

**How are surveys done and how can they  
be done better?**

**Some insights from surveys in urban  
industrial settings**

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# An introduction to field work in urban industrial settings

1. Introduction to primary (sample) surveys
2. The challenge of field work in urban industrial settings
3. An example of field work.

# An introduction to field work

1. Research questions and issues of interest
2. Location of field work and enquiry
3. Choice of location(s)
4. Unit of study
5. Method of field enquiry – survey
6. Challenges of conducting field work in Urban India
7. A quick example

# Designing a survey (Work plan)

- Sampling design/procedure
- Design of questionnaire-schedule
- Testing of questionnaire- pilot survey
- Actual survey
- Data entry and processing

# Research questions and issues of interest

- Based on review of literature on past studies
- Based on preliminary visits to field locations
  - Your own assessment of the situation on the ground
- Based on discussions with ‘experts’
  - Government officials, association members, trade unionists
  - Experts on or off location
- All of the above (my choice)

# Location of field work and enquiry

## Choice of location(s) – Characteristics of location

- Rural/Urban
- Manufacturing/services/all
- Formal/informal
- Migrant/non-migrant
- Village study or a study in a village
- Slum – with multiple economic activities
- Multiple locations/ Comparative study
- Some of the above/All of the above

# Criteria for choice of location

- Research location given – with reasons/without reasons
- Location about which we have some prior information (through the census, NSS, previous study)
- Location that has been studied before (change over time)
- Location that has never been studied before (new knowledge)
- Resources and other practical constraints

**In any case, the final choice of location  
ONLY AFTER a preliminary visit**

# Unit of study & Respondent

- **An individual (self)**
  - Worker , Student, *migrant* worker
- **An enterprise**
  - Owner/manager/Accountant/supervisor of enterprise
  - Worker of the enterprise
- **A household**
  - Head of the household (maximum information?)
  - Woman of the household (availability criterion?)
  - Multiple members of household (HH + woman + children)
  - Any member of household
- **A village**
  - Headman, caste leaders, school principal
- **A slum**
  - Social workers, public utility related officers, municipal officers



# Method of field enquiry – A survey

- **Types of surveys**
  - Census type
  - Sample type
- **With a questionnaire**
  - Structured questionnaire
  - Unstructured questionnaire
  - Combination (preferred)
- **Without a questionnaire**
  - Observations
  - Field notes
- **Other tools**
  - Video, photography, audio recording

# Sample size 1

## In theory

- There is a positive relationship between sample size and accuracy – closeness to reality
- Larger the sample, closer are its estimates to the actual
- Choice of sample size can be determined statistically provided you have some prior knowledge of the distribution (mean, variance or parameters, clusters and so on)
- Choice of sample size can be determined using statistical techniques for studies of banking, financial sector, stock market and other such (mostly electronically available) data.

# Sample size 2

**In practice,**

- The sample size is often determined by **availability of resources**
  - Time, money, infrastructure, expertise
- Larger samples may lead to poor quality data (due to a variety of reasons, improper training, infrastructure, motivation and so on)
- Small sample Vs large sample (non-small sample)
- My view, any sample larger than 30 units is good enough.

# Designing a survey

- **Choice of location(s)**
- **Sampling design/procedure**
  - Preparation of a Sampling frame – listing
  - Preparation of a location map
  - Stratification (if heterogeneous study units and if we are interested in capturing difference)
  - Sample selection

# Types of sampling

- Non-probability sampling
  - Probability sampling
1. Does your research require a representative sample?
  2. Given the availability of resources and prior information is it possible to construct a representative sample?

# Non representative or Non-probability sampling

- **Convenience sampling or Accidental sampling** - members of the population are chosen based on their relative ease of access.
  - friends, co-workers, or shoppers at a single mall, are all examples of convenience sampling.
- **Snowball sampling** - The first respondent refers a friend.
  - The friend also refers a friend and so on.
- **Purposive sampling or Judgmental sampling** - The researcher chooses the sample based on who they think would be appropriate for the study. This is used primarily when there is a limited number of persons with “expertise” in the area being researched.
- **Quota sampling:** Equivalent of stratified sampling except that sample units are not chosen randomly once the quota and group/stratum is identified.
- **Case study** - The research is limited to one group, often with a similar characteristic or of small size.

