As for female production workers, half of them fall in the category of the household industry.

The distribution by status in employment points to additional gender-based disparities (Figure 5.7). The status of employer is monopolized by men, while women are proportionately over-represented in the least autonomous status, that of unpaid helpers (37 per cent), which has to be related to their important participation in familial agriculture. The share of female workers is also noticeable among employees in the public sector (27 per cent), where they perform qualified professional jobs or, more often, unskilled service work and manual construction work.[10]

Figure 5.6
Percentage distribution of employed persons by sex in each occupation.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

(a) percentage of workers of each sex in the category of occupation under consideration.
(b) percentage of workers in each occupation among all workers.

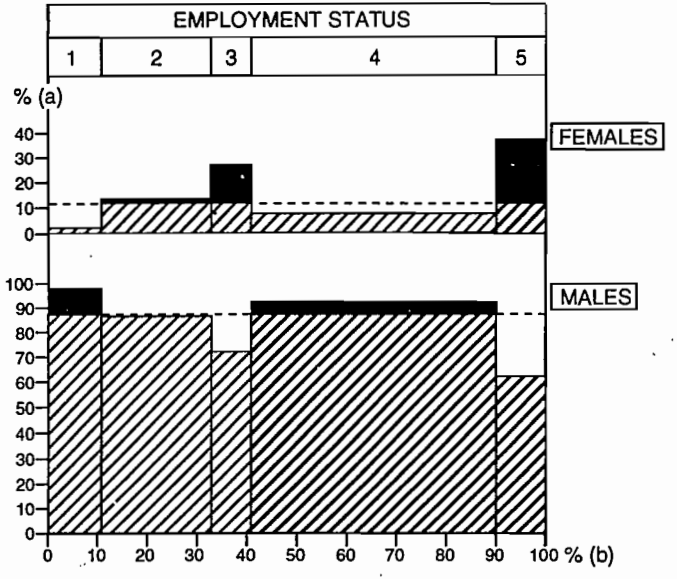
--- average percentage of each sex among all workers.

■ above the mean

Surfaces are proportional to the number of workers

Source: The 10% household survey - 1988.

Figure 5.7
Percentage distribution of employed persons by sex in each employment status.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

(a) percentage of workers of each sex in the category of employment status under consideration.
(b) percentage of workers in each employment status among all workers.

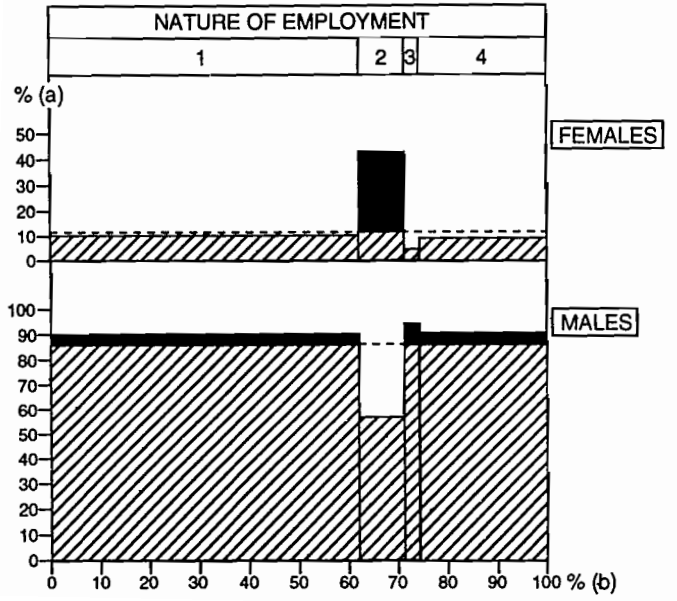
- - - average percentage of each sex among all workers.

■ above the mean

Surfaces are proportional to the number of workers

Source: The 10% household survey - 1988.

Figure 5.8
Percentage distribution of employed persons by sex in each nature of employment.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

(a) percentage of workers of each sex in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all workers.

- - - average percentage of each sex among all workers.

■ above the mean

Surfaces are proportional to the number of workers

Source: The 10% household survey - 1988.

Female employment is further characterized by the significance of temporary and seasonal employment (Figure 5.8), which is again associated with work in agriculture. Thus, 31 per cent of female workers are employed temporarily or seasonally, as against 6 per cent for male workers or, from another angle, female workers account for 43 per cent of temporary and seasonal workers as against 12 per cent of all workers. Consequently, the annual duration of the employment period is significantly shorter for female workers than for male workers (262 days as against 303).[11]

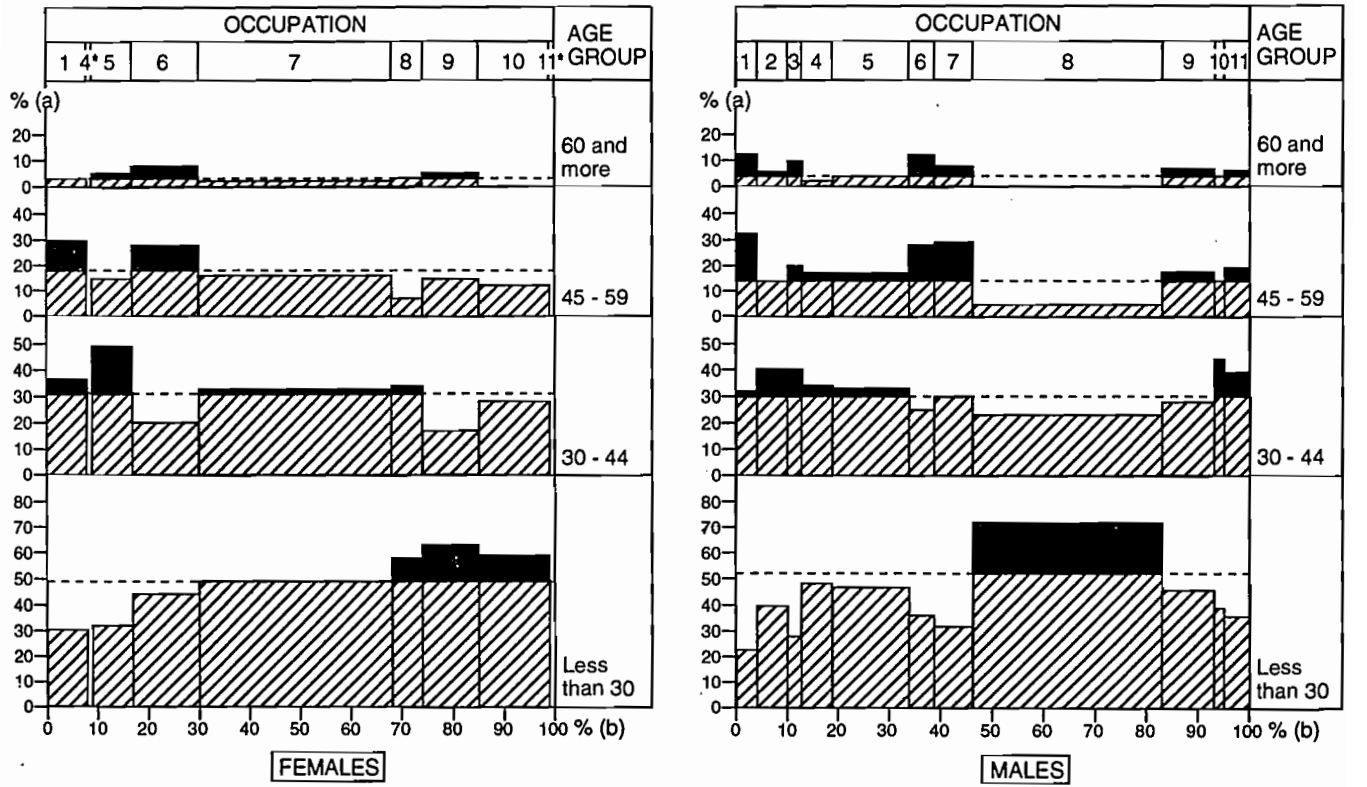
Age

The first remarkable feature in the pattern of occupation by age concerns the production workers in the dyeing and printing industry. They are noticeably younger than the average workers, especially the male workers: about 72 per cent of them are below 30 years of age, as against less than 50 per cent in every other occupational category (Figure 5.9). This reflects the continuous 'pull' effect that Jetpur's dyeing and printing industry has on new entrants into the labour force.

Conversely, it can be noted that professional and technical, managerial, service, and agricultural occupations have a relatively higher proportion of male workers aged 45 or more. The occupational pattern by age of female workers shows some specificities, like the particularly high proportion of women below 30 among the production and the construction workers.

Absorption into the labour market follows to a certain extent the progression of the individual along his life course; this process is reflected by the age differentiation of employment characteristics. As compared to their respective share in the total work force, male as well as female workers aged less than 30 are over-represented among unpaid helpers as well as among temporary or seasonal workers, and under-represented among own-account workers and employers as well as among workers employed regularly or permanently (Figures 5.10 and 5.11). In other terms, with increase in age, unpaid helpers become more and more rare, employers and self-employed more frequent, and regularity of employment rises correlatively.[12] For instance, unpaid helpers account for 12 per cent of the male workers aged less than 30 and their share becomes

Figure 5.9
Percentage distribution of employed persons by age group in each occupation and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

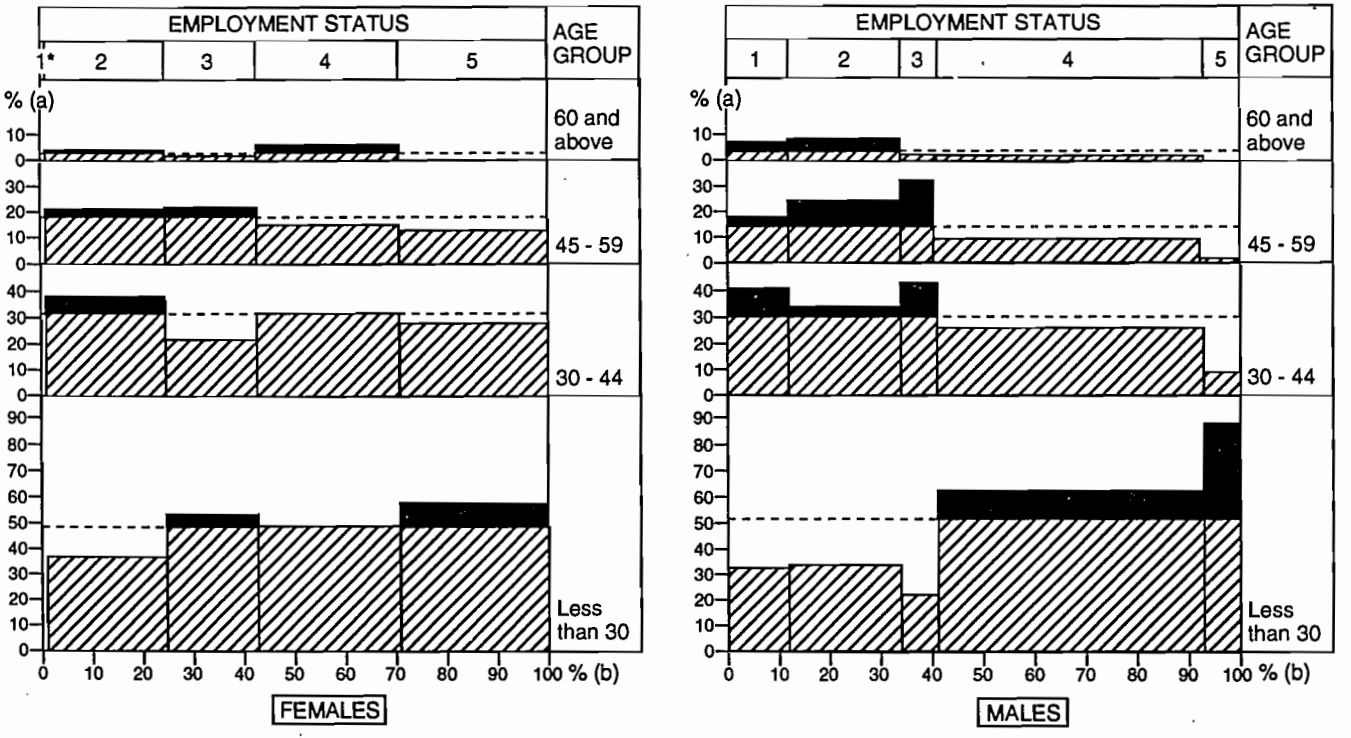
(a) percentage of workers in each age group in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/female workers.

--- average percentage of workers in each age group among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.10
Percentage distribution of employed persons by age group in each employment status and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

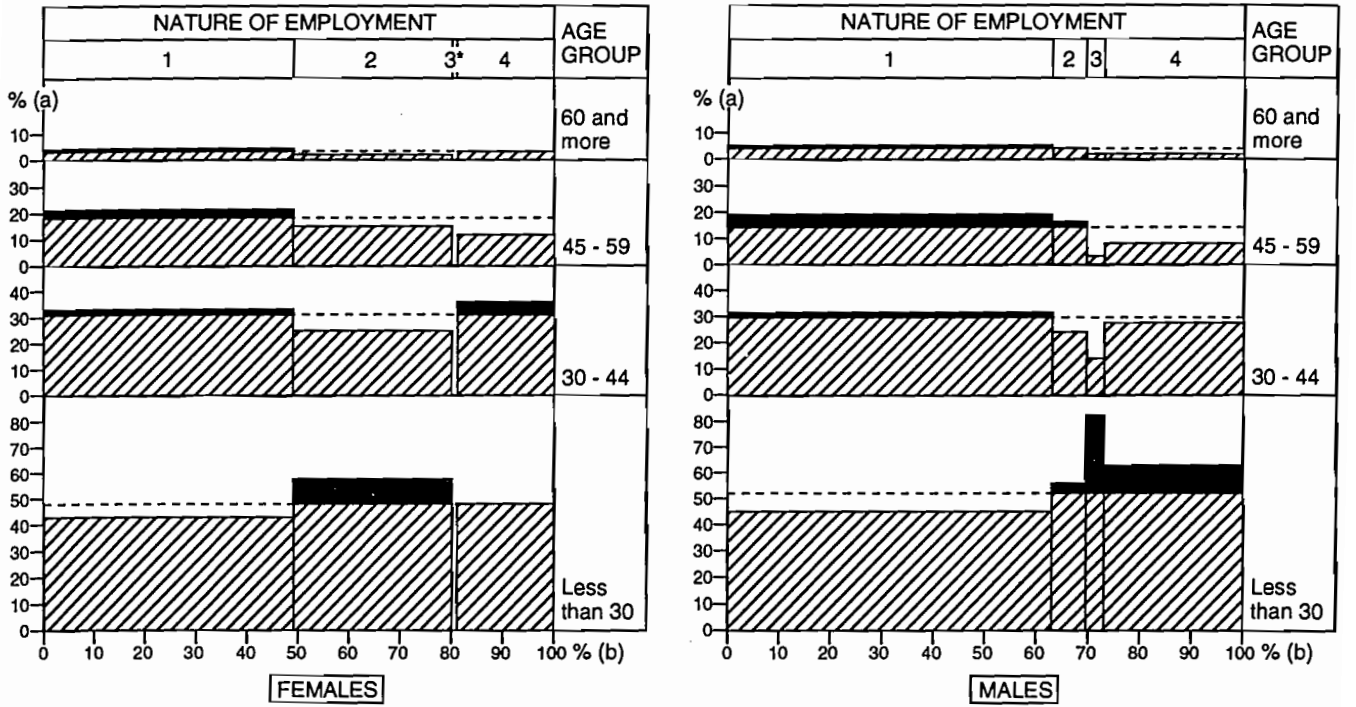
(a) percentage of workers in each age group in the category of employment status under consideration.
(b) percentage of workers in each employment status among all male/female workers.

--- average percentage of workers in each age group among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.11
Percentage distribution of employed persons by age group in each nature of employment and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

(a) percentage of workers in each age group in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all male/female workers.

--- average percentage of workers in each age group among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

marginal after 30; on the other hand, employers who account for only 7 per cent of the male workers aged less than 30 account for 22 per cent of those aged 60 or more. As expected in a traditional and hierarchical society, autonomy in employment gains momentum with age. For male workers especially the status of unpaid helper is a transitory one, corresponding to a training period in the familial business or enterprise, and many of those familial helpers will become self-employed or employers in their turn.

Another point worth checking is whether young workers are more subject to casual employment (and hence more vulnerable) than elders. There is no evidence of such discrimination for female workers. As for male workers, the share of those aged less than 30 among casual workers is effectively higher than their proportion in the total working population (63 per cent as against 52 per cent). This is mainly due to the fact that young workers are also proportionately over-represented among employees in the private sector, and especially in the dyeing and printing industry, where casual employment is particularly frequent. If one considers the employees in the private sector alone, the age structure of the casual workers is roughly in accordance with the age structure of all private employees.

A last noticeable point is the specific age structure of the male contract labourers: 81 per cent of them are less than 30 year old (as against 52 per cent of the workers on the average). These are also essentially wage-earners in the dyeing and printing industry.

The variations in the average annual number of days employed by age group provide a synthetic view of the association between age and regularity of employment. Though the variations are not very important, the annual duration of employment increases with age (from 288 days for workers aged less than 30, to 322 for those aged 60 or more).[13]

Education

As shown in Figure 5.12, the occupational pattern also reveals the existence of a process of selection based on educational qualifications. Non-manual and qualified jobs such as those performed in professional, technical, managerial and clerical occupations clearly require higher levels of education (second-

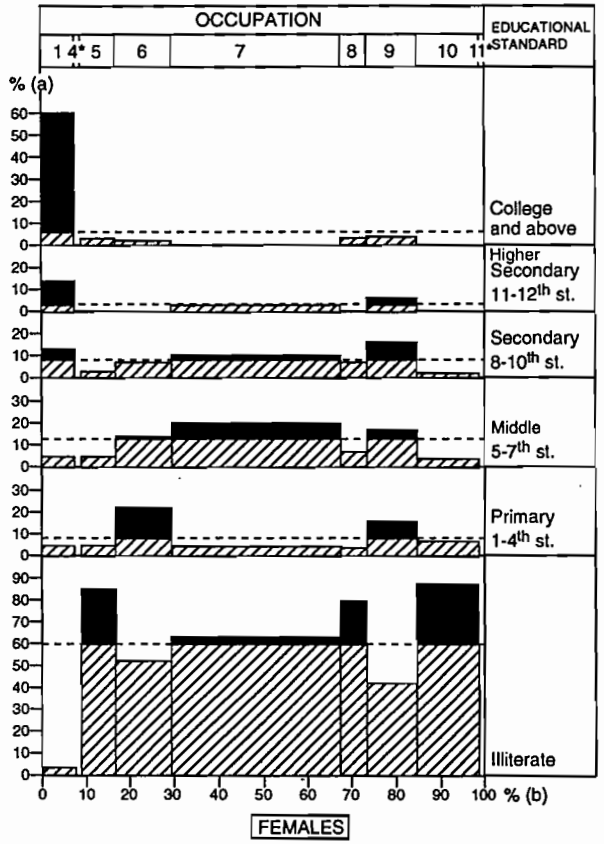
ary and above) than other occupations. For example, men who have attended college or above represent 46 per cent of the male professional and technical staff as against 8 per cent only of all male workers; for female workers the corresponding proportions are, respectively, 60 per cent as against 6 per cent.

On the other hand, service workers, farmers, manual workers in the printing industry as well as in construction and transport, are more frequently illiterate or educated only up to primary school level. As regards production workers in the dyeing and printing industry, the required skills are acquired through apprenticeship and training in the factory itself. But the most striking example is that of the construction workers, already identified as an underprivileged group: 49 per cent of the men and 87 per cent of the women in this group are illiterate as against 21 per cent and 60 per cent of the total number of male and female workers respectively.

In some other occupations, such as those related to sales, the educational qualifications differ according to the gender because of the heterogeneity of the corresponding jobs. Male sales workers who are more often merchants, shopkeepers, salesmen, shop-assistants, commercial travellers, etc., are characterized by better levels of education than the average. Female sales workers on the contrary are noticeable for their very high proportion of illiterates; they are essentially petty vendors, street vendors or home-based milk vendors.

Two different positions of status in employment are associated with levels of education which are notably higher than the average: employees in the public sector especially (men as well as women) and employers (Figure 5.13). As these two categories are characterized by regularity of employment, workers with secondary or higher levels of education are also over-represented in the category of regular or permanent employment in proportion to their share among total workers (Figure 5.14). Seen from another angle, employees in the public sector and employers tend to be more frequent according to the higher level of education, and regularity of employment follows a similar trend. Thus, employees in the public sector and employers account for only 3 per cent and 4 per cent of the male illiterate workers, as against 26 per cent and 32 per cent of those who attended college and above; for female

Figure 5.12
Percentage distribution of employed persons by educational standard in each occupation and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

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2: entrepreneurs in the dyeing and printing industry
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5: sales workers
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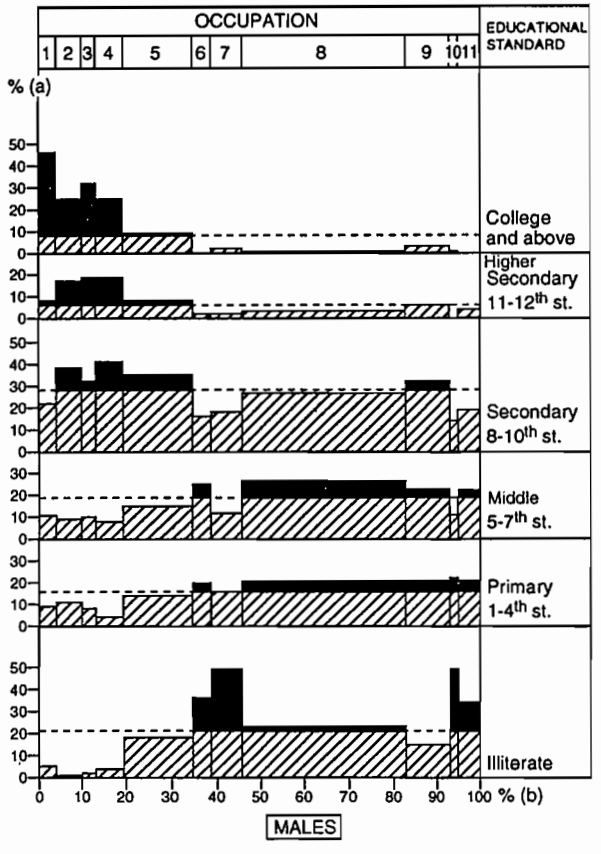
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

Contd . . .



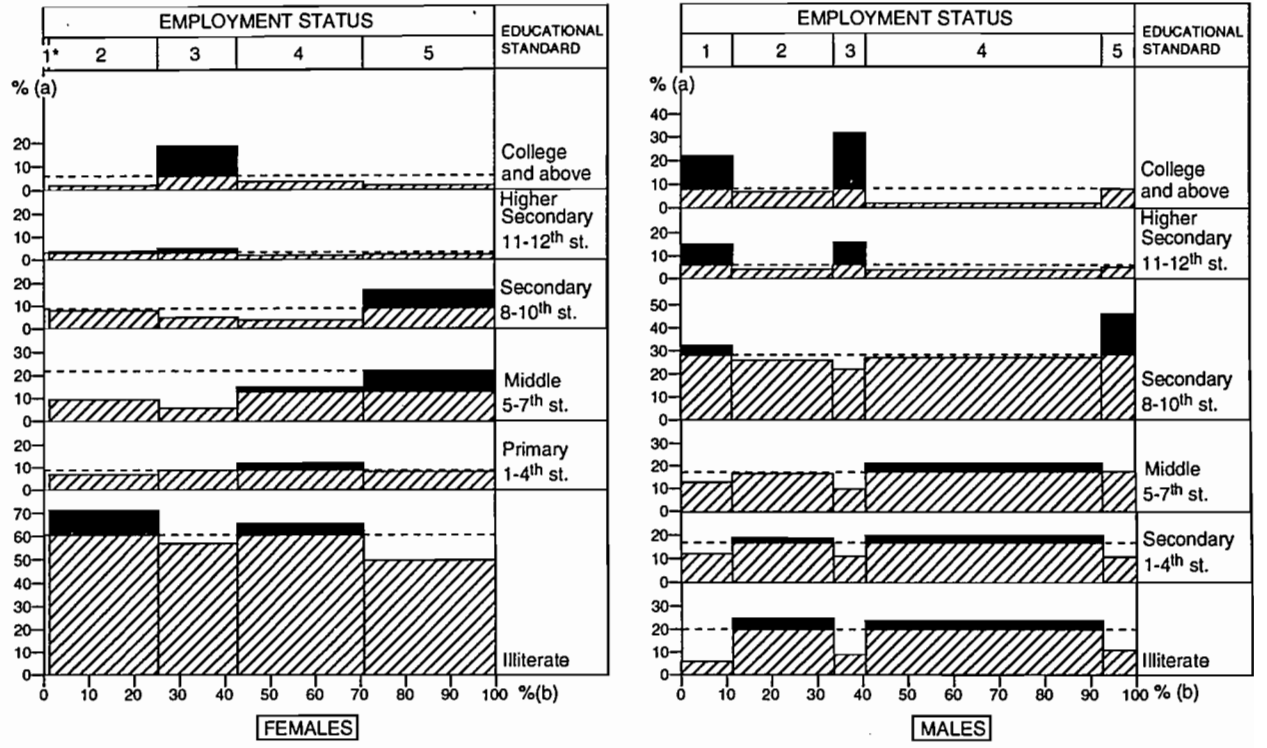
. . . Contd .

(a) percentage of workers in each educational standard in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/ female workers.
- - - average percentage of workers in each educational stan-` dard among all male/female workers.
■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

Figure 5.13
Percentage distribution of employed persons by educational standard in each employment status and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

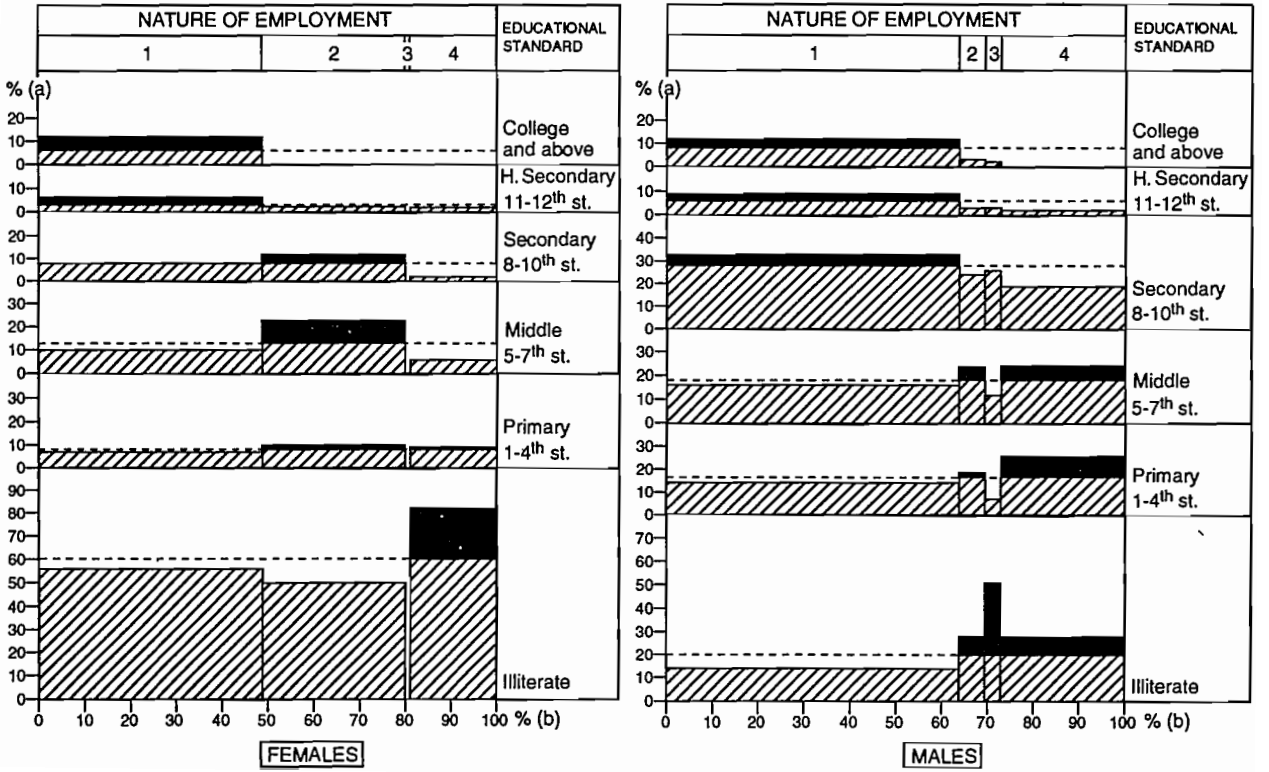
(a) percentage of workers in each educational standard in the category of employment status under consideration.
(b) percentage of workers in each employment status among all male/female workers.

--- average percentage of workers in each educational standard among all male/female workers.

▇ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.14
Percentage distribution of employed persons by educational standard in each nature of employment and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

(a) percentage of workers in each educational standard in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all male/female workers.

- - - average percentage of workers in each educational standard among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

workers, the corresponding percentages of employees in the public sector are 17 per cent and 49 per cent respectively. Further, among male workers, 47 per cent of the illiterates are regularly employed as against 96 per cent of those who attended college and above, and among female workers 46 per cent as against 93 per cent respectively. Conversely, casual and temporary employment, as well as contract labour, are proportionately more often associated with primary and middle education or illiteracy.[14] The same pattern of contrast between regularly employed workers and other categories of workers remains true for the wage-earners in the private sector alone. In short, and as shown by the variations of the average annual number of days employed, the duration of employment tends to rise with the level of education (from 277 days for illiterate workers to 355 for those who have attended college and above).[15]

Caste

The survival of occupational specialization based on caste has been shown in many empirical studies, though the process of industrialization and urbanization is acknowledged as a major agent of change undermining the traditional caste-based socio-economic organization (Gandhi, 1983; Nobel and Dutt, 1977; Heuze, 1991). The situation observed in Jetpur calls for a qualified appraisal.

The distribution of workers by occupation and by caste (Figure 5.15) shows a relative degree of specialization[16] and in particular the survival of certain caste-based hereditary activities. For example, the Brahmins are over-represented in professional and clerical jobs, the Vaniyas (or Gujarati Banias) in business management, the Kanbis in agriculture, the Khatris among the entrepreneurs of the dyeing and printing industry, and the Scheduled Castes among the service workers. Another noticeable feature is the high concentration of Scheduled Castes and Hindu backward classes in construction work. These two groups account for 40 per cent and 36 per cent of the construction workers, while their proportions in the total urban work force are 6 per cent and 25 per cent respectively. Thus, socially underprivileged sections tend to be more frequent in the occupational group which proved to be the most

vulnerable in terms of lack of protection and irregularity of employment. In the occupations where female workers are neither marginal nor excluded, the tendencies towards caste-based specialization (underlined above) are true for male as well as female workers.

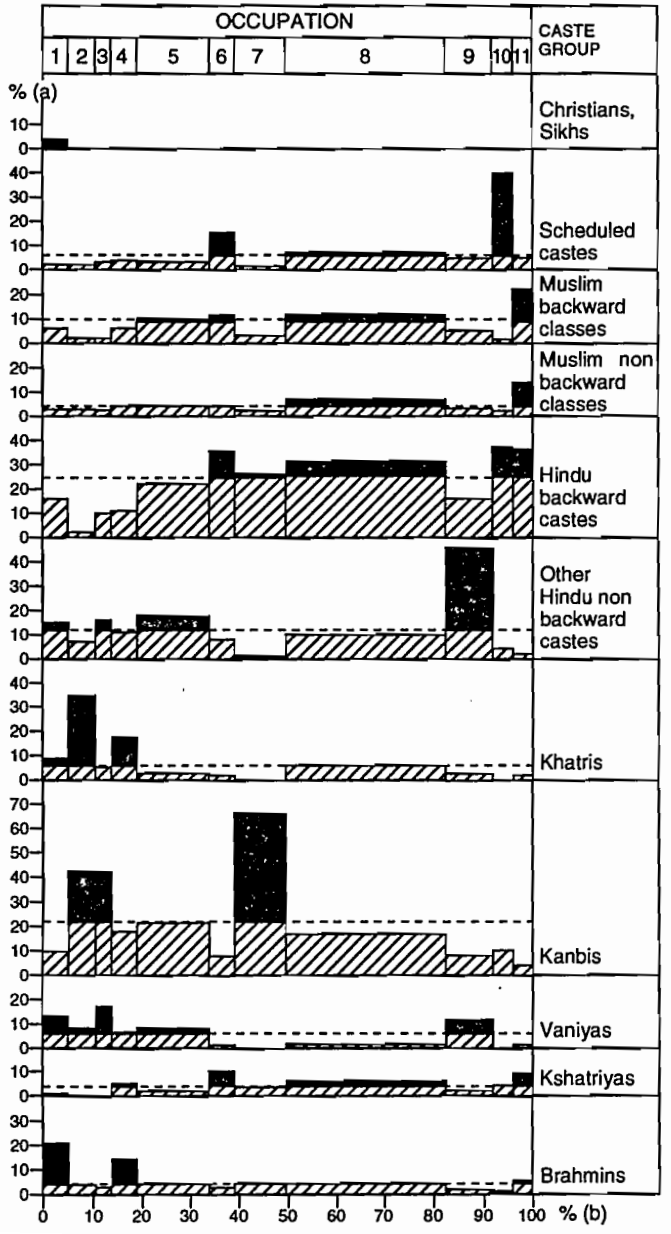
As regards the caste base of the new occupations generated by the industrialization process, two divergent patterns emerge between the entrepreneur–employers of the dyeing and printing industry and the industrial production workers.

The entrepreneurs are dominated by two castes: the Kanbis (who account for 42 per cent of the entrepreneurs) and the Khatris (35 per cent). A third group (minority but significant) that should be mentioned is the Vaniyas who account for 9 per cent of the entrepreneurs in the dyeing and printing industry. Needless to say, the proportion of each of these three castes among the entrepreneurs of this industry is remarkably higher than their respective proportion in the total working population.[17] The participation of every other caste group is marginal and the proportion to the total number of entrepreneurs is also significantly lower than the proportion to the total work force.

In contrast to the three-polar caste base of the entrepreneurs, the industrial production workers belong to a wide span of various castes: no caste group or community is excluded, and furthermore, apart from the Vaniyas, no group is noticeably under-represented as compared to their proportion in the entire working population. For example, to take the two extremes of the traditional caste hierarchy, the Brahmins as well as the Scheduled Castes are represented in the industrial working class in proportion to their share in the total working population. Among the caste or community groups which are slightly over-represented as compared to their share in the total work force are the Hindu backward classes and, to a lesser extent, the Muslims.[18] But it should be emphasized that the formation of the industrial working class transcends the traditional caste-based segregation pattern. However, as will be shown in the chapter devoted to the industrial workers, a refined analysis highlights more subtle forms of selectivity within the industrial labour force itself.

The distribution by status in employment and that by nature of employment provide further insights into the significance of

Figure 5.15
Percentage distribution of employed persons
by caste/community in each occupation.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

(a) percentage of workers in each caste group in the category of occupation under consideration.
(b) percentage of workers in each occupation among all workers.

\- - - average percentage of each caste group among all workers.

 above the mean

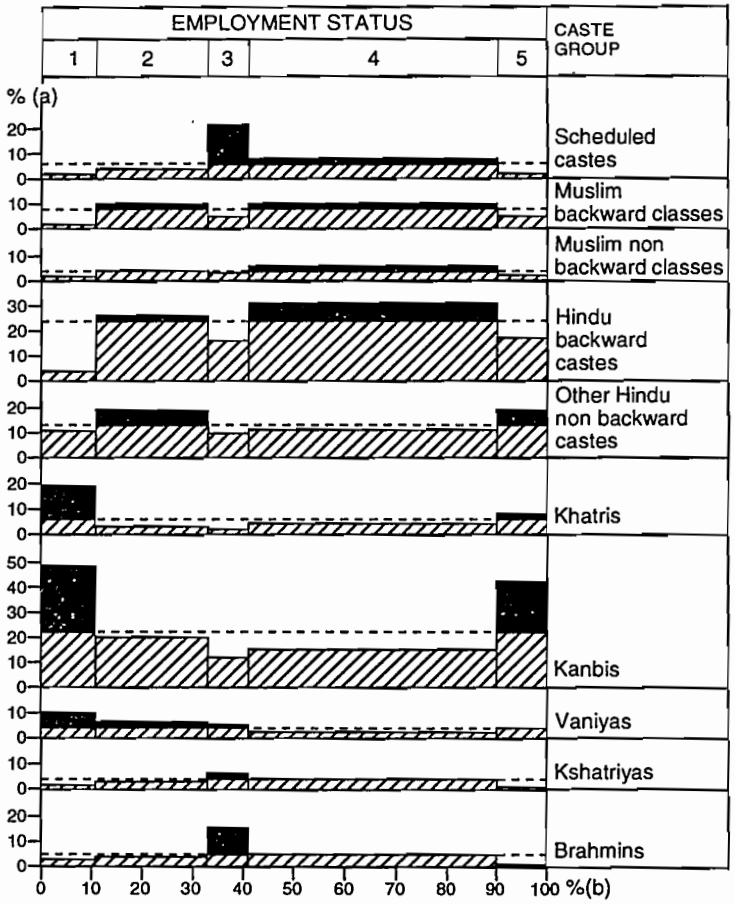
Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

the caste factor in the segmentation of the labour market (Figures 5.16 and 5.17).

There is first a marked contrast between, on the one hand, the Kanbis, Khatris and the Vaniyas who hold a dominant position in the local economy (especially in the printing industry) and, on the other hand, the Scheduled Castes, the backward classes and the Muslims who belong to the underprivileged sections of the population. In comparison with their respective

Figure 5.16
Percentage distribution of employed persons
by caste/community in each employment status.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

(a) percentage of workers in each caste group in the category of employment status under consideration.
(b) percentage of workers in each employment status among all workers.

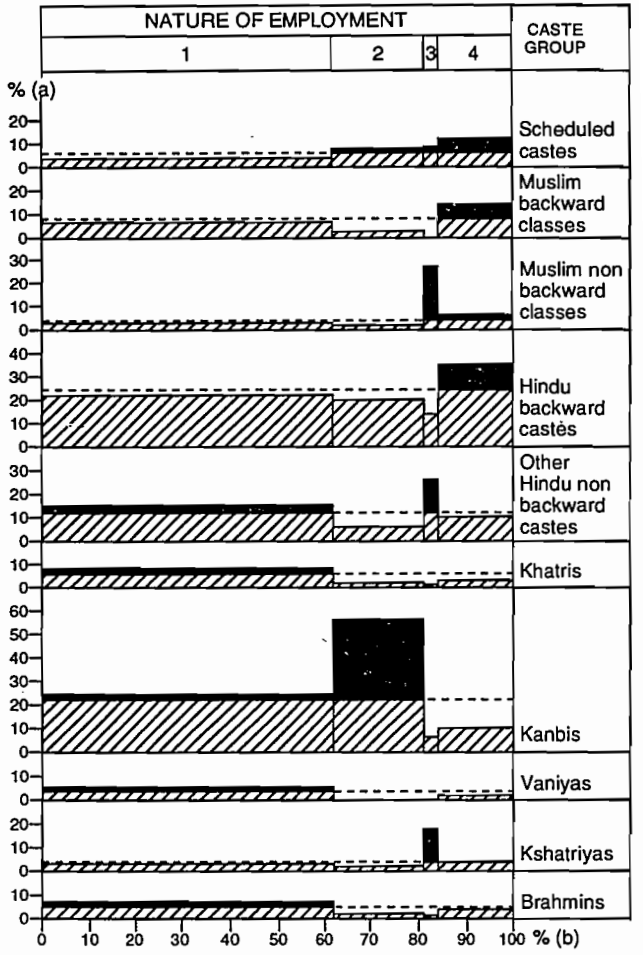
--- average percentage of each caste group among all workers.

above the mean

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

Figure 5.17
Percentage distribution of employed persons by caste/ community in each nature of employment.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

(a) percentage of workers in each caste group in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all workers.

--- average percentage of each caste group among all workers.

above the mean

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

share of the total work force, the former are clearly over-represented among the employers, while the latter play only a marginal part as employers but tend to be over-represented among wage-earners in the private sector. Moreover, the Scheduled Castes and the backward classes are more frequently subject to casual employment than the other caste groups are. This is true also when the comparison is limited to the category of employees in the private sector. For example, 73 per cent of the Scheduled Caste wage- or salary-earners, 66 per cent of the Muslim backward classes and 55 per cent of the Hindu backward classes are casual employees, as against 40 per cent or less of the private employees in every other caste group.[19]

The male workers belonging to the underprivileged castes or communities are also disadvantaged in terms of annual duration of employment: 274 days for the Scheduled Castes and for the Muslim backward classes, 289 for other Muslims and for the Hindu backward classes, as compared (for example) to 318 days for the Brahmins, 336 days for the Khatris and 351 days for the Vaniyas.[20] In addition, the former combine two handicaps: fewer months of employment over the year, and fewer days worked per working month. The pattern is different for female workers: what is remarkable is the Kanbis annual duration of employment which is much below the average (174 days as against 262). This can be explained by the traditional engagement of this caste in agriculture, and the mainly seasonal employment of women in this branch. Due to the relatively high contribution of labour by the women of this caste, this specialization also shows up in the remarkable participation of the Kanbis as temporary or seasonal workers and as unpaid helpers.

Among employees in the public sector, two statutorily opposite castes are over-represented in proportion to their respective share in the working population (for males as well as for females): the Brahmins and the Scheduled Castes. But, while the former more often perform qualified professional or clerical jobs, the latter are mainly confined to unskilled service work or construction work.

