Chapter IV

Work Participation and Occupational Structure in Relation to Urbanisation
4.1 Introduction

4.1.1 Work participation is an important indicator of both development and urbanisation. Work participation in the initial stages of development is high because of poor development of technology and lack of efficiency (Rath, 1999); it becomes necessary to engage more hands to make a living. Later, however, as the technology improves the earnings are enhanced and a few hands can be taken off from the work; this is also applicable to females. The proportion of females among workers decreases in agricultural sector and slightly increases in tertiary and service sectors in urban areas (Mukherji and Phadke, 2006). Female work participation and females among workers throw light on contribution of females in organised activities, especially in urban areas. The present work analyses work participation for the years 1961 and 2001 along with female work participation. Since data are available separately for main and marginal workers for the year 2001, the analysis is also extended for that year. This has also been done separately for urban workers.

4.1.2 Definition of ‘urban’ incorporates proportion of male workers in non-agricultural occupations as one of its important criteria and hence urbanised areas are generally characterised by non-agricultural workers. In fact, urbanisation is the result of occupational shift from agriculture to non-agricultural activities and hence it was thought appropriate to analyse the patterns of non-agricultural workers in general and those in urban areas in particular vis-à-vis the level of urbanisation. It would have been ideal to analyse the pattern category-wise, such as, manufacturing, construction, trade & commerce, transport & communication and services. However, while data for occupational categories are available for the base year, i.e. 1961, they have not been released for the year 2001. The researcher was thus constrained to satisfy her only with the broad category of non-agricultural workers. Since the data on workers in household industry are available for both the years they have been analysed separately.
4.1.3 The above variables have been analysed spatially. Maps have been prepared for agricultural and non-agricultural workers to highlight sectoral shift, total and female work participation and also female among workers which will highlight their association with urbanisation. Location quotient would have been ideal for classification as it would bring out areas above and below state average. Since a comparative scenario for two years is desirable it is necessary to adopt the same classes for both the years and hence natural breaks have been first considered and then rationalised taking into consideration the average for 2001.

4.2 Total work Participation: 1961

4.2.1 Total work participation shows the percentage of workers in relation to total population. The Census for 1961 does not provide division of workers as ‘main’ and ‘marginal’. It simply provides data for ‘workers’. The census for 2001 gives segregated data for workers into two categories mentioned above; they together form ‘total’ workers. The data in the two years are not thus strictly comparable. The present analysis, therefore, compares patterns for only total workers. The data in 2001 have been used to understand the spatial pattern of distribution of main and marginal workers in order to understand the nature of availability of work in different parts of the State. In 1961, the average work participation for the entire State is 47.90%. The spatial pattern shows large scale variations between 66.45% in Korchil, a tribal taluka of Gadchiroli and 30.35% in highly urbanised taluka of Pune City (Fig. 4.1a).

4.2.2 The talukas with very high level of work participation, i.e. more than 55%, is a characteristic of backward areas located in eastern Vidarbha, Marathwada followed by Western Maharashtra; Konkan has very few such talukas. Most of these talukas are either hilly and/or tribal where workers are engaged in lowly primary activities like collection and gathering of forest products or shifting cultivation. In Marathwada and some parts of Western Maharashtra such areas are associated with dry farming. The high participation, here, is a compulsion rather than a choice. More people have to participate in work due to lower returns accruing from the individual efforts. It also reflects on the level of skill of
the people since unskilled work requires more people to earn to make a living
unlike the skilled work.

4.2.3 One third of the talukas are associated with high level of work
participation ranging between 50% and 55%. Marathwada typifies this situation
par excellence, except a few talukas containing district headquarters like
Aurangabad, Jalna or Nanded; it was characterised by dry farming at that time.
Traditional agricultural methods were also an important feature inherited
historically from the days when it was a part of the Nizam state, requiring more
manpower. In Western Maharashtra and Vidarbha it is a characteristic of hilly or
drought prone areas. In Konkan, this is mainly seen in tribal pocket.

4.2.4 Another one third of the talukas are associated with moderate level of
work participation ranging between 40% and 50%. Associated mainly with the
valleys of the Bhima and the Krishna, the phenomenon reflects on agricultural
and associated industrial labour employed in irrigated farming tracts. This is also
true of Khandesh and parts of Konkan characterised by progressive agriculture;
in Mumbai City district it is partly the result of labour intensive non-agricultural
activities, and, in part, also due to migration of people in working age group.
Thane taluka also boasts of this phenomenon partly because of labour intensive
activities like salt production, some city oriented market gardening and, in part,
due to settling of migrants in urban areas like Thane city. Generally, high work
participation is a characteristic of less urbanised talukas while low is associated
with relatively more urbanised ones.

4.2.5 Low level of work participation, i.e. between 30% and 40%, is observed in
very few talukas. They are primarily associated with large urban centres
specialising in secondary and tertiary activities which are less labour intensive;
selective migration is also an important contributor. The largest concentration of
such talukas is in the vicinity of Mumbai; other small pocket is in Kolhapur-
Sangli area. Elsewhere, talukas are isolated focusing on district headquarters.
4.3 Total work Participation: 2001

4.3.1 Average work participation for the State is 42.50% which has gone down by 5.4% from the base year. Spatially, it varies between 59.22% in Khanapur and 29.46% in Nanded (Fig. 4.1b). The area under very high level has been considerably reduced compared to base year pattern and this is a sign of development (Rath, 1998). Only isolated pockets are seen in eastern Vidarbha and Western Maharashtra associated with either hilly or drought prone areas; they still continue to depend on non-descript primary activities. High level is observed in the talukas located mainly in Western Maharashtra and Vidarbha. While in tribal areas of the Khandesh and eastern Vidarbha it is an improvement suggesting availability of better work opportunities, in drought prone areas of Western Maharashtra it is a continuation. There are very few such talukas in Konkan and Marathwada; in the latter one finds a considerable improvement due to irrigation and associated industrialisation. Moderate level is a characteristic of Marathwada, Vidarbha and southern parts of Western Maharashtra. While in the former two there is considerable improvement in the latter it is a status quo. In Konkan the change is found in central parts. Low level is mainly associated with highly urbanised areas containing district headquarters. Nanded taluka is the one which is going just below this level. Over four decades work participation shows substantial decline in backward areas like Marathwada and eastern Vidarbha but developed areas do not follow this pattern. Thus the pattern of change is complex and this is reflected in relatively lower value of correlation co-efficient with the base year (r=0.61). Generally the areas have changed through one step (Table 4.1).