# Probability sampling

A **probability sampling** scheme is one in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined. The combination of these features makes it possible to produce unbiased estimates of population totals, by weighting sampled units according to their probability of selection.

# Important Types of probability sampling

- Simple random sampling
- Circular or systematic sampling
- Cluster sampling
- **Stratified sampling (weights and estimation)**
  - Stratified by size
  - Oversampling
- **Multistage sampling**
  - Two stage (stratum at district level and village level), three stage



# Design of questionnaire-schedule

- Divide the questionnaire into blocks
- General information (identity of unit of study)
  - Name address education age gender place of work and so on
- Specific/core data or information to be collected in two or more blocks (depending on research questions)
- Sequencing the questions/blocks
- Consistency checks (by design and oral informal)
- Investigator information (investigator name, time of survey, data, place and so on)
- Respondent details (assessment of response – cooperative respondent)

# Testing and finalising questionnaire

- Testing of questionnaire- pilot survey
- Modification to questionnaire
  - Freezing of questionnaire?

## Followed by

- Actual survey
- Data entry and processing

# Challenges in urban field work

- The urban jungle
- Incomplete urbanisation

# Challenges in urban field work

## The urban jungle – 1

- Urban India has less time (than rural India)
  - Long hours of work (industry, trade, other services)
  - Remaining time for rest and recuperation
  - Appointments, seeking time a challenge
- Urban anonymity
  - nobody knows anybody/everybody is a stranger here
  - difficulty in establishing contacts
- Uncertainty – urban workers' life uncertain
  - Informal employment conditions
  - Lack of appropriate housing facilities
  - Lack of basic amenities, water, electricity and so on

# Challenges in urban field work

## The urban jungle – 2

- Vastness of the urban field
  - Large geographical areas/boundaries
  - Large populations/dense population
  - Innumerable economic activities
- Lack of boundaries
  - Between household and enterprise
  - Living space and working space
  - Family/household/boarding house
- Constant state of a flux
  - Difficult to find respondent
  - Even more difficult to return to respondent

# Challenges in urban field work

## The urban jungle – 3

- Mobile worker
  - Moves easily between town and country
  - Moves easily between town and town
- Selection of a sample
  - Industry wise
  - Area wise
  - Any other criterion
- Preparation of the sampling frame (listing exercise)

# Challenges in urban field work

## Incomplete urbanisation 1

- Migrant workers
- Continued links with the village/hometown
- Need to understand nature of links
  - Dependent in village/hometown
  - Visits
  - Remittances
  - Employment in the village
- Seasonality in employment
  - In urban employment (knitwear in Ludhiana)
  - In the village (agricultural harvesting)

# Challenges in urban field work

## Incomplete urbanisation 2

- Collecting data on variables not in urban India such as
  - Data on dependents
  - Assets of the worker/Land holding
  - Borrowing in village??
- Other sources of income
  - Identity documents – ration card, voters' card
- Social identity
  - Caste, role of caste in urban setting