The characteristics of the employment pattern by caste shows the survival of some traditional occupational specializations as well as the mutual strengthening of certain social and eco-

nomic disparities. To be in a position to conclude whether this reveals the existence of caste-based discrimination in the access to jobs, it is necessary first to examine the effect of education in this process of selection. As analysed above, the different occupational and employment categories tend to be associated with certain educational qualifications. The workers' level of education also shows major variations according to caste or community. The illiteracy ratio is marginal among the Brahmins, the Vaniyas and the Khatris (less than 2 per cent for male workers) and highest among the Hindu backward classes and the Scheduled Castes (38 per cent and 33 per cent respectively for male workers, 84 per cent and 79 per cent for female workers). Conversely, the proportion of workers who attended college or above is highest among the Vaniyas, the Brahmins and the Khatris (29 per cent, 22 per cent and 16 per cent respectively, as against 8 per cent for all workers). Thus, the over-representation (in proportion to their respective share in the total work force) of the Brahmins and the Vaniyas in professional and technical occupations, and of the Brahmins and the Khatris in clerical occupations could be explained by their better educational qualifications, corresponding to the requirements of these jobs. On the other hand, the under-representation of the Scheduled Castes and the Hindu backward classes among those occupational groups and their over-representation among generally unskilled occupational categories like service and construction work are in accordance with the low educational qualifications of these castes.

However, some caste-based differentiations persist in the employment pattern even after the major effects of the educational structure by caste are neutralized. This can be seen by examining separately the employment structure of the workers who have attended secondary school or above, and for whom the span of possible occupations should be more open.[21] Similar tendencies of over- and under-representation are still observable, especially as regards the castes and occupational groups examined above. Moreover, the gap between the rates of participation of each caste in the same occupational group is not necessarily reduced. For instance, among the workers who attended secondary school or above, 26 per cent of the Brahmins are in professional or technical occupations as against

only 4 per cent of Scheduled Castes, while the corresponding proportion among the total number of workers (all educational levels included) is 22 per cent and 1 per cent respectively. Further, 22 per cent of the Brahmins with secondary or higher education are in clerical jobs, as against 8 per cent of the Hindu backward classes, while the corresponding proportion among total workers is 16 per cent and 2 per cent respectively. On the other hand, 9 per cent of the Scheduled Caste workers with secondary or higher education are still in construction work, whereas this occupational group accounts for only 1 per cent of all workers with the same level of education.

Turning to the employment status, educated workers from the backward classes and the Scheduled Castes are seldom employers (less than 7 per cent among those with secondary or higher level of education, as against 18 per cent of all workers with the same level of education). Educational credentials do not compensate for the lack of financial capital, nor for the lack of the 'right connections' and a network or relations.

Lastly, Scheduled Castes and backward classes, even when equipped with secondary or higher education, remain the most affected by casual employment. In particular, 43 per cent of the Scheduled Caste workers and 26 per cent of the Hindu backward class workers with this level of education are casual labour, as against 13 per cent on average for workers with the same level of education.

In short, the differences of educational qualification across various castes and communities tend to strengthen the segmentation of the labour force along caste lines, rather than explain it. Not only do the low status castes have a limited access to education and especially higher education, which reduces the span of the possible jobs, but the educated workers belonging to those castes tend also to be discriminated against in the access to the more regular and qualified jobs.

The workers' personal characteristics draw some meaningful demarcation lines among the labour force. The impact of age reflects to some extent the gradual absorption of individuals into the labour market, in particular autonomy and regularity in employment increases with age. Acquired characteristics like educational qualifications play an obvious part in the access to

different types of jobs and labour status; yet inherited attributes like gender and caste have also a significant role in this process. Not only do women form a small minority of the urban work force, but they are moreover totally marginalized in the main sector of activity in Jetpur, the dyeing and printing industry; further they are excluded from the status of employer, and in general more subject to dependent and temporary or seasonal employment. Lastly, they are over-represented in the most vulnerable occupational group in terms of lack of protection and irregularity of employment, the construction workers. A relative degree of occupational specialization by caste and the survival of certain ascriptive hereditary activities are also notable. Furthermore, low-caste workers tend to be employed in more irregular and unprotected jobs, and they seldom accede to the status of employer. Differential access to education according to caste strengthens such discriminations. Thus, the differential pattern of employment according to the individuals' characteristics further reveals the segmented nature of the urban labour market. The situation observed in Jetpur is in line with research conducted in other parts of India. These urban studies illustrate the pattern of segmentation of the urban labour market along ascribed characteristics of workers. Such a pattern is associated with low occupational and labour status mobility (Harris et al., 1990; Breman, 1980).

Migration attributes

As shown in the previous chapter, in-migration had a significant part to play in the formation of the urban labour force. By examining the relative distribution of in-migrant and native workers among different occupations and labour status, as well as the inter-relationships between the workers' migration attributes and employment characteristics, the role of the migrant workers in the urban economy can be further highlighted.

Native versus in-migrant workers: and duration of residence

The in-migrant workers are not evenly distributed in the

various sections of the Jetpur labour market. The dyeing and printing industry played a strategic role in the absorption of the male in-migrants, especially of the most recent cohort: 62 per cent of the male workers who arrived in 1985-88 and 55 per cent of those who arrived in 1979-84 are employed in this sector, as against 45 per cent of the male natives. The differential contribution of the in-migrants' cohort in the various occupational groups is shown in Figure 5.18.

As regards occupations directly related to the dyeing and printing industry, a contrasting pattern emerges between entrepreneurs and production workers. In proportion to their respective share in the total male working population, the natives and the in-migrants prior to 1979 are over-represented among entrepreneurs (58 per cent and 33 per cent as against 49 per cent and 23 per cent respectively), while the in-migrants who had arrived since 1979 are over-represented among production workers (38 per cent as against 28 per cent). This differential pattern reflects the history and development of this industry in Jetpur.

Apart from a notable stream of Sindhi–Khatris who arrived between 1947 and the early fifties, the in-migration of entrepreneurs to Jetpur gained momentum in the sixties and the seventies. The in-migration of the Kanbi entrepreneurs is clearly more recent than that of the Khatri entrepreneurs: most of the Kanbi in-migrants arrived after 1970, while a large majority of the Khatri in-migrants arrived before 1970.[22] On the whole, most of the industrial establishments have been set up by the natives and the in-migrants of longer standing (78 per cent of the in-migrant entrepreneurs arrived before 1979). In contrast, the majority of the industrial production workers are in-migrants, most of whom arrived recently (65 per cent of those migrants have less than 10 years of residence in the town). This suggests that labour migration was vital to help the dyeing and printing industry face its increasing labour requirements during its most recent phase of expansion.

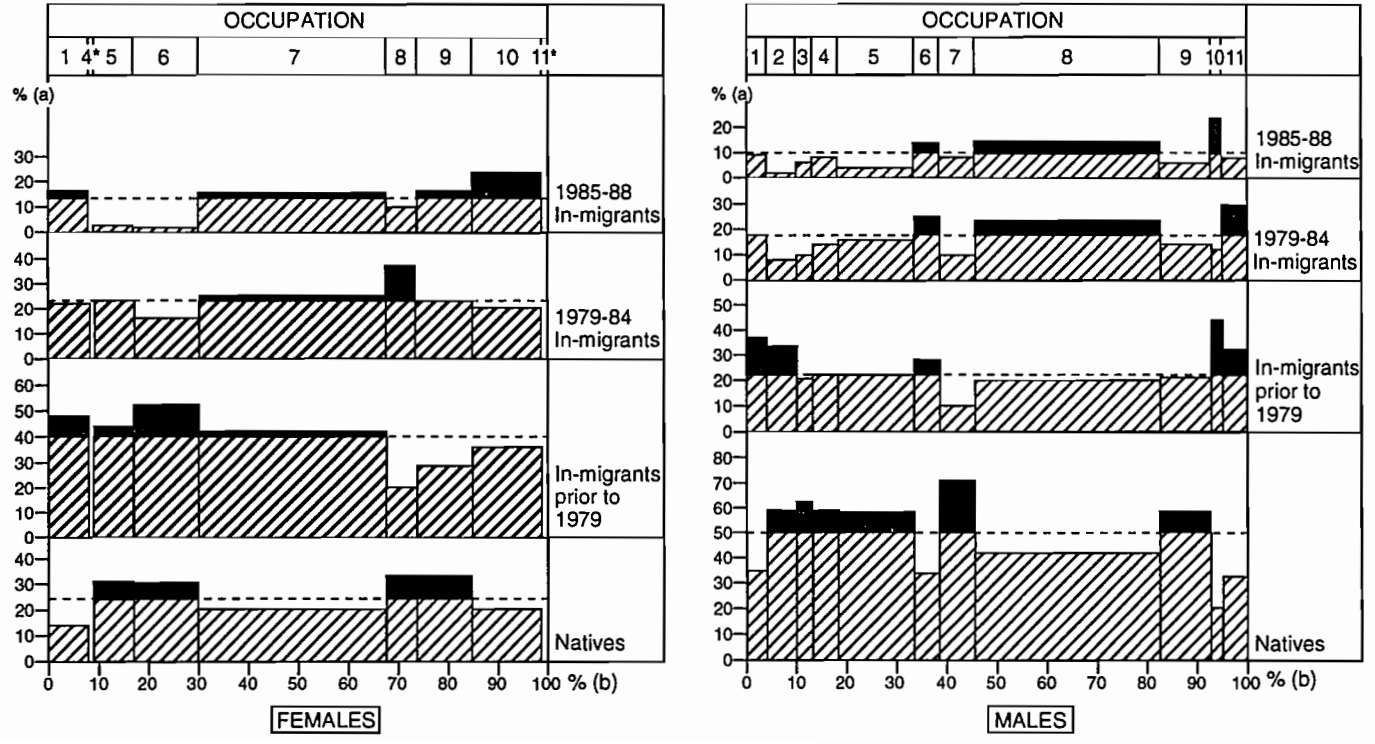
Worth noting too is the fact that among the industrial production workers who reside in the five surrounding villages surveyed, 45 per cent are in-migrants, 83 per cent of whom arrived after 1979. This shows that the villages in the vicinity have also received part of the labour migrants who were

absorbed into the urban industrial sector. This choice of residence can be explained by the less expensive rented accommodation available in the villages, as compared to the higher rents in the urban agglomeration. In addition, in one of the surveyed villages, two large dyeing and printing factories were recently set up. These recruit essentially inter-state migrant workers who are housed in the premises of the plant itself.

The dyeing and printing industry is not, however, the sector of activity in which the contribution of in-migrant workers is the highest (56 per cent—in all the occupations of this sector together—which is close to the average of 55 per cent). Among male workers, in-migrants are predominant and proportionately over-represented in professional and technical occupations (especially those who came prior to 1979) as well as in construction, transport and service-related occupations. The first occupations often correspond to appointments or transfers in qualified governmental jobs, whereas the others most often correspond to unskilled work, and may constitute a kind of refuge rather than an occupational choice for the new town-dwellers. This pattern of over-representation of in-migrants is also true for female workers in professional and technical occupations and, for recent in-migrants, in construction. Conversely, among male workers, the natives are predominant in agriculture (71 per cent of the workers), and they also form the majority in managerial, clerical and sales occupations, as well as among production workers not employed in the printing industry (essentially craftsmen).

The distribution of male workers by duration of residence across characteristics of employment shows a pattern which is evolving from more dependent and casual employment for the newcomers towards greater autonomy and better regularity for ancient in-migrants and natives.[23] The status of employee in the private sector is predominant in the most recent cohort of in-migrants and casual employment is more frequent, while the relative frequencies of the status of own-account workers and employers, as well as regularity of employment, rise with the duration of residence in town, to be the highest among natives. For example, only 1.5 per cent of the 1985-88 migrants are employers and 12 per cent self-employed, as against 16 per cent and 24 per cent for the natives; conversely, 76 per cent of

Figure 5.18
Percentage distribution of employed persons by duration of residence in town in each occupation and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

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8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

(a) percentage of workers in each category of duration of residence in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/female workers.

--- average percentage of workers in each category of duration of residence among all male/female workers.

▪ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

the former are employees in the private sector as against 44 per cent of the latter. Further, 43 per cent of the 1985-88 migrants are regularly employed, as compared to 66 per cent and 69 per cent respectively of the migrants prior to 1979 and of the natives. The natives, who could represent the ultimate stage of integration, are the majority among employers and own-account workers, and over-represented as compared to their share in the total work force (Figure 5.19). The fact that the natives are also strongly dominant among unpaid helpers is not contradictory, as these familial helpers belong usually to families owning an agricultural, commercial or manufacturing enterprise, and are more likely to become self-employed or employers in the future. As for the particularly high proportion of natives among temporary or seasonally employed workers, it results from the predominance of native workers in agriculture.

This pattern could suggest a gradual process of absorption into the urban labour market. This hypothesis does not, however, explain in a satisfactory way the observed differential pattern, as it would presuppose a stability of the employment structure in Jetpur over time (which is obviously not the case) as well as internal mobility in the labour market (which proves to be limited). The industrial development of Jetpur has engendered a growing working class, and attracted a large number of in-migrants. Therefore, the over-representation (in proportion to their share in the total work force) of in-migrants with less than 10 years of residence among employees in the private sector, as well as among casual labourers, results from this development. This also reflects a certain degree of segmentation of the labour market.

Among males, recent in-migrants appear to be more subject to casual employment, as compared to native workers in particular (Figure 5.20); this is not the result of a deliberate process of discrimination but due to the prevalence of wage-earners in the private sector among this group of migrants. A further analysis focusing on employees in the private sector shows that the respective percentages of natives and in-migrants from different cohorts among casual labourers are proportionate to their shares among all employees of the private sector.

In terms of annual duration of employment (all types of employment status included), there is no notable deviation

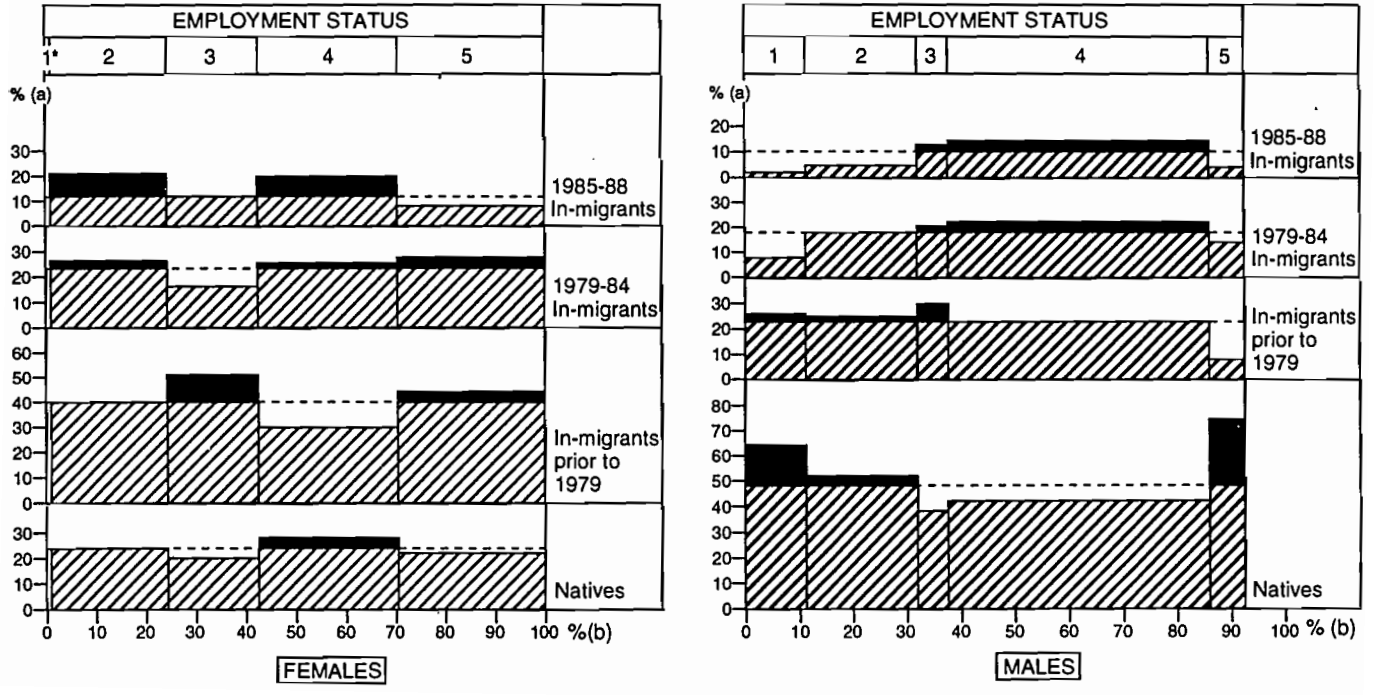
between in-migrants and natives, or between in-migrants from different cohorts or different geographical origins. Thus, faced with underemployment in the urban labour market, the status of the migrant *per se* is not a factor of discrimination.

Another by-product of industrial growth is the emergence of a specific form of recruitment in the dyeing and printing factories, the recruitment of contract labour from States other than Gujarat. This explains why most contract labourers in Jetpur are in-migrant workers, and moreover they are recent in-migrants (82 per cent of the contract labourers are in-migrants with less than 10 years of residence in town).

An important point to check is whether a parallel can be drawn between the employment pattern and the educational structure according to migration status and duration of residence in town. Among male workers, the illiteracy ratio is higher for in-migrants than for natives, and among in-migrants it is even higher when the cohort is more recent (37 per cent for 1985-88 in-migrants, 29 per cent for 1979-84 in-migrants, 21 per cent for in-migrants prior to 1979 and 15 per cent for natives). The proportion of male workers with secondary or higher education varies in the reverse order. Female in-migrant workers are also less educated than natives, but no clear pattern emerges between in-migrants according to their duration of residence.

As regards male workers, the proportionate over-representation of in-migrants in manual jobs whose educational requirements are low (such as service, construction and transport-related occupations) as well as among production workers in the dyeing and printing industry, is effectively in accordance with their lower level of education. The same parallel applies for employees in the private sector and for the categories of casual and contract labour. However, there is neither a systematic nor a simple correspondence between the employment pattern and the educational characteristics when natives and in-migrants from different cohorts are compared. For example, the analysis of the workers' occupational structure and migration characteristics for different levels of education (illiterate, primary and middle, secondary and higher) confirms the contrasting pattern underlined above between entrepreneurs and production workers in the dyeing and printing industry; in

Figure 5.19
Percentage distribution of employed persons by duration of residence in town in each employment status and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

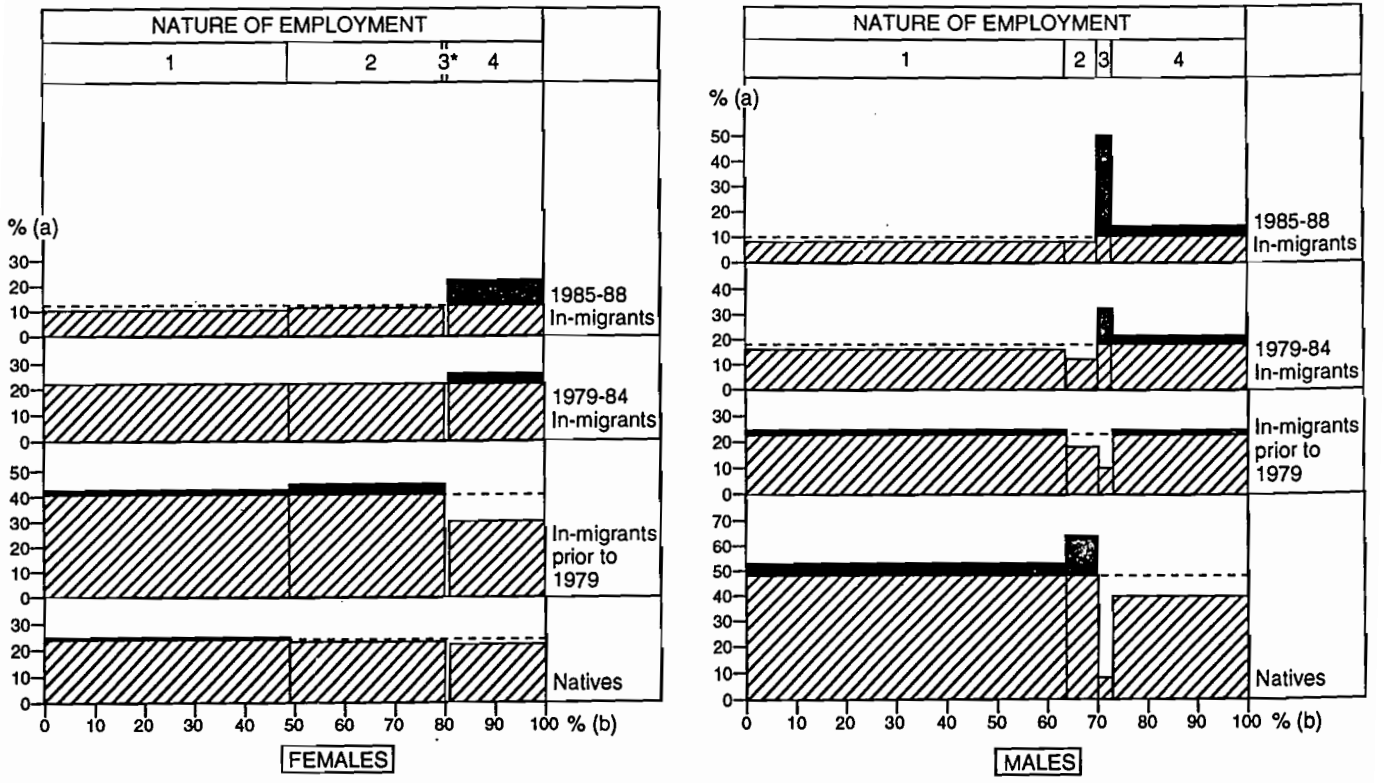
(a) percentage of workers in each category of duration of residence in the category of employment status under consideration.
(b) percentage of workers in each employment status among all male/female workers.

--- average percentage of workers in each category of duration of residence among all male/female workers.

▓ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.20
Percentage distribution of employed persons by duration of residence in town in each nature of employment and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

(a) percentage of workers in each category of duration of residence in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all male/female workers.

--- average percentage of workers in each category of duration of residence among all male/female workers.

above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

almost all cases, this further confirms the over-representation of the natives in the occupational groups already described. Thus, some specificities clearly emerge and cannot be explained by differentials in educational credentials. They reflect other types of endowment for which the natives of Jetpur are more advantaged (like agricultural land or capital) as well as the pull of the urban labour market which has engendered specific migratory channels and distinct cohorts at the different stages of the industrial development of Jetpur.

The distribution of female workers by duration of residence across occupational and employment categories shows some differences in comparison with the pattern for male workers (as illustrated in Figures 5.18, 5.19, 5.20). These are, however, less meaningful for the analysis of the labour market segmentation as most of the in-migrant women have moved for their marriage, many of them belonging to native households. In addition, the differentials observed for females are statistically less significant, in particular with regard to the nature of employment.

Reasons for in-migration

It seems interesting to check whether in-migrant workers who came to Jetpur especially for employment reasons (the labour migrants in the strict sense of the word) have an economic profile different from other in-migrants. Such differential analysis can further highlight the pull of the different urban functions. This question is more relevant for male in-migrant workers, 57 of whom came for employment-related reasons, while other migrants correspond essentially to induced ancillary movements. Female in-migrant workers who came to Jetpur for employment reasons are marginal (5 per cent); the majority moved there for their marriage (54 per cent), and the others as ancillary in-migrants (41 per cent).

Among male workers, labour in-migrants are proportionately over-represented in construction work as well as (by decreasing order) service, professional and technical occupations, and transport-related occupations. In the group of production workers in the dyeing and printing industry, labour in-migrants are represented in proportion to their share in the male working population. Concerning female workers, the

share of labour migrants is also remarkable in professional and technical occupations (27 per cent of all female workers in this occupational group), whereas it remains almost negligible in all other occupational groups (Figure 5.21).

As expected, in-migrants who moved for employment reasons are also proportionately over-represented among employees in the public sector, as government officers are subjected to the common rule of appointment and transfer involving geographical move (Figure 5.22). Further, labour in-migrants are predominant among contract labourers; they represent 87 per cent of all male workers under the contract system (Figure 5.23). These are manual workers in the dyeing and printing industry and they were recruited by intermediary agents in their native region or in other textile towns.

The dyeing and printing industry (all occupations in this sector included) does not exhibit a notably higher proportion of labour in-migrants than the Jetpur labour market as a whole (29 per cent of migrants for employment reasons as against 26 per cent among all workers). The industrial development, which affected the entire urban economy of Jetpur, gave an impetus to other branches of activity. These have also attracted large numbers of migrants, whose contribution to certain activities is sometimes proportionately higher. Nevertheless, half the number of labour in-migrants are employed in the dyeing and printing industry. In terms of employment opportunities provided, this industry constitutes the major pull of the town.

Urban/rural origin

The rural versus urban origin of the in-migrants introduces further differences in the employment pattern of the in-migrant workers (Figures 5.24, 5.25 and 5.26). Natives from rural areas form the dominant group among the in-migrant workers (69 per cent). In addition, they are proportionately over-represented in manual jobs such as service and construction work, and among production workers in the dyeing and printing industry, for males as well as for females. In particular, 45 per cent of male production workers in the dyeing and printing industry are in-migrants of rural origin, as against 36 per cent in the male working population. Transport workers can be added to this list for males, while among females in-migrants

of rural origin are predominant in agriculture (corresponding mainly to marriage migration). Further, male rural–urban in-migrants are noticeable for their proportionately high representation among employees, while they are strongly under-represented among employers. Correlatively, they are over-represented among casual labourers. Last but not the least, they are predominant in the category of contract labour.

In-migrants from urban areas are remarkable for their share in professional and technical occupations (for male as well as female workers) which further explains their over-representation in the category of employees in the public sector. Male in-migrants of urban origin are also over-represented among entrepreneurs in the dyeing and printing industry and—correlatively—among employers. Not only is their representation in this occupational group higher than the average share among all workers (25 per cent as against 15 per cent), but they also form a larger group than the rural–urban in-migrants in this occupation (who account for 17 per cent), although the latter are more than twice as frequent as the former among the total male work force.

The differential occupational pattern between rural and urban in-migrant workers is in accordance with the disparities in their level of education. In-migrants of urban origin are noticeably better educated than in-migrants of rural origin, males as well as females. For example, 15 per cent of the male urban–urban in-migrants are illiterate while 14 per cent have attended college or above, as against 32 per cent and 6 per cent respectively for rural–urban in-migrants.

However, once again, educational credentials are not sufficient to explain the occupational specificity of every migration stream. In particular, among each category of male workers differentiated by their level of education, the proportion of those employed as production workers in the dyeing and printing industry is systematically higher for in-migrants from rural areas than for in-migrants from urban areas (the corresponding proportions are, respectively, 46 per cent as against 33 per cent among the illiterate, 55 per cent as against 43 per cent among workers with primary or middle education, and 39 per cent as against 25 per cent among workers with secondary or higher education.[24] Conversely, among male workers with

secondary or higher education, the proportion of entrepreneurs in the dyeing and printing industry is still significantly lower for rural–urban in-migrants (7 per cent) than for urban–urban in-migrants (16 per cent).[25] These persistent disparities point again to the existence of distinct migratory streams corresponding to specific attraction effects of the urban labour market and modes of economic insertion.

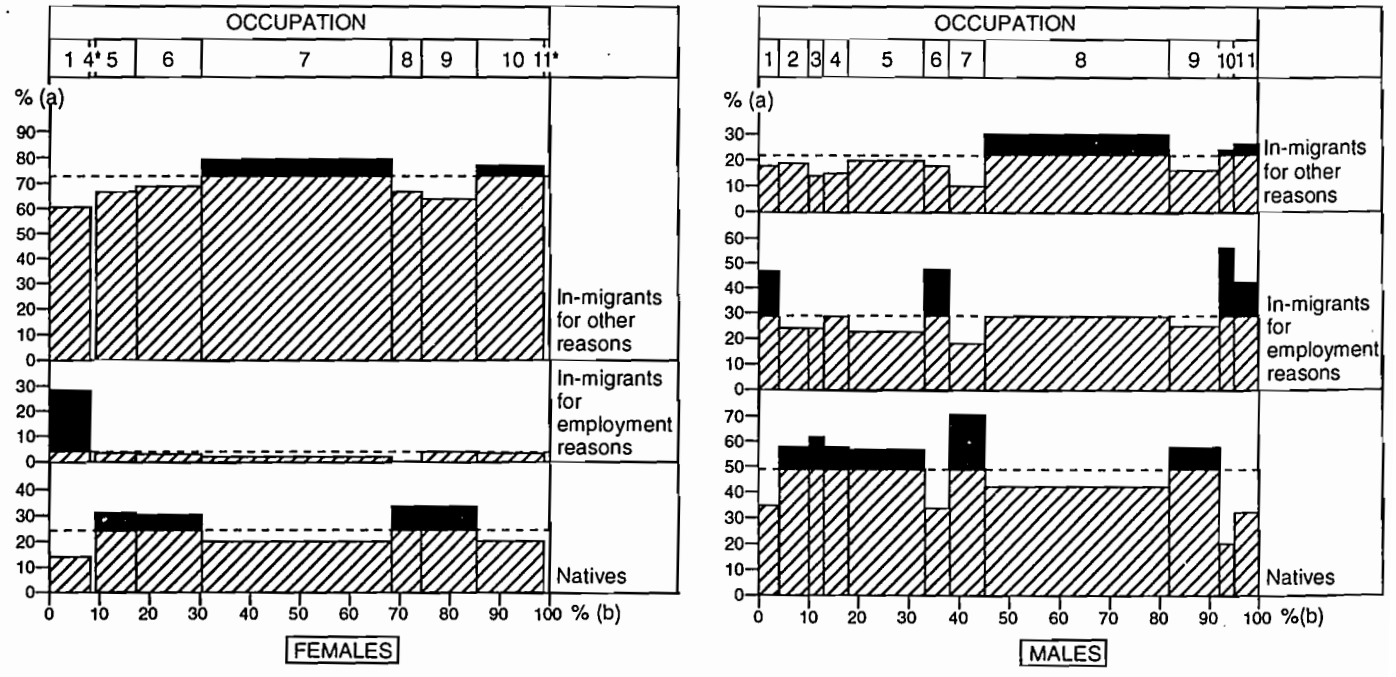
Geographical origin

Though most of the in-migrant workers (69 per cent of them) come from the surrounding districts (Rajkot district where Jetpur is located and the two adjoining districts of Junagadh and Amreli), there are some significant specificities according to the occupational group (Figure 5.27). Occupations relating to the dyeing and printing industry deserve particular consideration.

As in the case of all the in-migrant workers in Jetpur, Gujarat is the most common of the native places of the in-migrant production workers of the dyeing and printing industry (81 per cent), with a high concentration in Rajkot, Junagadh and Amreli districts (62 per cent). However, as compared to the other occupational categories, the geographical catchment area of the textile industry shows a significant inter-state stream (18 per cent of the in-migrant production workers), particularly from Uttar Pradesh, Rajasthan and Bihar. Those inter-state migrant workers correspond essentially to the already mentioned contract labourers.

Most of the in-migrant entrepreneurs in the dyeing and printing industry are natives of Gujarat (81 per cent); moreover, all the native places of the migrants from Gujarat are concentrated in Saurashtra. Rajkot district alone accounts for 40 per cent of all the migrant entrepreneurs' native places, and the adjoining districts of Junagadh and Amreli for 27 per cent and 7 per cent respectively. Some caste-based particularities are discernible. All the Kanbi entrepreneurs are natives of Rajkot, Junagadh or Amreli districts. Among migrants from States in India other than Gujarat, only a very few entrepreneurs can be mentioned. They have come from Rajasthan, Maharashtra and Uttar Pradesh, and belong to traditional trading communities (Banias—especially Marwaris and Lohanas). Last but not least, there is a sig-

Figure 5.21
Percentage distribution of employed persons by reason for in-migration in each occupation and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

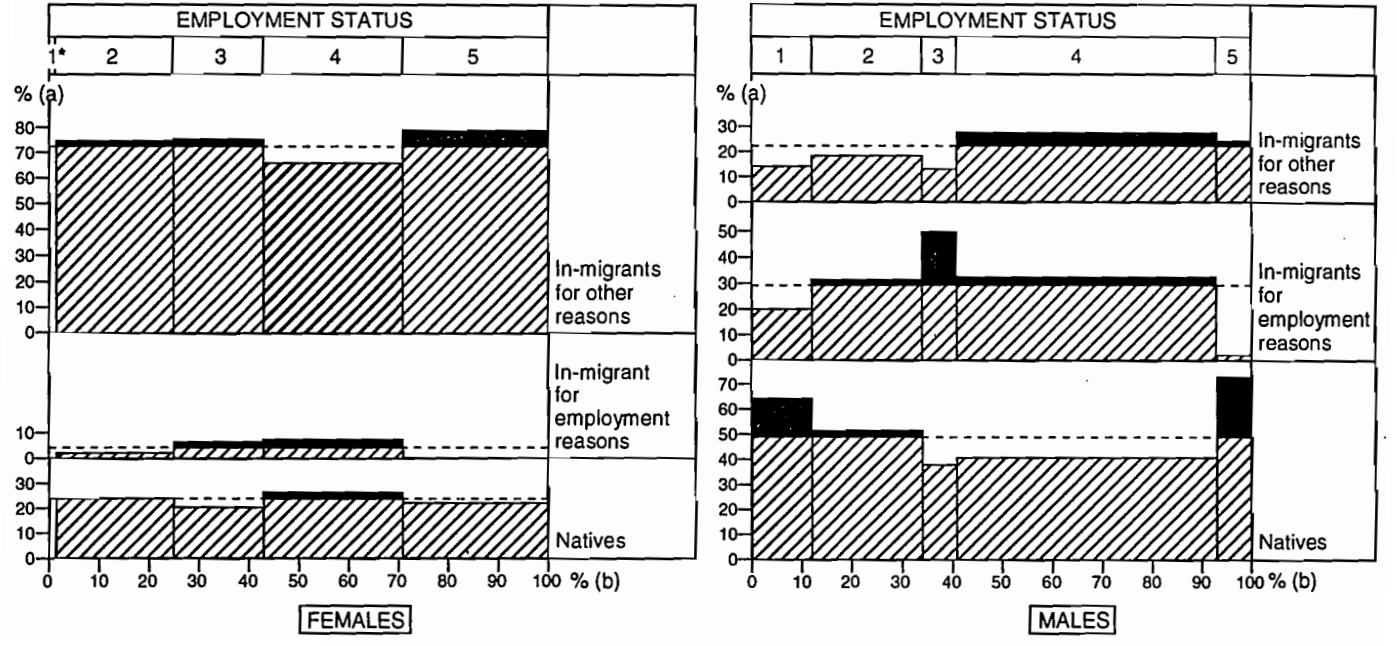
(a) percentage of workers in each category of reason for in-migration in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/female workers.

--- average percentage of workers in each category of reason for in-migration among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.22
Percentage distribution of employed persons by reason for in-migration in each employment status and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

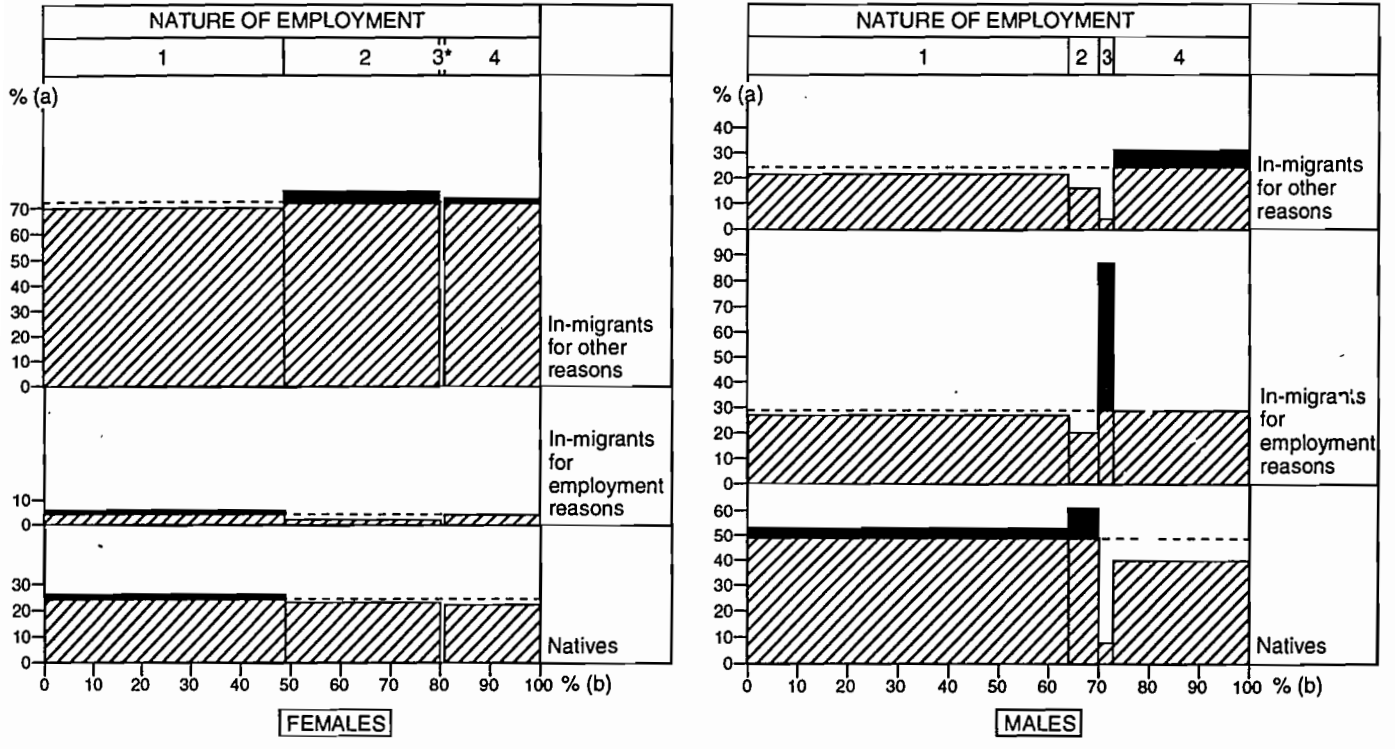
(a) percentage of workers in each category of reason for in-migration in the category of employment status under consideration.
(b) percentage of workers in each employment status among all male/female workers.

--- average percentage of workers in each category of reason for in-migration among all male/female workers.

▪ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.23
Percentage distribution of employed persons by reason for in-migration in each nature of employment and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

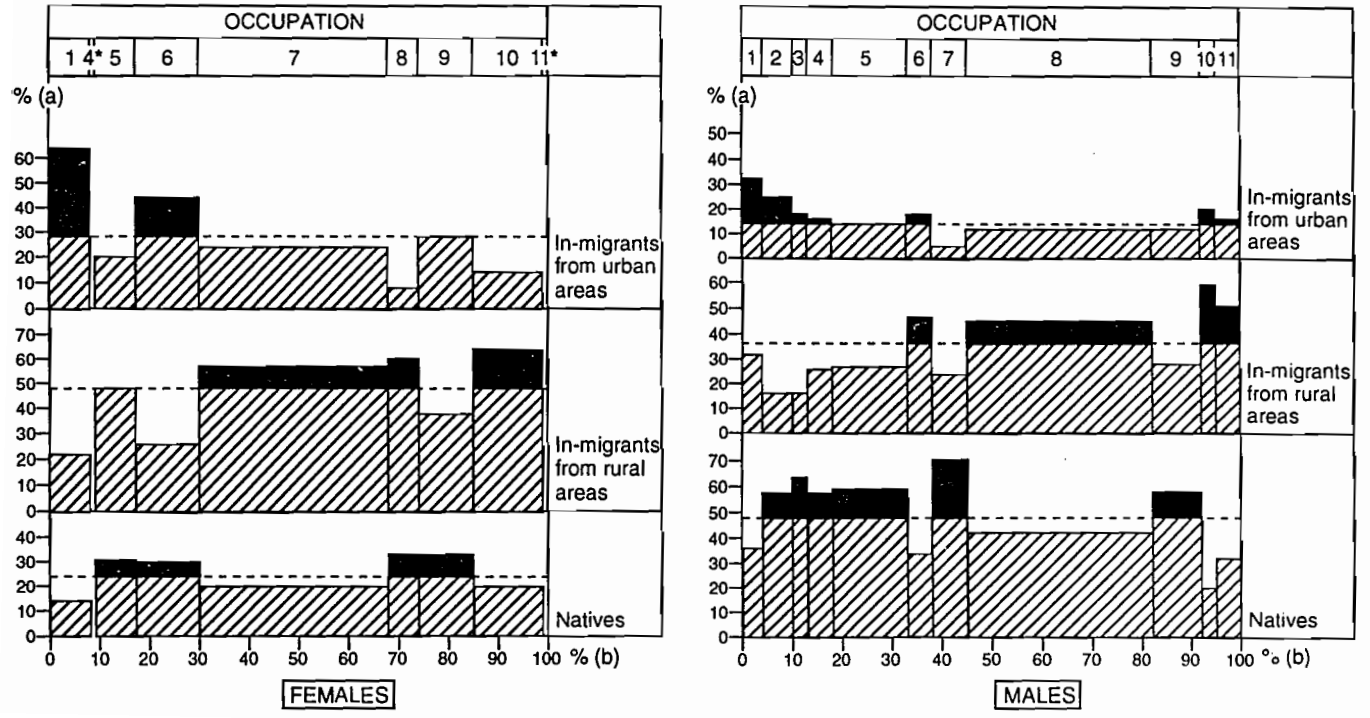
(a) percentage of workers in each category of reason for in-migration in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all male/female workers.