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4.3.2 Workers who had worked for the major part of the year, i.e. 6 months or more, are termed as main workers. The level of work participation by this group for the entire State is 35.87%; this roughly works out to be 84.46% of the total participation. The spatial pattern, however, shows wide variation between 48.59% in Kalwan and 21.01% in Shrivardhan (Fig. 4.1c), highlighting disparity in the availability of work. The talukas with very high level of participation by main workers, i.e. more than 45%, are less in number and surprisingly associated with marginal areas such as drought prone, hilly and/or tribal; the workers here are self employed for about 3-4 months during agricultural season and for the remaining months they must be getting some work under Employment Guarantee Scheme. Since the availability of work is limited there is competition for seeking work and hence wage level is low forcing females to participate in large numbers. The high level, i.e. between 40% and 45%, is observed in more than one fourth of the talukas. It is a characteristic of Western Maharashstra associated mainly with river valleys like the Godavari (upper), the Bhima and the Krishna because of prosperous irrigated agriculture focusing mainly on sugarcane, and associated industries which provide work for more days in a year; the female component comes down partly because of higher wages and women education. Nearly 38% of the talukas have moderate level, i.e. between 35% and 40%, associated either with less prosperous agriculture in hill ranges or industrialisation in urban areas; in the former it is due to less availability and in the latter it is the result of choice. Low level, i.e. between 35% and 30%, is observed mainly in North and Central Konkan, except tribal areas, Dhule and parts of eastern Vidarbha; the areas are varied in nature and the explanation is different for different areas as seen earlier. A contiguous belt of very low participation of less than 30% is found in southern part of South Konkan; here it is due to the exodus of able bodied males. It is also a characteristic of other backward areas such as hilly and tribal pockets of Nandurbar, border areas of Nanded, eastern parts of Gondiya and northwestern Chandrapur; this is due to
less availability. This is also a characteristic of some of the large cities like Nagpur and Nanded; but this is a sign of choice.

4.3.3 Workers who had not worked for the major part of the year, i.e. less than 6 months, are termed as marginal workers. The level of work participation by this group for the entire State is 6.63%. The spatial pattern shows variation ranging between 24.17% in Nagbhir and 1.83% in Mumbai City district (Fig. 4.1d). The talukas with very high level, i.e. more than 20%, are very few, located mainly in eastern part of Vidarbha and South Konkan; an isolated taluka in north Konkan, viz. Talasari also falls in this group. They are associated with adverse physiographic and social conditions which hinder availability of work opportunity for a longer period. Talukas with high level, i.e. between 20% and 15%, form an outward extension to very high level for the same reason; a few more have joined this group because of their being tribal. Talukas of Pen and Khanapur fall in this category because of their marginal nature. Nearly one fourth of the talukas are associated with moderate level between 15% and 10%. They are located in physically or socially marginal areas such as drought prone, hilly or tribal pockets as also those characterised by population exodus. Over 50% of the talukas show low level, between 10% and 5% of marginal workers. They are mostly associated with plateau Maharashtra where work is now guaranteed and very few people are marginally employed. Nearly 15% of the talukas are having very low level, i.e. less than 5%. They are mainly in and around large cities, viz. Mumbai or Pune with availability of varied work throughout the year. Other areas in this category are characterised by high availability of work for a longer period.

4.4 Female Work Participation: 1961

4.4.1 Female work participation shows the percentage of total female workers in relation to female population. It is 38.08% for the entire State. The spatial pattern shows large scale variations between 62.17% in Korchi, a tribal taluka of Gadchiroli, and 8.59% in fully urbanised district of Mumbai Suburbs (Fig. 4.2a).
This differentiation primarily reflects on the need rather than availability. This pattern is highly correlated with that for total work participation (r=0.94).

4.4.2 The talukas with very high level of female work participation, i.e. more than 55%, is a characteristic of tribal eastern Vidarbha, and a pocket in tribal areas of Nashik and Thane districts. Here, primary activity used to be collection and gathering of forest products and shifting cultivation. One of the features of tribal society is “working together to make a living” and thus most of the females also participate in the work. Incidentally, these areas are also characterised by high work participation (Fig. 4.1a).

4.4.3 More than one third of the talukas are associated with high level of female work participation, i.e. between 45% and 55%. Concentration of such talukas goes up as one moves eastward; patches around Nashik and Aurangabad are clearly visible. They are mainly associated with drought prone and hilly areas; this also matches with total work participation. The only exceptional patches in this respect are those in South and Central Konkan where female work participation is high despite low work participation and this is primarily the result of male exodus.

4.4.4 Over one third of the talukas show moderate level of female work participation, i.e. between 35% and 45%. The proportion of such talukas goes down as one moves eastward; this reflects on level of development. In Marathwada, moderate female work participation is also partly due to religious taboos.