# Field work in urban Industrial setting

# A Quick example

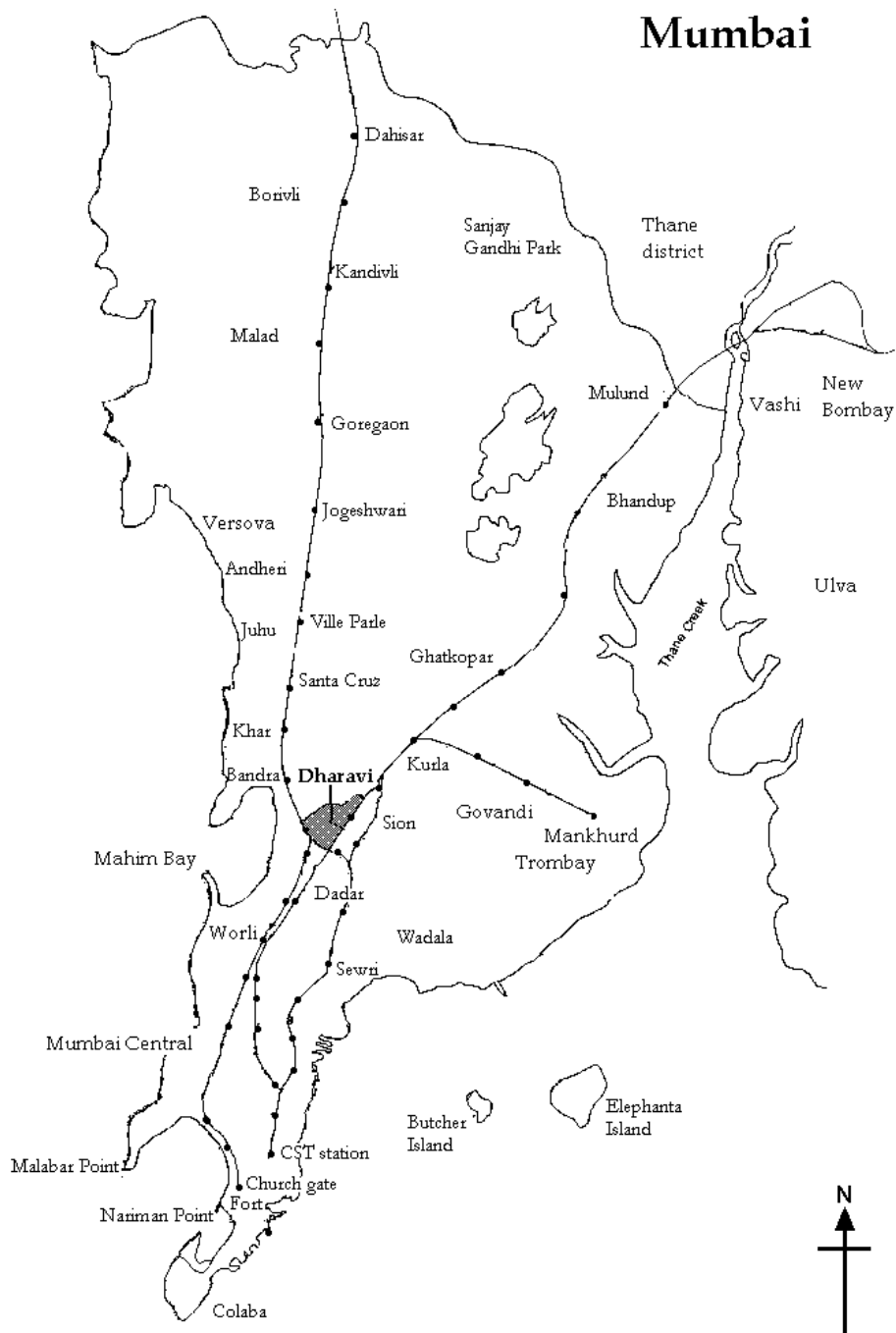
Survey of enterprises and workers in leather accessories manufacture in Dharavi, Mumbai, 1999-2000

- Choice of location
- Defining geographical boundaries
- Map of the location
- Preparation of the population frame
- Sample survey of workers in the industry
- Sample survey of enterprises in the industry
- Resurvey/second survey

# An introduction of the survey location, Dharavi, Mumbai

- Dharavi is a very large agglomeration of densely populated slums in Mumbai
- Dharavi is known for production units engaged in a wide variety of economic activities
- Units that produce an outstanding range of commodities, including food products, soaps, plastics, leather goods,
- To the eye it appears that every second tenement houses some kind of production unit.
- These production units are generally called “**karkhanas**”.

# Mumbai



## Location of Mumbai in India



**Location of Dharavi**  
**Its at the heart of present-day**  
**Mumbai**

## Some basic statistics on Dharavi

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1	Population of Dharavi, 2001	508,000
2	Area of Dharavi	1.75 sq kms
3	Number of slums included in Dharavi	39
4	Literary rate in Dharavi, 2001 (in %)	73
5	Literary rate in Greater Mumbai, 2001 (in %)	77
6	Sex ratio in Dharavi, 2001	752
7	Sex ratio in Greater Mumbai, 2001	898
8	Sex ratio in India, All/Urban	933 / 900

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### Bandra Kurla Complex







**Table 3.4** *Number of enterprises surveyed in the first round of sample surveys by size classes of enterprises, leather accessories manufacture, Dharavi, April 2000*