--- average percentage of workers in each category of reason for in-migration among all male/female workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.24
Percentage distribution of employed persons by rural/urban origin in each occupation and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

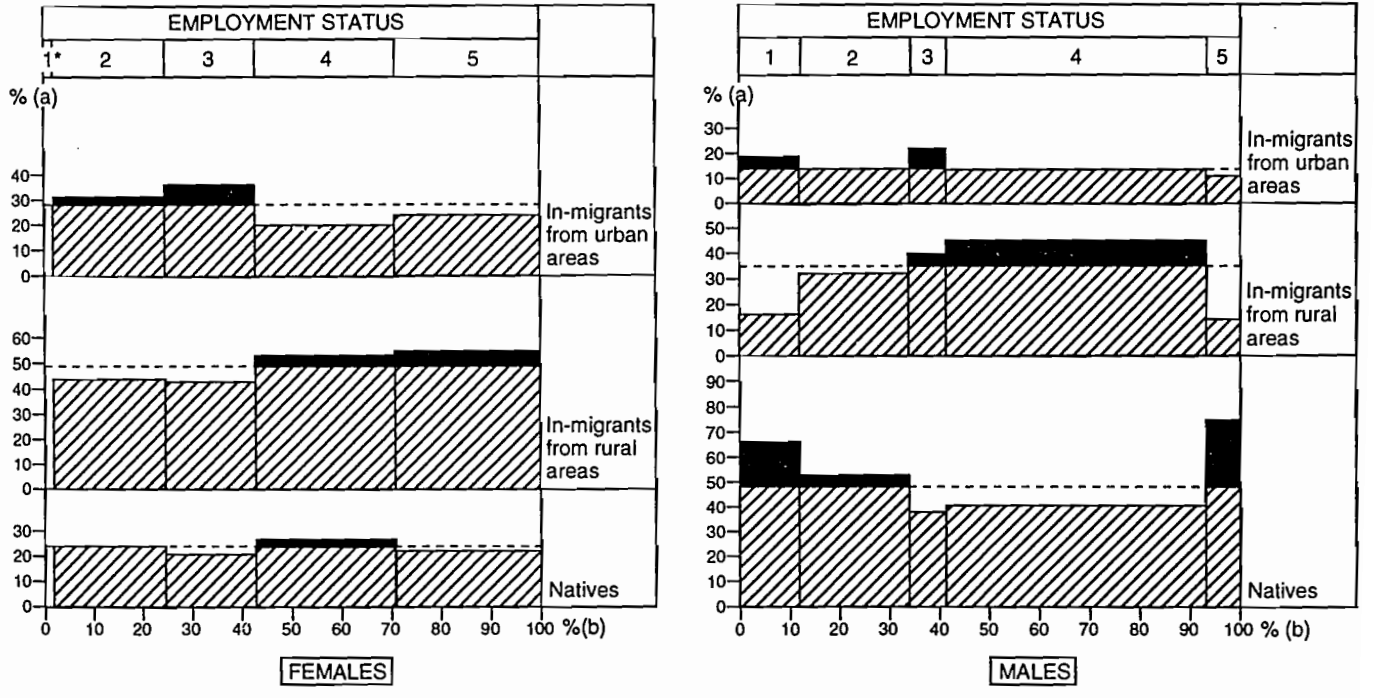
(a) percentage of workers in each area of origin in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/female workers.

--- average percentage of workers in each area of origin among all male/female workers.

▪ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.25
Percentage distribution of employed persons by rural/urban origin in each employment status and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



EMPLOYMENT STATUS:

1: employer
2: own-account worker
3: employee in public sector
4: employee in private sector
5: unpaid helper

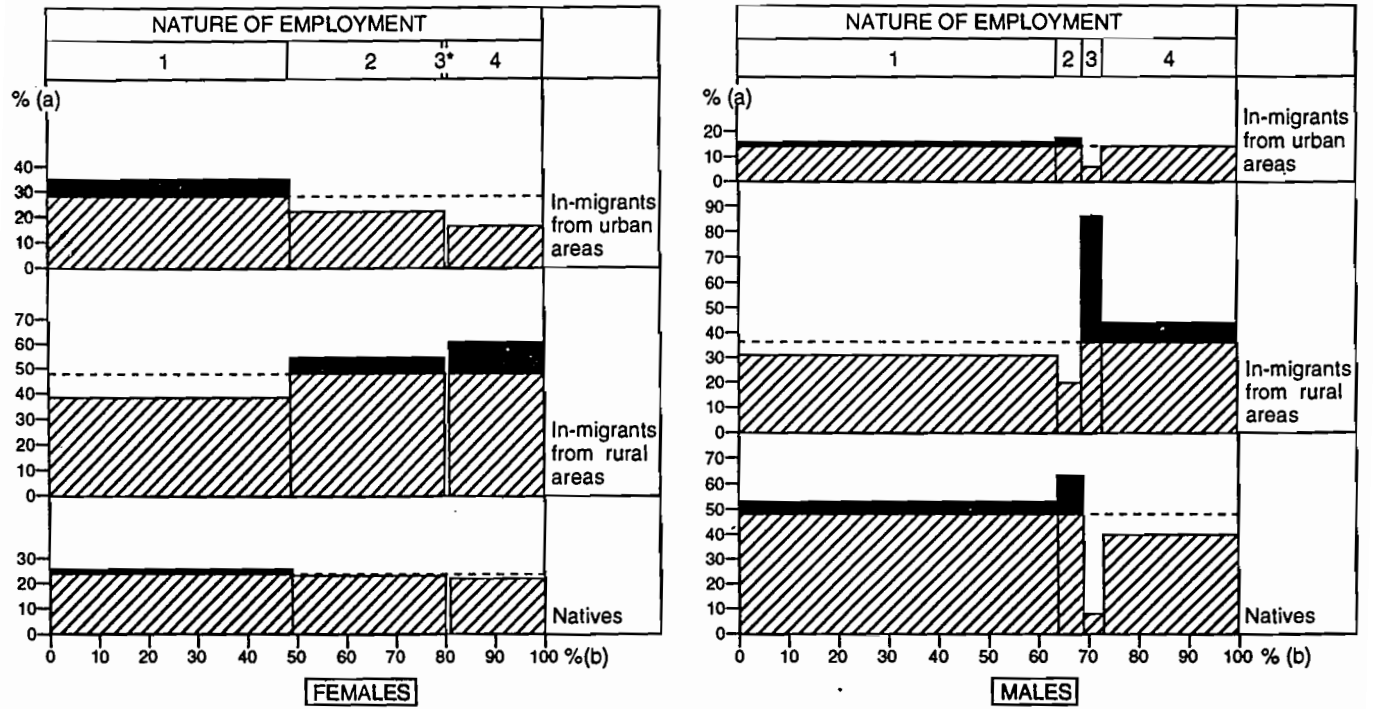
(a) percentage of workers in each area of origin in the category of employment status under consideration.
(b) percentage of workers in each employment status among all male/female workers.

--- average percentage of workers in each area of origin among all male/female workers.

▓ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.26
Percentage distribution of employed persons by rural/urban origin in each nature of employment and for each sex.
Workers residing in the Jetpur urban agglomeration in 1988.



NATURE OF EMPLOYMENT:

1: regular, permanent
2: temporary, seasonal
3: contract labour
4: casual

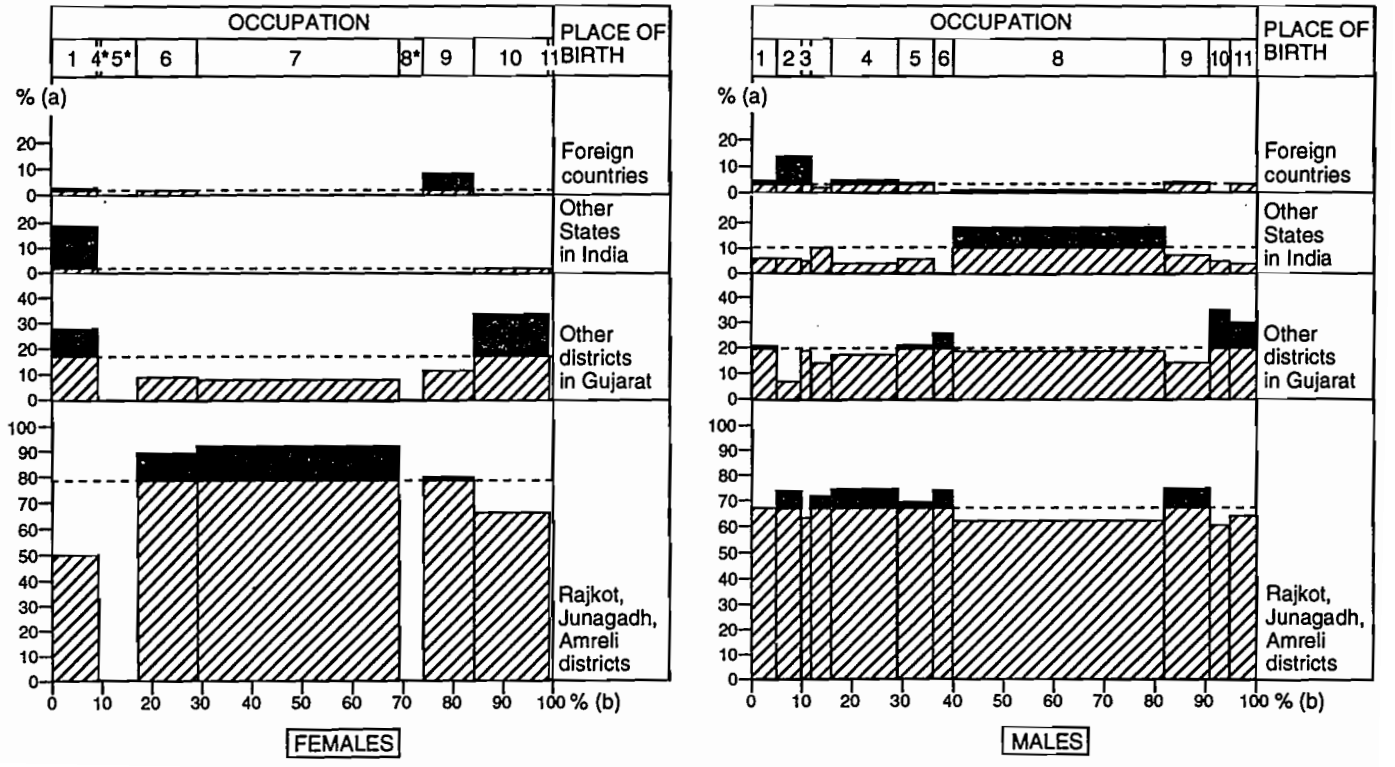
(a) percentage of workers in each area of origin in the category of nature of employment under consideration.
(b) percentage of workers in each nature of employment among all male/female workers.

--- average percentage of workers in each area of origin among all male/female workers.

▪ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers. *Source: The 10% household survey - 1988.*

Figure 5.27
Percentage distribution of employed persons by place of birth in each occupation and for each sex.
In-mighrant workers residing in the Jetpur urban agglomeratoin 1988.



OCCUPATIONS:

1: professional and technical workers
2: entrepreneurs in the dyeing and printing industry
3: other managerial workers
4: clerical workers
5: sales workers
6: service workers
7: farmers and related workers
8: production workers in the dyeing and printing industry
9: other production workers
10: construction workers
11: transport workers

(a) percentage of workers in each place of birth in the category of occupation under consideration.
(b) percentage of workers in each occupation among all male/female in-migrant workers.

--- average percentage of workers in each place of birth among all male/female in-migrant workers.

■ above the mean * percentage distribution not computed (less than 30 observations)

Surfaces are proportional to the number of workers.

Source: The 10% household survey - 1988.

nificant group of entrepreneurs from Sind in Pakistan (13 per cent of the in-migrant entrepreneurs). They arrived in India soon after the Partition; they are essentially Khatris who were already engaged in dyeing and printing in their place of origin.

Though the Jetpur dyeing and printing industry attracted many non-native entrepreneurs, the entrepreneurial dynamics at the basis of the industrial development of the town proves to be deeply rooted in the region, with 91 per cent of the entrepreneurs (native or in-migrant) belonging to Saurashtra.

In Jetpur, as has been also observed in other Indian towns (Oberai and Singh, 1983; Oberai, Prasad and Sardana, 1989; Harris, Kannan and Rodgers, 1990), distinct patterns of occupation and labour status do emerge between in-migrants and natives, and between in-migrants from different cohorts of arrival, in-migrants of different geographical origins and in-migrants with different motivations. Such patterns cannot be entirely explained by differentials in educational credentials. For example, the over-representation of natives in certain occupations and among employers and the self-employed results also from their better endowment in capital and land. Further, certain migratory streams correspond to differential attraction effects of the urban labour market in Jetpur, to specific recruitment pools and to modes of economic insertion. In particular, the history and development of the textile printing industry in Jetpur is reflected in the distinct patterns of migration of entrepreneurs and production workers. It is not, however, in the industrial sector that the contribution of in-migrants to the labour force is the highest; nevertheless, migrant workers play a strategic role by helping the dyeing and printing industry to fulfil its increasing labour requirement.

Spatial segregation

In this last section, a specific form of differentiation among the urban working population is examined, that of spatial residential segregation. According to the traditional pattern proposed by Sjoberg (1960) for pre-modern Asian towns, the urban morphology reflected a model of socially stratified societies.

The high status people were concentrated in the centre of the town where most economic activities (arts, trade and commerce) as well as the seat of political power were located, and the low status people were confined to the urban periphery. As stressed by Brush (1977), various empirical studies show how this type of urban structure has survived into the present time in many Indian cities. However, Brush (1977), Rao (1983) and Schenk (1986), have argued that this pre-industrial urban pattern cannot apply strictly to the recent urban development in India as it proves to be more complex.

With reference to the traditional structure of Indian cities, the industrial development that has taken place in Jetpur has led to a spatial residential segregation among two opposing classes, the entrepreneurs–industrialists and the hired industrial production workers. The focus is thus on the population engaged in the leading economic sector of this town, the textile dyeing and printing industry. In Chapter 3, it has been shown that, in the process of the urban and economic development of Jetpur, the household industry was supplanted by factories operating on a larger scale. This was accompanied by a dissociation of working and living spaces for the entrepreneurs, and the formation of an industrial working class. As examined in the following pages, the current spatial distribution of the residences of the entrepreneurs on the one hand and of those of the production workers on the other, reveals that residential and social segregation has not only continued but has become more pronounced.[26]

Present spatial distribution of residence of entrepreneurs and production workers

With regard to their place of residence, the entrepreneurs are relatively more concentrated in the core of the city (the commercial and business area) whereas they are seldom found residing in the peripheral zones, such as the northwestern suburb of Navagadh or the eastern and southern outskirts of the agglomeration (Figure 5.28). While the entrepreneurs form 5 per cent of the total working population of the urban agglomeration, they constitute between 10 per cent and 16 per cent of the population in certain centrally located zones. In terms of population concentration, 33 per cent of all the entrepreneurs

live in these central zones which account only for 14 per cent of the total working population.

The production workers of the dyeing and printing industry are relatively less concentrated within the urban agglomeration when compared to the entrepreneurs: for instance, half the number of industrial workers live in zones accounting for one-third of the total urban work force, whereas half the number of entrepreneurs live in zones accounting for only one-fourth of the total urban work force. This differential concentration pattern can be further measured by Gini's coefficient for each socio-occupational group: 0.237 against 0.429 respectively.[27] Nevertheless, the workers' places of residence are not uniformly distributed within the urban area (Figure 5.29). The map of the spatial distribution of the industrial production workers' places of residence is almost an obverse of that of the entrepreneurs: the highest percentages of industrial workers in the working population of corresponding zones are recorded in the outskirts of the urban agglomeration, whereas the lowest are found in certain central zones. Thus, there is a clear trend towards spatial segregation according to socio-economic demarcation lines, which has even resulted in mutual exclusion in certain zones.

One striking example of the above is Bhojadhar, an industrial workers' pocket located in a distinct outgrowth, southeast of the town. There the proportion of industrial workers in the working population reaches 64 per cent (as against 33 per cent on the average), whereas the entrepreneurs are totally absent. Bhojadhar, an outgrowth of Jetpur, developed in the late seventies, and more particularly in the mid-eighties, when available fallow land was encroached upon by settlers. The former village of Navagadh, northwest of Jetpur, has also turned into an industrial working-class suburb, with 46 per cent of its working population employed as production workers in the dyeing and printing industry.

As mentioned above, half the number of industrial production workers are concentrated in zones accounting for one third of the total urban work force. These are the zones where the percentage of industrial workers in the working population is above 45 per cent, and these zones are essentially located in the periphery of the agglomeration (north of the Navagadh railway

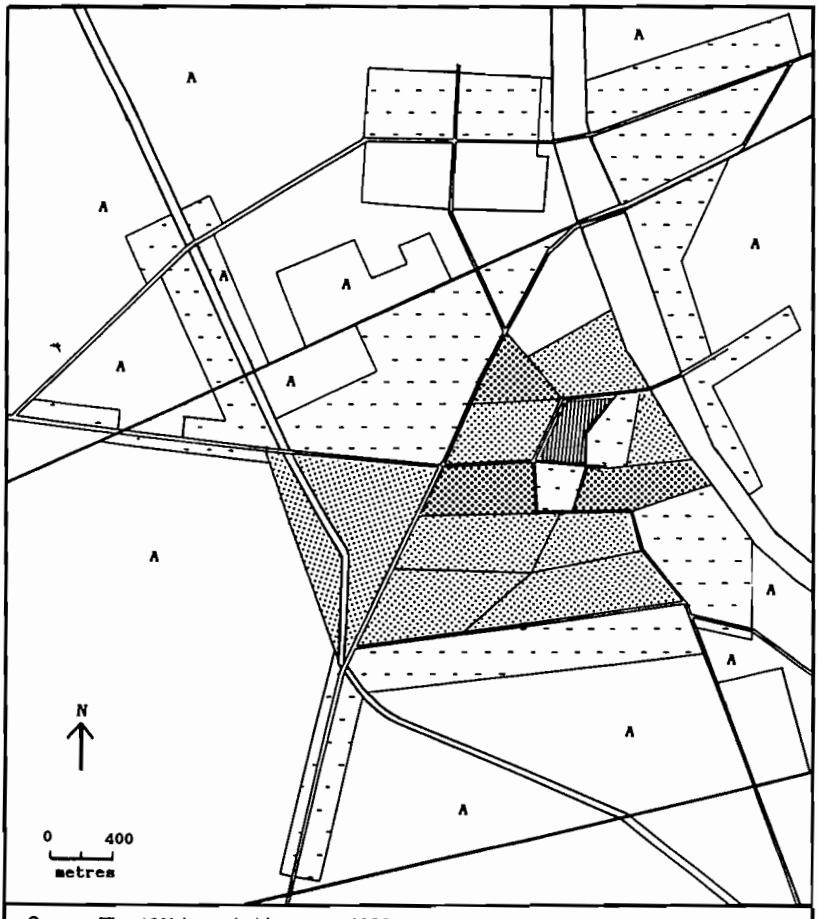
line, east of the Bhadar river, southeastern outgrowth of Bhojadhar).

The juxtaposition of the maps of the places of residence of entrepreneurs and production workers on the one hand, and of the map showing the location of the industrial establishments on the other (Figure 3.3), clearly shows two opposite trends: the segregation of the working space of the entrepreneurs from their living space; and the intermingling of work sites and residential zones of the production workers living in the urban agglomeration. An example of the close proximity between working and living spaces among the industrial production workers is the settlements of in-migrant workers living in huts just outside the gates of the factories, and the inter-state migrant labourers housed in the premises of the factory itself. The consequences of this extreme case of integration of working and living spaces will be analysed in the chapter devoted to the workers and their working conditions.

Class segregation or caste segregation?

A tendency towards spatial segregation between two opposing classes, namely the entrepreneurs–employers of the textile printing industry and their hired production workers, has been emphasized in the previous section. However, the intrinsic nature of this segregation should be studied further to determine whether it results primarily from a traditional caste-based residential segregation associated with a caste-based occupational specialization. Having discussed earlier the caste composition of the occupational groups generated by the development of the dyeing and printing industry in Jetpur, it is necessary to examine the pattern of residential segregation by caste, in order to appraise the impact of the latter upon the pattern of spatial segregation by class. A review of studies dealing with social structure and spatial organization in contemporary urban India confirms the significance of caste as a factor of residential clustering (Gandhi, 1983; Nobel and Dutt, 1977; Schenk, 1986). An examination of the general residential pattern of the population of the Jetpur urban agglomeration according to caste or community groups also indicates some tendencies of concentration and segregation.[28] However, the exposition will be limited to those castes which are significant

Figure 5.28
Percentage of entrepreneurs in the dyeing and printing industry among all employed persons, in different zones of the Jetpur urban agglomeraton in 1988.



Source: The 10% household survey - 1988.

A open space, arable land

0 %

0.1 - 4.9 %

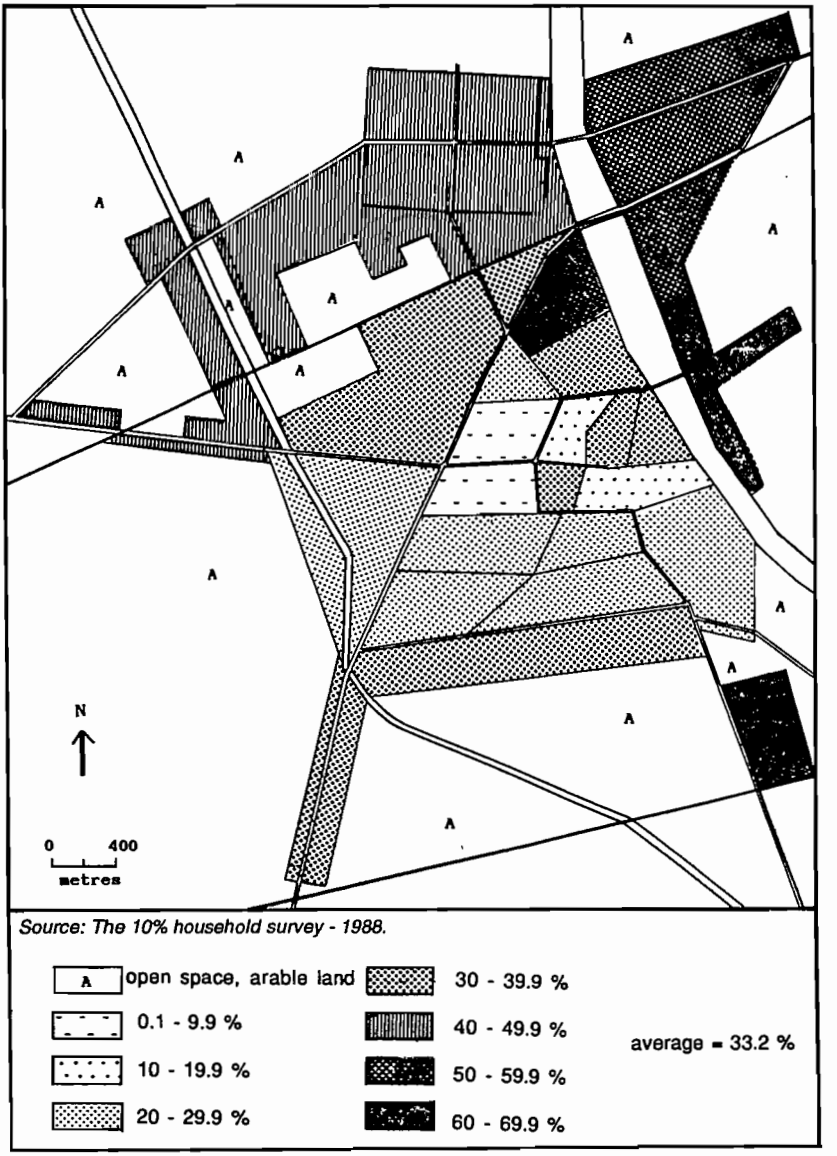
average = 5.4 %

5 - 9.9 %

10 - 14.9 %

15 - 19.9 %

Figure 5.29
Percentage of production workers in the dyeing and printing industry among all employed persons, in different zones of the Jetpur urban agglomeration in 1988.



in the composition of the socio-occupational groups which are analysed in this section.

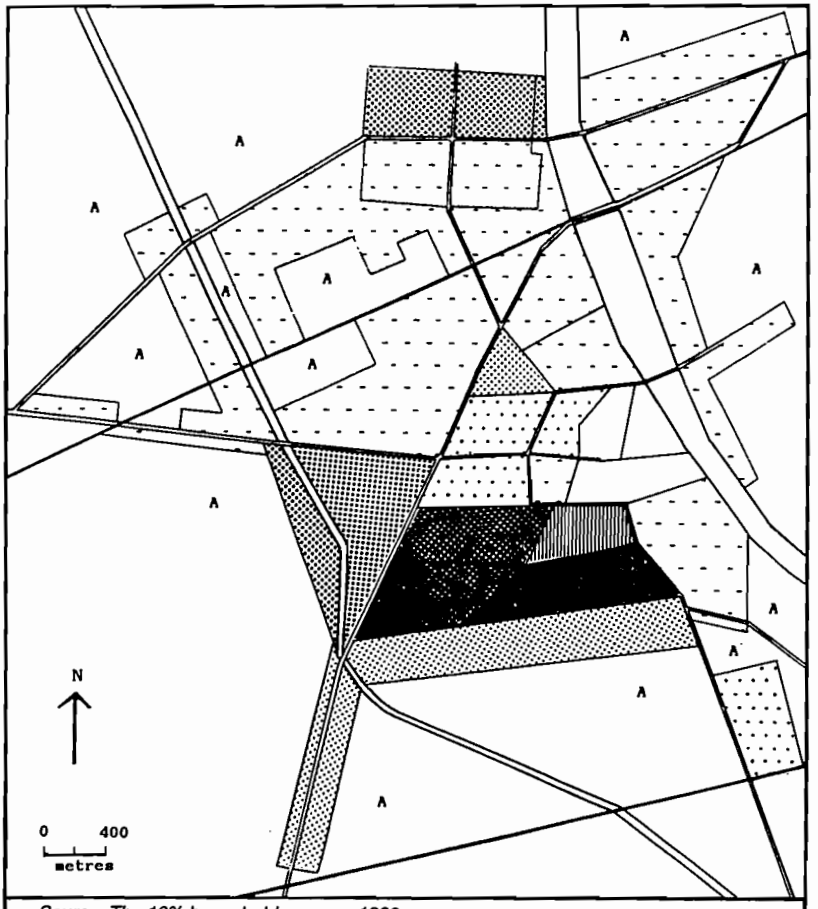
Concerning the entrepreneurs of the dyeing and printing industry, Figures 5.30, 5.31 and 5.32 show the residential distribution of the Kanbis, the Khatris and the Vaniyas (in the working population), to be compared to the residential distribution of the entrepreneurs (Figure 5.28). As measured by Gini's coefficient, the residential concentration of each caste taken separately appears to be higher than the residential concentration of the entrepreneurs: 0.539 for the Kanbis, 0.601 for the Khatris, 0.745 for the Vaniyas, against 0.429 for the entrepreneurs.

About 59 per cent of the Kanbi working population lives in a continuous area located in the southern part of the agglomeration and which accounts for only 22 per cent of the total urban work force. However, the Kanbi residents who have preferred to cluster in this area are mainly cultivators—the traditional and primary occupation of this caste. Thus, the residential distribution of the Kanbis cannot explain the relatively high percentage of entrepreneurs found in the central zones of the town (as related to the population of these zones).

More similarities can be observed between the residential distribution of the Khatris and that of the entrepreneurs. The Khatris are more concentrated in the inner town. In certain zones they constitute 17 per cent to 21 per cent of the corresponding working population, while their proportion in the total urban working population is only 6 per cent. Yet, from another viewpoint, half the number of the Khatri working population lives in a continuous area accounting only for 16 per cent of the total working population. However, there is no systematic congruence between the zones of highest concentration of Khatris and the zones of highest concentration of entrepreneurs. One zone was identified where the Khatris are proportionately over-represented whereas the entrepreneurs are strongly under-represented.

The Vaniyas show a distinct tendency to concentrate around the commercial streets in the core of the town: 62 per cent of the Vaniya working population lives in zones which account only for 12 per cent of the working population of the entire urban agglomeration. Though they are a small minority group (4 per

Figure 5.30
Percentage of Kanbis among all employed persons, in different zones of the Jetpur urban agglomeration in 1988.



Source: The 10% household survey - 1988.

A open space, arable land
0 %
0.1 - 9.9 %
10 - 19.9 %
20 - 29.9 %
30 - 39.9 %
40 - 49.9 %
50 - 59.9 %
no zone: 60 - 79.9 %
80 - 89.9 %

average = 22.3 %

Figure 5.31
Percentage of Khatris among all employed persons, in different zones of the Jetpur urban agglomeration in 1988.

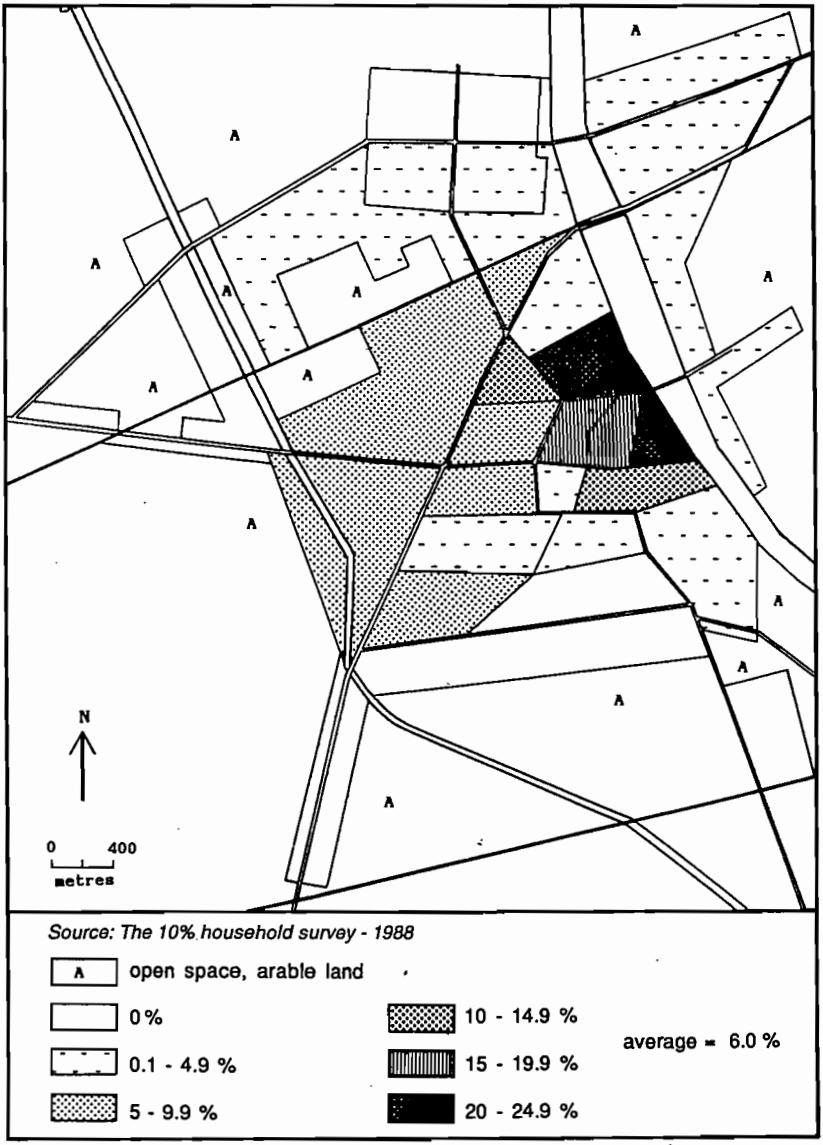
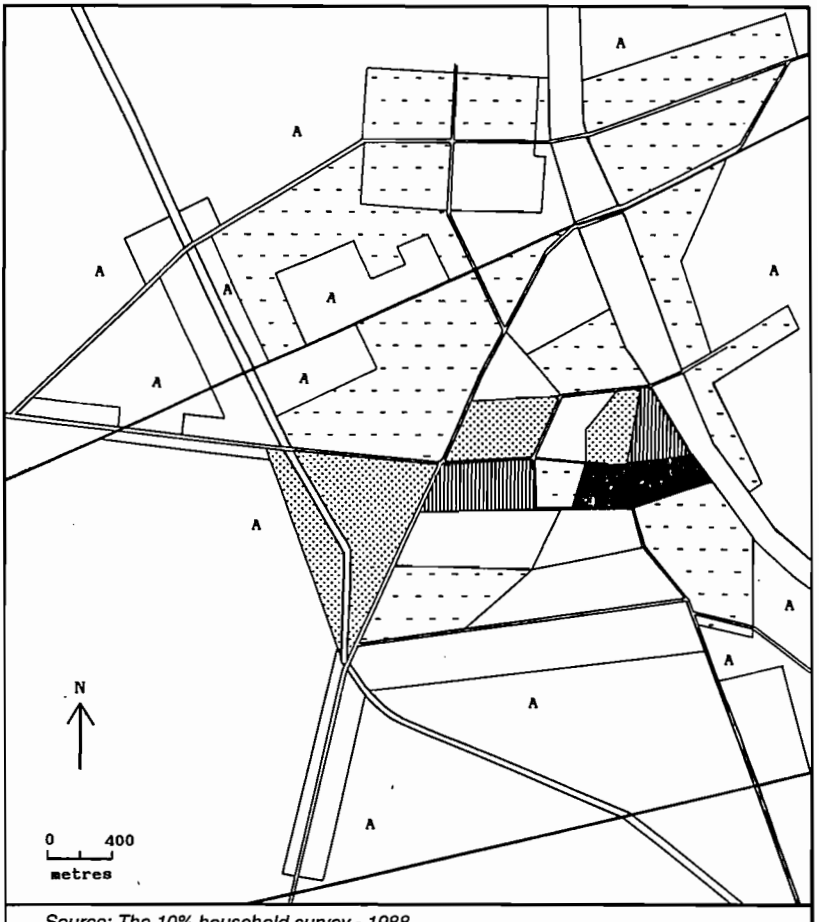


Figure 5.32
Percentage of Vaniyas among all employed persons, in different zones of the Jetpur urban agglomeration in 1988.



Source: The 10% household survey - 1988.

A	open space, arable land	no zone:	10 - 14.9 %
	0 %		15 - 19.9 %
	0.1 - 4.9 %	no zone:	20 - 34.9 %
	5 - 9.9 %		35 - 39.9 %

average = 4.5 %

cent of the working population), they account for 17 to 37 per cent of the working population in certain parts of the bazaar. Those correspond effectively to some of the zones where the entrepreneurs are also proportionately over-represented.

Regarding the industrial production workers, although they include a large range of classes and communities without marked discrimination, a comparison could be made between their residential distribution (Figure 5.29) and that of the Hindu backward classes (Figure 5.33) who form the relative majority group, accounting for 31 per cent of the industrial production workers. The spatial concentration of the workers of the Hindu backward classes is higher than that of the industrial workers, as measured by Gini's coefficients for the two groups: 0.369 and 0.237 respectively. However, in some zones there is an overlapping of these two categories, each being over-represented when compared to their respective share in the total urban work force. Yet, in the northwestern suburb—Navagadh—it is observed that the Hindu backward classes are proportionately under-represented whereas there is a strong concentration of industrial workers. The spatial distribution of the Hindu backward classes thus fails to reflect the specificity of the residential pattern of the industrial production workers who tend to decentralize their living areas in a ring of neighbourhoods including Navagadh and surrounding the original town of Jetpur.

Undoubtedly, the caste–community factor remains a powerful agent of spatial segregation in Jetpur; it has caused a greater degree of differential population concentration than the process of industrialization has done with regard to occupational groups. The survival of a caste-based occupational tradition among the entrepreneurs can explain certain features of their residential pattern, more precisely the tendency to concentrate in the core of the town which corresponds to the spatial concentration of two castes among those three which form the major proportion of the entrepreneurs. However, as there is no simple one-to-one correlation between castes and the new occupations in the industrial sector, the caste-based spatial segregation fails to explain the residential pattern of the industrial working class. This suggests that the industrial expansion has generated a specific residential pattern accord-

ing to its own economic logic, with a tendency towards the spatial segregation of the two opposing classes, industrialists–employers and hired production workers, and the clustering of the latter around the urban periphery where the industrial establishments have been decentralized.

Impact of in-migration on the residential pattern of the workers

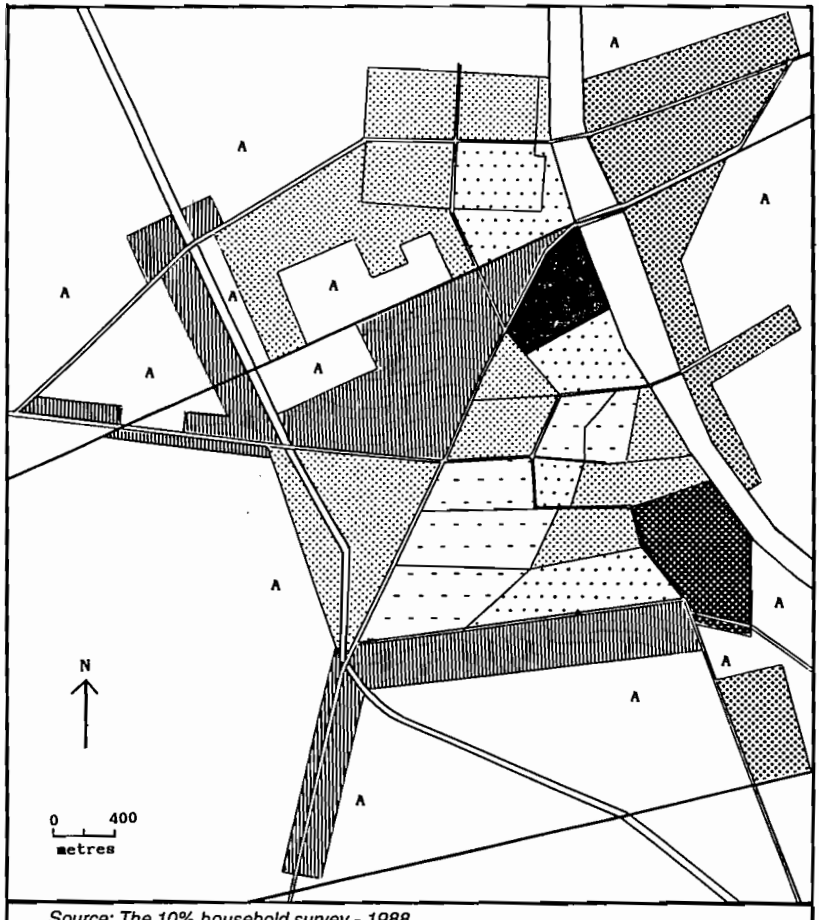
A last question to examine is whether the significant in-migration which has accompanied the process of industrialization and urbanization in Jetpur has strengthened or, on the contrary, diluted the spatial segregation between the industrial workers and their employers. While the proportion of in-migrants is 55 per cent in the total working population of the urban agglomeration, it is 42 per cent among the entrepreneurs of the dyeing and printing industry, and reaches 59 per cent among the production workers of this industry.[29] Here, it is relevant to assess the impact of in-migration on the residential pattern of the latter.

There are striking similarities between the residential pattern of the industrial production workers and that of the in-migrants, and more particularly of the recent in-migrants, as analysed in Chapter 4 (see Figures 4.6, 4.7 and 4.8).[30] The suburbs are predominantly inhabited by industrial workers as well as by in-migrants. It is, therefore, obvious that the process of labour in-migration has been an important factor in the residential decentralization of the industrial working class. It has contributed to and strengthened the tendency towards spatial segregation from the industrialists' class.

SUMMARY OF MAIN FINDINGS

The development of the textile printing industry in Jetpur is reflected in the considerable share of this sector in terms of employment opportunities generated for the urban-based workers, and also in its significant contribution to the livelihood of the rural-based people of the hinterland. The urban labour market exhibits a pattern of stratification along labour status

Figure 5.33
Percentage of Hindu backward castes among all employed persons, in different zones of the Jetpur urban agglomeration in 1988.



Source: The 10% household survey - 1988.

A open space, arable land
0 %
0.1 - 9.9 %
10 - 19.9 %
20 - 29.9 %
30 - 39.9 %
40 - 49.9 %
50 - 59.9 %
no zone: 60 - 69.9 %
70 - 79.9 %

average = 24.9 %

groups characterized by important disparities in terms of protection and regularity in employment. Two specially vulnerable occupational groups were identified in this respect: the construction workers and the production workers in the dyeing and printing industry.

The urban labour market in Jetpur further exhibits a pattern of segmentation according to the personal characteristics of the workers. Despite industrialization and important in-migration which have altered the ascriptive socio-cultural organization of occupations, the structure of the Jetpur labour market is still marked by notable caste-based differentiation. Caste and religious affiliations also influence the female labour force participation rates. Moreover, low-caste workers tend to be associated with more irregular and unprotected jobs. As might have been expected, educational qualifications play a part in the access to the different types of jobs and to labour status. However, this factor is unable to explain all the facets of the process of segmentation of the labour force. In addition to the caste factor, gender-based disparities reflect also the persistence of powerful socio-cultural factors. Further, though in-migrant workers are found in all the occupational groups and all levels of labour status, a distinct pattern of employment emerges in relation to cohorts of arrival and geographical origin. This shows that specific migratory and recruitment channels are also operating, and they draw new demarcation lines in the urban labour force.

Turning to the specificity of the dyeing and printing industry as compared to the other sectors of activity, its labour force can be distinguished by the following characteristics. As recalled above, the production workers in this industry belong to the most vulnerable sections of the urban labour force in terms of irregularity of employment and lack of protection; these workers are particularly young, less educated than the average, and females arealmost excluded from their ranks. While three castes predominate the entrepreneurs, the industrial working class covers a large range of castes. Natives of Jetpur, ancient in-migrants and urban natives are proportionately over-represented among the entrepreneurs whereas recent in-migrants as well as in-migrants from rural areas are over-

represented among the production workers. Lastly, the catchment area of industrial workers extends significantly beyond the State's borders, which is related to the recruitment of contract labour.