4.4.5 Low level of female work participation, i.e. less than 35%, is primarily a characteristic in and around urbanised areas, for reasons discussed elsewhere (4.2.5)

4.5 Female work participation: 2001

4.5.1 Average female work participation for the State is 30.81% which has gone down by 7.27% from that in the base year. The spatial pattern varies between
57.3% in Bhamragad and 8.73% in Ulhasnagar (Fig 4.2b). This matches well with total work participation for the year (r=0.95); however, there is a considerable change from pattern of female work participation in the base year (r=0.72). Very high level, i.e. more than 55%, is restricted to only two talukas, both in Gadchiroli, indicating significant reduction as compared to the base year; this is a characteristic of tribal society. High level is observed mainly in tribal pockets of Vidarbha as well as Western Maharashtra and Konkan. They are also associated with hilly and drought prone areas. High and low moderate levels do not show any specific pattern and contiguity; they are found in all types of regions. Low level, i.e. less than 35%, is a characteristic of highly urbanised areas and their vicinity where secondary and tertiary activities attract male workers; moreover, work is not a necessity for females here as in mofussil cores. As in the case of total work participation, the participation has gone down by one step (Table 4.2)

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4.5.2 Participation by main female workers is 22.23% for the entire State. Spatially, it varies between 44.51% in Bhamragad and 7.28% in Ulhasnagar (Fig 4.2 c). The talukas with very high level are very few in number and associated with hilly and drought prone areas. In continuation with these talukas, there is a zone of high level sharing similar feature and they are also located in the area of dry farming. Moderate level is observed in the transitional zone between highly urbanised area and the areas of high participation. Nearly 40% of the talukas are characterised by low level and they are either highly urbanised area or physically marginal areas; the higher percentage here is obvious because main workers is only a part of the total workers.
4.5.3 Marginal female workers form only 8.58% of the total females in the entire State. Spatially, their percentage varies between 30.59% in Nagbhir and 1.25% in Mumbai City district (Fig 4.2 d). The talukas with very high level, i.e. more than 25%, are observed in the either tribal pockets or areas of population exodus. Adjoining them are the talukas with high level, i.e. between 20% and 25%, having similar features. Moderate level, i.e. between 10% and 20%, is partly a characteristic of hilly or drought prone areas associated with dry farming. Low level, i.e. between 5% and 10%, is associated with prosperous agriculture and very low level, i.e. less than 5%, is observed in highly urbanised areas.

4.6 Females among the Workers: 1961

4.6.1 Proportion of females among the workers is 38.45% for the entire State. It spatially varies between 59.06% in Guhagar talukas and 8.13% in Mumbai City district; rural to urban migration of male workers is one of the important factors for such a pattern (Fig 4.3a). The former is in the source region of migrants and the latter, the destination. It has a strong association with female work participation (r=0.85) but not so strong with total work participation (r= 0.63). This is primarily because proportion of females among the workers is governed not only by the need, availability or willingness of females to work but also on competition for the same work from the males.

4.6.2 The talukas with very high level, i.e. more than 50%, are very few in number. They are mainly located in the central and south Konkan and its eastward extension in Satara district; a pocket in eastern Vidarbha also has a high level. In the former group, their association is mainly with the areas of out migration to metropolitan centre of Greater Mumbai; males from Satara vicinity have also migrated on account of their recruitment in the military. Vidarbha pocket has also emerged due to migration to local mining and industrial centres.

4.6.3 Nearly 30% of the talukas are associated with high level, i.e. between 45% and 50%, located primarily as an extension to very high level in Vidarbha and Konkan. A pocket in northwestern tribal region, and, one in the drought prone
areas of Western Maharashtra also have high proportion of females among the workers due to push factor; moreover, life here being very hard women have to take up any available job to support the family.

4.6.4 Moderate level, i.e. between 35% and 45%, is observed in more than 50% of the talukas. They are associated with the river valleys like the Purna, the Godavari and the Bhima. Males are not required to migrate due to prosperous agriculture and therefore relatively fewer females are engaged in the work. While low moderate level is found associated with the deep soils adjoining the valley core, high moderate proportion is found in the transverse hills with poor soil cover.

4.6.5 Low level, i.e. less than 35%, is associated with urbanised areas which is also the destination for migrants. Here, one finds two levels, viz. very low associated with large cities of Mumbai, Pune, Nagpur, Solapur, Kolhapur, Nashik, Nanded and their vicinity, and, low, associated with small cities like Jalgaon, Bhusawal, Aurangabad or Latur. This reflects on the variation in the number of migrants.

4.7 Females among the Workers: 2001

4.7.1 The proportion of females among workers is 34.78% which has gone down by 3.67% compared to the base year. Spatially, it ranges between 57.25% in Tala and 12.43% in Ulhasnagar (Fig 4.3b). The basic pattern has changed over four decades (r=0.76); this is primarily in South Konkan and urban extensions where it has gone down. In the former it is due to change in migration pattern to Mumbai and in the latter it is due to improvement in technology and earnings, on the one hand, and selective migration from within as well as outside the state, on the other. However, very high level is still a characteristic of the pockets of Konkan only; the number of talukas has, however, gone down considerably. Generally the talukas show shift of one step only (Table 4.3).
Table 4.3
Percentage of Talukas falling in Different Levels of Females among Workers: 1961 and 2001

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4.7.2 Proportion of females among the main workers is 29.73% for the entire State. It varies spatially between 50.24% in Tala and 10.25% in Bhiwandi (Fig. 4.3c). The emerging pattern is similar to that of total females among the workers, as seen by high correlation (r= 0.91). The talukas with very high and high levels are associated with drought prone, hilly and tribal areas. Nearly 60% of the talukas have moderate level which is a characteristic of river valleys like the Tapi-Purna, the Godavari and the Bhima. Very low level is found in and around the city of Greater Mumbai. Talukas containing cities like Nagpur, Amaravati, Nanded, Nashik, and newly industrial nodes like Pimpri-Chinchwad, Chandrapur and Ballarpur also show very low level; low level forms a zone around very low level mainly around Mumbai and Nagpur which is due to metropolitan spill-over. It is also found as isolated pockets around small towns; surprisingly, Pune also falls in this category but this is due to technicalities of classification.