Size of the enterprises	Total No of enterprises in the population	10% of column (2)	Number of enterprises surveyed
(1)	(2)	(3)	(4)
1	12	1.2	2
2	43	4.3	4
3	71	7.1	7
4	63	6.3	6
5	47	4.7	5
6	43	4.3	4
7	21	2.1	2
8	24	2.4	3
9	6	0.6	1
10	24	2.4	2
11	3	0.3	0
12	7	0.7	1
13	1	0.1	0
14	2	0.2	0
15	10	1.0	1
16	2	0.2	0
17	0	0.0	0
18	1	0.1	0
19	0	0.0	0
20 and above	10	1.0	2
<b>Total</b>	<b>390</b>	<b>39</b>	<b>40</b>



**Table 3.5** *Number of workers surveyed in the first round of sample surveys by size classes of enterprises, leather accessories manufacture, Dharavi, April 2000*

Size of the enterprises	Total number of enterprises in the population	Total number of workers in the population	5% of column (3)	Number of workers surveyed
(1)	(2)	(3)	(4)	(5)
1	12	12	0.6	2
2	43	86	4.3	4
3	71	213	10.7	11
4	63	252	12.6	12
5	47	235	11.8	12
6	43	258	12.9	13
7	21	147	7.4	7
8	24	192	9.6	10
9	6	54	2.7	3
10	24	240	12.0	12
11	3	33	1.7	2
12	7	84	4.2	4
13	1	13	0.7	0
14	2	28	1.4	1
15	10	150	7.5	8
16	2	32	1.6	2
17	0	0	0.0	0
18	1	18	0.9	0
19	0	0	0.0	0
20 and above	10	249	12.5	33 12
Total	390	2296	115	115

Figure 3.1 Total monthwise employment in sample karkhanas,  
leather accessories manufacture, Dharavi, 1999-2000