The process of industrialization in Jetpur has been also accompanied by a trend towards residential and social segregation between the entrepreneurs–employers and the hired production workers. While the former are more concentrated in the core of the town, the latter tend to live in the outskirts, where work sites and residential zones of the industrial workers intermingle. This spatial residential pattern is in accordance with the traditional structure of Indian cities, where people belonging to higher socio-economic strata live in and around the centre of the town, while those from the lower strata cluster around the urban periphery. However, in the case of Jetpur the tendency towards spatial segregation observed between two opposite classes, the industrialists and the hired production workers, cannot be attributed entirely to a mere traditional caste-based residential segregation which would be associated with a caste-based occupational specialization. In particular the caste/community base of the industrial working class proves to be widely open without marked discrimination. The specificity of the spatial living pattern of the workers is more in accordance with an economic logic which tends to push back the places of residence of the industrial workers towards the urban periphery where the industrial production units have been gradually decentralized. Besides, massive labour in-migration has worked as a strong force of residential decentralization of the industrial working class, hence strengthening the tendency towards spatial segregation from the industrialists' class.

The next two chapters will focus on the entrepreneurs and the hired workers in the dyeing and printing industry and will examine more thoroughly the routes of access to this industry. This will provide further information on the mechanisms of segmentation of the urban labour market.

NOTES

1. To analyse the structure of the labour market in Jetpur, we have followed the industrial and occupational classifications commonly adopted in official statistics in India, like the censuses. However, certain adjustments were made in order to take into account the particularity of the Jetpur labour market. These different classifications are presented in the Appendix. For the status and nature of employment, we followed the categories and definitions used in National Sample Surveys in India.
2. The percentage distribution of workers by industrial category refers to the total working force for the 1961 census, and only to the main workers for the following censuses. The industrial category of 'secondary' workers in the 1971 census and that of marginal workers in the following censuses is not tabulated at the level of individual towns of the size of Jetpur. Hence, the percentage distribution of workers by industrial category in 1961 is not rigorously comparable with that of 1971 and 1991; however, the changes underlined above are sufficiently marked to indicate an effective trend. Lastly, in the general population tables published for the 1981 census, the main workers are divided into four broad categories (cultivators; agricultural labourers; household industry; other workers). This is the only data available on the composition of the working force by industrial category, at the level of individual towns with a population below 100,000.
3. In particular, Junagadh (120,416 inhabitants in 1981 and 32 kilometres away from Jetpur), Dhoraji (77,716 inhabitants in 1981 and 19 kilometres away), and Gondal (66,818 inhabitants in 1981 and 32 kilometres away).
4. We follow here an approach similar to that developed by Harris, Kannan and Rodgers (1990) to study the structure of the labour market in Coimbatore.
5. The occupation reported by unemployed persons was the kind of work which the person was looking for, or was available. For those who were previously employed, this corresponded generally to their last work
   The chi-square test of independence between the variables 'occupation' and 'employed/unemployed status' in the sample population shows an association significant at the 0.00 per cent level.
6. The difference between the rates of unemployment among the Brahmins and among the other caste groups is significant at the 1 per cent level, according to the chi-square test.
7. The workers who took up their first job or changed to a new job in a different industrial branch or occupational category have been excluded as their employment characteristics cannot be referred to a 12-month period. These represent 199 cases out of 3,942 employed workers (or 5 per cent).
8. The totally unemployed workers have also been excluded from the analysis of the annual duration of employment according to employment characteristics. This indicator was previously computed for the different occupational groups in two ways, that is, either including or not including the totally unemployed workers. Due to the marginal impact of total

unemployment, including the totally unemployed workers in the analysis does not introduce significant changes, except for professional or technical workers and clerical workers who are the two groups proportionately the most affected by unemployment. Their annual duration of employment is reduced by 23 days and 19 days respectively as against 5 for the total workers, but it still remains above the average (respectively 325 days and 338 as against 293).

9. The workers who took up their first job or changed to a new job in a different industrial branch or occupational category during the reference year have been excluded, in order to keep a 12-month period of reference and to consider only the cases of effective combinations of occupations, and to exclude cases of changes in activity which are a different phenomenon. The excluded cases represent 199 cases out of 3,942 employed workers.
10. A large number of the female construction workers employed in the public sector were engaged in a programme of relief work organized by the government during the drought.
11. According to the analysis of variance, the difference between the means of the two sub-populations (female workers and male workers) is significant at the 0.00 per cent level ($F = 67.5496$)
12. The chi-square test of independence between the variables 'age group' and 'employment status' in the sample population shows an association significant at the 0.00 per cent level for male workers and at the 1.0 per cent level for female workers, and that between the variables 'age group' and 'nature of employment' an association significant at the 0.00 per cent level for male workers and at the 3.0 per cent level for female workers.
13. According to the analysis of variance, the hypothesis that the means of the four different age groups (less than 30, 30-44, 45-59, 60 and above) are equal is rejected with an observed significance level of 0.00 per cent ($F = 19.1978$).
14. The chi-square test of independence between the variables 'educational standard' and 'employment status' in the sample population shows an association significant at the 0.00 per cent level for male as well as for female workers, and that between the variables 'educational standard' and 'nature of employment' an association also significant at the 0.00 per cent level for male as well as for female workers.
15. According to the analysis of variance, the hypothesis that the means of the five different sub-populations (according to their educational standard) are equal is rejected with an observed significance level of 0.00 per cent ($F = 60.2169$).
16. The chi-square test of independence between the variables 'caste' and 'occupation' in the sample population of workers shows an association significant at the 0.00 per cent level.
17. The difference observed in the sample population between the percentages of the caste under consideration among the entrepreneurs and among the other workers is significant at the 0.1 per cent level for the Kanbis and the Khatris, and at the 1 per cent level for the Vaniyas (chi-square tests). The strategies developed by the entrepreneurs from different castes to penetrate the dyeing and printing industry are examined in Chapter 6.

18. The difference observed in the sample population between the percentages of the caste group under consideration among the industrial production workers and among the other workers is significant at the 0.1 per cent level for the Hindu backward classes, the Muslims (other than backward classes) and the Muslim backward classes separately (chi-square tests).
19. The chi-square test of independence between the variables 'caste' and 'nature of employment' in the sample population of employees in the private sector shows an association significant at the 0.00 per cent level.
20. According to the analysis of variance, the hypothesis that the means of the different caste groups among male workers are equal is rejected with an observed significance level of 0.00 per cent ($F = 16.9150$).
21. The results presented here concern workers of both sexes considered together. The same analysis for male workers alone leads to similar findings and conclusions. The limited number of females workers with secondary or higher education in the sample (86 cases) did not allow us to carry out a separate analysis of their occupation, employment status and nature of employment.
22. The distribution of Kanbi and Khatri in-migrant entrepreneurs in the sample is as follows:
    - Kanbis: 26 in-migrants, 22 of whom arrived after 1970;
    - Khatris: 42 in-migrants, 30 of whom arrived before 1970.

    The difference between the two distributions is significant at the 0.1 per cent level (chi-square test).
23. The chi-square test of independence between the variables 'migration status' and 'employment status' in the sample population of male workers shows an association significant at the 0.00 per cent level, and that between the variables 'migration status' and 'nature of employment' an association also significant at the 0.00 per cent level.
24. The differences observed in the sample population between these proportions are significant at the 5 per cent level for illiterate workers, and at the 1 per cent level for workers with primary or middle education and for workers with secondary or higher education (chi-square tests).
25. The difference observed in the sample population between these two proportions is significant at the 1 per cent level (chi-square test).
26. The chi-square test of independence between the variables 'occupation' and 'zone of residence' in the sample population of workers shows an association significant at the 0.1 per cent level.
27. Gini's coefficients measure here the concentration of the industrial production workers/or entrepreneurs/or any other population category according to the various zones of the urban agglomeration, as compared to the distribution of the total working population in these zones. As already specified in a previous note in Chapter 4, Gini's coefficient varies between 0 (the population of the category under consideration is uniformly distributed across the different zones) and 1 (all the population of the category under consideration is concentrated in a single zone). One limitation of Gini's coefficient for comparison also needs to be recalled here: this coefficient does not differentiate between the zones according to whether they are adjoining or not.

28. The chi-square test of independence between the variables 'caste' and 'zone of residence' in the sample population shows an association significant at the 0.1 per cent level.
29. The difference observed in the sample population between the proportion of in-migrants among the industrial production workers and in the total working population is significant at the 0.1 per cent level (chi-square test).
30. Although the analysis in Chapter 4 of the residential pattern of the in-migrants pertained to all the in-migrants (working or not), the analysis of the spatial distribution of the residences of the in-migrant workers would bring about similar conclusions.

APPENDIX

INDUSTRIAL AND OCCUPATIONAL CLASSIFICATIONS

To analyse the structure of the labour market in Jetpur, we have followed terminology and classifications similar to those commonly adopted in the official statistics in India. However, in order to take into account the specificity of the Jetpur urban labour market, in particular the major role of the dyeing and printing industry, we have added distinct categories:

- in the industrial categories, 'dyeing and printing industry' is distinguished from other manufacturing;
- in the occupational groups, 'entrepreneurs in the dyeing and printing industry' are distinguished from other 'administrative, executive and managerial workers', and 'production workers in the dyeing and printing industry' are distinguished from other 'production workers'.

The industrial and occupational classifications used in national statistics, and those used for the 1988 household survey in Jetpur, are detailed below.

Census of India, 1961–1991

The industrial categories adopted in the Census of India (1961, 1971, 1981 and 1991) were as follows:

I - Cultivators
II - Agricultural labourers
III - Livestock, forestry, fishing, hunting and plantations, orchards and allied activities.
IV - Mining, quarrying
V - Manufacturing, processing, servicing and repair:
(a) household industry

(b) other than household industry
VI - Construction
VII - Commerce and trade
VIII - Transport, storage, communication
IX - Other services
In 1961, the categories III and IV were merged into one.

National Industrial Classification, India, 1970.

Divisions:
0 - Agriculture, hunting, forestry and fishing
1 - Mining and quarrying
2 & 3 - Manufacturing and repair
4 - Electricity, gas and water
5 - Construction
6 - Wholesale and retail trade and restaurants and hotels
7 - Transport, storage and communications
8 - Financing, insurance, real estate and business services
9 - Community, social and personal services
X - Activities not adequately defined

1988 household survey in Jetpur

Industries:
1: Agriculture, hunting, forestry and fishing; mining, quarrying
2: Dyeing and printing industry
3: Household industry
4: Other manufacturing, processing, servicing and repair; electricity, gas and water
5: Construction
6: Commerce and trade: wholesale and retail trade, restaurants and hotels
7: Transport, storage, communication
8: Other services: financing, insurance, real estate and business services; community, social and personal services.

National Classification of Occupations, India, 1968.

Divisions:
1: Professional, technical and related workers

2: Administrative, executive and managerial workers
3: Clerical and related workers
4: Sales workers
5: Service workers
6: Farmers, fishermen, hunters, loggers and related workers
7-8-9: Production and related workers, transport equipment operators and labourers
(*including construction workers*)
X: Workers not classified by occupations

1988 household survey in Jetpur

Occupations:

1: Professional and technical workers
2: Entrepreneurs in the dyeing and printing industry
3: Other managerial workers
4: Clerical workers
5: Sales workers
6: Service workers
7: Farmers and related workers
8: Production workers in the dyeing and printing industry
9: Other production workers
10: Construction workers
11: Transport workers.

6

Investment Strategies: Entrepreneurs and Traders

This chapter aims at understanding the process of industrialization in a middle-sized town at the micro-social level through an analysis of the profiles and investment strategies of the entrepreneurs. This includes the following issues:

- What is the socio-economic background of the entrepreneurs and how did they raise the initial capital to start their enterprise?
- What opportunities for upward socio-economic mobility have been generated by the process of industrialization?
- What is the significance of factors like caste affiliation, familial network and support, political contacts and education in the emergence and success of entrepreneurship?
- To what extent are the entrepreneurs in Jetpur able to promote their common interests as a group—or as a class?
- What is the role of the traders in the organization of the printing industry and what is the extent of their control over it?

The current difficulties faced by the textile printing industry of Jetpur, and its future prospects are examined in the last section.

At the outset, a sketch of the economic characteristics of the textile printing industry is in order: this will help to state the conditions in which contemporary industrial investment has taken place in Jetpur, and to assess the significance of this case study in the context of decentralized development of small-scale industries.

ECONOMIC CHARACTERISTICS OF THE TEXTILE SCREEN-PRINTING INDUSTRY

The description of the economic characteristics of the textile screen-printing industry in Jetpur is based on the interviews conducted in 1988 and 1989 with entrepreneurs, traders and some 'outsider' operators like bank managers and an independent chartered accountant. Given the industrialists' reluctance to provide accurate statistical data on the financial aspects of their management (see Chapter 2), some second-hand data are also used. The purpose of this section is not to go into a detailed economic and financial analysis of the management of an industrial unit, but rather to state the economic conditions and constraints under which the entrepreneurs have to operate. Questions pertaining to raw materials, fixed capital, initial investment and working capital will be successively reviewed.[1]

Raw materials

Two main categories of raw materials are used in the textile printing industry: cloth, and dyes and chemicals.

Cotton cloth

Cloth is the principal and basic material required. Only cotton cloth is printed in Jetpur. Earlier, mill cloth as well as power-loom and hand-loom cloth were used. But since the sixties, with the development of power-looms,[2] the supply of power-loom cloth became more abundant and relatively less expensive than mill cloth, and it gradually supplanted the other types of

cloth. Nowadays power-loom cloth is the exclusive type of cloth used in Jetpur.

The prevalent channel for cotton cloth printed in Jetpur is as follows. The cotton yarn is mainly spun in Tamil Nadu (in Coimbatore in particular), yarn is woven in power-loom houses in Maharashtra (Bhiwandi, Ichalkaranji and Dombiwali) to obtain grey cloth, and grey cloth is sold in the Bombay market to brokers, traders or industrialists involved in textile printing. The grey cloth is sent for bleaching to processing houses in Maharashtra.[3] The bleached and mercerized fabric is then ready for dyeing and printing. Only two or three big textile printing establishments in Jetpur have their own bleaching units to process the cloth before dyeing and printing. Several qualities of cotton cloth are available; the main ones used in Jetpur are mulmul (a very fine cotton cloth), cambric (a thicker fabric introduced in the Jetpur printing industry about 12 years ago), doria, organdy and moongakota.

The price of cloth varies according to its quality, which makes the main difference in the selling price of the saris. The most common and cheapest type of cloth, the unbleached mulmul, cost Rs 5 to Rs 6.50 per metre in December 1988. The supply and the cost of cotton cloth are, however, affected by important fluctuations in the markets of cotton yarn and grey cloth. Being highly speculative markets, these markets are sensitive not only to the supply of rough cotton, but also to various other factors like the export policy of cotton. Furthermore, since 1987, the fluctuations in the cloth market have increased and reached unprecedented levels.[4] Such erratic fluctuations generate uncontrolled increases in the cost of production.

Dyes and chemicals

The dyes used in the Jetpur screen-printing industry are synthetic; vegetable dyes like vegetable indigo are not used any longer. Other chemicals are also required in the dyeing and printing process, as well as products like wax, gum and starch.[5] Dyes and chemicals are purchased mainly from manufacturers in Ahmedabad, but also in Vapi, Valsad, Baroda (in South Gujarat) and Bombay, generally through the intermediary of trading agencies, many of whom are based in Jetpur. The few dye factories set up in and around Jetpur can supply only a

marginal part of the local demand of the textile printing industry. Moreover, some of these factories manufacture raw materials for dyes which are not directly usable by the textile printing factories.

The cost of dyes and chemicals accounts for more than half the printing cost. For example, with all costs included (except the cost of cloth), the average printing cost of a sari was Rs 9 to Rs 11 in 1988-89, out of which Rs 5 to Rs 7 was for dyes and chemicals, depending mainly on the quality of the dyes used and the number of colours printed.[6] Until recently dyes and chemicals were easily available on credit. Merchants used to give to the entrepreneurs a time limit of 60 to 75 days for cash payment without credit charge, and six months for payment on credit with 10 to 15 per cent interest charge. In fact, in both cases, the terms of payment were very often deferred by one or two months by the entrepreneurs. However, during the 1985-87 drought the dye and chemical merchants incurred heavy losses due to non-payment by the textile printing establishments which could not overcome their cash flow problems or were compelled to close down. As a result, dye merchants stopped giving long-term credit to their customers, and began to insist on cash payment within eight to 30 days (depending on the merchant).

Temporary shortages of dyes or other chemicals, and subsequent fluctuations in prices, create difficulties of stock management and increase the cost of production. Entrepreneurs feel that these difficulties were compounded by the government's policy of promoting the export of dyes for the past five or six years. This was in response to the ban imposed by industrialized countries on the manufacture of certain chemical dyes because of the high pollution hazards.

Fixed capital

The main equipment in the screen-printing industry, which consists of wooden printing tables, screen plates and electric ceiling fans, does not require very heavy investment. For example, in 1989, the price of a printing table of six-sari capacity amounted to Rs 15,000 and the average price of a screen plate ranged from Rs 170 to Rs 220 (Rs 90 to 120 for the

frame and Rs 80 to 100 for the stencil). Screens are manufactured in Jetpur in specialized establishments which receive their orders and design patterns from the textile printing factories. However, a few large printing concerns have their own screen-making departments. Several types of presses are also used in the finishing process for pressing the saris. But many sari printing factories, especially the small ones, send their saris for the finishing processes (including ironing, pressing and packaging) to specialized establishments working on contract for them.

The fitting of printing tables equipped with a heating system which includes a boiler imposes a higher investment: about Rs 88,000 for a table of six-sari capacity in 1989. This equipment ensures the drying of the dye solution applied on the fabric and hence allows the factory to operate during the monsoon, when the atmosphere is too humid to allow the cloth to dry only by air exposure. However, this concerns only a marginal proportion of the printing units (about 10 big factories). In addition, 'hot tables' (as they are locally called) were introduced in Jetpur only recently, around 1982. 'Stencer machine' and 'felting machine' are the only very expensive machines being used for special finishing processes on the printed cloth;[7] each costs several hundred thousands of rupees. But only a few printing establishments (about a dozen) and some specialized finishing establishments (about 15) are equipped with such machines.

A study conducted by M.S. Ashraf in 1981-82, based on a sample of 30 printing units, showed that for the 20 units which were established and owned by their current entrepreneurs, and with a size ranging from three to 14 printing tables (6-7 on an average), the average fixed capital invested amounted to Rs 323,640 per unit.[8] This amount can be broken down as follows:

- land and building: Rs 234,250
- equipment and tools: Rs 66,500
- other assets: Rs 22,890.

The other 10 units of the sample were set up by the entrepreneurs in rented premises: six of them did not show any fixed assets, and in the remaining four the average fixed capital came to Rs 33,750 per unit (Ashraf,1985).

The district credit plan (1988-90) and the annual action plan (1988) for Rajkot district, published by the State Bank of Saurashtra which is the leading bank, provides a more recent

estimate. According to the scheme and unit cost approved by the sub-group on industries in July 1987, the total cost to set up a new sari printing unit is evaluated at Rs 550,000, out of which the sum of Rs 450,000 is for fixed investment and the sum of Rs 100,000 is for working capital requirement.

Whatever the differences in the amount of fixed capital, all the textile printing units in Jetpur come under the category of small-scale industry, with a capital invested in plant and machinery being far below the threshold of Rs 3.5 million (by 1987 to mid-1990 criteria).

Factors of differentiation

It seems essential at this point to examine the various modes of economic and financial organization adopted by the entrepreneurs. This will imply a great variety of situations for the initial investment.

The first factor of differentiation to be taken into account is whether the entrepreneur is the owner of the factory premises or whether he runs his enterprise in rented premises. In Jetpur, about 60 to 65 per cent of the printing units are run by entrepreneurs who also own the premises, and 35 to 40 per cent are run on a rental basis. In the latter system the rented premises are most often already equipped with printing tables and electric ceiling fans, and are available on a temporary basis, for six months or a year. The lease is renewable. Undertaking printing work in rented premises already equipped is a solution adopted by entrepreneurs who do not own fixed assets, or by entrepreneurs who already own a factory and resort to this solution when they have to face extra orders. Thus, this system allows the entrepreneurs to adjust their production to the level of the demand, at a lesser cost.

The second factor of differentiation concerns the mode of entrepreneurship adopted, 'job-work' or 'own-business', these being local designations. In the most frequent system known as 'job-work', the entrepreneurs undertake printing work only under subcontract, hence they do not have to buy the cloth or market the finished products. They are provided with bleached cotton cloth and the pattern of design by the traders who place

the orders and pay them for the printing work according to a rate fixed per sari. About 75 to 80 per cent of the printing units in Jetpur function under this subcontracting system. In the alternative system, called 'own-business', the entrepreneurs work as independent manufacturers: they purchase the cloth, undertake the printing work for themselves, and then market their finished products. They have showrooms in Jetpur and Ahmedabad; some have their own trading agencies in the main market places; at least they have representatives and commercial travellers and are connected with wholesalers who distribute the saris in major towns. Some entrepreneurs also combine the two systems: printing work for themselves and doing work under subcontract for traders. Among the large independent printing establishments which have their own trading agency, some also place orders with other smaller printing factories of Jetpur, in order to meet the demand.

The mode of entrepreneurship (subcontract or independent) induces at the outset differences in the components of the cost of production and the calculation of the margin of profit for the entrepreneur. In particular, for the entrepreneurs working under subcontract, the cloth is not part of their expenses of raw material. However, important fluctuations in the price of cloth also affect these entrepreneurs indirectly, through their impact on the general buoyancy of the textile printing industry and trade. With job-work, entrepreneurs can make a profit of 0.50 paise to 1 rupee per sari out of an average printing charge of about Rs 10 paid by the traders, thus corresponding to a rate of profit of 5 to 10 per cent. Yet, in 1988-89, a 5 per cent profit seems a more common figure, only those entrepreneurs who manage their enterprise very successfully may earn a 10 per cent profit.[9] For independent manufacturers, the margin of profit results from the difference between the selling price and the cost of production (including the cost of cloth). The selling price depends first of all on the quality of the cotton material and secondly on the type of print, ranging from Rs 35 to 50 per sari on an average (in 1988-89); hence the average rate of profit can vary from 5 to 10 per cent of the selling price. Needless to say, for both types of entrepreneurs, the margin of profit is always subject to reductions, including drastic ones or even loss, following a sharp increase of certain components of the

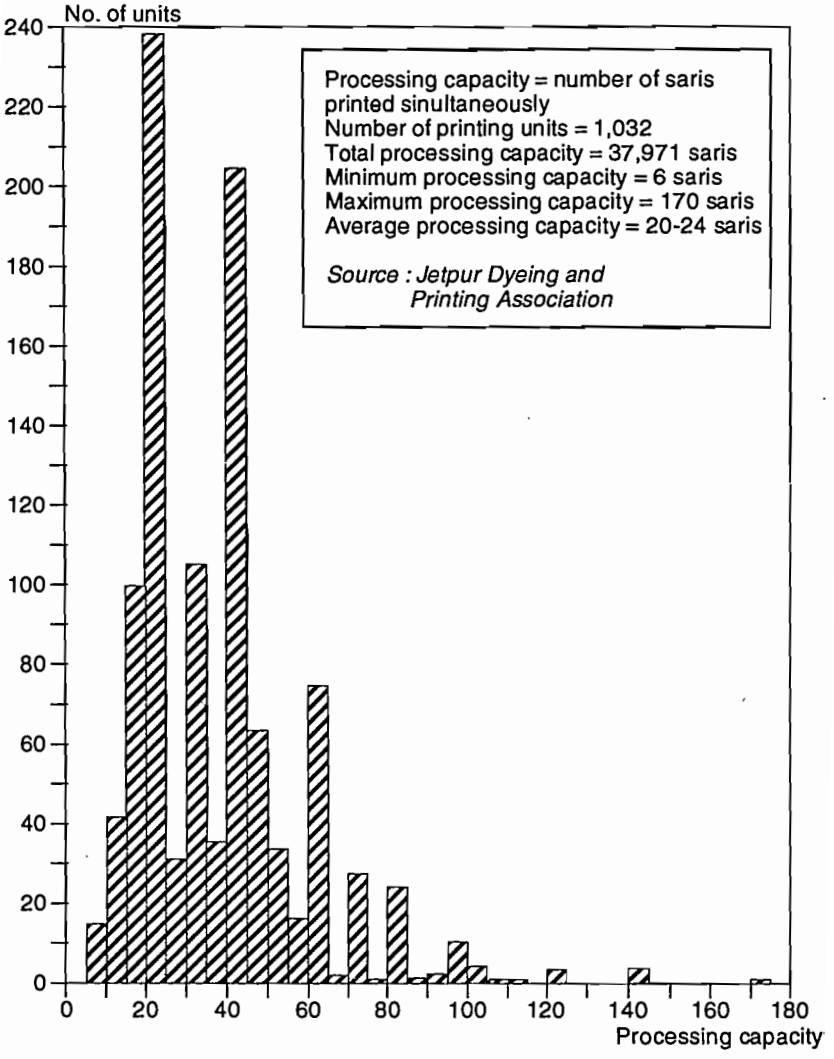
cost of production without possible increment of the printing charge or the selling price, or due to the unfavourable conditions of the market. The requirements in working capital differ too according to the mode of entrepreneurship, and are obviously higher for independent manufacturers as they have to provide for the purchase of cloth and distribution expenses.

The third main factor of differentiation pertains to the juridical organization of the business. In Jetpur two forms can be found: proprietary venture and partnership venture, the latter prevailing more particularly under the form of familial partnership. Such a partnership venture allows a variety of possibilities in the distribution of the industrial capital and the sharing of profits. Several partners can be associated in the same venture, some being active partners, some sleeping partners and some only nominal partners (for income tax purposes). The same entrepreneur can also hold shares in different ventures. Then, a group of partners, especially familial partners, can be associated to run a group of units, as a result of dividing juridically and administratively the industrial capital and profit under different names.

There are also major variations in the size of the printing factories, in terms of their processing capacity as well as their effective production. The processing capacity of a printing unit is measured in the number of saris which can be printed simultaneously, and thus it is directly related to the number of printing tables. Then, for a given number of printing tables, the daily production depends on the number of working hours, the main factor of differentiation being whether the night shift system is practised in the factory or not. For instance, if the printing tables are equipped with a heating system, the printing process goes on continuously for 24 hours, in order to make the optimum use of the equipment. A first picture of the wide range of variations can be drawn from the list of units which has been prepared by the Jetpur Dyeing and Printing Association. Out of an approximate total number of 1,200 printing units, 1,060 units were listed in 1988 and the processing capacity was indicated for 1,032 of them (or 86 per cent of the 1,200 units). The distribution of the printing units according to their processing capacity is shown in Figure 6.1.

The smallest units have only 1 to 2 printing tables, with a

Figure 6.1
Distribution of the sari printing units in Jetpur by processing capacity in 1988.



minimum printing capacity of six to eight saris allowing a minimum daily production of 60 to 80 saris. Such tiny units are run by individual artisan–entrepreneurs, almost on a household basis. At the other extreme, the largest unit registered has a capacity of 170 saris. The most frequent capacity is 20 to 24 saris (23 per cent of the units), and then 40 to 44 saris (20 per cent of the units). The average capacity is 36.8 saris per unit.

However, the limitations of such data should be kept in mind. Firstly, the units which are not registered with the industrial association (about 12 per cent of the units) are more probably marginal units. Above all, the data do not provide the real picture of the distribution of the effective size of the printing establishments and of the concentration of the industrial capital among all the entrepreneurs. There are two main reasons: first, the common practice of dividing their industrial firm in small-sized units under different names, and second, the prevalence of partnership in the proprietorship and management system. As these practices (especially the first one) aim to avoid extra taxes and escape labour legislation, information on that issue was too delicate to obtain from the industrialists for the purpose of accurate and reliable statistical data. For example, though the largest printing unit registered has a capacity of 170 saris, there are bigger establishments constituted by groups of several industrial units, the largest ones including up to about 25 units, with total processing capacity amounting up to 2,000 saris and total daily production reaching 25,000 saris. As already mentioned in Chapter 2 (in the presentation of the survey of industrial establishments) on the basis of the information provided by the industrial association itself, the number of 1,100 to 1,200 printing units estimated for the Jetpur area corresponds to about 500 distinct individual enterprises or industrial familial groups. This shows the extent of the practice of dividing industrial firms but conceals a very uneven distribution of the industrial capital. There is a large number of small entrepreneurs, many of them with limited fixed capital, and, at the other extreme, bigger entrepreneurs operating through extensive industrial familial groups. Thus, the dispersion of the industrial activity in a multitude of production units goes hand in hand with a certain degree of concentration of the industrial proprietorship. This twofold tendency, namely a trend towards the concentration of

the industrial proprietorship while the production remains decentralized in distinct units, is not infrequent in the expansion of an industrial branch. It has been observed, for example, by Cawthorne (1990) in the context of the knitwear industry of Tirripur, a town in South India, and identified by this author as 'amoebic capitalism'.

Turning back to the Jetpur textile printing industry, though the technique of production (hand-printing with screen) is identical for all the enterprises, this industry proves to be locally very heterogeneous in terms of size of the establishment, amount and type of fixed assets, mode of entrepreneurship (subcontract for traders or independent manufacture), structure of the financial capital and type of proprietorship. The degree of modernization of the management varies also considerably, from rudimentary means to computerization for the most advanced.

Initial investment

The above factors of differentiation bring about a wide range of situations with respect to the initial investment. The amount of fixed capital required depends in the first place on the factory building tenure. The initial expenses for fixed capital were obviously much higher for those entrepreneurs who own the land and the plant. However, as already expounded in Chapter 3, during the years immediately after the Partition, some entrepreneurs could take advantage of the easy availability of buildings at a low price to set up their factory in those buildings which were evacuated by the Memons after their departure to Pakistan. In the specific cases of refugees from Sind who arrived in Jetpur in 1948-49 or during the early fifties, some of them could claim buildings as custodian property; this concerned entrepreneurs belonging to the Sindhi Khatri and Lohana communities.

Here is the example of Haribhai, a migrant from Sind and Luhana by caste, a caste traditionally involved in trading activities. He arrived in Jetpur with his family in 1948. The family acquired land and a house as custodian property. His

father and his three elder brothers set up provision stores. Meanwhile, Haribhai got an office job in a sari printing factory, where he could gain experience of management and of the dyeing technique. In 1966 he set up his own printing factory, with a processing capacity of 15 saris and performed subcontract work for traders. The building was part of the familial custodian property. The financial capital was brought in by his three brothers and his father, from the savings realized in the provision stores, and amounted to Rs 16,000. His brothers were financial partners, he himself was the working partner: he handled the management of the factory and worked as a dyer for the first 10 years. Today, Haribhai runs his factory in partnership with his son, in the same building, with a processing capacity increased up to 27 saris.

For the entrepreneurs running their unit in rented premises, the expenses for fixed capital were mainly confined to fittings and fixtures, or sometimes were even nil. Further, the initial expenses to set up a printing unit could be minimized by using rented premises already equipped, starting the production on a very small scale, undertaking printing work for a trader who supplies the cloth as well as the screen designs, and purchasing dyes and chemicals on credit. Moreover, entrepreneurs were given the option to go into partnership in order to share the initial expenses and the risks. An entrepreneur without any savings to invest could try to find sleeping partners, namely financial partners who advance the initial capital but do not get involved in the effective management of the concern, while the former is the working partner, who contributes his work, in the management of the concern, or even at the production process (for example, as a dyer). Eventually entrepreneurs could apply for a loan from commercial banks or from the Gujarat State Financial Corporation (GSFC). Subsidies for industrial investment were also available under specific governmental schemes. The textile printing units of Jetpur have been eligible for various benefits and financial facilities given by the government to small-scale industries, provided they were effectively registered with the Directorate of Industries (since 1987 through the District Industries Centre located in Rajkot).

In particular, the Gujarat State Financial Corporation,

which was established in May 1960 along with the formation of the State of Gujarat, aimed to operate as a development bank for encouraging promotion and development of small and medium industrial units in the State of Gujarat. It provides financial assistance consisting of term loans for setting up new industries, for acquisition of fixed assets such as land, building and plant, machinery or equipment; or for expansion, diversification, renovation in case of existing units. Under general conditions, the stipulated seed capital is 25 per cent of the total cost of the project and the repayment period up to eight years with an initial moratorium of one to two years in case of new units. Till 1991, there was a concessional rate of interest for small-scale industry, of 13.5 per cent in 1988-89.[10] These conditions are more or less similar to those offered by the commercial banks for term loans (seed capital has to represent a minimum of 25 per cent of the total investment, the repayment period is up to seven years, with an annual interest rate of 13.5 per cent in 1989). However, the commercial banks normally do not encourage term loans, and they rather orient their clients towards the GSFC which is the appropriate institution for financing the acquisition of fixed assets of small and medium industries.

The GSFC has a regional office in Rajkot. However, among the entrepreneurs of Jetpur, it became popular only a decade after its establishment, especially from 1975 to 1980, when a new set of industrial incentives was declared by the then Government of Gujarat. In 1971 the Central Government implemented a scheme of capital subsidies and fiscal incentives to set up small and medium scale industries in backward areas. From 1975 to 1980 the State Government declared a new set of incentives in order to include districts not identified as industrially backward (by state or by central government) under the state industrial incentive scheme. Under this scheme, three grades of growth centres were distinguished all over Gujarat: grade A with three growth centres, grade B with nine growth centres and grade C with 96 growth centres (later on extended to 109), the incentives increasing gradually from grade A to C. Jetpur, though not located in an industrially backward district, was categorized as a grade C growth centre, hence new industries set up there became eligible for the new set of

incentives consisting of cash subsidies amounting to 15 per cent of the initial cost of fixed assets, along with sales tax exemption or deferment. The state industrial incentive scheme was modified several times by the successive governments in Gujarat. Nevertheless, it seems that the particularly generous scheme implemented in the second half of the seventies had a significant impact on the Jetpur textile printing industry. Many units were set up during this period, and this is the only industrial incentive scheme mentioned today by the entrepreneurs when they comment on the past development of the Jetpur industry.

The Gujarat Industrial Development Corporation (GIDC) also developed a small industrial estate on the outskirts of Jetpur, in the mid-seventies. Plots are provided for the setting up of new industrial units, and acquisition of land can be financed with GIDC loan, at an interest rate of 17 per cent (in 1989). But, with no more than 25 units, this industrial estate remains marginal within the industrial spread of Jetpur and its total number of 1,200 printing units. A location in the GIDC estate became more appealing after 1983 when the Gujarat Water Pollution Control Board stopped giving a 'No Objection Certificate' for the construction of new textile printing factories in the Jetpur area, except for those factories located in the GIDC industrial estate.[11] This administrative measure was a response to the acute problem of water pollution created by the uncontrolled discharge of industrial effluent loaded with dyes and other chemicals into streams and rivers. As a matter of fact, most of the units located in this estate were set up after 1983.

The survey conducted with a sample of 50 entrepreneurs provides a picture of the extent of the various practices adopted to create an enterprise. Twenty-one entrepreneurs set up their first printing unit in rented premises; 20 had an initial processing capacity of less than 20 saris; 38 started by undertaking printing work exclusively under subcontract; 44 have been in partnership, and out of them 37 were in familial partnership. Lastly, 23 entrepreneurs benefited from loans given by commercial banks or GSFC to set up their first unit or new units; or, on the basis of the total number of units declared by the 50 entrepreneurs, 27 units out of 137 (20 per cent) were set up with the help of such loans.

Working capital

Apart from the initial investment in fixed capital, sufficient working capital is a prime necessity for the smooth running of an industrial enterprise. The commercial banks have to help the entrepreneurs with the financing of their working capital. According to the government policy to promote small-scale industry, the public commercial banks should play a major role in financing small-scale industry which is a priority sector. In Jetpur there are seven commercial banks in the public sector, the State Bank of Saurashtra being the leading one in financing the entrepreneurs.[12] The Rajkot Nagarik Sarkari Bank also plays an important role in the co-operative sector.[13] These banks can provide cash credit facilities which are sanctioned for a one-year period and are renewable. The borrower's seed money should represent a minimum of 25 per cent of the total required amount (but in some cases it can be released up to 10 per cent). In 1989, the annual rate of interest ranged from 12.5 to 17 percent, according to the amount of the loan.

The degree of dependence of the Jetpur textile printing industry on financial institutions is very high. According to the estimates of local banks, the proportion of printing units which are completely independent from the various financial institutions (banks, GSFC, GIDC) for their functioning would not exceed 10 per cent. This would correspond to small entrepreneurs who do not approach public financing institutions for two types of reasons. First, this may concern the entrepreneurs from the lower socio-economic strata. With inadequate educational qualifications and lack of managerial skills, they are either not aware of the financing facilities provided by the banks and governmental corporations, or are discouraged by the administrative procedures. The second category would pertain to small units which succeed in functioning on their own source of financing because their heads maintain a small-scale production along with a strict financial management. It is not possible, however, for the bigger entrepreneurs to function without the assistance of the financial institutions.

Most of the entrepreneurs in Jetpur have to approach banks for the financing of their working capital. Yet the financial institutions do not fulfil all the requirements of the Jetpur

textile printing industry, especially with regard to the financing of working capital. The entrepreneurs also depend upon private financial sources: credit given by dye and chemical merchants, with annual interest rates ranging from 10 to 15 per cent; credit given by cloth traders (for independent manufacturers), with interest rates ranging from 24 to 30 per cent; and, as a last resort, loans from private money-lenders, with annual interest rates ranging from 24 to 36 per cent (indicative rates for 1988-89). Hence, as described by the bankers, the textile printing industry of Jetpur suffers from an over indebtedness which contributes to its overall sickness. The main difficulties faced by this industry will be elaborated in the last section of this chapter.

In this section we have expounded the specific technical and economic conditions for investing in the Jetpur dyeing and printing industry, focusing more precisely on the setting up and management of printing units. However, among about 2,000 entrepreneurs in this industry,[14] three groups can be distinguished according to the main activity of the establishment: 73 per cent of the entrepreneurs run sari printing units, 19 per cent screen manufacturing units, and 8 per cent finishing units. The entrepreneurs engaged in one of the last two activities work under subcontract for the printing establishments. The bigger entrepreneurs have printing factories which include specialized departments for screen manufacturing and finishing processes.

The next section will also focus on the entrepreneurs of the principal and dominant group, those running proper printing units. Its purpose is to examine more concretely the investment strategies implemented by the entrepreneurs and to place them in their social context.

ENTREPRENEURS' SOCIO-ECONOMIC BACKGROUND AND INVESTMENT STRATEGIES

To portray the main profiles of entrepreneurs and their main strategies of investment, the breakdown by caste is essential,

as the traditional caste-based occupational specialization determines the possible routes of access to entrepreneurship. The Khatris, who were the original craftsmen and the first entrepreneurs to develop the dyeing and printing industry in Jetpur, still constitute the relative majority group of the entrepreneurs running printing factories (44 per cent) (Table 6.1). The Kanbis, traditionally a caste of agriculturists, have gradually entered this industry in increasing numbers, especially since the seventies. Now they dominate the ancillary establishments (they account for 67 per cent of the entrepreneurs running screen manufacturing or sari finishing units) and form the second most important group of entrepreneurs running printing factories (34 per cent). The Vaniyas, who form the traditional Gujarati caste cluster of merchants, are found at the head of printing factories (11 per cent of the concerned entrepreneurs), but they have not penetrated the ancillary establishments. These are essentially Hindu Vaniyas, Vaishnava or Modh Vaniyas, whereas the Jain community is negligible among the entrepreneurs as well as among the total population of the town (less than 2 per cent). Another traditionally Gujarati trading caste which entered, though marginally, the textile printing industry deserves mention: the Lohanas who account for 5 per cent of the entrepreneurs. Only a few Marwari entrepreneurs from Rajasthan or those previously settled in Calcutta are acknowledged in Jetpur.

Thus, three main profiles emerge among the entrepreneurs in the Jetpur textile printing industry: the artisan–entrepreneurs, the ex-farmer entrepreneurs, and the merchant–entrepreneurs.

In order to appraise correctly the relative place of the traditional trading communities in the formation of the contemporary class of industrialists, some of the Khatri entrepreneurs, those who hail from families involved in cloth or printed textile trade for generations, should also be taken into account. This group of Khatri entrepreneurs is numerically less important than those coming from families of artisans engaged in traditional cloth dyeing and block-printing; however, textile trade and printing work are two activities economically linked, and the combination of both is—and was—not rare among the Khatri families. The pioneer entrepreneur in the screen-print-

ing industry in Jetpur provides an interesting illustration of this strategy of diversification (as seen in Chapter 3).

Table 6.1
Percentage distribution of entrepreneurs in the Jetpur dyeing and printing industry by caste and type of establishment (1988).

Caste	*Entrepreneurs by type of establishment*			*Population of the Jetpur urban agglomeration*
	Sari printing factories	*Ancillary units*	*All establishments*	
Kanbi	33.5	66.6	42.3	22.0
Khatri	43.7	8.8	34.4	7.1
Vanyia	11.4	0.0	8.4	4.9
Lohana	5.7	1.8	4.7	5.9
Brahmin	0.6	12.3	3.7	5.5
Others (not BC or SC)	3.8	3.5	3.7	16.0
Other Backward Classes	1.3	3.5	1.9	32.7
Scheduled Castes	0.0	3.5	0.9	5.9
Total	100.0	100.0	100.0	100.0
No. of observations	158	57	215*	11,925

* including 211 entrepreneurs residing in the Jetpur urban agglomeration, and 4 in the surrounding villages.
BC = backward classes; SC= Scheduled castes
Source: The 10 % household survey (1988)

Among the 25 leading industrial groups in Jetpur, the competition seems very keen between the traditional artisan and merchant communities on the one hand, and the newcomers from agriculturists' families on the other: 12 groups, including the biggest one in Jetpur, are run by Khatris, 10 by Kanbis, two by Vaniyas and one by Lohanas.[15]

The accounts given by some entrepreneurs[16] illustrate more concretely the different types of strategies implemented to start a textile printing factory in Jetpur.