4.7.3 Proportion of females among the marginal workers is 62.09% for the entire State; relatively high percentage is indicative of the fact that the share of females among marginal workers is substantial. It varies between 86.94% in Palam and 29.05% in Mumbai Suburban district (Fig. 4.3 d). High level is associated with the talukas which are located in the marginal areas including the tribal areas. More than 60% of the talukas are having moderate level spread over all the regions; their significant presence is seen in Central and South Konkan, and, this is also true of the extreme north of this region. It is also seen in Vidarbha, Marathwada and Western Maharashtra barring areas around urban centres. Nearly 20% of the
talukas are associated with low level which is a characteristic of vicinity of urbanised areas; the urbanised areas themselves have very low level.

4.8 Non-agricultural Workers: 1961

4.8.1 The proportion of non-agricultural workers constitutes all the workers except those engaged in agriculture related pursuits, i.e. other than cultivators and agricultural labourers. Since non-agricultural male workers form an important component of the definition of ‘urban’, non-agricultural workers are expected to get concentrated in urbanised areas. Their proportion is 30.12% for the entire State. Spatially, however, it varies widely between 99.82% in Mumbai City district and 3.20% in Vikramad (Fig.4.4 a). The former is totally urbanised and there is very little scope for agriculture and the latter is a tribal taluka of Thane district with negligible presence of non-agricultural activities; incidentally areas of both the extremes are located in Konkan.

4.8.2 Very high level, i.e. more than 75%, is observed in only six talukas containing large cities like Mumbai, Kalyan, Pune, Solapur and Nagpur. Mumbai has a heavy concentration of commercial and industrial activities due to colonial past and its continuing trend even after independence; Kalyan represents a spill-over of Mumbai. Pune is also an important industrial centre apart from being a divisional headquarters. Nagpur was the capital of the erstwhile Central Provinces and also an important industrial centre in addition to being a divisional headquarters and, Solapur is an important cotton textile centre. All of them are highly urbanised and hence very high level of non-agricultural workers is easily explicable.

4.8.3 High level, i.e. between 45% and 75%, is also found in a few talukas. They are located in the vicinity of metropolitan centres, viz. Mumbai and Nagpur, due to spill-over. Other relatively small centres like Nashik, Bhusawal, Karvir, Nanded, Amravati and Ballarpur also have high level. It is either because of administrative or industrial or transport function. Surprisingly, the taluka of Malwan also falls into this category and this is primarily because of migration of
able bodied agricultural workers; coastal shipping and fishing form important functional base.

4.8.4 Moderate level, i.e. between 15% and 45%, is observed in nearly half of the talukas. Only one fifth of these fall in high moderate level, i.e. between 30% and 45%; they are just above the average for the entire State. They are located along the transport corridors like Mawal-Daund, Malegaon-Dhule, Miraj-Hatkanangale and a mining belt to the northeast of Nagpur. A belt between Mumbai and Shrivardhan stands out due to fishing activity. Besides, there are small isolated pockets focusing on industrial towns like Bhiwandi or Chandrapur, tourist centres like Mahabaleshwar or Pandharpur, commercial centres like Latur, and, administrative-cum-industrial centres of Ahmadnagar or Aurangabad. Low moderate level, i.e. between 15% and 30% which is just below the State average, is seen in broad belts, such as, those extending between Karad-Washim, Ahmadnagar-Nashik-Malegaon, Nandurbar-Raver-Pachora, Wardha-Chandrapur and Bhandara-Chandrapur; a small belt is also seen to the southeast of Nanded. These form dry farming core with less developed industrial or commercial activity due to poor access; these are the areas growing oilseeds and pulses and hence associated with their processing in household industries. Coastal areas of Konkan fall into this category because of some fishing alongside agriculture.

4.8.5 Low level, i.e. between 7.5% and 15%, is observed in a little over 40% of the talukas where agriculture is the main activity. The areas form almost a continuous belt running from Khanapur to Warud broken only by the talukas containing industrial centres like Solapur and Nanded, and, trade centre like Latur. Areas around the triangle formed by Nashik-Malegaon-Ahmadnagar and those around Aurangabad and Jalna also fall in this category. These were poor agricultural areas and did not support any significant non-agricultural activity. Another small belt lies in the Wainganga valley of eastern Vidarbha which is known for rice cultivation. A rather discontinuous belt is also seen nestling the Sahyadri in areas with a poor access. Emergence of non-agricultural functions
here is difficult to envisage. A small number of talukas in tribal pockets have very low level of less than 7.5% and this is understandable; a few other hilly talukas like Vaibhavwadi and Chandgad also share this feature.

4.9 Non-Agricultural Workers: 2001

4.9.1 Over four decades, the proportion of non-agricultural workers for the State has reached 45.01% which is one and half times that of the base year. Spatially, it varies between 99.83% in Ulhasnagar which is a wholly urbanised taluka and 6.16% in Akrani, a tribal taluka with a marginal location (Fig. 4.4 b). The basic pattern has changed only marginally from the base year (r=0.87); one simply finds extension, especially in the Mumbai-Pune belt, and intensification elsewhere indicating strengthening. Very high level has spread mainly in the vicinity of Mumbai and Pune; a few isolated talukas, such as, Nashik, Aurangabad and Chandrapur, have also joined this category due to policy factor apart from administration. Areas with high level form a zone surrounding Mumbai and Nagpur; in addition there are isolated talukas containing district headquarters. Besides, talukas like Malegaon, Bhusawal, Hatkanangale and Bhadravati stand out due to their industrial function. Mahabaleshwar falls into this category due to tourism related activity. High moderate level shows upgradation from low moderate and low category. But some of the belts, such as, Karad-Washim, Nandurbar-Raver and Bhandara-Chandrapur have perpetuated their low moderate status. Tribal areas with very low level in the base year have raised their level by one step. Besides, dry farming pockets on the transverse ranges have retained their low level. Generally, the talukas show improvement by jump of one step (Table 4.4); only some talukas like Haveli, Aurangabad, Chandrapur, Bhadravati and Khalapur have promoted themselves by two steps due to changed industrial policy.