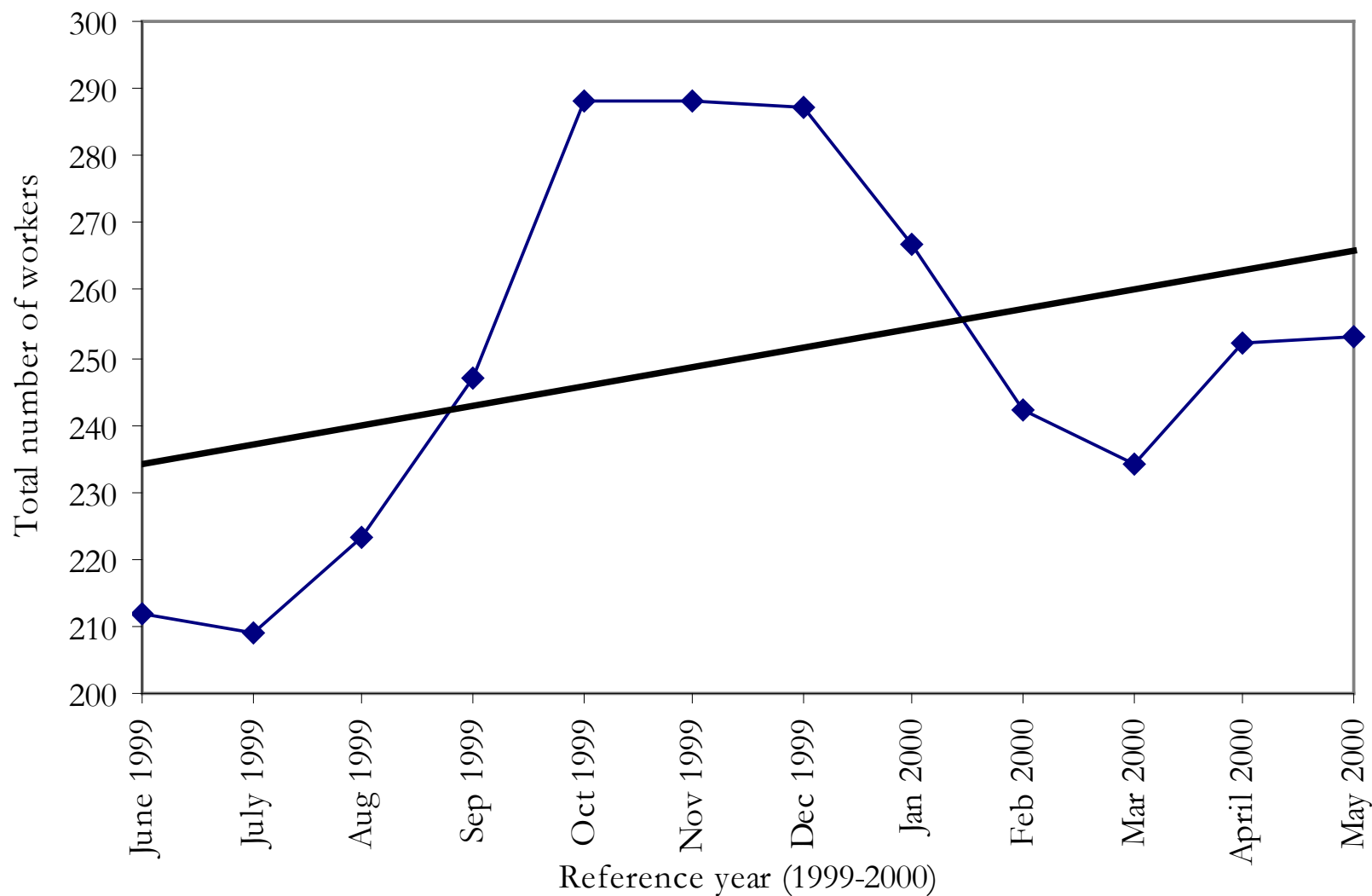