Transition from family craft to industrial production

As seen above, a large part of the entrepreneurs hail from families already engaged in dyeing and printing work for several generations. This is the case of most of the Khatri

entrepreneurs, and also of the Bhavsar entrepreneurs, a few of whom are found in Jetpur. Their fathers and grandfathers were initially artisans in block-printing or traditional dyeing, and the reconversion to screen-printing took place in the fifties during the father's generation, or at the current generation. In such families the entrepreneurs have been involved in the dyeing and printing activity since their childhood; they had a direct experience of the diverse kinds of work performed in this industry and acquired technical as well as managerial skills through their training in the familial unit.

For these entrepreneurs, there was most often no initial investment as such, but rather a reconversion from textile dyeing or block-printing to screen-printing, starting on a very small scale and operating on a familial basis, with a gradual extension of the enterprise by reinvestment of the profit made. In the successful cases, further expansion of the concern by adding new units was achieved by resorting to bank or GSFC loans. Some of the current big industrial groups have followed this type of development, starting from a very low profile, as shown for example by the story of Shantibhai.

Shantibhai is a Khatri whose forefathers hail from Kalavad, a small town in Saurashtra, which was famous for its tradition of the dyeing craft. Shantibhai's family was also engaged in dyeing and printing of cloth for generations. His father came to Jetpur in 1928, attracted by the business prospects offered by this textile printing and trading centre, and set up a block-printing workshop. His conversion to screen-printing took place in 1958, and did not require substantial additional investment. The family owned already the workshop, they started on a small scale, and executed orders from traders under subcontract. Further, the labour force was provided by the family members who got trained in the household enterprise. Then, they gradually expanded their processing capacity and hired wage workers in increasing numbers. By reinvesting their own profit and with the help of bank loans, they built successively five new printing factories from 1962 to 1980. Today the familial group consists of six printing units accounting for a total processing capacity of about 260 saris, one bleaching unit, two sari finishing units, one trading agency in

Jetpur to purchase dyes and chemicals, and one trading agency in Bombay to market their saris and a few other printed items. Shantibhai's father is now retired—though he still comes to the factory office everyday—and the familial venture is run in partnership by Shantibhai and his six younger brothers. The next generation, still studying in school or college, is expected to join the familial business in its turn and hence perpetuate the ancestral line of production.

The case of the artisan–entrepreneurs of the Jetpur textile printing industry illustrates a 'bottom-up' process of development, in the form of transition from cottage craft to industrial production among the artisans. However, only a minority of them are truly 'capitalist–entrepreneurs' who own their factory premises and the equipment and work for themselves as independent manufacturers. Most of them are dependent on traders for whom they undertake printing work. Further, some small artisan-entrepreneurs still participate in the production process, especially as dyers to prepare the solution of dyestuff. As quoted by Knorringa (1988: 22), these entrepreneur–workers have been typified as 'not fully crystallized capitalists' by Pansters.[17]

Among the artisan–entrepreneurs, the in-migrants—of the first or following generations—further demonstrate how the urban industrial development has benefited from a transfer of skill from the craft industry initially carried out in villages or towns of the surrounding region.

Transfer from trade to industry

The entrepreneurs from merchant communities (Vaniyas, Lohanas and some Khatris) belong more specifically to families of merchants specializing in the textile or sari trade. They extended the familial trading activity to the sari printing industry. Before running their own printing unit, these entrepreneurs had previous work experience in the familial trade, or (among the Khatris especially) experience of management in the printing unit started by their parents or relatives.

The merchant–entrepreneurs raised their initial capital to invest in industry with the profit made in the familial trading activities carried out in Jetpur itself or, for some in-migrant

entrepreneurs, in other places before settling down in Jetpur. If necessary, to familial savings were added bank or GSFC loans. This transfer of capital often allowed these entrepreneurs to start their first printing factory on a larger scale as compared to the artisan–entrepreneurs. Moreover, the personal or familial experience in the cloth or sari trade also equipped the merchant–entrepreneurs with the necessary contacts and thus made it easier for them to turn to the textile printing industry. They often started as traders placing orders with Jetpur factories to get saris printed, and subsequently decided to set up their own printing factories when they realized the possible returns. It is generally a diversification of the familial business rather than a reconversion. The combination of the sari trade and the printing industry allows the traders to control the quality of the prints, to develop their own line of products, and to increase their profits.

As compared to the large majority of Jetpur's entrepreneurs who undertake printing work under subcontract according to traders' orders, entrepreneurs from merchant communities generally work as independent manufacturers: they themselves purchase the cloth to be printed, and market their finished products. This last mode of business involves more risk and requires more capital, but can yield better returns.

Two selected entrepreneurs' life histories can illustrate the passage from trade to industry, and the transfer of capital from one sector to the other.

Girishbhai exemplifies the case of printing factory owners belonging to well-established Bania families of textile traders.

Girishbhai is a Jain Vaniya, whose family belongs to Jetpur and had for generations traded in mill cloth. His grandfather's commercial establishment was well known in the place. His father found a new business opportunity with the development of the printing industry: he started to work as a commission agent to supply bleached cotton cloth to the manufacturers. In the early sixties he was the sole broker in grey cloth in Jetpur; since then many more agents have entered this business. Later, Girishbhai's father also started trading in saris and placed orders to printing factories. Thus, in 1984, when Girishbhai and his three brothers started their own printing factory in

partnership, they had previously acquired long years of experience in the familial trade and were equipped with the right network of contacts in the sari business. They invested the capital raised from trade and got a loan from the GSFC for the construction of the plant and for the machinery. They work as independent manufacturers and run their printing factory of 72-sari capacity in close association with their father's cloth and sari trade.

As for Lalitbhai's trajectory, it provides one of the most spectacular success stories among Jetpur's entrepreneurs.

Lalitbhai was born in 1902 in a small village of Jetpur taluka, and was a Lohana by caste. His father was, however, a simple cultivator, and the family lived poorly. At the age of 15 he left home to earn a living in Bombay. He did not know anybody there, and at the beginning slept on the pavement outside the shops of Mulji Jetha Market, the biggest textile market in Bombay, where he could find a job as a casual loader. Then he worked as an assistant and later a salesmen in the same sari shop for 18 years, starting with a monthly salary of Rs 15. In addition he worked on commission basis for three more years with the firm. Equipped with a 21-year experience and wide contacts, he started his own shop in the same market, gradually developed his business and became a prominent dealer in hand-printed saris. He placed orders to get saris printed in factories in Bombay, Ahmedabad, Rajkot and Jetpur. After more than 20 years in the sari trade, and in order to meet the growing demand for Jetpur's style printed saris, he decided to manufacture his own products and started his own printing factory (in 1953) at Jetpur, where he already had business contacts. He bought the land and built the factory with the savings set apart from his trade in Bombay. This first printing unit started on a very small scale, with a processing capacity of only 10 saris at a time. Since then he gradually established new factories and when he died in 1983 he bequeathed one of the biggest industrial groups in Jetpur. This includes today 16 companies, with a total processing capacity of 1,700 saris at a time, and an employment capacity of almost 1,000 workers. The familial business is now run by Lalitbhai's two elder sons, who

successfully continue to develop the sari trading company in Bombay and the manufacturing activities in Jetpur.

The entrepreneurs' life histories clearly point out the assets of the merchant communities to penetrate this industry: the traders, and more specifically the textile and sari dealers, have the financial capital to invest. They also have experience in business and the right network of connections relying on caste solidarity and professional contacts.

As regards the role of in-migrants in the industrial development of Jetpur, the category of merchant–entrepreneurs also provides examples of the contribution of external capital to industrial investment through transfers made by the migrants, on the basis of funds raised outside Jetpur, in the migrants' native place or in any other place of previous residence.

Transfer from agriculture to industry

All the Kanbi entrepreneurs belong to agriculturists' families. At the time of the princely states their forefathers were tenants-at-will on the lands of local rulers. After Independence, the Kanbis benefited from the implementation of land reforms and tenancy acts, and became landowner cultivators. The Kanbis engaged today in the textile printing industry represent the first generation of entrepreneurs among their community. Some of them have set up their first printing unit without previous experience of work outside familial agriculture and without any specific training to enter this new business. However, more often, the newcomers among the Kanbi entrepreneurs acquired work experience outside agriculture, particularly in the sari trade or in the textile printing industry. They worked as employees, like salesmen or managers, and sometimes as partners. This experience enabled them not only to acquire some skills in business management, but also to become familiar with the trading networks and to establish personal contacts in the sari business, which is also a strategic asset to start and run successfully a printing factory. The entrepreneurs working under subcontract are entirely dependent on the traders to get regular orders, thus good relations maintained with them prove to be fundamental. This also

highlights the favourable position held by the cloth and sari trade as a way to penetrate the sari printing industry. Other Kanbi entrepreneurs had the previous experience of manual workers. This equipped them with technical skills, especially concerning dyes and the preparation of dyestuff, which is the most strategic operation in the production process.

The investment strategy of the Kanbi entrepreneurs relies upon the transfer of capital from agriculture to industry. These were the entrepreneurs coming from farmers' families who developed the farming of cash crops, especially after the 1969 bank nationalization policy, which provided easy access to financial facilities. Eventually they benefited from the improvement of irrigation facilities and managed to set aside the surplus from their agricultural incomes. This process took place in particular in the surroundings of Jetpur, in the command area of the Bhadar irrigation dam and canal, where irrigation facilities supplied after 1966-67 allowed the farmers to make good profits from agriculture and reinvest the money in the textile printing industry. Since they own agricultural land, the Kanbis also have the option of selling a plot of land to raise the required capital.

Rameshbhai's history illustrates a rather frequent strategy followed by the Kanbi entrepreneurs, one which combines financial back-up from agriculture and previous experience in the textile trade that is used as a springboard to penetrate the sari printing industry.

Rameshbhai belongs to a family of cultivators owning 11 hectares of land cultivated by his two brothers in their village of Jetpur taluka, with an additional 6.5 hectares of land located in another village and leased out. Rameshbhai had studied up to the seventh standard, while working simultaneously on the familial fields. He also had several work experiences in Jetpur, as an employee in the packaging department of a printing factory, then in a cloth shop and in another sari trading shop. He eventually became a partner in this last business with other fellows of his caste. He dropped it after he incurred a loss, and decided to set up his own printing enterprise. As the savings from agriculture were not sufficient to raise the required funds, the family sold off one plot of land, found financial partners and

took a loan from a commercial bank. The initial investment eventually amounted to Rs 150,000 in 1980. Rameshbhai and one of his brothers contributed Rs 20,000 each; three other partners also brought in Rs 20,000 each; this was completed by a bank loan of Rs 50,000. Rameshbhai started his printing unit in rented premises with a capacity of 32 saris, with a stock of dyes and chemicals obtained on credit, and worked under subcontract for traders. The concern is organized as a familial partnership. Among the five partners, Rameshbhai handles the management, his brother is still engaged in agriculture but has sent his son to work in the familial factory as a dyer, and the three other partners are sleeping partners. In 1987, Rameshbhai increased the processing capacity by shifting the unit to new rented premises with a capacity of 60 saris. Though he lives in town, Rameshbhai remains deeply rooted in his familial agricultural background, and the industrial enterprise in Jetpur and the farm in the village mutually support each other, as commonly observed among the Kanbi entrepreneurs.

Being cultivators, the Kanbis have also the option to acquire agricultural land and to reconvert it into non-agricultural land for industrial purpose. Thus, to achieve their economic reconversion from agriculture to industry, prosperous Kanbi farmers bought agricultural land in Jetpur or in adjoining villages from marginal farmers like the Kolis (a backward caste in Gujarat). They managed to obtain the authorization to reconvert this agricultural land to non-agricultural land for industrial purpose, and set up factories. For example, according to data provided by the village *panchayat* of Navagadh, where many printing factories were set up, 60 per cent of the agricultural land converted for industrial purpose was purchased from marginal farmers who became landless and finally joined the proletariat. This type of transfer of land, from which the Kanbis were the first to benefit, took place mainly between 1968 and 1974. Afterwards, the entrepreneurs who set up factories were mostly rich farmers, landowners who converted part of their own agricultural land to non-agricultural for industrial purpose.

Kishorbhai's history provides a good example of the role of landed property in the investment strategies of the Kanbi entrepreneurs.

Kishorbhai was only 17 years old in 1979 when he started an industrial unit in partnership with two relatives, a maternal uncle and a brother-in-law. His familial partners were both experienced dyers, but did not have any financial backing. He himself had no experience outside the familial agriculture and just held a Secondary School Certificate, but he was in a position to bring in the required funds, thanks to familial savings from agriculture. For one year they ran a printing unit in rented premises, which they stopped when Kishorbhai got land and financial support from his father to build his own factory. Kishorbhai's father, who owned land in Navagadh along the canal, had developed an industrial estate after having converted part of his agricultural land into non-agricultural land. Out of 10 plots, seven were sold off, and from the profit made a printing factory with a processing capacity of 48 saris was built on one of the remaining plots. Three years later, a second and larger printing factory of 60-sari capacity was erected on the same industrial estate, with the help of a loan from the GSFC. Kishorbhai handles the management, his brother-in-law works as a dyer, and his maternal uncle is in the packaging department. This case history also shows a fruitful combination of financial and working partners in a familial venture.

The process of transferring agricultural surplus to the benefit of the urban industry cannot be attributed only to the strategy of in-migrant entrepreneurs from rural areas. This strategy is prevalent among the entire community of the Kanbi entrepreneurs in Jetpur, in-migrants as well as natives, and the in-migrants have contributed their share.

What should be emphasized here is, again, how deeply integrated in its rural hinterland the development of Jetpur is, and, more precisely, how the urban industrial development has benefited from the progress in the agriculture of the surrounding region. The mutual reinforcement of agrarian and industrial development is a process acknowledged in other towns in Gujarat as well as in other regions in India. It has been, for example, underlined by Streefkerk (1985) in his study of Bilimoria, a small town in South Gujarat; Punjab also provides a good illustration of the connection between urban industrial

expansion and the green revolution (Saberwal, 1976; Tangri, 1982).

Socio-economic mobility

The occupational biographies of the entrepreneurs can be further analysed from the viewpoint of social mobility. In particular, there is a question which reflects popular dreams as well as the myth nourished by the entrepreneurs' speeches: to what extent are the entrepreneurs recruited from the ranks of the wage workers of the printing industry? Out of the 50 entrepreneurs interviewed, 20 worked previously in the dyeing and printing industry or in the sari trade as mere employees—either as manual workers (13 of them), or as clerical employees or in management (7 of them). These figures do not include the entrepreneurs who started working as unpaid helpers in the familial establishment. As for the entrepreneurs belonging to families who were traditionally involved in the dyeing and printing activity, the expansion of this industry in Jetpur under its present form (using screen technology) enabled the transition from household craft to industrial production. Undoubtedly the development of the textile printing industry provided opportunities for upward socio-economic mobility. This has been illustrated by the life stories of some entrepreneurs.

But all the cases of the office and manual wage workers, who eventually created their own enterprise, are not necessarily representative of the effective opportunities for upward mobility for the workers hired in the dyeing and printing industry. In some families (of farmers or traders) which were already endowed with financial capital, the experience gained as manual worker or office employee in the textile trade or industry may correspond to an occupational strategy aimed to acquire technical or management skills and to increase the chance of succeeding in one's own enterprise.

The opportunities for upward mobility took place mainly in the phase of transition from cottage craft to industrial production, and during the best period for expansion of the Jetpur textile printing industry, from the mid-sixties to the mid-eighties. As seen above, the economic characteristics of this

industry allowed entrepreneurs with very little capital (or sometimes with virtually no capital) to combine various organizational and financial solutions in order to minimize the initial investment and create their own enterprise and develop it gradually. However, though theoretical solutions exist to compensate the initial lack of financial capital, those solutions are often open only to the candidate entrepreneurs who are already equipped with the adequate contacts in business, trade and industry. The significance of such contacts is highlighted in the next section. In particular, the role of a caste-based network proves to be crucial, it contributes to the concentration of the dyeing and printing industry in the hands of three main caste groups and leaves little room and chance to 'outsiders'. As a matter of fact, entrepreneurs with past experience as wage workers in the textile industry or the sari trade are recruited from among the most privileged of those workers, the minority which receives a regular salary—and hence has a more steady financial situation—and which corresponds also to the workers who hold a better position to establish contacts in this business. As will be developed in the next chapter, the prevalence of casual and irregular employment in the Jetpur textile printing industry is the main obstacle faced by the workers who want to put away some money as savings, which is a prerequisite to establish any enterprise.

Factors of entrepreneurship

Beyond the specific assets of each main community of entrepreneurs, some common factors play a critical role in the emergence and success of entrepreneurship. In this respect, the role of the extended family, of business and political contacts, and of education are examined below.

The extended family

The most significant factor is the family, and more precisely the extended family, as a basic and multidimensional supporting structure. The joint family was first appealed to for the mobilization of the financial capital required to start up the enterprise or later on to extend it; landed or fixed property was

sometimes also provided by the family. Further, family members most often supplied the labour force for the management of the firm, for supervision work or even to participate in the production process; they included partners in the familial venture as well as familial unpaid helpers. For entrepreneurs belonging to communities of artisans or traders, and more generally for entrepreneurs of the second (or subsequent) generation, the family also provided an informal structure for training and acquiring managerial and technical skills. Last but not the least, the extended family, other kinsmen and beyond them caste fellows and acquaintances, constitute a network of relations on which the prospective entrepreneurs relied on and found helpful connections to start up and run their industrial venture.

The reference to the joint family as a basis for entrepreneurship does not exclude, however, cases of internal dissensions and the eventual splitting up of the family business. But the initial role of the extended familial structure to launch the industrial enterprise is not negated. Besides, familial partnership does not necessarily mean that all the brothers or sons involved in the same joint venture live under the same roof. More generally, familial economic solidarity and mutual support can transcend the residential unit, even when the different familial segments do not live in the same town. This is the case of some prosperous entrepreneurs' families which have extended and diversified their activities outside the printing industry and outside Jetpur, in some other towns of Gujarat or in Bombay. This is also a common situation among the Kanbi entrepreneurs whose families maintain agricultural activities in their native villages.

What has been observed in the case of the Jetpur entrepreneurs is not specific to this study: the role of the family structure in industrial entrepreneurship has been underlined by several authors, not only for the case of industrial transition in India, but also for the industrial revolution in Europe. To quote a few examples in the Indian context, Tangri has stressed 'the role of the extended or the joint family as a school for management training, pooling of risks and resources and, therefore, as a vehicle for capital formation, innovation and economic expansion' (1982: 193). Streefkerk too, in his study of

industrial transition in rural South Gujarat, analysed entrepreneurship among artisans as 'a collective effort with members of the joint family at its nucleus' (1985: 80), and in the case of businessmen and industrialists the joint family is typified as 'the ideal', 'the organizational principal behind most undertakings' (p. 133). One could also refer to Spodek's study of entrepreneurship in the Ahmedabad textile industry and his analysis of the family firm (1965 and 1969). In a broader historical perspective, Henri explained the role played by familial capitalism to promote industrial transition in France in the nineteenth century: the extended family constituted the fundamental structure for the mobilization of capital, the training of managers, for providing access to information pertaining to innovation, distribution networks and trends of the market (1988: 149). Most of the above quotations could be restated to explain the situation observed in Jetpur.

Business and political contacts

The entrepreneurs' case histories have highlighted the function of family, kinship and caste networks in providing the proper business and professional contacts that are of critical importance to establish and manage an enterprise. Clubs, such as the Rotary Club, the Lions Club and the Jaycees Club International, which have dynamic branches in Jetpur, constitute another type of structure which gives to their members opportunities to widen their social and professional contacts. Given their elitist character, access to these organizations is deliberately restricted, and would *de facto* exclude many among the smallest entrepreneurs. Nevertheless, for the more privileged ones, membership in one of these clubs enables them to establish useful contacts with bank managers, traders, industrialists, professionals and other influential persons. As rightly noted by Streefkerk in the case of Valsad in South Gujarat, these clubs also furnished opportunities to extend one's relations outside one's town, and bring 'contacts with influential persons from other cities and areas' (1985: 95). In a study of the small-scale sector in Hosur, a growth pole in Tamil Nadu, Knorringa further observes: 'Clearly a membership of this club (the Lions Club) improves the possibilities of a small-scale entrepreneur to obtain orders' (1988: 60).

In addition to the strategic role of business and professional relations, studies on entrepreneurship in India often stress the importance of another type of relations, namely political connections (see, for example, the already cited study of Streefkerk, 1985). The industrialists interviewed in Jetpur did not, in general, openly acknowledge political connections and contacts with the government sphere, at least as far as their own history was concerned. Incidental comments and more casual discussions with entrepreneurs and other informants, confirmed by other evidence, suggest however that this factor plays a significant role too. For example, the fact that some entrepreneurs managed to build factories outside the GIDC estate after the Gujarat State Water Pollution Control Board had stopped issuing a 'No Objection Certificate' for setting up of new printing units in Jetpur (namely since 1983) suggests personal intervention or political interference in the administrative apparatus, or giving bribes. A similar interpretation is contended by certain informants (not belonging to the Kanbi community) to explain how so many conversions of agricultural land to non-agricultural land for industrial purpose could have taken place, especially in the case of land located along the irrigation canal meant for agriculture. Cases of factories built by encroachment on public land are also referred to. More generally cases of entrepreneurs who did not follow the stipulated conditions and usual rules to establish new concerns do not seem uncommon, and the political connections of such entrepreneurs or their influential position can be then put forward to explain this state of affairs.

The entrepreneurs' influence and political contacts are, however, not always used—or misused—for particularistic advantages, as shown by the following instance. A few years ago, access to the administrative apparatus in Delhi, through the close connections of certain industrialists with a Member of Parliament, helped to lift excise duties that the Central Government had planned to impose on the production of saris. This would have directly affected the Jetpur printing industry, or at least the bigger establishments.

A proper network of connections appears to be an asset as much essential as financial capital to contribute to successful entrepreneurship. Another issue to investigate is the role of

the human capital embodied in the entrepreneurs themselves or, in other terms, the importance of formal education and informal training.

Education

The distribution of the entrepreneurs in the dyeing and printing industry by level of formal education exhibits a very heterogeneous profile, including a large range of situations (Table 6.2). This variety is further accentuated by the co-existence of several generations. Though the entrepreneurs as a whole belong to some of the most educated occupational groups in Jetpur (as seen in the previous chapter and shown in Table 6.2), their average level of education could be appraised as not very high, in consideration of the specific requirements of the job. In particular, about 21 per cent of these entrepreneurs have not studied beyond the primary school. At the other extreme, the proportion of post-graduate and professional degree holders remains marginal.

Table 6.2
Percentage distribution of entrepreneurs in the Jetpur dyeing and printing industry by level of education (1988).

Level of education	*Entrepreneurs in the dyeing and printing industry* %	*Total male working population in the Jetpur UA* %
Illiterate	0.9	21.0
Primary (1-4)	11.2	17.1
Middle (5-7)	9.8	19.3
Secondary (8-10)	37.7	28.3
Higher secondary (11-12)	16.3	6.2
College undergraduate	13.0	3.1
Graduate	9.3	3.2
Professional degree	0.9	1.1
Post-graduate	0.9	0.7
Total	100.0	100.0
No. of observations	215	3,452

UA= urban agglomeration
Source: The 10 % household survey (1988)

When faced with difficult economic conditions and the increasing complexity of the business world and the administration, the lack of adequate educational background and management knowledge can become a handicap for the entrepreneurs. This negative factor is in fact put forward by the local bank managers who have to deal with the sick units in this industry.

Nevertheless, as has been shown by their life histories, besides formal education, entrepreneurs are often equipped with previous experience in trade and/or in management, or with technical skills acquired in on-the-job training. All these constitute equally valuable assets. Further, entrepreneurs not belonging to the traditional castes of artisans or traders, especially the Kanbis, would often claim that this industry does not require specific educational credentials, and that one can learn through on-the-job experience. This seems true to some extent, and the absence of specific educational requirements has probably contributed to attract many new entrants with no traditional background in entrepreneurship. This assessment is, however, not shared by some more demanding entrepreneurs who intend to master the technical as well as financial aspects of the management of their firm. This is the case in particular of certain Khatri entrepreneurs who would insist not only on the importance of their traditional knowledge of dyeing and printing craft transmitted through generations, but who would also appraise modern formal education and professional diplomas as additional assets. Familial partnership appears again as an adequate organizational structure to combine different types of skills.

An illustration of this is given in the story of Shantibhai (presented above). All the seven brothers (and partners) acquired technical and managerial experience in the familial enterprise where they had been brought up. But while the three elders have only a primary level of education, a younger brother has a diploma in electronic engineering from Bombay and another has a diploma in textile chemistry from Baroda. Another revealing case is that of Jamnadas and his brother, Khatris by caste, whose initial joint family partnership eventually split up. Among the resulting separate ventures, one is run by Jamnadas and his two sons, another by Jamnadas' brother

and his two sons. The level of education of the two brothers is identical, both got their 'matriculation' (equivalent to the Secondary School Certificate). The educational background diverges at the next generation: a diploma in textile chemistry and a Bachelor of Commerce degree for Jamnadas' sons, and simple secondary school certificates for each of the two nephews. Interestingly, the father of the less educated sons feels this educational gap as a handicap for their firm, when compared to the results of the industrial group (now a competitor) run by his brother and sons. In short, as the unfortunate father would say: 'It (education) makes a difference in business now.' Hence, in a more competitive market, the entrepreneurs' educational credentials prove to be an important factor—to say the least.

The entrepreneurs in Jetpur as a class?

Another issue to examine is the extent to which the entrepreneurs in Jetpur are organized as a group and promote their common interests. This can be analysed first through the existence and functioning of an industrial association.

Dyeing and Printing Industrial Association

The first association to be organized to serve the interests of the dyeing and printing industry and its entrepreneurs was the Jetpur Dyeing and Screen-printing Industry Co-operative Society, founded in 1959 with 30 members. The co-operative society's objective was to help the entrepreneurs acquire tools and implements for the industry. But the project failed due to the lack of co-operation among its members; the society incurred a loss, stopped its activities and went into liquidation.

In December 1964, a new industrial association was founded: the Jetpur Dyeing and Printing Association, with about 250 members. Its objectives were to organize the entrepreneurs, defend their interests and solve the difficulties faced by this industry. The first problem that the Association tried to cope with was to safeguard the entrepreneurs' interests, more precisely in the case of entrepreneurs undertaking printing work under subcontract. The Association also acts as an inter-

mediary to purchase and resell to its members raw materials (like certain chemicals and packaging materials) on which the government imposes a quota, or which are in short supply in the market, or for which the Association can obtain better rates than the individual entrepreneurs. More generally, the Association represents the industrialists' demands to the government officials or to the relevant authorities. The issues tackled by the Association include irregularity of electricity supply, inadequacy of the telecommunication system in Jetpur, insufficiency of water supply, claims for reduction of octroi rates and sales taxes, claims for better bus and railway facilities for the town, problems encountered with certain transport companies, housing problems in the urban agglomeration, etc. Since 1979, the Association has represented the entrepreneurs in the negotiations with the Gujarat State Water Pollution Control Board for the purpose of implementing a water pollution control plan in Jetpur; the Association also acted as the intermediary for the collection of money from the entrepreneurs for meeting the expenses of the effluent disposal scheme. Following the creation in June 1992 of the Saurashtra and Kutch Development Committee by the Government of Gujarat, the president of the Jetpur Dyeing and Printing Association was appointed a member of this committee, along with other industrialists from Saurashtra. The committee has to make recommendations for investment in order to promote industrial growth in this relatively less developed region of the State of Gujarat.

In 1988, 603 printing units (out of a total of about 1,200) were members of the Jetpur Dyeing and Printing Association. In fact, these units represent the majority of the entrepreneurs of Jetpur, as those running several units do not systematically register all their units with the Association, usually only one. The number of entrepreneurs staying completely apart from the Association does not exceed 50 and they are essentially the small ones. In spite of the representative nature of the Association and its indisputable role in the negotiations with the Gujarat State Water Pollution Control Board, the members often complain about the dissensions and political divisions within the Association. More generally the entrepreneurs acknowledge their lack of unity and solidarity which has

resulted in the Association being unable to defend the real interests of the dyeing and printing industry of Jetpur.

An illustration of the above is the incapacity of the entrepreneurs to envisage concerted action in order to fix a common minimum printing charge and selling price for the saris vis-à-vis the traders, or a common price increase in the case of any important increase in some components of the production cost. In the present prevailing conditions of competition, such agreement appears impossible and even inconceivable; this gives way to fierce and unfair competition between the Jetpur entrepreneurs.

The situation in Jetpur is not exceptional: the entrepreneurs' rivalries and particularistic interests have been identified as the main obstacle to the setting up of efficient industrial associations in the small-scale sector, in India as well as in other developing countries (Schmitz, 1990: 298).

Internal fragmentation and heterogeneity

A basic line of fragmentation among the Jetpur entrepreneurs follows the caste affiliation. The spectacular advance of the Kanbis in the dyeing and printing industry has not been easily accepted by the entrepreneurs who were already established in the business for a longer time. The traditional artisan–entrepreneurs in particular have nourished a resentment against these 'outsiders'. Thus, certain Khatri entrepreneurs denigrate the Kanbis on the basis of their agricultural background, and reproach them for having entered a business which was not their traditional branch of activity and for which they did not have the technical skills. They further accuse the Kanbis of neglecting the quality of the printing work and of compromising on the quality of the dyes in order to lower their cost of production. In short, the Kanbis are blamed for having 'spoiled' the Jetpur textile printing industry, and for the loss of the 'good name' of the Jetpur saris. Another allegation against the Kanbi 'lobby' pertains to extensive land speculation and fraudulent conversions of agricultural land into non-agricultural land for industrial purpose. The entrepreneurs' rivalries along particularistic lines are further exacerbated in the context of increasing competition. In a broader perspective, the evolution of the competing forces

within the group of Jetpur's entrepreneurs reflects the emergence of the Kanbis as a dominant caste in Saurashtra (as expounded in Chapter 3).

The caste affiliation is, however, not the only factor of internal fragmentation among the entrepreneurs. Different political affiliations have already been mentioned. In addition (and as shown in the sections above) the entrepreneurs of the Jetpur dyeing and printing industry form a very heterogeneous group with respect to the economic characteristics of their concern as well as to some individual characteristics like their education and training. There is a large socio-economic gap between the artisan-style small entrepreneurs still participating in the production process and dependent on traders and, at the other extreme, the real capitalist industrialists at the head of firms which include several factories and their own trading agency. Such contrasting positions, along with the range of intermediary cases, constitute a fundamental obstacle in the coalescence of the Jetpur industrial entrepreneurs into a united social class.

The traders' external control over the Jetpur printing industry

We have seen how and to what extent the traditional trading castes have contributed directly to the Jetpur printing industry through their entrepreneurial and financial participation. Besides, cloth merchants and dealers in printed textiles have always exerted a control over the dyeing and printing activities in Jetpur, through the supply of raw materials and the marketing of finished products. This system of subcontracting, which is a common feature in the history of cottage and small-scale industry, is still prevailing in the Jetpur printing industry. As already mentioned, about 75 to 80 per cent of the factories in Jetpur undertake printing work under subcontract, and their operations are thus determined by the sari traders' orders. The extent of the subcontracting system shows the high degree of dependence of the entrepreneurs upon the traders. But it has also proved to be a factor of expansion of this industry as it has attracted a large number of entrepreneurs without a substantial capital base.

The local cloth and sari traders, belonging mainly to the Vaniya and Khatri castes, form a minority group among all the traders, stockists and wholesalers dealing with the Jetpur printing industry. Most of the dealers are based in the major markets for Jetpur prints (Bombay, Ahmedabad, Delhi, Kanpur, Calcutta, Madras, etc.) and they visit the establishments in Jetpur periodically and place their orders. To understand the increasing hold of the traders over the Jetpur printing industry, a preliminary presentation of the finished products of the industry and the evolution of their market places is necessary.

The main product of the textile printing industry in Jetpur is cotton saris for the lower and lower-middle classes, with selling prices ranging from Rs 35 to 50 in 1988-89 (Rs 45 to 60 in 1992). In the early stage of this industry, Saurashtra and the rest of Gujarat constituted the major market. Since then the development of the industry has been associated with an extension of this market, and gradually Jetpur's saris have been sold all over India. Today, Gujarat represents only a very small part of the entire consumer market, and the Saurashtra part is almost insignificant. West Bengal, Uttar Pradesh and Bihar as well as South India have become major markets for Jetpur's saris. Large quantities of saris are also sent to Bangladesh through Calcutta, and some to Nepal, Sri Lanka and Mauritius. The length, colour and design of the printed saris are specially selected to suit the specific customs and tastes of customers in different parts of India and abroad. In addition, a few factories in Jetpur also print *khangas* and *mishars* (that is, pieces of cloth worn by African and Arab women) which are exported to East Africa and West Asia. Bedsheets, dress material and scarfs, though of minor importance in the total production, require mention. Dress material is printed for export houses of readymade garments, and along with printed scarfs they are sent to Europe and North America. The establishments which print textiles for foreign markets work for export houses. Only a couple of industrial groups in Jetpur have direct contacts with these countries and export independently, since it involves high risks.

The opening up of the market for Jetpur's prints, from Saurashtra and the rest of Gujarat to the entire country and even abroad, increased the distance between the actual producers and the consumers, and further strengthened the role

of the middlemen—the dealers. This corresponds to a classical type of evolution, commonly observed in the history of cottage and small-scale industry (Gadgil, 1971). High dependence upon the sari traders nourishes today a common resentment among those entrepreneurs working under subcontract. They often complain that the traders impose their conditions of payment; in particular, the latter ask for long-term credit facilities which postpone the realization of the sales from 30 to 180 days, and thus may create cash flow problems for the enterprise (as will be elaborated in a later section). The entrepreneurs feel that the fruits of their labour are partly despoiled by the traders who make profits at their expense. The extent of the tension existing between the entrepreneurs and the sari traders is further shown by the first task which was assigned to the Jetpur Dyeing and Printing Association, namely to safeguard the entrepreneurs' interests vis-à-vis those of the sari traders. In order to face the problem of certain traders not paying in time, or even refusing to take the saris printed according to their orders, the industrial association blacklisted and boycotted some traders.

Dye and chemical merchants, as well as cloth merchants and brokers who supply cotton cloth to independent manufacturers, have also their share of control over the printing industry, through the credit granted to the entrepreneurs for the purchase of raw material. Interestingly, these traders have formed their own associations too, in order to defend their own interests against those of the manufacturers. The dye and chemical merchants of Jetpur founded an association in 1969, which accounted for about 110 members in 1988-89: its aim was to tackle the problem of non-payment of credit by the entrepreneurs. The cloth brokers, about a score of them in Jetpur, work as intermediaries between the grey cloth traders in Bombay and the sari traders and independent manufacturers in Jetpur, for whom they get the cloth bleached and mercerized. The brokers' association is more recent; it was created in 1986 in order to solve the problem of non-payment of dues by Jetpur's traders and manufacturers. Though a small one, this association is noteworthy as it seems rather exceptional in this type of trade. For example, there is no association of cloth and sari traders as each trader runs his own business secretively.

The existence of professional associations and their specific objectives reveal some of the problems faced by the Jetpur dyeing and printing industry, as well as the tensions existing between suppliers and customers, and entrepreneurs and traders, at stages preceding and following the printing process.

Industrial transition in Jetpur: in short, and from a broader perspective

The industrialization process in Jetpur was at the outset the result of a gradual transition in capital accumulation from family craft to industrial production by artisan castes traditionally specializing in dyeing and printing work. This 'bottom-up' process corresponds in a certain sense to the type of industrial development that the Government of India had tried to promote in the small-scale sector. Though the industrial development in Jetpur did not result from a specific governmental scheme that directly focused on this town, the entrepreneurs in Jetpur proved capable of taking advantage of the various incentives provided to the small-scale sector and which were aimed at stimulating decentralized industrialization.

The traditional trading communities, especially the cloth and sari traders, have also directly contributed to industrial investment through the transfer of capital from trade to printing factories. The transition from merchant to industrial capital is an acknowledged feature of the economic history of India (Pouchepadass, 1975; Gadgil, 1971) and a common process too in the post-colonial development of the small-scale industry (Streefkerk, 1985). In Jetpur, the merchants' economic strategy corresponds to a diversification of the familial business and ensures a better control of both the production and commercialization processes. Not only do the traders have the financial capital to invest, but also the right network of connections to establish industrial concerns. As a result the economic position of the merchant entrepreneurs was strengthened as compared to that of the large majority of entrepreneurs working under subcontract for traders. The strategic position held by the cloth and sari trade has been rightly appreciated by some new entrepreneurs who used their work

experience in this sector as a springboard to penetrate the sari printing industry. The demographic weight of the traditional trading communities in the formation of the contemporary class of entrepreneurs (though notable) is however relatively modest and the industrial transition in Jetpur cannot be reduced to a mere transition from trade to industry. Yet, the traders' external control over Jetpur's printing industry has remained unabated, and was even strengthened along with the widening of the market.

More recently, especially since the seventies, the Jetpur printing industry has been increasingly penetrated by a new generation of entrepreneurs with an agricultural background, the Kanbis, and the urban industry has benefited from a transfer of capital from agriculture. From a regional perspective, this process exemplifies the growing influence of the Kanbis on the economic and political scene of Saurashtra and Gujarat.

THE JETPUR DYEING AND PRINTING INDUSTRY: PROBLEMS AND PROSPECTS

Some of the difficulties faced by the Jetpur textile printing industry have already been mentioned in the sections above: fluctuations in supply and prices of raw materials, increasing competition, over-indebtedness, water pollution, etc. This section will examine the major issues, more particularly with a view to trace the causes of 'sickness' in this industry and to envisage its future prospects. Labour issues will be discussed in the following chapter.

Fluctuating markets and a relative fall in demand

The Jetpur sari printing industry is confronted by fluctuating markets, a relative recession in the demand, and competition with other textile printing centres.

The demand for saris in certain regional markets may be affected by extraneous factors like political events,[18] international

relations[19] and natural calamities, thus creating marketing problems and a lack of orders for the establishments catering for those markets. In particular, the drought which hit large parts of the country in 1987 showed the vulnerability of the textile printing industry to natural calamities. The fall in the population's purchasing power reduced the demand for consumer goods (like saris), especially in rural areas directly affected by the crop failure. Since the consumers of Jetpur's saris are mainly village women, many entrepreneurs suffered from the general depression of the market during this drought and the subsequent reduction of orders. However, the situation differed considerably among the entrepreneurs, depending on the place of marketing of their saris and their capacity of adaptation to the changing conditions of the market. The demand shrank dramatically for those establishments whose market was concentrated in regions severely hit by the drought. But some major markets for Jetpur's saris were spared, in particular Bihar and West Bengal (and Bangladesh through Calcutta).

Depression in a specific market has a reduced impact on the Jetpur textile printing industry as a whole, as the marketing places of Jetpur's saris are very diversified, and extend to all parts of India and to some foreign countries. But for those establishments directly affected the procedure of shifting from one market to another is neither easy nor rapid, as the entrepreneur has first to find new traders and then to adjust the prints to the market's requirements of the new selected region. On the whole, it amounts to a costly procedure, resulting in relatively low flexibility.

In addition to market fluctuations which are geographically confined and temporarily limited, the Jetpur textile printing industry is also affected by the relative recession—or at least stagnation—in the global demand for Jetpur's saris. This has to be related to the expansion of the screen-printing industry in other centres[20] in India which compete directly with Jetpur for cotton saris, and most of which developed more recently than Jetpur. Furthermore, the marketing of cotton prints has to face the relatively new and indirect competition of synthetic textiles, increasingly appraised by the consumers for their better qualities of maintenance and durability. At the all-India level there has been a remarkable shift away from pure cotton

textiles in favour of synthetic and blended varieties, despite the latter being notably more expensive than the former (Goswami, 1990; Murty and Sukumari, 1991). This is especially the case in Gujarat, where synthetic saris—from Surat especially—swamp the market.

Increased competition

In the context of general competition with other textile printing towns, the Jetpur entrepreneurs also compete fiercely with each other. In a nutshell, the Jetpur textile printing industry is the victim of its own successful development. The bright prospects of this industry attracted many entrepreneurs which contributed to the industrial growth of Jetpur as long as the demand was also expanding rapidly. When the demand started stagnating, this led to increasing competition, resulting today in the reduction of the margin of profit in this industry and to the elimination of the weakest units. However, the entire process was accompanied by some adverse effects.

Among the entrepreneurs attracted by this industry, many of them did not have the technical knowledge of the dyeing and printing process, nor the required managerial skills. Consequently insufficient attention was given to the technical requirements of the production process. Unskilled or semi-skilled workers were employed to perform the work of skilled labour, which finally damaged the quality of the prints. This contributed to a deterioration of the quality of Jetpur's prints and this affected the general reputation of this industrial centre. This also turned out to be a handicap on the export market where quality standards are particularly strict.

To secure one's position in a highly competitive market, maintaining quality standards is a key factor. However, this is not an easy task when the competition takes an unfair turn, as is the case in Jetpur today. There is a fierce competition with regard to printing prices, and to snatch orders from traders some entrepreneurs do not hesitate to lower their price at the expense of the quality of raw material or by resorting to malpractices. The result is a general downward trend of the margin of profit in the Jetpur dyeing and printing industry.

The decline is particularly marked for those entrepreneurs who refuse to compromise with the quality of printing. As admitted by Jetpur's entrepreneurs themselves, business ethics and quality rules are not respected in the current competition.

Financial Crisis

Combined with the difficulties explained above, a major reason for sickness in the Jetpur dyeing and printing industry is the shortage of working capital in running the concerns. The natural corollary to this is over-indebtedness as the industry is a totally credit-based business.