4.9.2 Proportion of main non-agricultural workers is 48.73% for the entire State. Spatially, it varies between 99.85% in Ulhasnagar and 6.98% in Surgana (Fig. 4.4c). The emerging pattern almost perfectly matches with that for total non-
Table 4.4
Percentage of Talukas falling in Different Levels of Non-agricultural Workers: 1961 and 2001

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</table>

agricultural workers, as seen by high degree of correlation ($r = 0.99$). Very high level is observed in the talukas containing large cities and their vicinity. High level is a characteristic of coastal area and mineral rich region of Vidarbha as agriculture is not the chief activity here. Moderate level is a characteristic mainly of Western Maharashtra as nearly 80% of its talukas are falling in this category; this due to agro-based industries primarily sugar. Low level is a phenomenon associated with tribal pockets and transverse ranges; only 15% of the talukas fall in this category. Surgana is the lone member of the very low category.

4.9.3 Proportion of marginal non-agricultural workers is 25.25% for the entire State. Spatially it varies between 99.56% in Mumbai (Sub.) and 2.87% in Akrani (Fig. 4.4 d). The emerging pattern matches well with that of total non-agricultural workers ($r=0.93$). Very high and high levels form nearly 15% of the talukas which are associated with highly industrial urbanised talukas. Moderate level is a characteristic of Western Maharashtra and adjoining Marathwada because of agro-based industries. Surprisingly tribal pockets in Gadchiroli district also belong to this category but it is partly due to forest related collection activity and mining; forest related activities also enhance the level in parts of the tribal areas in the northwest. Low and very low levels are a characteristic of Vidarbha and Marathwada indicating that agriculture still continues to be the wage earning activity in areas predominantly associated with SCs and STs.
4.10 Workers in Household Industries: 1961

4.10.1 Household industry is defined as ‘an industry conducted by one or more members of the household at home or within the village in rural areas and only within the precincts of their house in the urban areas’. It relates to production, processing, servicing, repairing or making and selling of goods. The proportion of workers in household industries is 4.38% for the entire State, which appears quite low as compared to that for total non-agricultural workers which is 30.12%; this, however, works out to be nearly 15% of the entire non-agricultural workforce. It suggests that this type of informal activity was very important four decades back. Spatially, it varies between 27.25% in a mineral rich taluka of Mohadi located in Bhandara district and 0.30% in Surgana, a tribal taluka of Nashik district (Fig. 4.5 a).

4.10.2 The very high level, i.e. more than 10%, is observed in only 5% of the talukas located in northeastern part of Vidarbha and isolated talukas, viz. Solapur, Sangole, Man and Hatkanangale, located between Solapur and Kolhapur. In the former the activity is oriented to mineral clay and ceramics is the main item manufactured; cane work and orange processing also provide some scope. In the latter, it is mainly in the form of activities having forward or backward linkage with agro-processing but some cane work and pottery is also seen.

4.10.3 The talukas with high level, i.e. between 5% and 10%, is observed in 16% of the talukas. In Vidarbha it forms a southward extension to areas with very high level; the activities differ slightly and they are mainly oriented to oilseed crushing, cotton ginning or processing of hides. In Western Maharashtra, the belt is focused on areas growing sugarcane, cotton, oilseeds such as groundnut, and, pulses. While isolated talukas of Marathwada stand up because of oilseed processing those in South Konkan due to mango and cashew processing; some urban centres like Sawantwadi also manufacture wooden toys. Talukas in Central Konkan emerge because of salting/drying of fish.
Workers in Household Industries

1961

2001
4.10.4 More than 60% of the talukas show moderate level, i.e. between 2% and 5%, which is a characteristic of Marathwada as nearly 90% of its talukas fall in this category; the household activity here is oriented to agro-processing, especially cotton and oilseeds. This is also a characteristic of western Vidarbha and even these areas it is in the form of agro-processing, including that of oranges. In Western Maharashtra such areas are sandwiched in between the areas with high level. In Konkan they are found in coastal talukas; the activities here are related to boat repairing as well as fish and fruit processing.

4.10.5 Low level, i.e. less than 2%, is observed in 15% of the talukas which is a characteristic of hilly and tribal areas which provide limited scope for such activity.

4.11 Workers in Household Industries: 2001

4.11.1 The household workers constitute only 2.65% for the entire State which has gone down by 40% compared to that for the base year. This is in spite of the fact that the percentage of non-agricultural workers has gone up by one and half times. In other words, the importance of household industry as a provider of wage goods in the non-agricultural sector is only about 6% compared to 15% in the base year indicating declining role of this sector due to rise of organised or formal factory sector. One finds some change from the base year pattern and this is indicated by the degree of association between the two (r = 0.64). Spatially, it varies between 17.34% in Gondiya and 0.53% in Bhamragad; both the extremes are located in Vidarbha (Fig. 4.5 b). Areas under very high and high levels have shrunk considerably and they now show a moderate level. Areas of moderate level have themselves shifted to low level leading to expansion of area under low level. Generally talukas show shift by two steps (Table 4.5).

4.11.2 The proportion of main household industry workers is 2.33% for the entire State, which comes to nearly 5% of the entire main non-agricultural workforce; in other words, it makes a very low contribution to the latter. Spatially, the percentage varies between 15.21% in Solapur and 0.47% in Bhamragad (Fig. 4.5c).
Table 4.5
Percentage of Talukas falling in Different Levels of Household Industry Workers: 1961 and 2001

<table>
<thead>
<tr>
<th>Category</th>
<th>&gt; 10.01</th>
<th>5.01-10</th>
<th>2.51-5</th>
<th>2.01-2.5</th>
<th>1.51-2</th>
<th>&lt; 1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>5.07</td>
<td>16.06</td>
<td>52.96</td>
<td>10.70</td>
<td>6.76</td>
<td>8.45</td>
</tr>
<tr>
<td>2001</td>
<td>1.41</td>
<td>1.41</td>
<td>24.79</td>
<td>22.25</td>
<td>23.38</td>
<td>26.76</td>
</tr>
</tbody>
</table>

The emerging pattern is similar to that of total household industry workers, as seen from the high correlation value between the two (r=0.98). The spatial pattern is, therefore, a replica of that for the total household industry workers.