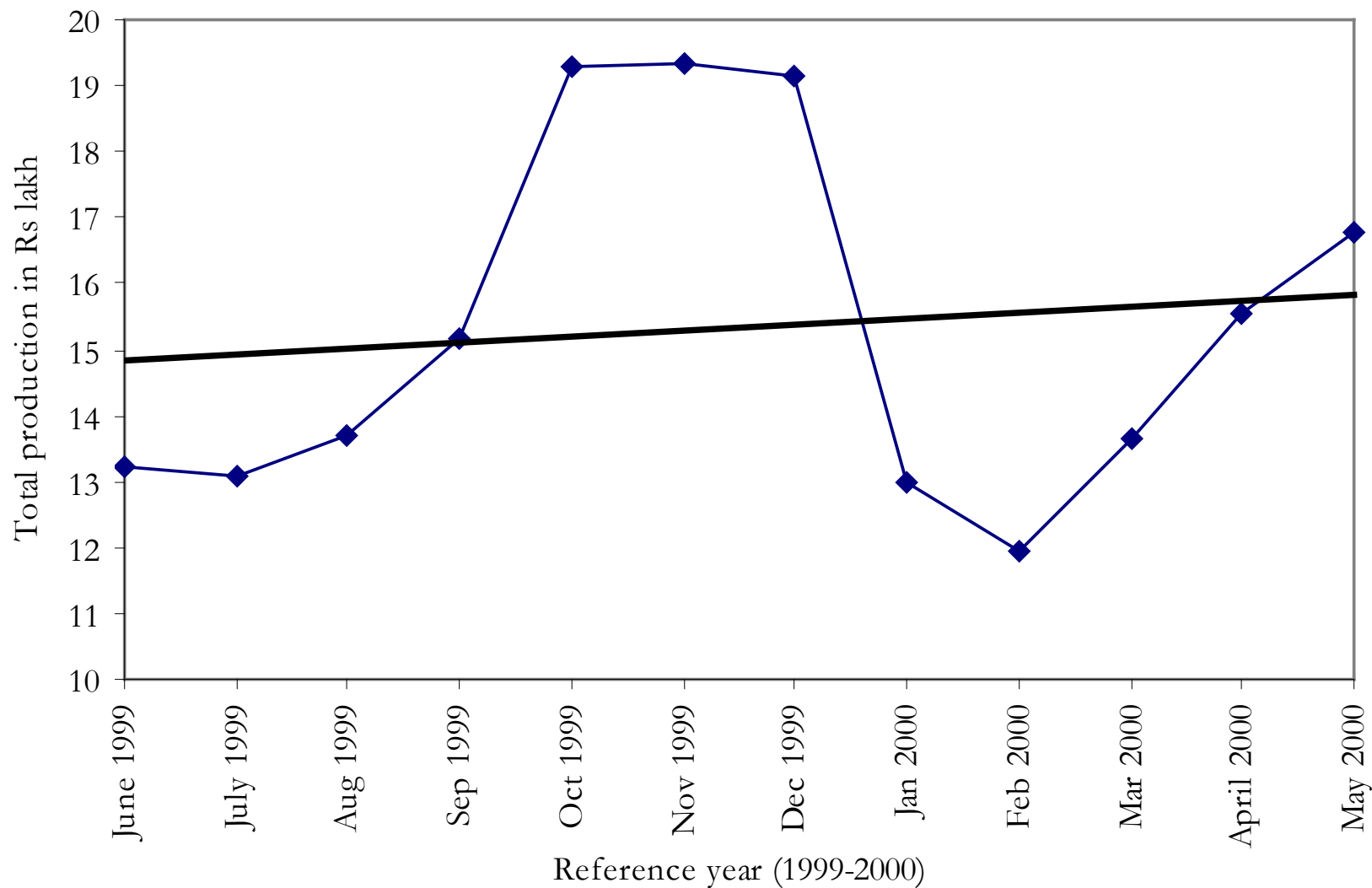