Problems arise for the entrepreneurs who want to increase their production without sufficient initial capital base, and who do not implement a strict financial management. In particular, the balance between the creditors and the debtors is often not maintained. On the creditor's side, the entrepreneur has to pay interest charges to the dye and chemical merchants and cloth traders for the purchase of raw materials, and to the bank for the financing of working capital. On the debtors' side, the finished products are sold to the traders on a credit basis, with the period of credit ranging from 30 to 180 days. This creates liquidity constraints for the printing unit and curtails its quantum of working capital. The realization of the sales determines the entire cycle of working capital of the manufacturing unit, and any disparity between the creditors' side and the debtors' side has a direct impact on the health of the unit. Attracted in particular by mass production, many entrepreneurs tend to give to traders credit facilities which go beyond their financial capacity, resulting in their over-indebtedness.

The financial crisis faced by these entrepreneurs is in a certain sense too a consequence of their inadequate managerial skills. In a situation of tough competition, and faced with shrewd traders who impose their conditions, such entrepreneurs are unable to save their concern from liquidation. In addition, some of the small entrepreneurs with low educational qualifications are not aware of the rehabilitation schemes provided to sick units. The financial difficulties of the small

printing units especially are reflected in frequent changes in their partnership and ownership, and a notable turnover among the small entrepreneurs.

The trend towards over-production and the process of over-indebtedness is not a recent phenomenon in the Jetpur dyeing and printing industry. When the conditions of the market became less favourable, industrial sickness (to which this process leads) was revealed more sharply. Thus, as reported by all the bankers, the number of sick units increased significantly during the 1985-87 drought with the additional effect of other acute problems, especially water shortage and a fall in the demand for saris. More generally, with the situation of increased competition, the trend of industrial sickness in Jetpur appears to be also on the rise.[21]

Irregularity of water supply and the problem of water pollution

In addition to the economic difficulties engendered by the increased competition, the multiplication of textile printing factories in the same area meets ecological constraints, namely inadequate water supply and water pollution.

The dyeing and printing industry is dependent on water; therefore, an adequate water supply is a primary concern and a potential source of recurring difficulties in a drought-prone region like Saurashtra. Water is an essential element in the dyeing and printing process: sufficient quantities as well as an adequate quality of water have to be provided. Water is first used in the preparation of the dye solutions, to dissolve the colour powders. Then large quantities of water are required to wash the saris. For these two operations the chemical properties of the water matters too. A good amount of water is also needed to wash the printing tables, the screens, the buckets and other tools. Hence, drought has an immediate adverse effect on the dyeing and printing industry which is hit in the first place by shortage of water.

For example, to ensure the functioning of their establishments during the 1985-87 drought, the entrepreneurs were compelled to buy water from rural areas and bring it to their factories by means of mobile tankers. They had also to send the

saris for washing to places where water was available in sufficient quantities, sometimes up to 90 kilometres away from Jetpur. This resulted in increased production costs.

No wonder, then, that the Association, in its representations to the government, has constantly demanded that adequate steps should be taken to provide a regular water supply to the Jetpur dyeing and printing industry. In some sense, the entrepreneurs of Jetpur suffer from the paradox of having developed a water-intensive industry in a drought-prone region.

Another ecological limit to the concentration of textile printing factories in Jetpur is water pollution. Factories discharge their effluent, loaded with dyes and other chemicals, into streams and rivers, resulting directly in the pollution of the surface water, and (by infiltration) of the underground water. In addition, washing-places for the saris have been constructed along the banks of rivers and in the agricultural fields in the surroundings of Jetpur. This has increased the pollution of rivers and also affected agriculture. This widespread pollution is not only harmful for the environment, but it also generates health hazards for the people and the cattle in this area.

The acuteness of the situation led the Government of Gujarat to appoint a task force committee in 1979 to examine this water pollution problem. Subsequently (and as mentioned already), from 1983 the Gujarat State Water Pollution Control Board stopped issuing a 'No Objection Certificate' for setting up new printing units in Jetpur. An agreement was eventually reached between the Jetpur industrialists and the Board in order to implement a collective water depollution programme, whose expenses were to be shared by the entrepreneurs and the Government of Gujarat. Hence an effluent disposal system, consisting of a drainage network and a collective treatment plant, was constructed, and the plant was eventually inaugurated in May 1992. But the problem of the chemical pollution created by the washing-places scattered along rivers and in agricultural fields is not solved as yet. This state of affairs prompted the district administration to resort to extreme steps in order to curb water pollution, like the demolition of some washing-places.

This last problem shows the external effects generated by the uncontrolled expansion of the dyeing and printing industry with its adverse consequences for the environment. Until this point, the case of Jetpur could be advocated on the ground of the successful integration of an urban industrial centre with its rural hinterland. But the water pollution issue reveals also conflicting interests at the regional level between industrial growth and agriculture, or between industrialists as entrepreneurs seeking to minimize their costs of production and local inhabitants as farmers or mere water consumers.

Concluding remarks: limits and prospects

The pattern of mono-industrial development in Jetpur presents economic as well as ecological limitations. The agglomeration and concentration of the textile printing factories in Jetpur seem to have reached their saturation point, and the resulting increased competition affects the profitability of this industry and induces a process of elimination of the weakest units. The 'golden years' of the Jetpur textile printing industry, when the town was known as 'the little Dubai' of Saurashtra, appear to be over. However, though the fall in the demand does not give much scope for further expansion of the Jetpur printing industry at the global level, it still allows the firms with a rigorous management to be very prosperous, and the more dynamic ones to plan an increase in their processing capacity.

In view of this general condition of the industry, a trend of diversification towards ancillary and allied industries or trades has emerged, often accompanied by a geographical redeployment, which was already observable in 1988. For instance, some entrepreneurs have set up textile or sari trading agencies in major market towns, or factories for the manufacture of dyes and chemicals in the adjoining district of Junagadh (identified as industrially backward and thus entitled to specific incentives for industrial investment). Others set up units for the manufacture of packaging material or of synthetic yarn, and powerlooms for making synthetic fabrics in Surat. Five entrepreneurs, 'pioneers' in Jetpur, had also started units for printing polyester saris or other synthetic material, to adjust to the

increasing consumer demand for synthetic saris, in Gujarat especially.[22] All these entrepreneurs maintain their textile printing factories in Jetpur. Furthermore, some industrial groups are expanding by integrating the manufacturing and the processing activities upstream of the printing process, and commercialization downstream, with ramifications outside Jetpur. This vertical integration enables these establishments to control their cost of production and ensure a steady supply of finished products, and hence to be more competitive in the market.

In 1988-89, at the time of our main field observations, industrial reconversion did not seem to be on the agenda; what rather emerged were limited attempts at diversification among the most dynamic entrepreneurs and an internal restructuring of the textile printing industry at the expense of the weakest units. The second visit in August 1992 confirmed this twofold trend. Evidence of further diversification was especially remarkable. In addition to the ancillary and allied products and services mentioned above, there is a partial reorientation of the Jetpur prints towards formerly marginal, or entirely new, lines of products. For example, saris of better quality meant for middle-class people have gained ground as compared to the cheapest ones aimed at low-class consumers; dress material, bed-sheets, scarfs and *khangas* have increased their share among total production; printing on viscose rayon and staple cotton has also been introduced for dress material. The increasing share of prints other than the traditional cotton saris has to be related to the increase in exports, another significant and recent trend in Jetpur.

It seems that the new economic policy implemented since 1991 has given a boost to exports: despite the abolition of cash subsidies for exports, other measures such as the devaluation of the rupee, the establishment of its partial convertibility[23] and the simplification of the export procedure have had a positive direct or indirect impact on exports. It has created altogether a favourable psychological climate, as acknowledged by the entrepreneurs in Jetpur. Although, at the level of Jetpur's total production, the share of exports remains low as compared to the share of the internal market, the entrepreneurs already engaged in exports have buttressed this orientation. Many others have also entered the export market through

export houses for whom they work under subcontract, and the concerned establishments are among the more prosperous ones in Jetpur. Most often, however, the smaller units cannot take direct advantage of this new trend, since they are not in a position to compete with others on the export market which requires better standards of prints and involves higher risks of rejection and hence of loss. Nevertheless, the partial shift towards exports at the global level, providing it continues to be on the increasing side, is likely to affect favourably the whole Jetpur textile printing industry as far as it can help relax the competition on the internal market.

The reorientation in favour of new lines of products, new varieties of textiles or new markets is an encouraging trend which shows the capacity of the Jetpur entrepreneurs to adjust to the evolution of the consumer market as well as their capacity to respond to the reforms of economic liberalization.

A recent project, proposed by the Association and submitted to the State Government, deserves mention. This is a proposal to set up a new industrial estate in the vicinity of Jetpur to promote the processing of cotton and synthetic fibres and to establish power-looms for the manufacture of cotton and synthetic fabrics. The objective would be to create in and around Jetpur a composite textile centre for spinning, weaving and printing. It aims at attracting new entrepreneurs and providing new investment opportunities to local entrepreneurs, in order to prevent industrial redeployment outside the Jetpur area. Although this project is still at the initial stage of discussion, it further indicates the dynamism of entrepreneurship in Jetpur.

NOTES

1. Values are given in Indian rupees, at the current prices of 1988-89. At that time, the exchange rate of the Indian rupee vis-à-vis the US dollar and the pound sterling was: 1 US $ = Rs 14 and 1 £ = Rs 26.
2. See, for example, Goswami (1990: 2497): 'From a modest beginning (in the early 1960s), power-looms now (in 1986) account for more than 55 per cent

of textiles produced in India. The composite mills come a poor second with approximately 28 per cent of output, while hand-looms are at the bottom, accounting for less than 17 per cent of total production.'

3. The bleaching process aims to remove impurities from the fabric through treatment in a chemical solution. The mercerizing process consists of another chemical treatment which imparts a certain degree of lustre to cotton which gets added strength, and hence increased durability and increased dye absorbing power.
4. For instance, around 10 to 12 years ago, there was already a lot of speculation in this market, but at that time an average fluctuation would be of 5 paise per metre and the traders would fight for 2 paise per metre. In November 1988, increases up to Rs 1.5 per metre in one session of transactions were reported.
5. Other chemicals are acetic acid, sodium nitrate, caustic soda, sodium silicate, urea, etc. Wax is applied to the printing table before spreading the cloth. Gum is used in the preparation of the dye paste as a thickening agent. It is extracted from a leguminous plant, the gowar, which grows particularly in Rajasthan. Starch, which is a hardening agent, is extracted from maize.
6. For a study on the cost of production in the Jetpur sari printing industry, see: R.B. Gandhi (1985-86).
7. See Chapter 7 (the section on the printing process) for a description of these finishing processes.
8. At the current prices of 1981-82: at that time the exchange rate of the Indian rupee *vis-à-vis* the US dollar and the pound sterling was: 1 US $ = Rs 9 and 1 £ = Rs 17.
9. Estimates of profit are based on the study conducted by R.B. Gandhi (1985-86), and on the information provided by a chartered accountant interviewed in 1989. For the reasons already expounded in Chapter 2, and recalled at the beginning of this chapter, data on costs and profits were not collected directly from the entrepreneurs at the level of individual establishments.
10. Since October 1991, the rate of interest varies according to the amount of the loan: in 1991-92 it increases with the size of the advance from 13 to 19.5 per cent for term loans.
11. However, in spite of the official ban, some industrialists managed to build new printing factories after 1983 outside the GIDC estate.
12. The other banks are: the Central Bank of India, the State Bank of India, the Bank of Baroda, the Union Bank of India, the Indian Overseas Bank and the Dena Bank.
13. In the co-operative sector, the Rajkot District Co-operative Bank and the Gujarat State Co-operative Land Development Bank, which have also offices in Jetpur, are oriented towards the agricultural sector.
14. This estimate is based on the 10 per cent household survey conducted in 1988; the corresponding confidence interval at the 95 per cent probability is: 1,758 - 2,276.
15. Source: the *mamladar's* office, Jetpur, 1988.
16. The names mentioned in the entrepreneurs accounts have been changed in order to respect the anonymity of the individuals.
17. Pansters, W.G. (1985): De dialektiek van mikro en makro; Een onderzoek

naar het funktioneren van kleinschalige berijvigheid in Ciudad Juarez, Mexico. Diskussiestukken van de vakgroep sociale geografie in ontwikkelingslanden, Nr 30, Utrecht.

18. For instance, the assassination of Indira Gandhi in 1984 and the subsequent social unrest and political disturbances affected the Delhi market and parts of the North Indian market, compelling some entrepreneurs to shift to other zones.
19. The Bangladesh market, for example, is sensitive to the political relations between India and its neighbouring country, especially through a more rigorous control of exports.
20. In Gujarat one can mention Rajkot, Ahmedabad, Jamnagar; in Rajasthan: Pali, Jodhpur, Jaipur; in Uttar Pradesh: Mathura, Farrukhabad and in Andhra Pradesh: Hyderabad. With respect to the type of saris printed, the main direct competitor for the Jetpur printing industry is Pali.
21. Unfortunately, there is no systematic record of closures of industrial units (see Chapter 2), and hence there is no reliable data to analyse the trend in the number of units that have closed down over time. However, information provided by various bankers in Jetpur, in 1989 and again in 1992, leads to the conclusion that the number of units facing critical financial difficulties tends to augment under the present market conditions.
22. These printing units are run very secretly, and more or less illegally, in order to avoid the excise duties imposed on the printing of synthetic cloth.
23. The total convertibility of the rupee on trade accounts (that is, for the purpose of import and export payments) was established one year later, in March 1993.

7

From Working Conditions to Industrial Workers as a Class

In the chapter devoted to the analysis of the structure of the urban labour market, some characteristics of the labour force employed in the dyeing and printing industry have already been underlined. They pertained more precisely to the production workers: a particularly young population, almost exclusively male, poorly educated, hailing from a wide range of castes, and including a high proportion of recent in-migrants, especially from rural areas. With respect to regularity and security of employment, they proved to be especially vulnerable.

The present chapter examines in more detail the working conditions of the different categories of hired workers in this industry: the manual workers and others residing in the urban agglomeration or in the surrounding villages. A primary objective is to investigate the channels of access to employment in the textile industry and the possibilities of upward mobility for the industrial workers. This will further highlight the process of segmentation of the labour market. Another main issue to deal with is the formation of an industrial working class: to what extent do the industrial workers constitute a united labour force, or, on the contrary, what are the lines of fragmentation?

The evidence presented in this chapter is based essentially on the 64 workers' life histories and the in-depth interviews with them. It is corroborated by data obtained from interviews with union leaders, labour officers and entrepreneurs, and the

results of the household survey which includes a sample of 1,764 hired workers in the textile printing industry.

WORKING CONDITIONS

A preliminary description of the different operations of the production process will help us to comprehend the working conditions in the textile printing industry, as well as the grounds for the division of labour. The system of recruitment and payment, which is a basic determinant of the workers' welfare, will be then examined.

The printing process[1]

The first step of the printing process is the preparation of the thickened solution of the dyestuff, mixing colour powders in water with suitable starch or gum paste and other chemicals to make the actual printing paste (Plate 1). This operation of

Plate 7.1
Dyer preparing the printing paste with synthetic dyes and other chemicals.

primary importance is carried out by the dyer in the 'colour laboratory' of the factory. Thus, the dyer who occupies a strategic position must be a well-trained and skilled worker. In some small establishments the entrepreneur–employer himself is engaged in the preparation of dyes.

The second step is the application of one or more pastes to the fabric surface in order to print a multicoloured design (Plate 2). The fabric to be printed is spread on the wooden slanted table specially made for the purpose. As saris form the prevalent item of production in Jetpur, the usual length of a printing table is about 30 metres (on which the cloth of six saris can be spread simultaneously) and the width is nearly 2 metres. Wax is previously applied on the top of the table in order to keep the cloth creaseless and firmly fixed in position while printing. After the fabric is spread and gummed over the top of the table, the printers place the screen on the printing table across the width of the fabric, with the nylon material of the screen lying flat upon the cloth to be printed. The dyeing solution is poured inside the screen frame and, with the help of a rubber squeegee attached to a wooden handle, one or two

Plate 7.2
Printers spreading the printing paste on the fabric through a screen.

strokes are given across the screen, in order to transfer the dyeing solution through the open pores of the screen onto the fabric placed underneath, thereby registering a part of the final design to be printed. The screen is then lifted and placed at the next point, marked and fixed at a proper distance on the side of the table to ensure continuity of the print. This process is performed by two printers standing opposite each other on both sides of the table, and it has to be continued until they cover the entire length of the cloth.

When the design is of a single colour, only one screen is required. But in the case of multicoloured designs, the number of screens to apply is equal to the number of colours in the particular design, each screen printing that portion of the design which bears that particular colour. Only one colour can be printed at a time, and the printers cannot apply a new colour before the previous one is completely dried. Different styles of printing can be distinguished. In direct printing, the dyestuff are screen-printed directly at the required places of the multicoloured design on the bleached cotton fabric, leaving the other portion white. But in some specific styles, called 'discharge printing' and 'resist printing', the fabric is first dyed uniformly, dried and then screen-printed.

The step following the screen-printing operation is the immediate drying of the printed fabric, so that the dye present in the wet paste on the fabric surface does not spread beyond the boundaries of its design. For that purpose all the printing factories are equipped with electric ceiling fans. The printed cloth is first hung under the fans above the tables to dry out, and then taken out and spread in the sunlight. As already mentioned, a few factories are fitted with printing tables equipped with a heating system, in order to operate during the monsoon.

According to the class of dyes used, the printed and dried textiles are then taken for steaming or chemical processes in order to develop and fix the colours. With reactive and rapid dyes, which are the most commonly used today, the prevalent developing process consists of passing the cloth through a solution of sodium silicate.[2]

In the next step, the cloth is sent for washing in various detergent solutions as well as in clear water in order to remove the starch, gum and other chemicals used in the preparation of

the printing paste and throughout the dyeing process and which remain in the fabric (Plate 3). Earlier, the process of developing dyes and the washing operations took place on the banks of the Bhadar river. But the tremendous extension of the printing industry did not allow this situation to be perpetuated on a larger scale. Nowadays the printing factories have their own washing-places inside their premises, or—in most of the

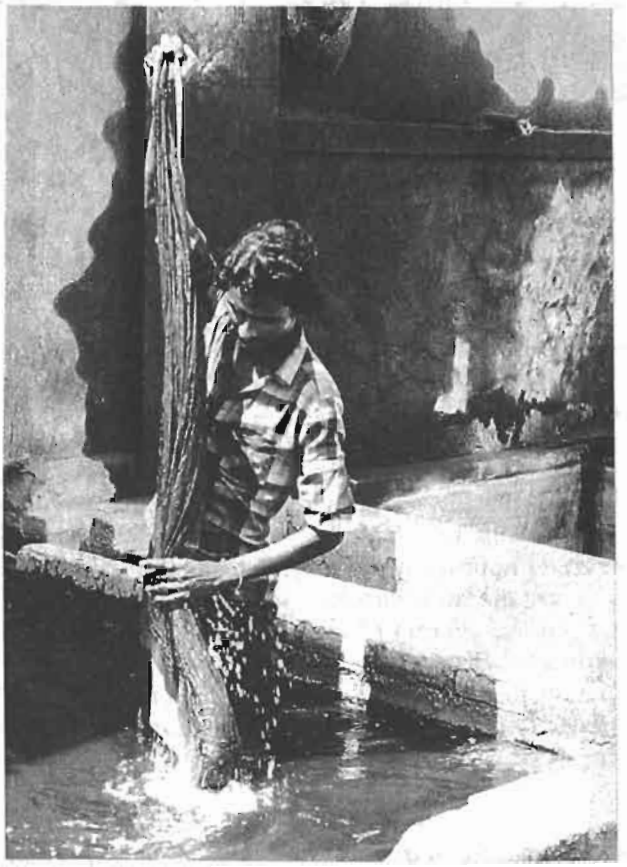


Plate 7.3
Washing the printed saris.

Plate 7.4
Ironing the saris.

cases—they send the printed cloth outside their factory to washing-places (called 'washing *ghats*') situated in the fields around Jetpur.

To become attractive enough to be presented to the consumer market, the printed cloth goes through different textile finishing processes, in order to give stiffness to the cloth or to produce a soft or a felt effect, by applying starch, a softening agent or other appropriate chemicals. Most of these finishing operations are manual, although the most sophisticated ones require special machinery, like the Stencer machine or the 'felting machine'.[3] The type of washing and finishing processes also depends on the class of dyes used for printing. The final step consists of ironing, folding and pressing the saris before packaging (Plate 4).[4]

Employment generation and range of occupational specialization

As shown by the above description, the entire printing process is manual. Sophisticated machines which are sometimes used

for finishing processes (Stencer machine, 'felting machine') are found only in a few textile printing factories, or in some specialized establishments. Consequently, the employment capacity of the screen-printing industry is considerable. Based on the 1988 household survey, the number of hired workers employed at the beginning of 1988 in the dyeing and printing industry was estimated to be around 14,500 workers residing in the Jetpur urban agglomeration,[5] to whom should be added about as many commuters. This estimate is coherent with other data provided by the industrial association on the number of establishments and their processing capacity (see Chapter 3), and given the situation of drought which adversely affected the printing industry at that time.

Table 7.1
Percentage distribution of hired workers in the Jetpur dyeing and printing industry by occupation in 1988.

Occupation	%
Screen-maker, designer	5.7
Dyer	8.3
Printer	40.3
Washerman	13.8
Folding and pressing worker	9.6
Packer	2.2
Ancillary production worker	7.7
Clerical worker	6.5
Salesman	1.0
Service worker	3.4
Transport worker	1.5
Total	100.0
No. of observations	1,764*

* This sample includes 1,520 workers living in the Jetpur urban agglomeration and 244 in the nearby villages surveyed.
Source: The 10% household survey (1988).

The workers of the textile printing industry are specialized by occupation, corresponding to the different operations of the process of production. The printers form the bulk of the industrial labour force (40 per cent of the workers), the washermen account for 14 per cent, the workers engaged in folding and

pressing 10 per cent, the dyers 8 per cent, the screen makers and designers 6 per cent, the workers engaged in packaging operations 2 per cent, and other production workers engaged in steaming, silicate and felting processes and other miscellaneous operations 8 per cent. In addition to the production workers, a few clerical workers (6 per cent), salesmen (1 per cent) and a few service and transport workers (5 per cent) require mention (Table 7.1).

System of recruitment and payment

Apart from the dyers, the office staff (accountant, clerk, etc.), the watchmen and the drivers who are salaried on a monthly basis, the other types of work in the textile printing industry are remunerated on a piece-rate basis.

Table 7.2 shows the rates applied for the main types of work in the printing industry of Jetpur; it is based on the data collected in 1989 during the survey of industrial workers. The actual wages received by the workers are detailed below, along with the three main systems of recruitment and payment which are distinguishable in the Jetpur dyeing and printing industry, namely: piece-work wage, monthly salary and contract labour.

Piece-work wage

The prevalent system of recruitment and payment is hiring on a daily basis, with remuneration on the basis of the amount of work executed, according to a fixed piece-rate (see Table 7.2). This is the general system applied for the printers, washermen, workers engaged in pressing, folding and finishing operations, as well as for the screen-makers. The payment is given at the end of each working day (printers), or every week or fortnight (washermen, workers in folding and pressing), by the employer or the accountant to the team's leader (locally called 'master') who is responsible for the work. The master redistributes their respective share to the workers of his team (for example, four to seven workers for a team of printers), according to their level of skills and experience. The resulting daily earnings for the workers fluctuate considerably, even for the same occupation,

Table 7.2
Labour costs in the Jetpur dyeing and printing industry in 1989.

Type of work	*Rate in rupees (1989)*	
Screen designing		
– tracer	10 to 20 per screen	
– lacquer	4 per screen	
– photographer	5 to 6 per screen	
Dyeing	monthly salary: 600 to 2,000	depending on the experience and on the establishment
Printing	0.45 to 1.00 per sari, up to 1.25 in extreme cases	depending on the number of colours and on the establishment
1 colour	0.45 to 0.55 per sari	
2 colours	0.50 to 0.70	
3 colours	0.70 to 0.80	
4 colours	0.80 to 0.90	
5 colours	0.90 to 1.00	
Silicate process	0.05 to 0.10 per sari	
Washing	0.25 to 0.30 per sari	paid to the master washerman
Pressing and folding		
– ironing	0.06 to 0.10 per sari	
– simple folding	0.05 per sari	
– ironing and folding	0.11 to 0.15 per sari	
– roll pressing	0.05 to 0.20 per sari	depending on whether the work is done inside the establishment or given outside to finishing units
– folding and pressing, including 'bamboo roll' pressing*	0.15 to 0.50 per sari (average : 0.30)	paid to contractors from Uttar Pradesh and Bihar, and depending on the type of folding and pressing
Felting process	0.25 to 0.30 per sari 0.07 to 0.15 per sari	paid to the finishing unit paid to the master

* see note 17.
In 1989, the exchange rate of the Indian rupee vis-à-vis the US dollar and the pound sterling was around: 1 US $ = Rs 17; 1 £ = Rs 27.
Source: Workers' life histories (Jetpur, 1989).

depending on the piece-rate applied in the factory, the number of working hours and the amount of work executed, and the level of skill and experience of each worker. The figures given below pertain to 1989.

The daily earnings for a printer ranged from Rs 20 to 45 for 8 to 12 hours of work;[6] it sometimes reached Rs 50 and up to Rs 70 when the working hours were increased (up to 15-16 hours), especially with the night shift. A higher piece-rate may be applied for work on 'hot tables'. A washerman earned Rs 15 to 25 per day for 8 to 10 hours of work, up to Rs 45 with more working hours, or otherwise if he had the status of a master. In folding and pressing, there are different operations involving different skills, which results in a wide range of daily earnings: from Rs 20 to 40 for 8 to 10 hours of work, depending on the level of skill. Yet better earnings (Rs 50-60 per day) could be expected by the masters. On the other hand, unskilled work, as in the silicate process, did not bring more than Rs 15 to 20 per day for 8 to 12 hours of work. Workers in screen-manufacturing units (lacquerers, tracers, photographers) could expect Rs 20 to 45 per day for 8 hours of work, the best paid work in that branch being that of the photographer. Data collected during the last round of observation in 1992, though limited, indicate some slight increases in piece-rates as compared to 1989; yet this does not appear sufficient to compensate for the inflation over those three years, particularly high in 1991 with a rate approximating 16 per cent.

Till the early sixties, the piece-work wage system was not prevalent among the production workers as the system of payment by monthly salary was more common. In the sixties the employers turned gradually to piece-work wages, in order to avoid the payment of the various employment benefits attached to the status of permanent employees (paid leave, allowances, bonus, provident fund, etc.), thus reducing labour costs. In addition, they expected higher productivity through this system which prompts the workers to work more for better earnings. The entrepreneurs consider the piece-work wage system as a contract with the master of the workers' team to whom they give a certain amount of work to be executed and to whom the payment will be given. For the washing, folding, pressing and finishing processes in particular, the industrialists often do not regard the concerned workers as their employ-

ees, especially the washermen whose work is performed in washing-places outside the factory premises.

According to the entrepreneurs, the introduction of piece-work wages was welcomed by the workers as they could enhance their earnings and earn much more than the minimum wage of the branch (namely, Rs 18 per day for an unskilled worker, Rs 18.65 for a semi-skilled worker and Rs 19.30 for a skilled worker—plus dearness allowance of Rs 6.75 per day, in June 1989). Not surprisingly, the workers' point of view is more critical. Admittedly some workers find piece-work wages more profitable than a fixed salary, provided they get regular employment. Some also appreciate the flexibility of this system, especially the commuters who belong to agriculturists' families, as it allows them to combine their work in the factory with agricultural work in their own fields, according to the requirements of familial farming. Most of the piece-work labourers are well aware that their system of recruitment and payment induces non-permanency and insecurity of employment, and hence irregularity of income, as they suffer directly from these. This reduces them to the status of casual workers who are deprived of all benefits. The piece-work labourers do not get any weekly or annual paid leave, any sick leave, or any allowances; at best they may get a bonus for Diwali (Rs 10 to 15 or a box of sweets). But even the system of giving bonus depends on the individual industrialist and it is not a common practice. Furthermore, with piece-work there is no fixed timing. Long working hours are extremely frequent, but they are never treated as overtime: they do not bring extra payment, as the same rate is applied without consideration to the number of working hours. In case of night shift, only the printers may sometimes benefit from a better piece-rate, when there is an extra demand to meet. For the washing, pressing, folding and finishing operations, workers also complain that the piece-rates are not adjusted to take account of inflation. It should be added that to yield good returns, piece-work requires very hard work and long working hours. The prerequisite is for a worker to be in good physical condition, in order to be productive and because there is no sick leave, and overall to be able to find employment regularly throughout the year. This is virtually never the case, as will be shown later by examining the period of employment.

Another direct consequence of the prevalence of piece-work is a high turnover of the workers between the different factories. Without any employment security, at the mercy of arbitrary dismissal, or in search of a better piece-rate and better working conditions, casual workers are rarely attached to the same establishment for a long time, and some of them change factories very frequently. Recruitment on a daily basis and piece-work wages hence contribute to irregularity of labour supply at the level of a single establishment, as the non-permanency of the workers induces high turnover, absenteeism, and possible temporary shortages.

Monthly salary

The monthly salary is today restricted to a few specialized jobs in the dyeing and printing industry: only the dyers among the manual workers, and the office staff, watchmen and drivers. In such cases there is no intermediary between the worker and the entrepreneur–employer to draw the remuneration (apart from the accountant). In 1989, the monthly salary of a dyer ranged from Rs 600 to 2,000 at the maximum (but rather rare), depending on the factory and on his experience.[7] This can be compared to the legal minimum salary for this occupation which was, in June 1989 Rs 501.80 per month, plus a dearness allowance of Rs 6.75 per day. It is still possible to find some production workers (other than dyers) who have been working for many years in the same factory and who have preserved their status as salaried workers; but this is more and more rare and confined to a few big establishments.

As compared to the piece-work labourers, the salaried workers are looked on as the privileged employees in this industry. Their monthly salary ensures a regularity of income throughout the year, and implies a certain security of employment. However, it must be underlined that the salaried workers never have the status of permanent workers. They are deprived of the various employment benefits attached to this status, and they are subject to dismissal even after many years of employment in the same establishment—sometimes precisely to prevent them from claiming the benefits to which they are entitled. As a general rule, they receive no allowances, they do not benefit from any provident fund, and they have no

proper paid leave. Admittedly they usually have one weekly holiday, though not systematically. Otherwise only a few days of leave from time to time are tolerated for medical or any other personal reasons, up to one or two weeks, without entailing a cut in the salary. The practice of giving bonus for Diwali is more frequent among the salaried workers than for the casual workers, though not systematic. In the best cases they receive an extra one month's salary. Salaried workers, especially dyers, do not receive extra wages for overtime or night shift. Thus, although more enviable than the casual workers, the conditions of the salaried workers are not satisfactory either.

Contract labour

Contract labour is the third system of recruitment found in the Jetpur textile printing industry, and it is confined to the inter-state migrant workers. This is a relatively recent and still limited type of recruitment, which is however quite indicative of a new economic logic, and likely to lead to a reinforced trend. Since the mid-seventies some employers in this industry have started recruiting workers from States other than Gujarat, mainly from the densely populated northern States of Uttar Pradesh and Bihar, and from the bordering State of Rajasthan. These workers are mostly recruited through middlemen, contractors or recruiting agents. They are generally male adults and teenagers and come to Jetpur without their family, and the duration of their stay depends directly on the duration of their engagement, which is usually temporary. They are also highly mobile, as they return periodically to their native place, or go to other industrial textile towns.

The inter-state labour migration corresponds to well-defined channels of recruitment, with occupational specialization according to the region of origin of the workers: printers from Rajasthan, workers for pressing and folding from Uttar Pradesh and Bihar. The contractor belongs usually to the same region as the migrant workers. He acts as a recruiting agent to recruit workers from his native region or from other industrial textile towns, and as a foreman and supervisor in the factory with his team of workers. While the chief contractors do not participate themselves in the production process, the small ones and the sub-contractors most often work with the team of workers under

their control. A contract is fixed between the industrialist and the contractor for a certain amount of work to be executed according to a fixed piece-rate; the contractor draws a commission for himself and pays his workers. For the folding, pressing and finishing operations, the contractor gives them a fixed salary, according to their level of skills, from Rs 150 to 650 per month (in 1989). For printing work, piece-work wages still prevail for the contract workers. Free accommodation in the factory premises is provided for inter-state migrant workers and the food expenses are advanced by the contractor. In some big factories, the premises are equipped with small one-room dwellings and water facilities; sometimes fuel for cooking is provided by the owner. But frequently the workers live in the workshops (see Plate 5); sometimes they may sleep amidst the piles of saris, and they are not provided with any water or cooking facilities. Some contractors also pay the medical expenses of their workers, and give them clothes as a bonus for festivals. Apart from that, the contract workers have no benefits. Work in night shifts, which is rare among local workers, is systematic among inter-state migrants under contract; it is virtually compulsory and it is not

Plate 7.5
"Bamboo roll" or "Benares roll" finishing, performed by migrant workers from Uttar Pradesh and Bihar.

compensated. Coming from regions less developed than Gujarat, the inter-state migrant workers are ready to accept lower remuneration than the local workers. Very often the contract workers draw their wages from the contractor only on their return to their native place, but they can withdraw an advance from the contractor when necessary.

The number of inter-state migrant workers living in the factories' premises, as enumerated in January-April 1988,[8] was 1,113, which would represent 4 per cent of the estimated total labour force of the textile printing industry. This figure can be compared to the estimated number of inter-state migrant workers based on the 10 per cent household survey, namely around 1,635,[9] or about 6 per cent of the estimated total industrial labour force. The difference is due to the fact that not all inter-state migrant workers are housed in the factory premises. Some of them have arranged for independent accommodation, sometimes almost at the gate of the factory, in overcrowded insalubrious rooms. Their housing conditions are not necessarily better than those of their fellow workers living inside the factories, and they are unable to escape from the control exercised over them by their contractor. Besides, some inter-state migrant workers have also come independently of these organised channels of recruitment. However, these figures should be considered as a minimum estimate of the employment potential of the textile printing industry for this specific category of workers. On the one hand, it is quite likely that some teams of workers living inside the factories have been missed out, due to possible misinformation leading to omission.[10] On the other hand, in the case of a recession in the textile printing industry, if no more work is available, these inter-state temporary migrant workers leave Jetpur, especially as they do not have any proper residence there, nor their families. Their presence in Jetpur being exclusively attached to their working contract, they return to their native place or go to other places in search of work. Since the household survey—and the enumeration—took place in the last year of a three-year period of drought which severely affected the textile printing industry, many teams of temporary migrant workers left Jetpur at that time—half their number according to some industrialists' estimates. This was confirmed by interviews

conducted after the 1988 monsoon, which brought great relief to this industry and allowed the recruitment of inter-state migrant workers to resume at a quicker pace. Taking these two factors into account (omission and seasonal fluctuations), the actual share—apart from economic crisis conditions—of the inter-state migrant workers in the total labour force of the Jetpur textile-printing industry could be estimated at around 10 per cent. It will be shown in a later section that the significance of this specific segment of the industrial labour force extends beyond its demographic share: the contract labourers from faraway regions fulfil specific functions in the textile printing industry which explain the initial reasons for this type of recruitment and its further development.

The textile printing industry in Jetpur is based on a labour-intensive process, and therefore has generated considerable employment opportunities. The entrepreneurs' search for better labour productivity and minimizing of labour cost has undoubtedly contributed to the expansion of this industry and to the development of mass production, but at the expense of the workers' welfare insofar as it has resulted in an increase of the extent of casual labour and in a general deprivation of social benefits. The process of industrial transition observed in Jetpur is typical of the hand-printing industry in India, and its adverse effects on the workers have been already denounced (Jain and Kapadia, 1984). With the passage from family-based cottage industry to industrial production, the dyers and printers have lost 'the advantages of working at home with family involvement and input, without gaining the advantages of organised labour.... They thus continue to function under conditions typical of the informal sector' (Jain and Kapadia, 1984: 470-71). From this viewpoint, it is important to underline that the size of the industrial establishment has no significant influence on the conditions of employment of the workers. Apart from the fact that contract labourers are essentially recruited by large-sized and some medium-sized printing factories—though they are also found in certain small-sized specialized finishing units—the system of piece-work wages without security in employment is common to all the establishments, whatever their size is, and the workers, including those

receiving a monthly salary, are not better protected in the large establishments than in the small ones.

LIMITS TO SOCIO-ECONOMIC UPWARD MOBILITY

The possibilities of socio-economic upward mobility provided by a job in the textile printing industry can be evaluated at several stages of the workers' life history. A first question pertains to the socio-economic background of the industrial workers: what types of inter-generational as well as individual occupational mobility does it reveal? Another issue is the entry into the textile printing industry: what are the channels of access to this industry, and are there any barriers to entry? Does industrial employment enable the workers to improve their economic condition as compared to their previous situation? Then, what are the possibilities of upward mobility within the industrial sector? Lastly, though we do not have specific data on those who left this industry, we shall envisage the future prospects for the current industrial workers.

The workers' socio-economic background

In the context of a middle-sized town whose peopling reflects strong regional and rural moorings, and where industrialization took off in the post-Independence period, it is not surprising that the entry into the industrial labour market was most often accompanied by an inter-sectoral mobility from agriculture to industry.

The inter-sectoral mobility can be first appraised through inter-generational occupational mobility. The majority of the workers belong to families engaged in agriculture. Their fathers and, even more frequently, their grandfathers are/were landless agricultural labourers or, more often, small farmers or farmowners whose land could not provide a decent livelihood for all the children, some of whom were pushed outside agriculture. Migration—or commuting—appears to be the prerequisite for a sectoral mobility. Those workers without an agricul-

tural economic background generally belong to families of artisans, self-employed service workers, petty traders and other miscellaneous labourers.

As far as the occupational mobility of the workers themselves is concerned, a notable number of them still had their first experience of work in agriculture, mainly as unpaid familial helpers or as agricultural labourers. This is a reflection of their socio-economic background. For most of the workers of this group, this constitutes the only experience before entering the textile printing industry. The commuters, in particular, belong essentially to this category. The second important homogeneous group is formed by the workers who entered the textile printing industry directly as their first job. Among them some in-migrants had work experience in other industrial textile towns. Only a minority was involved in non-agricultural occupations of varied types.

In the following chapter, it will be shown that inter-sectoral mobility from agriculture to industry does not necessarily correspond to an economic reconversion, but often to a diversification at the level of the familial group.

Entry into the Jetpur textile printing industry

As a general rule, for the current industrial workers, natives, in-migrants as well as commuters, the entry into Jetpur's labour market was synonymous with entry into the textile printing industry. This shows a lack of mobility from the non-industrial urban activities to this industry. From another viewpoint, not exclusive from the previous one, this suggests that the workers who sought—and managed—to enter the printing industry were able to accede to it directly, without any transitory stage in other more traditional urban activities. Yet, the first job in the textile printing industry was in some cases preceded by a period of unemployment, the duration of which sometimes lasted for several months, even one year or more in extreme cases. Conversely, none of the inter-state migrant workers had to face unemployment in Jetpur before entering the printing industry. This is due to their specific way of recruitment, most often through contractors who recruited

them directly from their native places or other previous places of work where they were contacted, or at least through well-established migration channels providing them with the necessary contacts to secure a job in Jetpur.

This first insight into the job access routes to industrial work reveals a strong compartmentalization of the urban labour market. Further, this is at variance with the famous dualist model—propounded by Todaro (1969)—according to which new in-migrants, and more precisely in-migrant workers from rural areas, proceed step by step from the traditional urban sector towards the modern sector. The applicability of this model to the Indian context has been criticized by Breman (1980).

As a general rule too, access to employment in the textile printing industry implies a period of apprenticeship or training. In the case of the inter-state migrant workers, the training period had sometimes taken place in a previous place of work in other industrial textile towns. Apprenticeship depends first on the kind of work to be performed. It is compulsory for all the skilled jobs, and it is significantly longer for the dyers, the most skilled job among them. The duration of the training period is extremely varied, from a few days to more than one year, depending not only on the type of work, but also on the master under whom the apprentice is trained, and on the opportunities of promotion in the factory.

To find a job either as an apprentice or as a trained worker, most of the workers benefited from contacts with, or an introduction from, persons already employed in this industry. Moreover, the persons who provided support were also often from the same caste, and/or from the same village or state of origin, or otherwise neighbours or acquaintances, or simply relatives and in-laws.

The significance of recruitment channels relying upon close relatives of the family already employed in the textile printing industry, which was revealed by the in-depth interviews, is confirmed by the occupational pattern at the household level.[11] Among the households residing in the Jetpur urban agglomeration and including two working members or more, half of them have at least one member employed as an apprentice, or as a wage or salaried worker in this industry; the point worth

noting is that among this last group 60 per cent of the households have two or more members working in the dyeing and printing industry. The corresponding percentages for those equivalent households residing in the five nearby villages surveyed are respectively 43 per cent and 34 per cent. These figures also testify to the reproduction process of the industrial proletariat at the familial level; this is particularly remarkable among the urban-based families, while in the case of the rural ones, employment in industrial labour corresponds more often to a strategy of diversification consisting of sending one member to work outside agriculture.

Among those who did not get any support to find a job in the textile printing industry, some went on their own to meet the factory managers. Others went to the *gujari*, which is a local labour market in the strict sense of the word, a place where workers in search of employment gather every morning, waiting for employers—or their intermediaries—to recruit them. Yet, the existence of such a labour market does not guarantee an entirely open access to employment in the textile printing industry. Preferences or discrimination based on community or caste cannot be excluded. Further, the *gujari* as an initial mode of entry into the textile printing industry occupies a marginal place. Whenever the employers resort to the *gujari*, this is essentially to meet the need for a trained and directly operational labour force, or to find labour to perform unskilled limited tasks, but never to search for new apprentices.

To sum up, entry into the industrial labour market in Jetpur relies on various networks of social relations. This conclusion is consistent with the findings of many other studies on the industrial labour market in India, all of which underline the significance of personal contacts in job access routes.[12]

Trends in earnings and irregularity of employment

To appraise the impact of the workers' absorption into the urban industrial market on their economic status, it is possible to examine the evolution of the workers' earnings, and to compare their levels of income both before and after entering the textile printing industry in Jetpur.