4.11.3 The proportion of marginal household industry workers is 4.35% for the entire State, which comes to nearly 17% of the entire marginal non-agricultural workforce; in other words, it is a significant contributor to the non-agricultural workers employed for less than six months in a year. Spatially, it varies between 25.05% in Gondiya and 0.73% in Korchi taluka of Gadchiroli district (Fig 4.5 d). Correlation to total household industry workers is not as high as that for main household workers (r=0.80), suggesting some differences in the pattern compared to that for total household workers. As expected it is relatively high in areas of dry farming in Western Maharashtra and adjoining parts of Marathwada compared to that for main workers. Surprisingly, it is also high in urban centres like Mumbai, Pune, Nagpur and their vicinity; this suggests that urban areas provide contract jobs with varied length of time. The fact that both main and marginal household industry workers show high level compared to total household industry workers suggests that bulk household industry jobs are created in the vicinity of urban areas.

4.12 Urban Non-agricultural Workers: 1961

4.12.1 In 1961, nearly 60% of the talukas were urbanised. Urban centres are predominantly associated with non-agricultural activities, as urbanisation is the result of an occupational shift. The proportion of non-agricultural workers in urbanised segment works out to be 89.74% for the entire State which indicates
Household Industry Workers: 2001

Mahrashtra
urban segments are not fully characterised by non-agricultural activities. The correlation between proportion of urban non-agricultural workers and level of urbanisation works out to be only 0.71 and it is interesting to know the factors responsible for such a divergence. Spatially, the percentage varies between 99.82% in Mumbai City district and 24.28% in Warud taluka of Amravati district (Fig. 4.6 a). The former is cent percent urbanised and latter has only 27% urban population concentrated in a Class IV town.

4.12.2 The very high level, i.e. more than 95%, is observed in only 8% of the urbanised talukas. Most of them like those in Mumbai vicinity, Pune, Solapur, Aurangabad, Nanded and Nagpur that have a high level of urbanisation, and hence the situation here is easily explicable. There are, however, others like Chikhaldara, Ratnagiri falling in the same category despite having only a small percentage of urban population; this is particularly noteworthy in the former which has only 4% urban population; even the share of urban non-agricultural workers is small. It is attributable to the fact that here we are dealing with non-agricultural workers only in the urban segment.

4.12.3 High level, i.e. between 90% and 95%, is observed in 10% of the urbanised talukas. Here too, the pattern is mixed as seen above. Most of them form belts in the vicinity of large cities like Mumbai, Pune and Nashik. There are a few isolated talukas like Dhule, Jalna and Akola which contain district headquarters, Mahabaleshwar and Pandharpur containing tourist centres, and, Ballarpur, Hinganghat and Yevla with industrial centres that fall in this category. Talukas of Malwan and Sawantwadi located in the heart of the area of population exodus in South Konkan also surprisingly fall in this category because of activities like fishing or toy making or processing of local fruits.

4.12.4 Moderate level, i.e. 55% and 90%, is observed in nearly 60% of the urbanised talukas. A high moderate level, i.e. between 70% and 90%, forms two prominent belts along Nashik-Pune and Pune-Solapur routes; the latter turns northeastward into Marathwada. Emergence of non-agricultural activities here is due to access and also agro-processing related to sugarcane and cotton; this is
Urban Non-agricultural Workers

MahaRashtra

2001

1961
also true of Kolhapur-Miraj belt. The belt to the north and south of Mumbai reflects on the impact of the city. Mineral rich region of Vidarbha also falls in this category due to related industries. Low moderate level, i.e. between 55% and 70%, is observed predominantly in Marathwada and backward districts of Yavatmal and Buldana in Vidarbha. In Western Maharashtra they are concentrated in tribal or drought prone areas. The non-agricultural activities here are only complementary to agriculture.

4.12.5 Low and very low level, i.e. less than 55%, is associated with over 22% of the urbanised talukas. They form a ribbon along the northern border of the State in the banana belt of Khandesh, Shegaon vicinity in western Vidarbha and its continuation eastward into the orange growing zone. Elsewhere such talukas are associated with some agro-based activities like dairying, grape processing or oilseed crushing region.

4.13 **Urban Non-agricultural Workers: 2001**

4.13.1 The proportion of non-agricultural urban workers is 94.65% which has increased by 4.91 percentage points; this appears relatively less as compared to the increase in urbanisation level but it is due to high base in the former. Although this indicates intensification and upgradation, it is not spatially even as indicated by the value of correlation co-efficient (r=0.81) revealing some change in the spatial pattern over four decades. They are generally higher in degree in areas of metropolitan spill-over compared to the other parts. Spatially, the percentage varies between 99.83% in Ulhasnagar and 32.89% in Narkhed (Fig. 4.6b). Nearly one fourth of the talukas show very high level, i.e. more than 95%, forming a contiguous zone around Mumbai, Pune and Nagpur for the reasons already mentioned. Other talukas containing district headquarters like Dhule, Jalgaon or Ahmadnagar also show very high level due to service function. The areas with high level are located as an extension to those with very high level. Moderate level is a characteristic of the talukas which have agro-based industries. Low and very low levels are associated with one fourth of the urbanised talukas. They contain small towns where preliminary processing of agricultural produce
is still dominant and goes hand in hand with agricultural activities. Generally, there is a shift by one step compared to the pattern in 1961 and such talukas are widely spread (Table 4.6). There are, however, quite a few talukas that show a change by two steps. Some talukas, like Rajapur or Bid, show a change by three steps. Generally, talukas with lower base level show greater change compared to those with higher base level. Talukas containing metropolitan cities like Mumbai or Pune, for example, do not show any change at all. At the other extreme, the highest change is shown by talukas which were not urbanised in the base year.