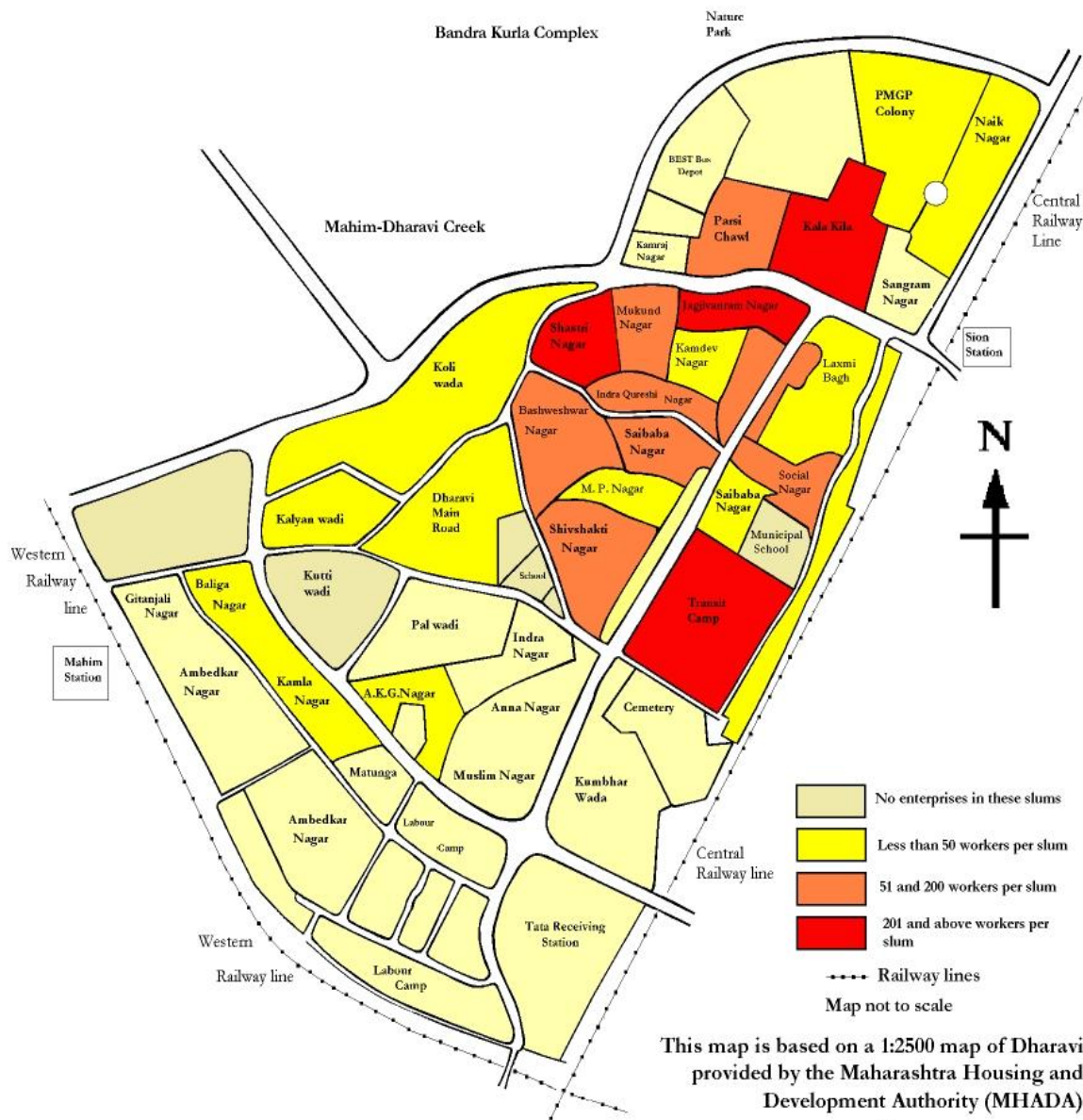
Figure 3.2 Value of monthwise production in sample karkhanas, leather accessories manufacture, Dharavi, 1999-2000