For a majority of the workers currently employed in the textile printing industry, the first job in this sector represents their first paid work, either because they did not have any previous experience of work, or because they were working as unpaid familial helpers, mainly in agriculture. This characteristic has to be related to the young age of the industrial workers (68 per cent of them are less than 30 years), which further reflects the continuous 'pull' effect of the textile printing industry in Jetpur.

For the workers who had a previous paid occupation (all of them in-migrants), there is no systematic improvement in their level of income after their migration and entry into the textile printing industry. This is true even if the reference point taken for the comparison is not the initial period of apprenticeship or training in this industry, during which the level of earnings may be significantly lower or even nil. Cases of deterioration in the average level of income between the previous occupation and the first 'full-paid' work in the textile printing industry are not exceptional. Migration took place because, in general, remaining at the previous place would have meant a drastic fall in income due to unexpected deterioration in the previous occupation (loss of job, sudden slump in trade, etc.) which had compelled the workers to leave. However, most of these initial declines in income after migration were followed by later improvement and adjustment.

The trend in the workers' earnings since their entry into the Jetpur textile printing industry gives a mixed impression. About half of the workers have followed an upward nominal trend (which should be corrected for the price effect). But it also shows that no worker in this industry, even after many years of employment, is protected from a sudden fall in income or a loss of employment. The principal characteristic and concern of the workers in the Jetpur textile printing industry is irregularity of earnings, which results directly from the precariousness of their employment. This was underlined in previous studies (Ashraf, 1985), and appears clearly in our 1988 and 1989 surveys.

In particular during the monsoon which is the lean season for the textile printing industry, the seasonal closure of the factories or their intermittent functioning generates wide-

spread unemployment among the workers. Only a small minority of workers, those who are salaried on a monthly basis, are remunerated throughout the year, including during temporary closure of the factory. The employment conditions of the contract labourers are more uncertain. Usually the contractors adjust the number of workers to the amount of work available, and eventually retrench workers if necessary. The most severely hit are the casual workers on piece-work wage, who form the bulk of the industrial labour f. .ce. Except for the privileged few who manage to be employed in factories which are equipped with hot tables and can function throughout the monsoon—but which represent only a marginal proportion of the printing units—all the casual workers are subject to unemployment periods during the monsoon. At worst they remain unemployed continuously for three-four months. The least they can expect is about two months of continuous unemployment or intermittent employment. Moreover, during the monsoon, the working days—when possible—are often shortened, following the vagaries of the weather. In addition, even when the printing is in process, each operation requires more time due to the high humidity. Hence, the scarcity of days of employment is aggravated by the irregularity of working hours and a reduction in productivity. As a result the workers' earnings, which are based on the amount of work completed, fall dramatically during the monsoon, or are reduced to nil.

Outside the dyeing and printing industry, there is not much scope for other alternative employment opportunities in Jetpur, especially during the monsoon. Only a small minority of the seasonally unemployed industrial workers manage to work elsewhere, mainly in agriculture, in the familial fields or as agricultural labourers, or sometimes as casual labourers in the construction and transport sectors. Among the other unemployed workers, many of them are too sceptical about the possibilities of alternative work to look for something else and they prefer to stay at home unemployed, whereas others continue to check for work everyday at the factory gates or at the *gujari*. A consequence of widespread unemployment during the monsoon is frequent indebtedness or over-indebtedness among the industrial workers, as their economic condition is especially critical in this season. Some workers approach their

current employer or foreman to obtain an advance payment free of interest, but this implies a minimum degree of attachment to an establishment, which is far from being the prevalent situation for piece-work labourers.

More generally, the employment of casual workers on a piece-work basis is directly affected by slackness in the textile printing industry resulting from unfavourable climatic conditions or any other factor of economic recession. Admittedly and as shown above, the daily earnings of the piece-work labourers can reach a level close to or even higher than the minimum wage of the branch. But their average annual income is considerably diminished by the many unpaid non-working days, the lack of holiday pay and sick leave, and more generally the lack of all benefits. Unemployment and possible fluctuations in earnings remain a constant threat for the workers of the Jetpur textile printing industry, including the monthly salaried workers who never get the status of permanent and protected employees. Piece-work wages, subsequent insecure employment and irregular incomes are common features of the the hand-printers' condition all over India, as shown by other studies of textile printing centres (Jain and Kapadia, 1984; GIDS, 1980). Furthermore, in terms of individual career prospects within this industry in Jetpur, there is no opportunity of improvement offered to the workers to secure a more permanent and protected status of employment. Thus, the actual conditions of employment turn to be a major obstacle to the possibilities of economic promotion for the workers.

Prospects

The plight of the industrial workers is reflected by the way they foresee their own future. On the whole, prospects are rather gloomy. As the most badly-off and pessimistic among them bluntly put it: they have no future, they anticipate health problems and expect a short lifespan. Their view results from their intimate knowledge of the working conditions and from a realistic appraisal of the health hazards incurred.

Synthetic dyes and other chemicals used in the dyeing and printing process are injurious to the health of the workers who

are directly in contact with them (dyers, printers, washermen in particular). They are likely to cause burns, skin and respiratory diseases and allergies.[13] After several years of work, the printers are also subject to stomach pain. This is because of their posture while printing, as they have to lean over the printing table, with one side of the screen plate resting against their waist. Some operations imply working conditions especially hard to bear, like printing on 'hot tables' (the heat combined with the chemicals inhalations) or the felting process (the humidity generated). Though some occupations like pressing and folding involve less health hazards, after about 15 years of work in the dyeing and printing industry, health problems and exhaustion seem to be the common fate of the manual workers. It should be recalled that no insurance against occupational hazards and no medical indemnity is provided by the employers.

In addition to these problems, the irregular earnings of most of the workers in this industry do not allow them to constitute any savings, hence preventing them from realizing any future plans for themselves or for their children. The destiny of many of them seems to be reduced to the transmission of their skills to their children who will join the proletariat in their turn, while they will consider themselves fortunate if they are given the opportunity to work as watchmen in a sari factory, after they have become too exhausted to work at the production process. Although many workers are not satisfied with their working conditions, they have no illusions about any improvement in their current situation or opportunities of better alternative work. Starting a small business, or something on their own account, appears as a frequent desire. However, this is likely to remain at the stage of a dream due to the lack of financial resources.

In the previous chapter, we have analysed the specific conditions under which socio-economic upward mobility had taken place for those entrepreneurs who had a past experience as employee in the textile printing industry. The comparison of the percentage distribution of the entrepreneurs by caste/community group with that of the hired workers points to a further reduction in the chances of promotion for the latter. As the employment structure by caste has already been commented on

in a previous chapter, only one example will be recalled here: the backward classes (Hindu and Muslim) and the Scheduled Castes who account together for 44 per cent of the hired workers in this industry represent only 3 per cent of the entrepreneurs. We have also argued that the relative contraction of the demand for Jetpur's prints as well as the increased competition do not give much scope for further expansion of the textile printing industry; this leaves consequently very few opportunities for new entrepreneurs to enter into this sector.

The above-mentioned factors have shown how casual employment and irregular earnings are major obstacles faced by the industrial workers who are unable to put aside savings and to improve their condition. Hence, the chances for an industrial wage-earner to accede to the coveted status of self-employed (or even employer) and to become 'his own master' in the textile printing industry or in another sector appear to be extremely limited today, if not nil for the majority of the industrial workers.

SEGMENTATION OF THE INDUSTRIAL LABOUR FORCE[14]

Does common work experience in the factory, in a universe governed by the same economic rationality, contribute to the weakening of traditional communal and caste-based barriers? Are the workers, who are subjected to the same laws of enterprise, in a position to form a united working class? Or do the actual working conditions in this industry generate new forms of fragmentation? These questions are in line with some of the recurrent themes in research on the working class in India;[15] here they will allow us to examine the role of industrial work in the formation of a working class and the restructuring of social groupings.

Communal and caste-based cleavages

Our premise was that a common setting—the factory—combined with the urban environment should encourage inter-

communal and inter-caste contacts and weaken the observance of traditional segregation, as compared to the stricter rules of the village society whence most of the industrial workers hail (as rural in-migrants and commuters). This is confirmed to some extent, as proved by the interviews conducted in the villages of origin of the workers. To quote an example often reported by the respondents, drinking tea and chatting with fellows from another confessional community or another caste is a practice commonly accepted by urban workers. Another more striking illustration is provided by the inter-state migrant workers housed in the factory premises. The same team frequently includes workers with different confessional and caste affiliations: Muslims as well as Hindus, and high-ranking castes as well as Harijans. All the workers of the team have to share the same living space, often confined to a corner of the workshop. Promiscuity on the work-site is thus accentuated by a lack of differentiation in the dwelling-place. Under specific conditions, namely in the context of work far from the native place, and hence far from the place of social reproduction, economic reproduction takes precedence over traditional social constraints. The requirements of industrial work tend to transcend—to a certain degree and temporarily—confessional and caste barriers. This is facilitated by geographical, social and cultural uprooting. Yet, as soon as these migrant workers manage partly to escape the totalitarian hold of the factory, by arranging for independent accommodation outside, they combine with members of the same community or caste group to share a dwelling: social logic recovers its own principles over the logic of strict economic survival.

The significance of community and caste is certainly not excluded from the universe of industrial labour. Their role in the job access routes has been already underlined. Certain entrepreneurs even show a pronounced preference for the recruitment of workers belonging to their caste in order to be assured of more loyalty from their employees. The volume of labour required, however, limits the extent of such a practice. But casteism and communalism are sometimes activated in a more pernicious way by the employers, in order to create divisions among the workers of their factory and prevent the formation of a movement of solidarity in the event of a conflict between a worker and the factory management.

In a previous chapter, we have shown that the caste and community base of the industrial labour class considered as a whole was widely open and without any marked discrimination. However, a refined analysis of the internal structure of the industrial labour force highlights more subtle forms of selection. The dyers, who form the production workers' aristocracy (due to their specific skills and their regular salary) are more often recruited from among the castes which control the dyeing and printing industry. Thus, the Kanbis account for 35 per cent of the dyers as against 21 per cent of the total hired workers in this industry, and the Khatris for 18 per cent as against 6 per cent respectively; conversely, the backward classes (Hindus or Muslims) represent only 25 per cent of the dyers, while they account for 39 per cent of the hired workers in the printing industry. The Scheduled Caste workers are also subject to discrimination, tending to be confined to the most unskilled jobs: they account for 30 per cent of the miscellaneous unskilled industrial labourers while they represent only 5 per cent of the industrial workers.[16] These examples demonstrate the existence of the phenomena of over- and under-representation of certain castes in some specialized occupations. Yet, there are no impassable caste barriers between the various categories of manual workers in the printing industry and no caste has the monopoly of a specific occupation.

New lines of fragmentation

The transition from cottage craft to industrial production, and the correlated expansion of an industrial proletariat, have engendered new forms of discrimination and segregation, in response to the economic logic of mass production. The near exclusion of female workers from the textile printing industry and their confinement to marginal tasks, expounded earlier, need to be recalled here. The organization of the production in the factories, the system of recruitment and payment, and the geographical origin and place of residence of the workers are also factors contributing to the segmentation of the industrial labour force. There are examined below:

Labour division

Labour division and specialization appear to be a consequence of the development of industrial production. This has generated increased compartmentalization of the activities in the factory. Till the early seventies, the apprentices generally received polyvalent training, preparing them to perform the various operations of the process of production. Today, the industrial labour force appears more fragmented: the new apprentices acquire specific skills in order to become workers specializing in a single operation, in the same kind of occupation to be performed during their entire career at the factory.

The most compartmentalized operations are found when the occupational specialization corresponds to a specific migratory channel of recruitment. This is the case of a special technique of finishing called 'bamboo roll' or 'Benares roll'[17] which is performed exclusively by migrant workers from Uttar Pradesh and Bihar and hence explains the genesis of this migration stream (see Plate 5). This technique has been used traditionally in Benares for a long time, and was introduced in Jetpur in the mid-seventies in order to supply the Calcutta market with saris specially suited to the consumers' taste. The technique spread in the Jetpur factories along with the growing importance of the Calcutta market among the marketing places of Jetpur saris, and was subsequently accompanied by an increasing migration stream of workers from those North Indian States. As the 'Benares roll' technique is not known by the local Gujarati workers, the migrant workers from Uttar Pradesh and Bihar hold the monopoly for this type of work. This has secured for them a niche in the industrial labour market of Jetpur. The same process of compartmentalization, with the exclusion of the local workers, is observed for the workers operating the 'Stencer machines' (who are also recruited from Uttar Pradesh, Bihar and sometimes from the South Indian States) and those operating the 'felting machines' (who are recruited from Rajasthan), all of them under the contract labour system.

Competition and rivalry between workers

The logic of maximization of profit through reduction of labour costs that is followed by the entrepreneurs has led to the gener-

alization of casual employment and piece-work wages without any social benefits. The resulting insecurity of employment which characterizes the industrial labour force of the Jetpur textile printing industry constitutes a ground conducive to divisions and rivalries. Recruitment on a daily basis and payment on piece-work wages can generate an atmosphere at work that is highly competitive, as felt by some workers.

Besides, a type of sectional and protective rivalry prevails among the dyers whose employment is also not secure even though they are paid monthly salaries. This is revealed by the attitude of the experienced dyers towards apprentices. They limit the transmission of their skills to their sons or and close kin and are secretive about their formulas so as to avoid training future competitors.

The inter-state migrant workers under contract

The inter-state migrant workers under contract form a specific segment of the industrial labour force. The degree of their segregation is increased by three factors. Coming from States other than Gujarat, they are first of all perceived by the local workers as foreigners, speaking a different language, with another regional culture, and specific food and sartorial habits. In addition, most of them live inside the factories, and they are therefore excluded from the common urban residential system. For these two reasons they are definitely not integrated into the urban population. Furthermore, their specific mode of recruitment, as contract labour, draws a clear demarcation with the other industrial workers.

From the industrialists' viewpoint, the inter-state migrant workers present some specific advantages which justify their recruitment. We have already mentioned that some of them fulfil exclusive functions in the process of production. Above all, they constitute a more docile and more easily exploitable labour force. These workers have come to Jetpur from regions less developed than Gujarat exclusively to work and have no intention to settle in the town. Their expectations regarding wages and working and living conditions are low, and as such their demands too are marginal. Even though this could apply also to other migrants, particularly those coming from rural areas, the

inter-state migrant workers are more vulnerable to exploitation due to their specific conditions of recruitment. In particular, it is easier for the employer to impose longer working hours and night shifts on those workers who live within the factory premises, as most of the inter-state migrant workers do. On the contrary, the local workers as well as the migrants settled with their family in Jetpur are reluctant to work at night. As far as the commuters are concerned the night shift is excluded; moreover, their working hours are conditioned to a certain degree by the length of their travelling time as well as by the bus and train timings. Furthermore, the inter-state migrant workers are generally under the control of contractors and foremen who fix the working hours as well as the wages. Thus, the employers are released from manpower management problems. Besides, the local labour trade unions have no influence on the inter-state migrant workers who live in seclusion behind the factory gate under 'due' control. This is seen as an additional advantage by the employer. It appears that the conditions of recruitment have resulted in residential as well as social segregation for the inter-state migrant workers. Together, they have opened the way to increased exploitation.

Another advantage (for the industrialists) of recruiting inter-state migrant workers is the great elasticity of this labour supply. Reduction of manpower in case of slackness is not a problem for the employers in this small-scale industry which avoids industrial and labour legislation; on the other hand, increasing the labour force to meet an additional demand during the peak season is not necessarily an easy task for the entrepreneurs. The contract labour system which prevails in the Jetpur textile printing industry exclusively among the inter-state migrant workers, offers a convenient solution to the industrialists. It is the contractors' responsibility to ensure an adequate supply of labour, and in the case of an increasing demand, the contractors can recruit workers easily in the migrants' native region (which is generally also their native place). The recruitment channels and the necessary network of relations are already established and, in Uttar Pradesh and Bihar particularly, there is a reserve army of the unemployed or the disguised unemployed which ensures a virtually unlimited labour pool. Conversely, in case of slackness in the printing

industry, the contractor is in a position to retrench redundant workers.

Taking all these factors into consideration, some industrialists have framed recruitment policies under which inter-state migrant workers are given preference in employment. Though this type of recruitment is still limited in the Jetpur textile printing industry, the specific functions and characteristics of the inter-state migrant workers suggest an upward trend (which was confirmed by the observations carried out in 1992). In this context, tension between the inter-state migrants and the local workers cannot be ruled out; there already is a feeling —though not widespread—among the latter that the recruitment of inter-state migrant workers has a negative impact on the potential improvement of their own working conditions and earnings, and that it weakens their bargaining power with their employers. One case of open conflict was reported. It was confined to one factory, but it is still quite significant. Seventeen local printers went on strike, following the attempt of a contractor to obtain from the industrialist a day shift contract for his inter-state migrant workers (in addition to the night shift) at the expense of the local workers. The case was brought to a local union, and finally a compromise was reached: financial compensation was given to the local workers, but they were not reinstated in the factory. From this example it appears clearly that the germ of resentment against the inter-state migrant workers could grow if the local workers feel that their employment is threatened.

Spatial discrimination: the commuting labour force and its specificity

The dissociation between working place and living place which characterizes the commuter workers has introduced another segmentation in the industrial labour force.

In the face of an employment crisis, the difference in the residential pattern of the workers (residence in the urban agglomeration or outside in the surrounding villages and towns) induces an unequal capacity to cope with a drastic decline of employment opportunities. This was revealed during the three-year period of drought (1985-88) which severely hit the textile printing industry of Jetpur, leading to the closure of many fac-

tories and resulting in significant unemployment. The commuter workers were the most affected by unemployment, as residing far away from the industrial centre proved to be a handicap. In a situation of employment scarcity, the workers living in the urban agglomeration and in the vicinity of the factories have better contacts to get jobs. In addition, as most of the workers in the dyeing and printing industry are engaged on a daily basis, if the probability of getting work is very low, the commuters would prefer to stay at home rather than to incur daily transportation expenses without any expectation of returns. The farther away from Jetpur the commuters live, the higher are the transportation costs and the higher the probability of their remaining unemployed in their village or town of residence.

Thus, the commuters appear to act as a buffer in case of any slackness in the textile printing industry and in a situation of reduction in employment. This specific function turns out to be a direct sizeable advantage from the viewpoint of the industrial workers living in the urban agglomeration, since their chances of getting a job are increased by the temporary removal of the rural-based competitors.

Though the massive volume of the commuting labour force helps the textile printing industry to meet its increasing labour requirements, from the entrepreneurs' viewpoint this specific segment of the labour force shows the inconvenience for running the industry: its lack of flexibility in working hours and its lack of complete availability. As mentioned above, overtime and night shift are not compatible with commuting. The rural-based commuter workers are deeply integrated in the agricultural economy. Those belonging to agriculturists' families continue to participate in agricultural work, and during the peak season they give preference to the familial agriculture and temporarily stop work in the factory. The temporary non-availability of the commuting labour force can have a negative effect on the textile printing industry. This was especially the case after the 1988 monsoon, the first good monsoon following three years of severe drought in Saurashtra. During the survey of industrial establishments conducted in November–December 1988, all the entrepreneurs interviewed complained about the temporary shortage of labour created by the commuter workers who were engaged in seasonal agricultural work. This contrasts with the

greater elasticity of the inter-state migrant labour force which can sometimes partially solve the problem of shortage in the supply of the commuting labour force: faced particularly with a shortage of printers who form the bulk of the production workers, some entrepreneurs resort to recruiting printers from Rajasthan, through already established channels.

Agricultural back-up

The processes of commuting and labour migration (when the latter is associated with the persistence of solid ties with the native place) contribute to the supply of a cheap labour force for the industrial sector since part of its reproduction cost is supported by the domestic sector, especially by familial agriculture (Meillassoux, 1980). In the Jetpur textile printing industry, this is directly confirmed for the inter-state migrants (under the contract labour system) who receive lower wage rates than the other workers. Apart from this case, there is no differential rate applied between native, migrant and commuter workers. However, the peasant factory workers and the workers hailing from families owning agricultural land in their village (who form together a significant share of the industrial labour force) are likely to be less demanding as regards their wage expectations than the workers belonging to proletarian families, or at least less interested in fighting for better employment conditions. This creates a new division line among the industrial working class, and thus weakens further its bargaining power. The same process of division of workers on the basis of landownership, with similar consequences in the lack of improvement of the workers' condition, has been observed in small-scale industries of South Gujarat by Streefkerk (1985: 210-18).

The analysis of the main factors of segmentation of the industrial labour force has shown how new barriers and new forms of economic discrimination are created along with the industrial expansion. Those new lines of fragmentation are juxtaposed to the traditional communal cleavages which, even though weakened, surface under more subtle forms. The example of the inter-state migrant workers housed on the factory premises, and that of the commuters, further indicate types of

segmentation which rely on modern forms of spatial segregation. The fragmentation of the industrial labour force has also repercussions on its working conditions in general, insofar as lack of unity and solidarity weakens the workers' bargaining power vis-à-vis the industrialists.

The industrial workers as a class? Labour trade unions and labour claims

In this section we shall examine the extent to which the industrial workers in Jetpur are capable of defending their own interests as a class, of safeguarding their rights and of settling their disputes with their employers through labour unions in particular.

The actual impact of the unions in terms of number or proportion of workers affiliated is difficult to evaluate. Though several trade unions have branches in Jetpur,[18] some are not deeply rooted in the town and have irregular activities. In addition, the workers may join only temporarily, for a specific case affecting them. They also change from one union to the other, in search of greater effectiveness in helping them achieve tangible and immediate gains, and almost regardless of the particular political objectives and ideological base of the union, which is an attitude already noticed among industrial workers (for example in Bombay by Panjwani, 1984). Hence, the number of members fluctuates greatly and the estimates based on the figures reported by different unions vary from about 1,500 to 6,000. This would represent a minimum of 5 per cent and a maximum of 20 per cent of the industrial workers.

The primary goal of the labour unions is the implementation of the labour laws. But this implies an extensive programme, as the establishments of Jetpur's textile printing industry fall under the purview of various Acts,[19] each of them with its individual schedule of rules to be implemented. The prevalent rule in the Jetpur textile printing industry is the non-implementation of the various labour laws, which seems to be a common feature in many small-scale industries in India (Heuzé 1987; Streefkerk, 1985). In 1988, for example, 1,566 cases of prosecution under the Factories Act, concerning 82 different

factories in Jetpur, were recorded with the Chief Inspector of Factories in Ahmedabad. It can be recalled too that only eight establishments were registered under the Indian Factories Act in 1988; although most of the printing factories in Jetpur come under its purview since the use of electric ceiling fans to dry the prints and of electric mixers to prepare the solution of dyestuff puts the threshold for registration at 10 hired workers. In addition, the labour office in Rajkot, on which Jetpur depends, reported 300 cases per year on an average for non-implementation of other labour laws in this industry. In their demands, Jetpur's labour unions emphasize that the industrial establishments should issue identity cards and attendance cards to the workers, as well as salary slips for the wages paid. Without any of these documents the workers have no proof of employment in a specific establishment, which makes it difficult for them to take any legal action. The abolition of the piece-work wage system and the regularization of the service of the casual workers into that of permanent workers is another strong claim.

Quite a few labour disputes are tackled by the unions, but these are essentially at the micro-level and confined to one establishment at a time. They deal in particular with arbitrary dismissals of workers. In the most successful cases, a compromise is reached with the employer, in which the retrenched workers receive financial compensation and are reinstated in the factory. But very often the workers have to leave the factory in return for the indemnity. Moreover, whenever labour claims are at the origin of the dispute—demand for attendance card or bonus, or more generally for the implementation of any labour law—these are never settled by the employers. As a result a breakthrough in the implementation of labour laws has not been achieved in the Jetpur textile printing industry. On the contrary, the generalization of piece-work wages has marked a downturn for the workers' employment security and social protection.

This acknowledgment of failure leads one to seek the reasons behind the workers' lack of negotiation power when face to face with their employers. The primary reason given by labour unions to explain their incapacity to organize the workers into a mass movement is the lack of unity and solidarity among the workers. In addition, there is no dialogue or

collaboration between the different unions and concerted action is not taken on any issue. The industrial workers' degree of awareness regarding their own rights as well as the unions' activities in Jetpur seems very low. Moreover, among those who are not ignorant of the activities of the unions there are some who do not trust them as they suspect collusion between the union leaders and the industrialists, at the expense of the workers. A blatant case of fraudulent practice in which a union delegate was involved was recently unveiled and this probably increased the suspicion. Lastly, many workers are afraid of losing their jobs if they join a union, and do not want to jeopardize the opportunities of employment in other factories too. This last remark applies especially to the dyers, as their strategic position in the process of production and their status as salaried employees prompt the entrepreneurs to investigate their past history before recruiting them. Unfortunately fears of victimization prove to be justified and threats are effective. Certain industrialists do hire hoodlums to threaten the workers who attempt to contact the unions. A case of physical assault against a union leader was also reported. This was done in retaliation as the unionist had not withdrawn a complaint filed against an industrialist, in spite of former warnings. Not surprisingly then, the workers who eventually contact the trade unions are usually workers who are already the victims of arbitrary dismissals, and unions appear to them as their last resort. Further, connivance between labour officers and industrialists is also alleged by the union leaders, which would explain the failure or the deceptive outcome of the attempts to redress the workers' grievances. Though such allegations are difficult to verify, they would be in line with the observations made in other small-scale industrial centres, in South Gujarat for instance (see Streefkerk, 1985: 199-201).

Our final field enquiries in Jetpur, in 1992, did not reveal any sign of improvement as far as the implementation of the labour laws is concerned, and the same methods were applied by the employers to discourage the workers from claiming their rights. Despite the traditional complaints of some entrepreneurs about 'harassment' by trade unions, the actions taken by the unions as well as their influence among the industrial workers are limited, and labour unrest definitely does not

characterize the situation prevailing in the Jetpur textile printing industry.

SUMMARY OF MAIN FINDINGS

The development of the textile printing industry in Jetpur has generated an increasing industrial proletariat, and played to some extent a positive role as a vehicle of economic and social mobility. Absorption into the urban industrial labour market has allowed many youths to get their first paid job, and the migrants to find better employment opportunities than they could have expected to get by staying in their place of origin. The transition from household craft to industrial production has also engendered opportunities for an upward socio-economic mobility, from which certain salaried workers were in a position to benefit and become entrepreneurs. Besides, the considerable requirements of manpower entailed an intermixing of communities and castes, and common work experience in the factories contributed to the weakening of traditional social segregation.

Yet, from another angle, the workers' prospects are not so bright. The actual working conditions in the Jetpur textile printing industry, characterized by the insecurity of employment and possible loss of income, appear as the major obstacles to the workers' general welfare and prospects of promotion. The cases of entrepreneurs hailing from the ranks of the working class, though indisputable, refer to a period of industrial expansion gone by, and they represent a marginal share in terms of effective probability of upward mobility for the hired workers. Further, access to employment in industrial labour is not entirely open, since it relies on networks of relations, especially on kinship and caste-based solidarities, and reveals a strong compartmentalization of the urban labour market between the industrial sector and the other urban activities. The industrial proletariat in Jetpur appears to be highly fragmented. Not only are the traditional communal and caste-based cleavages likely to be revived, but new forms of segmentation have been also created by the working conditions

associated with the capitalist form of industrial development. These factors of division are in conflict with the formation of a united working class. They also constitute an obstacle to the penetration of labour unions, whose influence is effectively limited in the Jetpur textile printing industry. Hence, any effort by the grass-roots to bring about a change in the workers' condition seem very unlikely.

From a wider perspective, the situation of the industrial working class in Jetpur is a good reflection of the multiform division of the Indian working class. This has resulted from differences in employment status as well as from communal, ethnic and sexual cleavages. As analysed by Heuzé (1987), these divisions are exacerbated by the competition in the labour market and exploited by the employers. Further, the 'atomization of the Indian working class' is the basic reason for the persistence of a low level of wages (1987: 116).

NOTES

1. The description of the printing process presented here is mainly adapted from the detailed accounts given by Trivedi (1970: 47-48) and by Shenai (1972: 44-45), completed and updated by our own observations.
2. When indigo dyes were used, the printed textiles were rolled and kept for 24 hours in a cool place where they could not come into contact with direct sunlight. The following day, after an exposure to sunshine, they were immersed in a solution of acetic acid, sodium nitrate and caustic soda, in order to develop the colours. With reactive or rapid dyes, the printed and dried cloth is taken for a steaming or silicate process, in order to develop and fix the colours. In the steaming process, the fabric is exposed to an atmosphere of wet steam (at a temperature of 100 degrees C.) in an enclosed chamber for 5 to 30 minutes, to fix the dyes on the fabric and develop the colours. This process was introduced in Jetpur in the mid-sixties. In the silicate process, which is more prevalent today, the printed cloth is passed through a solution of sodium silicate at a temperature of 45 degrees C., and then kept for 20 to 24 hours in closed plastic bags, as it should not come into contact with open air.
3. The Stencer machine is used to strengthen the fibre and increase the durability of the material as well as to give uniformity to the cotton material: the cloth put on this machine is stretched and passed through a steam chamber. The Stencer machine can also be used to prepare the cloth

material before the dyeing and printing process.
The 'felting machine' is used to obtain a soft effect: it sprays automatically softening agents on the cloth and then spreads it uniformly all over the sari by passing it on big rollers.

4. For example, in roll pressing the ironed and folded saris are passed several times between two rolls (see Plate 4) and then kept under heavy pressure in a press before packaging.
5. The corresponding confidence interval of this estimate at the 95 per cent probability is [13,854-15,142].
6. In 1992, Rs 40 per day was quoted as a common average.
7. In 1992, the figures quoted ranged from Rs 700 per month for an assistant dyer, up to Rs 1,200 to 2,000 for a skilled dyer.
8. See Chapter 2.
9. The corresponding confidence interval at the 95 per cent probability is [1,492-1,778].
10. The difficulties experienced in the survey of the migrant workers housed in the factories have been expounded in Chapter 2.
11. The figures given here are based on the 10 per cent household survey conducted in 1988, but they exclude the teams of workers living in the factories; to have included the latter would have biased this analysis.
12. To mention only a few of them, see: Breman (1980), Deshpande (1979), Heuzé (1987), Holmstrom (1984), Klaas (1979), Nathan (1987).
13. Gloves are provided to the dyers, but they are, however, not frequently used by them. Washermen on the other hand often complain that they are not given gloves to protect their skin from chemical solutions. Moreover, as the lunch break is usually very short, the workers do not have enough time to wash their hands properly before eating. This leads to ingestion of harmful chemicals.
14. This section draws partly on an article published in French: see Dupont, 1991.
15. In addition to the authors mentioned above in Note 8, see also: Heuzé (1982), Panjwani (1984), and the comprehensive bibliographical review by Heuzé and Sélim (1991).
16. The percentages given in this paragraph pertain to the sub-sample of 1,764 hired industrial workers included in the 10 per cent household survey of 1988, whether those workers live in the Jetpur urban agglomeration or in the five nearby villages surveyed. The differences observed between the proportions under comparison are statistically significant at the 0.1 per cent level, according to the chi-square tests of comparison.
17. This finishing technique aims to give uniformity to the cotton material. Each sari is rolled on a long wooden stick while spreading simultaneously a starch solution on the cloth, and remains on it for several hours before going for ironing and folding.
18. The Bharatiya Mazdoor Sangh (affiliated to the Bharatiya Janata Party), the Centre for Indian Trade Unions (affiliated to the Communist Party of India [Marxist], the Indian National Trade Union Congress (affiliated to the Congress [I] party), the All-India Trade Union Congress (affiliated to the Communist Party of India), and the Gujarat Mazdoor Sewa Sangh.

19. The main ones are: the Factories Act, 1948; the Shops and Commercial Establishments Act, 1948 (for establishments located in the territory of the Jetpur Municipality); the Employees' State Insurance Act, 1948; the Minimum Wage Act, 1948; the Employees' Provident Fund and Miscellaneous Provisions Act, 1952; the Equal Remuneration Act, 1976; the Payment of Bonus Act, 1965; the Payment of Gratuity Act, 1972; the Inter-State Migrant Workmen Act, 1979; the Contract Labour (Regulation and Abolition) Act, 1970; the Child Labour Act, 1987.

8

The Process of Spatial Mobility between the Town and its Countryside

The impact of in-migration on the population dynamics of Jetpur, the significance of commuting and the contribution made by migrant workers in the different branches of economic activitiy have been appraised in Chapters 4 and 5. The role of in-migrant entrepreneurs in the Jetpur dyeing and printing industry and that of commuters and migrants in the industrial labour force have been further examined in Chapters 6 and 7. The present chapter still focuses on the entrepreneurs and hired workers of the industrial sector, with the aim of analysing thoroughly the determinants and the underlying logic of their different forms of spatial mobility. Beyond a better understanding of migration processes, the objective is to comprehend the role of a middle-sized town like Jetpur in population attraction and settlement, and to illustrate those relationships with its hinterland that are indicated by the moves of the population.

The analysis of migration processes can be carried out at a micro-social level, in order to decipher the rationale of the individuals and their familial groups with their social and economic strategies. The resulting pattern of spatial mobility can be also interpreted in a macro-economic framework, taking into account the structuring of the economic space including Jetpur and in which the population movements take place. At the same time, two complementary angles of observation are taken: a view from the town seen as a growth pole with its

catchment area, and the reverse view from the villages, which envisages the town as a village antenna. Since the town's viewpoint has been indirectly broached in previous chapters, greater attention will be given in this chapter to the view from the villages.

A VIEW FROM THE TOWN: THE PULL OF THE INDUSTRIAL SECTOR

Three forms of spatial mobility have been generated by the 'pull' effect of the industrial sector in Jetpur: (*a*) spontaneous migration (of entrepreneurs and workers) which results in a durable or permanent transfer of residence into the town; (*b*) temporary labour migration organized by the employer and without permanent or proper urban residence; and (*c*) commuting associated with the maintenance of a residence in the surrounding villages or nearby towns. The share of each corresponding category of workers among the total labour force of the Jetpur textile printing industry and their specific functions have already been examined in previous chapters, as well as the contribution of in-migrant entrepreneurs to industrial investment. In this section, we analyse the determinants of spatial mobility, and the logic underlying the choice of the places of destination.

Commuting

For the commuters working in the dyeing and printing industry, the employment opportunities supplied by the industrial labour market are the direct determinant of circular mobility which favours integration between the urban growth pole and its hinterland, between urban and rural economies. The advantages of commuting over urban migration will be analysed in the next section from the viewpoint of the rural-based families. In the present section, we examine essentially the housing issue and some implications from the viewpoint of urbanization and town planning.

The soaring rents of residential accommodation in the urban agglomeration appear to be a major factor that influences the option for a rural residence. From this angle, labour commuting can be analysed to a certain extent as a process of *de facto* exclusion of the workers from the urban residential system, while their services and skills are tapped by the industrialists for the enhancement of the urban economy. This process is more evident in the case of migrant workers who have joined the industrial labour force of Jetpur but who have taken residence in the surrounding villages. Among the industrial workers who daily commuted to work in the Jetpur dyeing and printing industry from the five villages surveyed, 37 per cent were in-migrants. The settlement of industrial migrant workers in the villages surrounding Jetpur can be also interpreted as the ultimate stage of a tendency already observed within the urban agglomeration, namely the decentralization of the workers residences towards the periphery.

The dissociation between working place and living place which characterizes the phenomenon of commuting is not looked upon with disfavour by the town planning authorities. As expounded in the first chapter, the medium and small towns are expected to provide employment opportunities to those who seek work outside agriculture and want to continue to stay in the villages. This policy has been adopted for reducing rural–urban migration on a permanent basis.

In the case of Jetpur, the industrial and urban development is not the result of a specific programme planned by the government. Another middle-sized industrial town of Gujarat, namely Ankleshwar in Bharuch district, provides a striking illustration of the implementation of a governmental policy concerned with a more balanced industrial and urban development.[1]

In the seventies, the Gujarat Industrial Development Corporation set up an industrial estate in Ankleshwar with the purpose of promoting this town into a growth pole in a district identified as industrially backward. At the local level the objective pursued in Ankleshwar was to reduce the pressure on agricultural land by providing new sources of non-agricultural incomes in the proximity of the rural areas, but without uprooting the people from their villages. In order to avoid housing problems and the emergence of slums in the town of

Ankleshwar, the employment opportunities supplied were to allow the workers to keep their rural residence. In 1982-83, an integrated development project was initiated by the Government of Gujarat in order to match the demand for industrial workers with the availability of off-farm labour from the rural sector. The concern about preventing migration of industrial workers from their villages to the industrial urban area was clearly stated and two specific tasks were designed to be undertaken for this purpose: industrial workers should be provided with housing in their own villages with the help of industries and the government; and communication and transport facilities between the industrial estate and villages should also be provided for convenient commuting.

Nevertheless, population growth in Ankleshwar has followed the development of the industrial estate, and the urban agglomeration increased from 26,220 inhabitants in 1971 to about 78,000 in 1991. Yet, the commuters form about 40 per cent of the total population working in the industrial estate, and about 80 per cent of the industrial production workers, according to the estimates made by the Industries Association of Ankleshwar in October 1987. Though these figures may involve a large margin of error as they are not based on any systematic survey, they indicate the significance of commuting. In Ankleshwar, like in Jetpur, the industrialization process has generated—and intentionally in the former case—a widespread pattern of dissociation between working and living places. In India more generally, commuting as an alternative to migration is facilitated by the development of relatively inexpensive or subsidized transport facilities (Visaria, 1990).

From the point of view of urbanization and town planning, urban industries which rely to a large extent on the commuting labour force have an obvious advantage: the town benefits from this labour force without bearing the housing cost of it and with a limited burden in terms of civic amenities to provide for this population.

Spontaneous migration with urban settlement

The interviews with the entrepreneurs confirm the importance

of the effects of economic attraction on their decision to migrate to Jetpur, based on the knowledge of the economic context prevailing in this town. The technological and economic characteristics of the textile printing industry offered good business opportunities, with the possibilities of making quick profits with a minimum of initial investment and risks. The availability in Jetpur of the adequate industrial infrastructure and marketing network, and the supply of skilled labour force proved to be decisive factors in the locational choice of this town to start an enterprise.

As regards the in-depth interviews conducted with industrial hired workers, they show that, in the case of the labour migrants, the expectation or assurance of a job in the textile printing industry was the actual determinant of spatial mobility. Before their arrival in Jetpur, all migrant workers without exception had heard about its textile printing industry and the employment opportunities provided by this sector; some had previously visited Jetpur to explore the possibilities of employment in industrial labour. Labour migration is never a haphazard process; on the contrary, it relies on information previously collected through the networks of kinship, caste and natives from the same village already settled in the town. For the in-migrant workers currently employed in the textile printing industry, as a general rule, their entry into the Jetpur's labour market corresponds to their entry into this industry. The evidences above confirm the direct 'pull' effect of the industrial labour market in migration processes.

More generally, the industrial workers' migration histories highlight the role of labour as a vehicle of geographical mobility at the various steps of their migratory paths: the lack of gainful employment prospects pushed them to leave agriculture and the villages, and the search for employment pulled them into the towns. Unemployment, sudden deterioration of the job situation or/and the expectation of better opportunities determined the next migratory steps. Given the relatively young age of the in-migrant industrial workers (see Chapter 5), Jetpur was their first place of destination from their native place. This was the case especially among the in-migrants from Gujarat.

The migrant workers' future plans regarding the length of their residence in Jetpur and possible new moves also testify to

the primacy of employment in their decisions of spatial mobility, with these as a leitmotive: 'As long as I can find work in Jetpur, I'll stay, otherwise I'll go'; 'If I find a better job somewhere else, I'll leave Jetpur'. The uncertainty of the workers' condition is typified in this answer: 'I may stay, I may go. For a labourer it does not make any difference to work here or there.'

The fact that the workers are available for a change in place of residence according to the situation of the labour market has to be linked to the great precariousness of employment in Jetpur's textile printing industry. The lack of employment security encourages, in particular, the geographical mobility of the in-migrant workers, because unlike the natives, they have no ancestral and emotional moorings in this town. Once they had to leave their native place, the workers' spatial mobility is subjected to the labour requirements of the industrial sector, and migration appears as a crucial component of their strategies of survival. Circulation between Jetpur and other industrial towns constitutes another response to the local seasonal fluctuations in employment and a substitute for permanent out-migration from Jetpur, which is likely to be favoured by native workers.

Temporary inter-state labour migration organized by the employers

Temporary migration of contract labourers from States other than Gujarat to the Jetpur textile printing industry—with accommodation on the factory premises, and which corresponds to recruitment channels organized by the employers—is the most striking illustration of the extreme submission of spatial labour mobility to the industry's requirements. We have shown in the previous chapter how the inter-state migrant workers constitute a more easily exploitable labour force and ensure a labour supply with a great elasticity because of their specific conditions of recruitment, working and living.

The significance of this type of labour migration goes beyond the case of the Jetpur dyeing and printing industry. The recruitment of inter-state migrant labourers, who are housed on the work-site and generally under the control of contractors, is also

prevalent in other parts of the country (Joshi 1987; Heuzé 1987). It is found frequently in the textile industry: therefore, it is not surprising that when the inter-state migrant workers interviewed in Jetpur said that they had not come directly from their native place, their migratory paths were characterized by stays in other textile industrial towns with similar working and living conditions. In addition to the influx of migrant workers from Rajasthan, Uttar Pradesh and Bihar into Jetpur, Ahmedabad and Bombay, several examples of other industries in Gujarat can be cited. Particular mention has to be made of the migrant female labour force from Kerala for processing fish in the coastal areas (Moulik, 1984; Moulik and Rajamma, 1987), the migrant labour from Bihar to the sugarcane factories of Saurashtra and from Maharashtra to South Gujarat (Breman, 1978), the inter-state migrant workers in the power-looms of the industrial town of Surat (South Gujarat University, 1984), the migrant workers from Uttar Pradesh and Rajasthan in brick-kilns (Yagnik and Randeria, 1987), and the contract migrant labour on construction sites.