4.13.2 The proportion of non-agricultural workforce among main urban workers is 95.53% for the entire State suggesting that a slightly higher proportion of non-agricultural workers is employed for over six months. Spatially it varies between 99.85% in Ulhasnagar and 36.14% in Jalgaon (Jamod) in Buldana district (Fig. 4.6c). There is hardly any difference in the pattern as compared to that for total urban non-agricultural workers ($r=0.997$). Any explanation will simply be duplication and has not, therefore, been attempted.

4.13.3 The proportion of non-agricultural workforce in urban marginal workers is 83.54% for the entire State suggesting that less proportion of such workers is employed for less than six months in a year. Spatially, it varies between 99.56% in Mumbai (Sub.) district and 14.38% in Pauni in Bhandara district. There is not much difference in the pattern as compared to that for total urban non-agricultural workers ($r=0.96$).
Urban Non-agricultural Workers: 2001

Maharashtra
4.14 Urban Household Industry Workers: 1961

4.14.1 The proportion of urban household industry workers is 5.84% for the entire State which forms a small part of urban non-agricultural workers; this works out to be nearly 6.5% of the urban non-agricultural workforce. It is limited in urban areas primarily due to dominance of factory industry; rigid definitional criterion of a household industry in the urban areas, viz. that 'such industry should be located within the precincts of the house', which is not practicable because of pressure on land in urban areas, is also partly responsible for low value. Spatially, it varies between 39.45% in Umred taluka of Nagpur district and 1.06% in Mumbai (Sub.) district (Fig. 4.7 a) indicating its significance in less urbanised areas.

4.14.2 The very high level, i.e. over 10%, is observed in nearly one fourth of the urbanised talukas. They form almost a north-south belt from Raver to Kolhapur in Western Maharashtra which follows the railway route; isolated pockets in mineral rich region of Vidarbha also follow the rail route. In Marathwada association of such taluka is with agro-processing activities while in Konkan they are characterised by processing of fish along with agro-processing activities; Sawantwadi is specially known for wooden toys.

4.14.3 Nearly one third of the urbanised talukas are associated with high level, i.e. between 5.51% and 10%. This is a characteristic of Marathwada as fifty percent of its urbanised talukas show high level for the factors already mentioned. In Western Maharashtra they are observed as a belt between Pune and Kolhapur due to activities having forward or backward linkage with agro-processing; tribal region of northwest also stands out with high level due to activities related to processing of forest products. Talukas in Konkan are associated with processing of forest produce in tribal areas of the north and agricultural produce elsewhere.
4.14.4 Moderate level, i.e. between 3% and 5.5%, is observed in one third of the urbanised talukas. They are mostly located in western Vidarbha; their extension in Marathwada and Western Maharashtra is primarily due to agro-processing activity. Incidentally, these areas are characterised by low proportion of urban non-agricultural workers. In Konkan they are mainly coastal talukas under the influence of Mumbai in the north and those having activities related to port or local fruit processing in the south.

4.14.5 Low and very low levels, i.e. less than 3%, are observed in 10% of the urbanised talukas. Their association is mainly with highly urbanised areas like Mumbai and its vicinity, Nashik or Akola where organised industry is prominent. But one also finds low urbanised talukas like Chikhaldara or Igatpuri included in this category where non-agricultural component of workforce is highly specialised.

4.15 Urban Household Industry Workers: 2001

4.15.1 The proportion of urban household industry workers is 3.38% for the entire State which has gone down by over 40% from the base year. Their contribution to non-agricultural workforce has declined by the same amount in urban areas indicating increasing importance of organised sector there. There is a considerable change in the pattern which is indicated by low degree of association with that in the base year (r=0.57). Spatially, the percentage varies between 18.71% in Tirora in Gondiya district and 0.90% in Indapur of Pune district (Fig.4.7b). The areas with very high level and high levels have shrunk and now show moderate level. Areas of moderate level have been shifted to low and very low levels. Generally, talukas show shift by two or three steps (Table 4.7).
Table 4.7
Percentage of Talukas falling in Different Levels of Urban Household Industry Workers: 1961 and 2001

<table>
<thead>
<tr>
<th>Category</th>
<th>&gt; 10.01</th>
<th>5.51-10</th>
<th>4.01-5.50</th>
<th>3.01-4</th>
<th>2.01-3</th>
<th>2 and below</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>24.27</td>
<td>31.07</td>
<td>20.39</td>
<td>13.59</td>
<td>5.34</td>
<td>5.34</td>
</tr>
<tr>
<td>2001</td>
<td>2.93</td>
<td>7.11</td>
<td>20.50</td>
<td>23.01</td>
<td>28.87</td>
<td>17.57</td>
</tr>
</tbody>
</table>

One also finds talukas showing positive change by upto five steps but bulk of such talukas are newly urbanised. Surprisingly, districts of Mumbai and some talukas in the city region also fall in this category; this is the effect of globalisation and associated privatisation where contract jobs like packing are doled out and are carried out in the precincts of the house by the households.

4.15.2 The proportion of urban household industry workforce among the main workers is 2.87% for the entire State and this means that a smaller share of such workers is fully engaged. Spatially, the percentage varies between 16.84% in Solapur and 0.66% in Indapur (Fig. 4.7c). The emerging pattern is almost identical to that of total urban workers in household industry (r=0.98).

4.15.3 The proportion of urban household industry workforce among the marginal workers is 9.82% for the entire State which is considerably higher than that of main workers indicating that this sector primarily employs part-time workers. Spatially, it varies between 48.26% in Yevla and 1.40% in Bhokardan in Jalna district (Fig. 4.7 d). The correlation between total and marginal urban household workers is 0.84 indicating some difference in the pattern; this arises out of local specialities in function.