**Table 3.6** *Number of enterprises surveyed in the second round of sample surveys by size classes of enterprises, leather accessories manufacture, Dharavi, October 2000*

Size of the enterprises	Total number of enterprises in the population	10% of column (2)	Number of enterprises surveyed
(1)	(2)	(3)	(4)
1	14	1.4	1
2	46	4.6	5
3	81	8.1	8
4	91	9.1	9
5	66	6.6	7
6	62	6.2	6
7	28	2.8	3
8	26	2.6	3
9	10	1.0	1
10	29	2.9	3
11	4	0.4	0
12	14	1.4	1
13	1	0.1	0
14	3	0.3	0
15	10	1.0	1
16	3	0.3	0
17	0	0.0	0
18	0	0.0	0
19	0	0.0	0
20 and above	18	1.8	3
Total	506	51	51

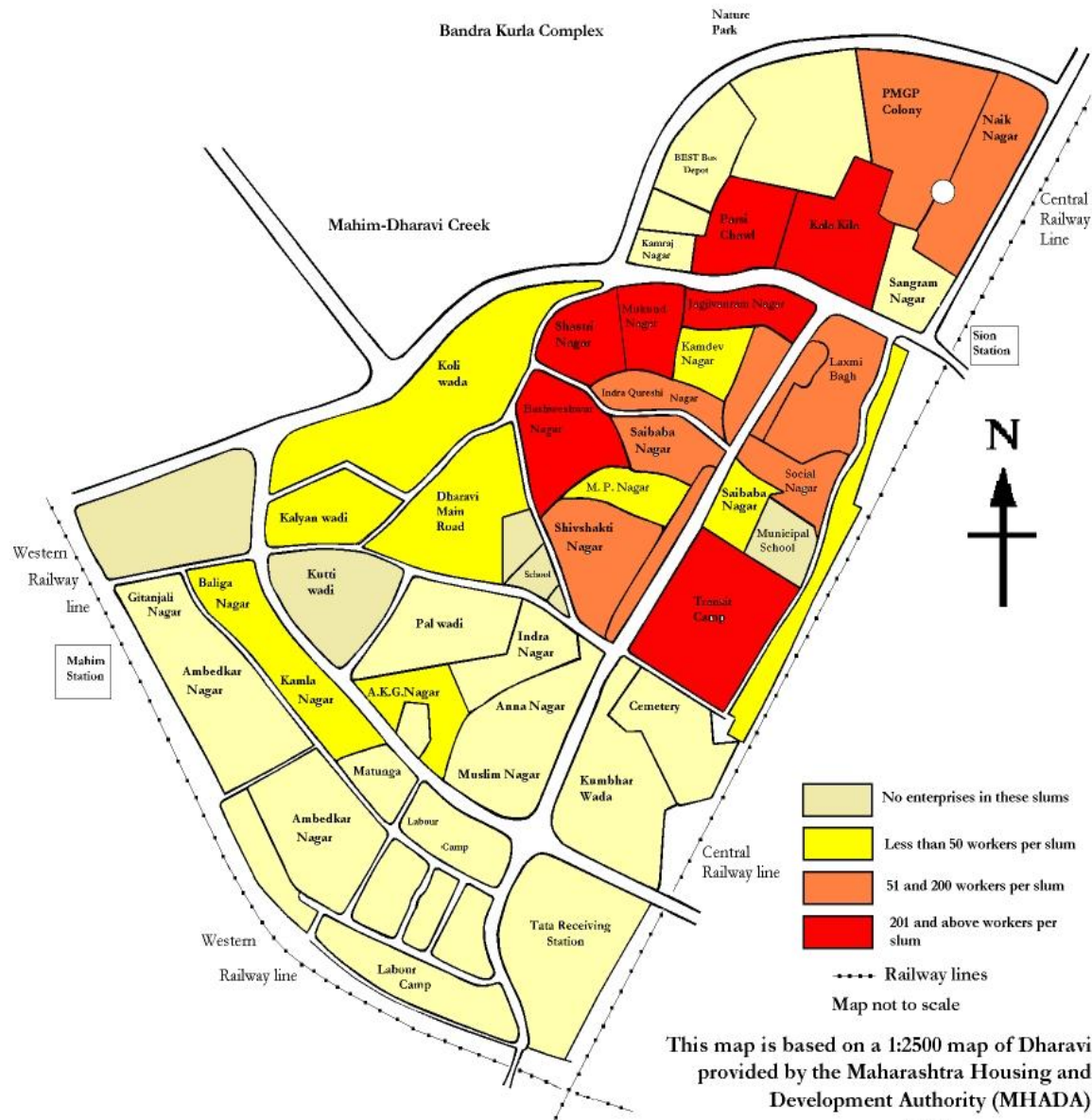
Table 3.7 <i>Number of workers surveyed in the second round of sample surveys by size classes of enterprises, leather accessories manufacture, Dharavi, October 2000</i>					
Size of the enterprises	Total number of enterprises in the population	Total number of workers in the population	5% of column (3)	Number of workers surveyed	
(1)	(2)	(3)	(4)	(5)	
1	14	14	0.7	2	
2	46	92	4.6	5	
3	81	243	12.2	12	
4	91	364	18.2	18	
5	66	330	16.5	17	
6	62	372	18.6	19	
7	28	196	9.8	10	
8	26	208	10.4	10	
9	10	90	4.5	5	
10	29	290	14.5	14	
11	4	44	2.2	2	
12	14	168	8.4	8	
13	1	13	0.7	1	
14	3	42	2.1	2	
15	10	150	7.5	7	
16	3	48	2.4	2	
17	0	0	0.0	0	
18	0	0	0.0	0	
19	0	0	0.0	0	
20 and above	18	447	22.4	37	22
Total	506	3111	156	156	



## Map 3 Dharavi

Distribution of workers in leather accessories manufacture, April - May 2000





## Map 4 Dharavi

Distribution of workers in leather accessories manufacture, December 2000

## **Leather accessories manufacture in Dharavi, 2000-01**

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Number of functioning karkhanas in May 2000	390
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Estimate of workforce in these karkhanas (in May 2000)	2296
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Number of functioning karkhanas in December 2000	506
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Estimate of workforce in these karkhanas (in December 2000)	3111
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# The field Surveys 1999-2002 some highlights

- Total workers in the Leather goods production between 2300 and 3120 depending on the time of the year.
- Total enterprises between 390 and 510 depending on the time of the year.
- **Units of study workers** (respondents: workers themselves) and enterprises (owners of enterprises)
- Two rounds of sample surveys – during peak season and non-peak season.
  - April - June 2000 and October 2000 - Jan 2001.
- **Workers surveyed: 271 (115 + 156)**
- **Enterprises surveyed: 91. (40 + 51)**

# Concluding remarks

- The type of field work you do is entirely dependent on your interest
- Time is really not a constraint
- Do it yourself (at least once)
- Field work can be extremely challenging
- Urban field work could be in my view more difficult and challenging than rural field work
- But it could also be exciting and rewarding

Thank you