The significant point in this type of labour migration is the domination of an economic logic imposed on the workers, which aims to uproot them from their original social background and seclude them on the work-site, with a view to their maximal exploitation.

Which explanatory framework?

At the macro level, the determinants of in-migration in Jetpur seem clear: there are the pull of the urban labour market, better and more numerous employment as well as business opportunities, in a nutshell better economic prospects as compared to the conditions prevailing in the place of origin of the in-migrants, the majority of whom come from rural areas or from regions less developed than Gujarat.

However, the primacy of the economic factors in the decision to migrate and in the choice of the place of destination needs to be qualified. Although better employment opportunities and prospects of profitable investment effectively hold a strategic part in the decision to move, the moves made by individuals

take place within networks of familial and social relations. Not only do these networks provide a support to the circulation of information, but also material and psychological help for the insertion of the migrant in the town, including in particular his first residential accommodation. Furthermore, for in-migrant labourers, previous contacts constitute a valuable asset to find a first job. As for entrepreneurs, an initial network of connections in the Jetpur business and industrial circles, as well as the support from members of their own community already settled in the place, are crucial factors to ensure the successful establishment of their enterprise. The networks of relations play a fundamental role in the migratory paths; they orient the choice of the place of destination in order to give its best chances to a new settlement. Among the in-migrants interviewed, those who came to Jetpur without having any previous contact or relation were exceptional.

A VIEW FROM THE VILLAGES: UTILIZATION OF THE TOWN AS A VILLAGE ANTENNA[2]

The findings presented in this section are based on the survey conducted in the native places of the in-migrants in Jetpur. The survey covers a sample of 10 villages and 2 small towns in Saurashtra (see Chapter 2 and Figure 2.4). Before examining the different forms of spatial mobility motivated by labour factors, a brief presentation of the general economic conditions prevailing in the areas sending migrants to town is in order.

The sample villages

The villages and small towns surveyed are situated within a radius of 135 km around Jetpur. All of them are served by bus services. The access roads, however, are of unequal quality; the roads of three villages (among the nearest) are not tarred, another is liable to flooding. The population of the villages ranged from 700 to 8,000 inhabitants, and that of the small towns from 18,000 to 24,000 (as per the 1981 census). In nine of the sample

villages, the Kanbis form the numerically dominant caste.

The agriculture of the villages surveyed is mainly based on the cultivation of groundnuts, in accordance with the dominant regional pattern, with an additional winter crop of wheat if the irrigation facilities allow it. Cattle breeding, and to a lesser extent goat breeding, is also prevalent, but only the three biggest villages are equipped with a dairy co-operative.

In five villages out of ten, but not necessarily the smallest ones, there is no local or cottage industry. In other cases, these are mainly small-scale industries based on the exploitation of local mineral resources (brick-kilns, ceramic factories, lime quarrying) or on the transformation of agricultural products (oil mill, flour mill). In addition, cotton spinning and hand-weaving testify to the government policy to promote textile cottage industries. Last but not the least, diamond-cutting and polishing units have been recently set up in the two small towns and in three villages.

The number and degree of development of the services vary with the size of the villages, in particular as regards health, education and banking services. Nevertheless, primary education is provided everywhere, as well as minimum medical facilities, except for one of the smaller villages. Further, all the villages are electrified and have a television for community use, only the three smallest ones are not connected by telephone. Everywhere, the villagers have, at the very least, access to a provision store and to a fair price shop selling staple commodities. In addition, all the villages are regularly visited by itinerant communities and hawkers who also bring in information about other places.

Thus, all these villages have a minimum of means of communication with and information about the outside world. None of them appears as a remote place. They are equipped with basic infrastructure and amenities, even though the local living conditions are sometimes far removed from those prevailing in Jetpur.

Rural–urban mobility as a component of familial strategies

As shown by the migrants' life histories, in a society where the

decisions of common interest (at the family level) govern the key stages of the individual life course, the place of the native village in the migrant's universe remains predominant. This is his ancestors' land, where he can find a refuge and where he is known and accepted as a member of the village society and can benefit from the informal security system provided by his community (Das Gupta, 1985). Furthermore, for the migrant living alone in the town with his family in the village, the native place remains the place of social reproduction, where his marriage will be arranged by his family and where his spouse will be received. The migratory paths of the workers and entrepreneurs interviewed in Jetpur further show that return migration to the native place after a period of studies or a work experience in town is not rare. More generally, the native place proves to be the reference pole of the migrant's familial space, and beyond, of his social space. In such a context, the labour moves from the villages to the town have to be considered as one component of the familial strategies of economic diversification and of survival of the extended family.[3]

Whatever the type of labour move to the town that is considered—commuting, temporary moves, permanent migration—in all cases, these appear in the first place as an attempt by the family based in the village to prospect the opportunities provided by the urban economy, in order to evaluate what benefit the domestic group as a whole can reap from such move. From this viewpoint, the departure of a member should affect the group as little as possible. Hence, the family will prefer to send young men who do not bear yet an important responsibility in the family, and if they are married they will be sent without their spouse. For the familial group, this really amounts to sending a satellite into town.

The urban way of life as such does not appear as a decisive factor of attraction. Based on the villagers' comments, the town seems attractive only as a labour market and a place for business opportunities, a place which is expected to offer in particular better paid jobs and more regular employment as compared to seasonal agricultural work. The village people show a rather realistic view regarding the difficulties of living and the working conditions in the town, and of the relative advantages and disadvantages of rural life. Though they are

aware of the better urban amenities and services, there is no overappraisal or idealization of the town. On the contrary, the difficulties of adjustment to the urban way of life are sometimes responsible for the failure of the attempt at economic diversification. In a society where cooking and everyday life rituals are specific to each caste and each regional community, where domestic roles and tasks are rigorously distributed between the members of the family, individuals are apprehensive about changing to a new environment. The success of the urban prospecting will depend upon the capacity of the pioneer sent to town to overcome these handicaps. Nevertheless, since the rural-based family is aware of the difficulties of adjustment faced by a new entrant into town, the failure of the migration is always envisaged as a possible issue, and therefore it is never considered as shameful.

In order to minimize the risk of failure, the choice of the destination relies upon familial and social networks. The places where relatives or in-laws reside and are likely to help the migrants will be given preference, or otherwise towns known to be a place of settlement for one's caste or community. For instance, say some Khant villagers: 'Outside the village, it is in Jetpur that the Khants of our region concentrate; hence many of our wives hail from this town, and we often go there for ritual purposes.' Therefore, migrating to Jetpur is made easier for the Khants, even for those living in faraway villages. This also exemplifies the role that marriage migration is likely to play in building up bonds between families residing in different places, which will facilitate further moves for economic reasons.

The collective perception by the villagers of the urban world and migration should favour exploratory moves into towns, since their economic rationale is acknowledged; return to the village is always possible and accepted even after a failure. Moreover, the migrant in town remains a member of the village society and his community provides him protection and support.

Commuting

Owing to the development of the communication networks and the transportation means subsidized by the state, which has made commuting possible and affordable, this form of labour mobility plays a significant part in rural as well as urban

economies. We have already underlined the remarkable share of the commuters in the industrial labour force of Jetpur and in the working population of the villages of the vicinity. The survey conducted in the migrants' native villages further reveals that in seven of the 10 sample villages, entire castes send at least one male member per family to work daily in the town.

Commuting provides a first solution to the need of economic diversification of the rural families. Whenever the distance to town allows it, and providing transport facilities are available and affordable,[4] the villagers who seek employment opportunities outside agriculture prefer commuting to urban migration. This solution helps them to preserve their familial and social life in their native place and to save the cost of residential accommodation in the urban sector, and they thus escape the strain of adjusting to an alien urban lifestyle. From the viewpoint of the familial unit, commuting also enables the group to maintain its control over the member working outside the village. This solution allows in particular a great flexibility in the assignment of the family labour force. In the families of farmers, the commuter represents the archetype of the peasant–factory worker: he works as a casual labourer in the textile printing industry, and stops going to the factory during the harvesting season, the peak season for agriculture, to give priority to the familial farm.

Commuting also initiates the opening up of village communities towards the urban world and constitutes sometimes a preliminary step to urban migration, as shown by the migratory paths of the migrants interviewed in Jetpur.

Temporary group migration of young men

The development of the diamond-cutting and polishing industry in Gujarat, especially in the town of Surat has attracted many migrants and provided opportunities of economic diversification to the rural families. Yet, migration from the villages of Saurashtra takes place under specific conditions: a group of young men, of the same age and class, moves to Surat on a temporary basis; the group ensures to each migrant a minimum of solidarity and mutual control. Then each migrant will come to a position when he can call a relative and provide him

in his turn protection and help for his urban insertion, and assistance to find a job. Despite the good economic prospects that these temporary movements offer, cases of failure are mentioned, often attributed to the difficult living conditions in an industrial city like Surat: 'He could not manage to adjust to the climate, so he came back to the village'; 'the urban environment over there is unhealthy, it is not rare to share a room between ten people, without speaking of cooking and laundry problems... .'

The case of the inter-state migrant labourers in the Jetpur textile printing industry needs to be recalled here. Those migrants come from regions far from Gujarat but the risks involved in long-distance migration are reduced by the existence of well-established recruitment channels (which secure a job at the place of destination) and by the group migration of individuals belonging to the same village or the same district. The integration of each migrant into the group facilitates his insertion into an alien environment. These specific conditions of migration contribute to turn the distance into a minor component of the migration process.

Migration to town and spatial segmentation of the extended family

An extension in the town of the rural family by the migration of a single member is likely to be transformed into a segmentation of the extended family, with one segment in the village and one segment in town. The pioneer migrant eventually forms his own nuclear household and can also attract other members of the family (brother, nephew, etc.).

This pattern was observed in particular among the migrant entrepreneurs, the Kanbis or the Khatris. At the outset they claim to be under the system of the Hindu undivided family, which implies a joint possession of the property and income of the family members. The initial capital required to start their enterprise was raised with the help of the extended family. Furthermore, in a situation of economic crisis, as was the case during the drought of 1985-88, the urban-based industrial enterprise was economically supported by the rural-based family; in the case of modest entrepreneurs food supply from the familial farm even helped them to cut down their expenses

and overcome their economic difficulties. Vice versa, the rural familial segment benefit from the monetary surplus raised in the industrial enterprise set up in the town: part of it is re-invested to improve the familial farm. In addition, the urban nucleus is available to participate in agricultural work if necessary.

More generally, the extended family creates its urban opening and expects to tap its share of the urban resources. According to the interviews with in-migrants surveyed in Jetpur as well as those with their parents or relatives in the village, the migrants continue to share in the expenses of the rural-based household, as far as their own financial means permit it and depending on the evolution of their own needs in town, which increase along with the formation of their own household. Some of them, especially bachelors or married men who migrated alone to the town, remit a large part of their incomes to their family in the village; all of them contribute at least to the expenses entailed by major familial events (marriage, death, sickness, etc.). For want of regular remittances, the migrant is expected to drain off other family members from the village, those who cannot be sustained by the rural economy. The other way round, the migrant in town can rely on his parents' help, if required.

Quite often the ties between the migrants in the town and in the village are so strong that, from the villagers' viewpoint 'there is no migration', 'they have not left the village' and they still belong to the village community. It seems that the migratory moves do not have any de-structuring effect on the social fabric. The extended family has won its challenge: to benefit from the urban economy by sending there an antenna, which will strengthen its status and secure its survival or even its prosperity. It also appears that an urban residence and an urban employment are not sufficient to characterize a social actor, and that a change for an urban residence or an urban job are not necessarily perceived as urbanward migration.[5] The middle-sized town, due to its accessibility and its intermediary status, seems to provide the ideal place of destination for such moves.

Migration to town of the entire household

The spatial segmentation of the extended family leads sometimes

to a total relocation in town. This chain process is often the successful result of the initial attempts at economic diversification in the town, which ended as a complete residential and economic resettlement. This can be illustrated by the case of a Kanbi family where all the brothers gradually left agriculture to invest in different urban industries, in Jetpur and other towns in the region; as their enterprises developed and prospered, the familial farm was eventually leased out. Another example is provided by the case of a working-class family, from the Khant community, all of whose adult members were employed in lime quarrying in the village. The elder son left first to look for a more attractive and better paid job in Jetpur, where his sister's in-laws lived and were willing to provide him an introduction to find a job in the textile printing industry. Three years later, the other members of his family joined him; his father and two other brothers followed the same job access route.

On the other hand, when the entire household out-migrates without a preliminary stage, migration to the town appears often as the last resort, as distress migration. This occurs when living in the village cannot provide the minimum economic base to sustain the family. Thus, certain families of farmers have been compelled to sell off their cattle or even their land, while the lack of outlets in the village pushed some families of artisans to go to the town.

Yet, even in the last cases, the native village remains the pole of reference of the relocated family. The industrial workers' life histories show that only three migrants out of the 30 Gujarati migrants of the sub-sample have cut off all relationships with their native place (and those three did not own any land in their village). All the other migrants visit regularly their village, for religious festivals and above all for familial events. The village is thus perpetuated as the preferential place for social reproduction.

Return migration, or the repatriation of the economic functions of the town as a village strategy

The extreme and most astonishing case of utilization of the town by the villagers is the repatriation of the economic

function of the town into the village. This strategy occurred owing to the development of the diamond-cutting and polishing industry in Gujarat, and according to the principle 'it is better to carry out at home what is usually done in town'. The establishment of diamond-cutting and polishing workshops requires only a minimum investment to buy the lathes. Such production units function under the job-work system: the traders or the middlemen who place the orders also supply the rough diamonds, and take them back for marketing after they got cut and polished. It is thus easy to relocate the production out of the urban centres, providing a good insertion in the networks of traders and middlemen is ensured.

A collective strategy, representing the general interest of all castes and sections in the villages, has taken place without any specific impulse from the government. The Kanbis, in particular, had sent young men to towns like Surat or Bhavnagar to work in the diamond industry. These young villagers got trained, and took advantage of the network of the Kanbi community and of its connections in the diamond business to establish the necessary contacts in order to run diamond-cutting units. Once the apprenticeship was completed, many Kanbi families, whose financial means are often higher than that of the other castes in the village, invested to set up diamond-cutting units in the village itself. They knew that they would be able to find in the place skilled labour, formed by the young villagers (from various castes) who had gone for apprenticeship. For the new entrepreneurs, the risk was minimum, as the wages in the village are lower, and their future workers would not hesitate to carry on in the village what they were doing in the town.

In this specific case, the function of the town is limited to the training of a generation of workers who acquire the required skills and establish the adequate networks of relations. Once the apprenticeship is over and the necessary contacts established, the migratory flow is reversed: from the town back to the village. The temporary migrants come back, as well as the urban-based familial segments which have never been cut off from the village, and find the opportunity of returning to their native place and rejoining their extended family.

To migrate or to stay?

Migration and commuting have been explained so far as a component of the familial strategies of survival and development. The comparison with families of a control group, namely families with characteristics similar to that of each migrant's family but without labour out-migrant or commuter in town, enables us to understand further the rationale behind the decision to migrate or to stay. The fact, that out of the 15 families of migrants surveyed in their native places only nine families were identifiable for the control group, already shows that seeking employment outside the village is inescapable for certain communities or castes.

For the agriculturists' families, the fundamental factor of resorting to migration or commuting is the pressure of population on land. Though the agricultural situation in Saurashtra is characterizd by a relatively low rural population density and a favourable average size of operational holdings as compared to other regions in India, the quality of the land is not satisfactory and a disquieting process of fragmentation of holdings is under way (as seen in Chapter 3). Beyond the simple ratio between the family size and the holding size, what appears to be decisive are the facilities of irrigation. In a drought-prone area like Saurashtra, adequate irrigation allows the farmers not only to increase yields, but also to widen the span of possible crops. However, there is no linear association between the pressure of population on the means of subsistence and out-migration. Admittedly, sending a son outside agriculture is often a necessity in order to avoid too strong a pressure on land, especially in the case of small farmers. But, even if there is no particular population pressure, in the cases of large farms and profitable irrigated farms, out-migration of one or more family members will be favoured since surplus incomes from agriculture secure a solid economic base and are likely to encourage job experiences outside agriculture, or investments in the urban industrial sector. As shown in a previous chapter, the Kanbi entrepreneurs hailing from agriculturists' families participated increasingly in the industrial development of Jetpur by investing in the textile printing industry their surplus savings from cash crop agriculture.

Two types of migratory moves need to be distinguished at this stage among the rural migrants that we have observed in the Jetpur textile printing industry. The first type corresponds to labour migration in search of a job as wage-earner, which does not require any initial investment or specific training; hence this will be the preferential resort for families with modest or precarious living conditions in the village. The second type corresponds to migratory moves founded on the desire of starting one's own business or enterprise. In that case, the primary factor of differentiation in mobility patterns is the capacity to constitute savings, which is the prerequisite to any investment project, even for the smallest shop or workshop.

The familial strategies of economic diversification implemented by farmers, as well as artisans or shopkeepers, imply an additional condition: the family size must be large enough to allow those who remain in the village to take charge of the work on the farm, in the familial shop or workshop. Conversely, families with only one son are deprived of the possibility of exploring the urban labour market.

Lastly, given similar economic conditions in the village, a major handicap for sending a member of the family to work in the town is the lack of relations from which the prospective migrant can get support for his urban insertion, and the lack of adequate contacts to help him find a job or start a business (the latter being true for commuters too). In the Jetpur case study, this was confirmed in the context of entry into the textile printing industry: we have shown in earlier chapters that the access to employment in industrial labour, like the initial investment to start an enterprise, rely—as elsewhere in India—on familial and social networks.

Connection between the different forms of mobility

What is the relation between the different forms of mobility identified above: commuting, group migration of young men with temporary residence in town, extension of the family in town through a pioneer migrant and then a segment, migration of the entire household and return migration to the

village? Is there a hierarchical relationship between them or are they responses to distinct situations?

In the pattern of spatial mobility expounded above, the different forms of mobility can be associated into a chain process, corresponding to different stages of the life course. However, there is no systematic or ineluctable chain process, and the pattern of spatial mobility is submitted to geographical and economic constraints. Obviously, too long a distance between villages and towns rules out commuting, whereas this form of mobility can be perpetuated in villages close to an urban agglomeration or well connected to it. Regarding economic constraints, there are examples of irreversible deterioration in the economic resources of the rural family which pushed the entire family to migrate to town, without possibility to attempt a previous diversification by sending one member to work outside the village. But such variations do not question the general underlying logic on which is based each identified form of spatial mobility, considered either as a stage of a chain process or as independent moves: the basic principles at play appear to be familial solidarity, moorings in the native village, and minimization of risks. These will be further elaborated in the following section.

THE RATIONALE OF RURAL–URBAN MOBILITY

In a society organized around strong familial structures and caste networks, 'the lights of the town' turn to be rather dull for the villagers. The observations carried out in the native villages of the migrants in Jetpur confirm the limitations of the psycho-sociological thesis which analyses rural–urban migration as the result of the modernization process, a response to the pull of the town seen as a place of modernity and individual emancipation.[6] In fact, the town is attractive only as far as it can provide employment opportunities and adequate infrastructure and environment for investment outside agriculture. Thus, urban–rural migration responds first to economic necessity. In addition, the rural–urban flow proves to be reversible. The inversion can take place at the individual level, in case of

failure of the attempt at economic diversification, or of non-adjustment to the urban environment; it can also take place at the level of the community, when the latter is in a position to repatriate into the village the economic activities initially carried out in the town.

From a macro-economic perspective, labour mobility is in accordance with the economic disparities observed between the employment and investment opportunities provided in urban areas and the less advantageous prospects which prevail in rural areas. *A priori*, this economic determinism seems to fit with the dominant theoretical migration models, which analyse migratory flows as a mechanism of adjustment to the economic space, in response to disequilibrium in the labour markets and to income differentials.

Yet it is necessary to go beyond this global economic framework. The micro-social approach enabled us to further analyse the rationale and determinants of the decision to migrate or to stay. In the population under study, spatial mobility motivated by labour factors responds to a collective logic of economic diversification at the level of the family, aimed at the survival and prosperity of the extended and spatially segmented family. The decision to migrate—or to stay—is part of a familial strategy to minimize risks. Within the family, the assignment of the labour force operates according to a principle of collective distribution of risks, between different economic activities and between different places. From this viewpoint, the process of decision-making differs from two traditional and basic assumptions of the neo-classical migration models which consider atomized individuals as the decision-making units and apply a logic of maximization of the expected benefits.

Evidence from the interviews shows how risks are effectively minimized. First, commuting is preferred to migration as long as communication facilities and distance allow it, and in case of migration solid ties are maintained with the native place.[7] Resorting to group migration also aims to minimize the difficulties of adjustment to a new environment (as illustrated by the example of young men migrating to Surat, and that of inter-state migrant labourers). In addition, most of the migratory moves take place within the regional space[8] and display a preference for middle-sized

towns, which are relatively close to the village not only in terms of geographical distance but also in terms of social distance and way of life. This hypothesis has been also supported by Joshi et al. (1988) in order to explain the growth pattern of middle-sized towns in Saurashtra.

The space which is explored by the migrants cannot be reduced to a simple physical and geographical space. Emphasis has been already put on its economic dimension, but its social dimension is also fundamental. Hence, more than a preference for short distance moves, the clue to an understanding of the pattern of spatial mobility lies in the priority given to social and cultural moorings in the village, which should not be questioned by commuting or migration. Whenever residence in the native place cannot be maintained due to economic constraints, the affective and social roots are nevertheless retained. The significance of familial and social networks lies in such a context: their major role in migration processes has been highlighted by the observations carried out in Jetpur as well as in the villages.

CONCLUSION

From the viewpoint of town and country planning, and as regards more particularly the role of industrialization in development patterns focused on middle-sized urban centres, a few lessons can be drawn from the pattern of spatial mobility observed in Jetpur and its countryside. The geographical and inter-sector mobility which was engendered by employment in urban industrial sector ensures an opening of the rural world to the urban world, and a better economic integration between both spaces. This process corresponds to an effective solidarity between the industrial pole and its regional catchment area, insofar as labour migration and commuting are part of familial strategies of economic diversification, and are often accompanied by remittances or return transfers from which rural communities benefit. From this angle, labour mobility towards the industrial sector appears as a factor contributing to urban as well as rural development.

But the pattern of migration engendered by the industrialization process also exhibits more disquieting facets. At the outset, the high propensity among the workers of the textile printing industry to migrate is the result of the precariousness of employment which characterizes this small-scale sector. The geographical mobility of the industrial workers can be further analysed as the reflection of the submission of labour to the requirements of industrial capital (Gaudemar, 1976), and the organized recruitment of inter-state migrants workers exemplifies the domination of an economic logic aimed at the maximum exploitation of the workers.

From the viewpoint of urbanization, the three principles which determine spatial mobility in the population under focus (namely, familial solidarity, moorings in the native village and minimization of risks) also provide clues to a better understanding of the high retention of rural population in India—the corollary of its moderate rate of urbanization. This assessment is consistent with the findings of other research works on the process of rural–urban migration in India, which have also demonstrated the major role of 'primordial attachments' (Klaas, 1979), the strength of rural roots (Racine, 1990), and 'the principle of collective risk-spreading within the place of residence and outside it' (Breman, 1985: 219). One could question, however, the extent to which the principle of familial solidarity will continue to strongly structure a society which, on the other hand, is subject to a modernization process and an increasing international opening. Then, what part are individual strategies likely to play and will these be in a position to challenge the priority given to village roots in the decisions of occupational and geographical mobility?

NOTES

1. The information about Ankleshwar was collected during a short period of fieldwork carried out in October 1987, and more particularly from the Ankleshwar Industries Association and the Gujarat Industrial Development Corporation.

2. This section and the next one are based on an article published in French: see Dupont and Lelièvre (1993).
3. See for example Shah (1973) who has made a detailed review of the anthropological literature on that subject, and presented a case study conducted in a village of Gujarat.
4. For example, among the commuters and ex-commuters interviewed for the survey of industrial workers, the time spent on each journey from place of residence to place of work ranged from 20 to 80 minutes, and the transportation cost of commuting from 0.25 paisa to Rs 6 per day, which should be compared to the daily wages in the textile printing industry, ranging from Rs 15 to 50 (1989 figures).
5. One type of migration is, however, considered in a different way by the villagers, and looked upon as final departure from the village community: this refers to a more ancient migration of entire families, that of traders (especially Vaniyas) who left to go into towns 'for better business prospects'. This was the case in particular after the nationalization of banks in 1969, which put an end to their activities as money-lenders in the villages.
6. The reducing nature of these theories has been already exposed by Amin (1974), Connell et al. (1976) and—for Gujarat in particular—by Breman (1985).
7. The high frequency of rural households in which one or several members pursue non-agricultural activities outside their villages has also been underlined by Breman's studies in South Gujarat (1985).
8. This is also in accordance with the analysis of the 1971 and 1981 census data on migration in Gujarat (see Visaria and Kothari, 1984).

9

Conclusion

The case study of Jetpur in Gujarat allowed us to understand the mechanisms of industrial and urban development in a middle-sized town at the micro-level and to highlight processes which have been shown not to be unique in India.

This town also provides a particularly relevant field of study to question the issue of industrialization and urbanization as vehicles of modernization and social change, in the context of a predominantly rural Indian population. Small and medium-sized towns maintain preferential links with their rural hinterland, and hence stand at the interface between the villages typified as the crucible of tradition and the large cities depicted as the very place of modernity. In the same way, small-scale industries based on a traditional activity like the hand-printing of textiles are in a better position to illustrate the transition from familial and hereditary crafts to industrial production and its impact on socio-economic mobility. On the basis of these empirical evidences, we can thus question the pattern of small-scale industrialization and development at stake, and draw some lessons for policy implications.

Development of the textile printing industry in Jetpur

The history of Jetpur shows how the textile trade, which contributed to the prosperity of this town in the nineteenth

century and until Independence, prepared the ground for the emergence of the textile printing industry. Its development further illustrates the transition from family-based craft to industrial production by the local entrepreneurs who were from the caste of artisans specializing in dyeing and printing work, the Khatris. A bottom-up process of gradual accumulation took place, although all the entrepreneurs are not 'true capitalists'. Till today, many entrepreneurs are highly dependent on the traders for whom they print under subcontract; and many of them do not own their plants.

The characteristics of the hand-printing industry, based on a labour-intensive process without sophisticated technology or specific machinery, offered opportunities of rapid profits with a minimum of initial investment, while the system of subcontracting enabled the entrepreneurs to minimize their risks. The concentration of textile printing in Jetpur further enabled the entrepreneurs to take advantage of the economies of agglomeration. These favourable conditions attracted many entrepreneurs who did not necessarily belong to the traditional community of craftsmen.

Amongst the newcomers were the Vaniyas, the traditional caste cluster of Gujarati traders, and the Kanbis, traditionally a caste of cultivators. The Vaniya entrepreneurs hail more specifically from families of traders in textiles or printed saris and they maintain direct contacts with the sari printing industry. For them the printing industry is an extension of the familial business. The assets of this community are the availability of capital from their trading activities, and a network of useful connections. The demographic weight of the merchant–entrepreneurs is however limited, and the industrialization process in Jetpur cannot be reduced to a mere transfer of merchant capital to industrial capital. The role played by the Kanbis in the industrial development of Jetpur is more remarkable: they have gradually entered this industry in increasing numbers and now form the majority group. Initially, they had no specific technical knowledge or experience in business, but they reinvested in the urban industry the profits set aside from their agricultural incomes, especially from the farming of cash crops. This evolution reflects the emergence of this caste of agriculturists on the economic and political regional scene.

Thus, three main profiles emerge among the entrepreneurs in the Jetpur textile printing industry: the artisan–entrepreneurs, the merchant–entrepreneurs, and the ex–farmer entrepreneurs. They further illustrate three types of investment strategies deeply marked by the traditional caste-based occupational specialization which determined the possible routes of access to entrepreneurship. Other non-community-specific factors play a critical role in the emergence and success of entrepreneurship: the extended family as a basic and multidimensional supporting structure, an adequate network of business and political contacts, and—to some extent in the context of an increasingly competitive market—sufficient educational credentials.

Impact of industrialization on urban dynamics

The impact of industrialization in Jetpur has been appraised at two different levels: on the dynamics of the urban population and on the structure of the labour market.

Population dynamics

The considerable expansion of the textile printing industry in Jetpur since the fifties has been associated with rapid population growth, as compared to the performance of towns of similar size-class in the same State. This results from important in-migration and the spatial spread of the agglomeration. There is a clear pattern of suburbanization which shows up in the decentralization of the factories in the peripheral zones, the location of the new entrants' residences, and the subsequent faster population growth of the suburbs. In the late eighties the original town and its industrial suburbs formed an urban agglomeration approximating 114,000 inhabitants.

The process of in-migration, mainly from regional and rural areas, has increased the labour supply as well as the labour force participation rate. Although the share of in-migrants in the work force of the textile printing industry is remarkable (56 per cent), their contribution proves to be proportionately stronger in some other sectors. The industrial development gave impetus to the whole urban economy, and other branches of activity have also absorbed large numbers of migrants.

Structure of the urban labour market

The printing industry proves to be the leading sector of the urban economy, and has also an appreciable impact on the economy of the surrounding villages. Since it is based on a labour-intensive process, this industry has generated considerable employment opportunities, with a total capacity ranging from 30,000 to 40,000 jobs at its maximum. This contributes directly to the livelihood of the majority of the urban households, and of a noticeable proportion of the rural ones.

The analysis of the structure of the Jetpur's labour market reveals first the existence of wide disparities in terms of labour status, according to criteria of regularity, protection and autonomy in employment. A more disquieting feature is that the production workers in the textile printing industry account for one-third of the total urban labour force and belong to the most vulnerable sections, second only to the construction workers.

The urban labour market also exhibits a segmented structure. The traditional factors of segmentation such as caste and gender still operate in the labour supply as well as in the structuring of the employed labour force. A relative degree of occupational specialization by caste and the survival of certain ascriptive hereditary activities are still notable. Furthermore, low-caste workers tend to be employed in more irregular and unprotected jobs, while they seldom accede to the status of employer. Educational qualifications play an obvious part in the access to the different types of jobs and the related labour status. However, this factor cannot explain all the facets of the process of segmentation of the labour force; it strengthens caste-based discriminations rather than explain them. The migration process has also engendered proper channels of recruitment, some of them being directly linked to the development of the textile printing industry, like the inter-state migrant workers under contract.

The job access routes to industrial work reveals a strong compartmentalization of the urban labour market with a lack of mobility from the non-industrial urban activities to the textile printing industry. Access to industrial jobs is not entirely open and still relies on a network of relations, especially on kinship and caste-based solidarities. In that sense, employment in the

industrial sector reproduces and reinforces traditional social segregation. Besides, the process of industrialization in Jetpur has been accompanied by a trend towards residential and social segregation between the entrepreneurs and the hired production workers, with a tendency for the latter to cluster around the urban periphery.

The industrial proletariat also appears to be highly fragmented. Although the considerable requirements of manpower entail an intermixing of communities and though common work experience in the factory weakens the observance of traditional segregation, the caste-based cleavages still surface. In addition, new forms of segmentation have been generated by the working conditions associated with the capitalist form of industrial production. These include the near exclusion of the female labour force, the compartmentalization of the different operations of the production process, the competition and rivalries between workers as a result of insecurity in employment, the segregation and increased exploitation of inter-state migrant workers due to their specific mode of recruitment as contract labourers housed in the factories, and the disadvantages suffered by commuting workers in the competition for jobs in a situation of employment crisis. All these factors of division are in conflict with the formation of a united working class and hinder the penetration of the labour unions. Hence they inhibit the workers' ability to promote their own interests.

The pattern of urban and industrial development in Jetpur has not led to a more egalitarian pattern of access to jobs, neither has it achieved the economic advancement of the socially underprivileged sections of the population.

Successful integration of an industrial growth pole with its hinterland?

However, from the viewpoint of the potential role of middle-sized towns in industrialization and in regional development, the case of Jetpur seems to illustrate the successful integration of an industrial growth centre within its hinterland and the rural economy, as far as several dimensions of the development process are concerned:

- The geographical origin of the entrepreneurs and the workers is mainly confined to the local region; more generally the predominantly regional as well as the rural origin of the in-migrants in Jetpur reveals a town deeply rooted in its countryside.
- This industry also supplies ample employment opportunities to the rural population without uprooting them from their villages. This has been facilitated by the development of communication networks and cheap means of transportation.
- In-migrant workers and commuters have helped the textile printing industry to meet its considerable requirements in manpower; and in-migrant entrepreneurs have contributed to the industrial development by bringing in their skills as craftsmen and businessmen, and/or their capital.
- The industrial growth is directly linked to the progress in agriculture of the surrounding region, following the development of irrigation, mechanization and introduction of cash crops. This has allowed surplus savings and transfer of capital from agriculture towards the urban industry.
- Spatial moves made by the workers and potential entrepreneurs from rural areas to the town appear as a component of the familial strategies of survival and development, and do not imply severing of rural moorings. On the contrary, the migrants help realize a better integration between the town and its countryside through the relations that they maintained with their native place, including remittances and return transfers contributing to the welfare of the rural communities. In that way, the urban and industrial development generates spread effects on the countryside.

The process of development in Jetpur can be considered as the outcome of endogenous dynamics in the sense that this centre has grown spontaneously and was not directly stimulated by public investment. Nevertheless, the entrepreneurs of Jetpur proved able to take advantage of the general industrial policy aimed at promoting small-scale and decentralized industrial

development, and of the incentive measures implemented by the Central as well as the State Governments. Hence, this example should encourage the policy of dispersed industrial development that were advocated by the Indian Government, as it underlines the potential role of medium-sized towns in regional development through small-scale and labour-intensive industrialization.

Successful pattern of industrialization?

However, the pattern of industrialization which has taken place in Jetpur presents also some limitations, some stemming from the disadvantages of single industry towns, others, more disquieting, pertaining to the workers' condition.

Disadvantages of single industry towns

The pattern of industrial specialization of the town limits the range of economic functions that the urban centre is in a position to fulfil for its agricultural surroundings. For instance, there is no agro-industry in Jetpur, such as oil mills or cotton ginning factories, which could process the agricultural products grown in the region. This also points to some reservations about the above conclusion regarding the 'successful' integration of the industrial centre with its hinterland.

Another disadvantage for the urban economy itself is that the prosperity of the whole town is entirely dependent on the fortune of the textile printing industry, and hence very vulnerable to any economic fluctuations occurring in this branch. This results in an instability of employment for the workers' community.

Furthermore, the concentration of textile printing factories in Jetpur has resulted in fierce competition, and a subsequent reduction of the margin of profit. These more stringent economic conditions, compounded by frequent over-indebtedness, have contributed to an increase in the number of sick units, and to the closure of the weakest.

At the town's global level, given the relative decline of the demand for cotton printed saris and the increasing competition with other textile printing centres in the country, there is not

much scope for further expansion in the traditional line of products. This situation calls for a process of diversification, which has in fact started though it is confined to the textile industry and its ancillary or allied products and services. There is also a search for new markets abroad, and the recent measures of economic liberalization seem to have boosted exports. This trend of reorientation also reveals the capacities of adjustment of the Jetpur entrepreneurs to the changing economic context, which are promising signs of dynamism for future industrial prospects.

On the other hand, outside the textile industry, there is no significant trend of industrial redeployment in the town. One such attempt can, however, be mentioned, in the diamond industry. Since 1987, a few diamond-cutting and polishing units were set up in Jetpur, following the general development of this industry in Gujarat, including in Saurashtra. An exhaustive survey of the diamond-cutting and polishing units enabled us to enumerate, in April 1988, 14 functioning units with a total capacity of employment amounting to about 500 workers, approximated on the basis of their installed equipment in machinery. This may appear very limited as compared to employment generated by the textile printing industry. The town is not well integrated into the required trading network, there is also a scarcity of skilled labour, and business and employment fluctuate considerably, with frequent closures of the workshops. The diamond industry does not seem to be solidly established in Jetpur, and in August 1992, it did not show any evidence of expansion.

The industrial workers' condition

Turning back to the textile printing industry, the most problematic development issue is certainly the industrial workers' condition. The type of industrial development which has taken place in Jetpur relies on a labour-intensive process of production, and on manpower resource management based on widespread casual and unprotected labour. This has generated considerable employment opportunities, but at the cost of the workers' welfare. Prevalence of casual employment and seasonal unemployment, general lack of security and social benefits are the major features of the industrial workers' fate. The

transition to mass production even aggravated their working conditions, insofar as the industrialists' search for better productivity has led to a minimizing of labour costs through the generalization of recruitment on a daily basis and piece-work wages, at the expense of recruitment associated with a monthly salary which was initially more widespread and gave better protection to the workers.

The process of industrial transition observed in Jetpur is typical of the hand-printing industry in India, and of its ambivalent effects for the hired workers who have not gained the advantages of organized labour. Yet the role of industrialization as a vehicle of social mobility has to be acknowledged to a certain extent. The development of the textile printing industry in Jetpur has provided ample opportunities of investment and employment which encouraged geographical mobility as well as economic mobility from agriculture to industry, and allowed many migrants and commuters to improve their economic situation as compared to that in their place of origin. During the main period of expansion, the relatively easy access to entrepreneurship created opportunities for upward socio-economic mobility, from which artisans traditionally engaged in dyeing and printing work, as well as a few salaried workers, were in a position to benefit. However, this favourable economic context has passed, while the prospects of promotion for the present industrial workers are jeopardized by their actual working conditions.

Beyond its impact on the workers' condition, the extent of casual labour could have adverse effects on the dynamics of the town. Precariousness of employment and irregularity of income inhibit the purchasing power of the workers and their capacity to improve their housing. These also support a high propensity to geographical labour mobility in search of better opportunities and are likely to compromise the urban integration of the migrants. The attachment of the migrant workers to their native place, as well as the model of the peasant-industrial worker, could be also interpreted as a reflection of the insecurity of urban employment. Such a process of industrialization does not favour the transformation towards a more settled working class and urban population.

Policy implications

The multifaceted heterogeneity of the Jetpur textile printing industry, especially in terms of the size of establishment and the organization of business, calls for differentiation in the formulation of any policy suggestion for this industry.

Small-scale and labour-intensive industrialization that characterizes the hand-printing sector appears to rely on a highly exploitative process at the expense of the workers who continue to work under conditions typical of the informal sector. In order to enable the bulk of the workers to better benefit from the industrialization process, a more rigorous implementation of the labour legislation seems a prerequisite to ensure them more security of employment, better earnings, minimum social security benefits, and thus improve appreciably their working and living conditions. Yet, for many small entrepreneurs whose concerns are barely profitable, such measures would increase their labour costs and thus may compel them to close down. This dilemma is common to many small-scale labour intensive industries, which provide attractive investment opportunities for the entrepreneurs essentially because of the availability of cheap labour. This would argue in favour of government intervention and special assistance for this type of industries, which has been already advocated for hand-printing (Jain and Kapadia, 1984).

Given the considerable potential of employment of the Jetpur printing industry, due attention should be paid to the social angle in addition to criteria of strictly economic profitability while considering the financial difficulties faced by many entrepreneurs. A policy of promoting the hand-printing industry on the basis of a further expansion along the same traditional line of products (cotton saris) is not realistic in Jetpur due to the degree of local competition and the state of global demand; industrial diversification into allied products and exports should rather be encouraged. However, prior to promotional measures, intervention appears necessary to prevent a further aggravation of the endemic financial crisis.

The entrepreneurs view the solution to their shortage of working capital and overburden of interest charge in a more understanding policy of financing the small-scale industry

through the banking system, with measures aimed to release their cash flow constraints. Credit institutions recommend firstly a more rigorous financial management. Scarcity of financial resources, compounded by the entrepreneurs' lack of accounting and financial skills, is a general problem of the small-scale industrialists, commonly acknowledged not only in India, but also in other developing countries.

The growing sickness that hits the industry in Jetpur like many enterprises in the small-scale sector in India further calls for specific action for the revival of sick units. Rehabilitation schemes have been formulated since 1987 in the Sick Industrial Units (special provisions) Act, and in 1988 the Board for Industrial and Financial Reconstruction had already recommended a more liberal and comprehensive approach.[1] However, the effective implementation and success of this policy relies beforehand on the better information of the entrepreneurs regarding the assistance provided by the financial institutions and their specialized rehabilitation cells. In addition, management assistance for the entrepreneurs with inadequate educational background or managerial skills seems also desirable. Such measures would also contribute to the safeguard of employment, which follows the spirit of the industrial policy formulated by the Indian Government in the industrial policy resolution of 1956 and the five-year plans, with their emphasis on employment generation and encouragement of labour-oriented industries.

How far would such a plea for active government intervention be compatible with the programme of economic liberalization launched by the Indian Government in July 1991? The new small-scale industries policy announced one month later includes certain resolutions that should have a favourable effect and help small entrepreneurs by reducing their financial constraints. Thus, the following measures can be mentioned: to ensure payment of the bills of small business; to provide access to the capital market; and to meet fully the credit needs of small units. Yet, one could have further expected specific action as regards industrial sickness, including preventive as well as curative measures.[2] Given the sizeable incidence of industrial sickness in the small-scale sector, the absence of such measures is all the more regrettable since the New Industrial Policy,

especially through delicensing, will intensify open competition with large units, which is likely to affect adversely the small ones. Consequently, there is a risk of closure of many small enterprises and hence of increasing unemployment. Last but not least, the announcement of measures to relax some labour laws for tiny units may augur a dangerous trend. In the general climate of economic liberalization, industrialists and some economists are already calling for more flexibility in manpower management. But, in the small-scale sector where labour laws are already commonly violated, the official relaxation of the latter would remove the last workers' defences and could only entail unacceptable social regression.

NOTES

1. See: 'Rehabilitation of sick units: BIFE seeks mandatory powers'. *The Economic Times*, 12 November 1988; and 'Pressure of sickness'. *The Economic Times*, 14 November 1989.
2. See also: Sandesara (1991b).

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