4.16. Work Participation and Level of Urbanisation: 1961

4.16.1 An analysis of variables related to work participation in relation to level of urbanisation indicates that the relationship is mixed (Table 4.8). While total work participation, including that by females, is negatively related, participation in non-agricultural activities shows direct relation; both of them are quite
Urban Household Industry Workers: 2001

Maharashtra
significant. Typal structures have been derived based on the correlation matrix (Fig 4.8 a). There are two typal structures suggesting two clear-cut groups, viz. work participation and non-agricultural workers. In the first typal structure, the strong reciprocal relationship is seen between total work participation and female work participation which is easily explicable. Female work participation has equally strong primary association with females among the workers; this is

Table 4.8
Correlation Matrix for Work Participation in Relation to Level of Urbanisation: 1961

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TW Participation</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 FW Participation 0.94</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 FAW 0.63 0.85</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 N-Ag W -0.62 -0.69 -0.70</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 HHI W 0.01 0.03 -0.01 0.33</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 U N-Ag W -0.56 -0.57 -0.46 0.59 0.12</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 U HHI W -0.17 -0.15 -0.11 0.28 0.54 0.58</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 U.P.% -0.66 -0.74 -0.75 0.88 0.16 0.71 0.36</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

as per expectation. The second typal structure indicates the reciprocal relationship between non-agricultural workers and level of urbanisation; it is expectable in view of the definition of ‘urban’ by the Census. Further, level of urbanisation has its first relation with urban non-agricultural workers which is understandable; the latter by itself is associated with urban household industry workers which are correlated with total household industry workers.

4.16.2 In 2001 too, level of urbanisation and work participation are strongly
Typal Structure for Work Participation in Relation to Level of Urbanisation: 1961

Fig 4.8a

Table 4.9
Correlation Matrix for Work Participation in Relation to Level of Urbanisation: 2001

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TW Participation</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>FW Participation</td>
<td>0.95</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>FAW</td>
<td>0.79</td>
<td>0.94</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>N-Ag W</td>
<td>-0.71</td>
<td>-0.83</td>
<td>-0.85</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>HHI W</td>
<td>-0.08</td>
<td>-0.10</td>
<td>-0.08</td>
<td>0.33</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>U N-Ag W</td>
<td>-0.56</td>
<td>-0.58</td>
<td>-0.52</td>
<td>0.60</td>
<td>0.15</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>U HHI W</td>
<td>-0.18</td>
<td>-0.18</td>
<td>-0.13</td>
<td>0.28</td>
<td>0.50</td>
<td>0.64</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>U.P.%</td>
<td>-0.77</td>
<td>-0.86</td>
<td>-0.88</td>
<td>0.87</td>
<td>0.16</td>
<td>0.65</td>
<td>0.32</td>
</tr>
</tbody>
</table>
associated (Table 4.9). Three typical structures emerge from the correlation matrix (Fig 4.8 b). There is not much change in their association with each other except household industry workers which now form a segregated group; this indicates a decline in household industry workers over four decades indicating importance of organised sector.

4.16.3 An attempt to correlate main and marginal workers with the level of urbanisation does not bring out anything new. As with the total workers, main and marginal workers are also negatively related to urbanisation and non-agricultural workers, including household industry workers, are positively related. In general, marginal workers show higher correlation compared to the main workers which appears surprising, but considering that this is especially the situation for the year 2001, it is clearly the result of globalisation (4.15.1); considering the fact that change in urbanisation is also due to extension, the effect of rural areas also partly contributes to this situation. The variables are correlated in pairs of main and marginal, and, do not form a part of typical structure involving level of urbanisation.
4.16.4 The above analysis was an attempt to group the variables based on their highest positive correlation (Yeats, 1974). Typical structures do not show the relation of all the other variables to level of urbanisation. The analysis has, therefore, been extended by compiling the correlation values of all the work participation variables with level of urbanisation for the two years in order to find out if there is any significant relationship between the two (Table 4.10).

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Variable</th>
<th>1961</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total work participation</td>
<td>-0.66</td>
<td>-0.77</td>
</tr>
<tr>
<td>2</td>
<td>Female work participation</td>
<td>-0.74</td>
<td>-0.86</td>
</tr>
<tr>
<td>3</td>
<td>Females among workers</td>
<td>-0.75</td>
<td>-0.87</td>
</tr>
<tr>
<td>4</td>
<td>Non-agricultural workers</td>
<td>0.88</td>
<td>0.87</td>
</tr>
<tr>
<td>5</td>
<td>Household industry workers</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>6</td>
<td>Urban non-agricultural workers</td>
<td>0.71</td>
<td>0.65</td>
</tr>
<tr>
<td>7</td>
<td>Urban household industry workers</td>
<td>0.36</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Over four decades, one finds that there is no change in non-agricultural workers in relation with level of urbanisation. The rest of the variables show change in degree of association but not in kind. Work participation declines with time due to technological development, but this happens more in less urbanised areas and hence inverse relation with urbanisation has been strengthened. The relation between urban non-agricultural workers and level of urbanisation has declined as the newly urbanised areas away from the metropolitan influence are still oriented to farm jobs.

4.17 Closing Remark

From the foregoing analysis it appears that variables related to work participation indicate some change in the pattern over four decades. Work
participation has decreased because of technological development necessitating fewer workers to do the same job. This is also observed even in case of female work participation. The number of females among the workers has also gone down due primarily to change in the migration pattern to urban areas and increasing awareness about education of females; gender oriented policy factor has also helped girls to take education. Proportion of household industry workers, both total and urban, has decreased because of increasing importance of organised sector. Percentage of non-agricultural workers has increased considerably due to lower base; urban areas do not show such a spectacular increase. While the work participation variables are negatively correlated with level of urbanisation, those related to non-agricultural activities show positive correlation. The relationship with work participation has strengthened over time and that with non-agricultural work force has become rather weak. There is no significant change in the grouping of the variables, except household industry workers which have got divorced from the other non-agricultural workers.