

The home as workplace in Jahangir Puri, a squatter settlement in Delhi

'I was married in Ferozabad and that's where I learnt about the trade in bangles. My brother used to stay with a bangle-maker and learned how to do it. We came to know about this place [Jahangir Puri] through my husband's uncle who lived in the area. An aunt got us here, as she came with bangles to sell. Then we took a room and later managed to get a plot. We have now made this house ourselves. People who live in *pukka* houses turn their faces away from people like us who live in *jhuggis* (squatter homes.) Yes, it would be easier if we had more space, and if we had more money we could buy more goods and sell to the shopkeepers. But for a shop you need an advance of 1 lakh of rupees [R100,000]. Where would we get that from? We need a rest: if we had money we would be able to. We have no children so we will have no support in old age. I can see only darkness ahead of us. We have no savings, it's just not possible. I work hard with my own hands: that's how we manage to break even.

We have just one room. We sleep on a mattress and then roll it up while I work. We store what we have made along the side of the room. If we had more space it would make no difference. We could not make more bangles. We only make what my husband can sell and that depends on the time of the year. He sells more at festival times, but we are lucky: he sells to Hindus and Muslims, so there are two lots of festivals for us — Dhiwali and Eid. Storage is not a problem for us, although if we had somewhere to lock up the *thula* (handcart) we would not have to work so hard at loading and unloading it every day. The only way we can store it is by standing it on end outside the door.'

This is an extract from a recorded discussion with Rafiquan, who lives with her husband in a one-roomed dwelling in Jahangir Puri, Delhi. Their room is barely seven metres square and occupies the whole of their plot. Their home is also Rafiquan's place of work, where she paints, finishes and sorts glass and metal bangles which her husband sells from his handcart. A high percentage of their neighbours also work and generate income within their homes.

It was part of a study carried out for the Department for International Development (DfID, formerly ODA) by the Centre for Architecture Research Overseas (CARDO) at the University of Newcastle upon Tyne. It was a pilot study for a larger study of cities in Asia, Africa and Latin America to examine how to reduce poverty and improve living conditions in some of the poorest urban areas. The study used two main forms of data collection:

- questionnaires to 50 householders who have home-based enterprises (HBEs)
- eight in-depth recorded interviews with selected householders.

Both gave valuable insights into the area: the former gave quantitative data and the latter explored processes and relationships in greater detail. The questionnaire results were easier to tabulate, but in the interviews people were willing to reveal more about themselves and their way of life. For instance, it became clear that they had great difficulty discussing the difference between their 'living space' and 'working space'. In fact, for many people the concepts of 'living' and 'working' were so interrelated that it was almost impossible to distinguish between the two.

Some key results of the study are presented here, with the minimum of comment. It is hoped that the reader can analyse them to build up a clear picture of the integration of home and work in this one small area, and see how this fits in to their theoretical view of life in poor urban areas.

Home-based enterprises

Studies have identified several characteristics of HBEs:

- They are family-based, with the family controlling the land and/or space and providing most of the capital and the labour for the enterprise.
- Most of the family's labour and capital is used in the enterprise.

- Resources are treated as interchangeable between the enterprise and the domestic sphere. Space in the house can be converted between the two spheres; time can be given by all the family members (even very young children when needed); and money and other resources (food, clothing, furniture) can easily be transferred between the spheres because of the absence of formal divisions between home and the enterprise.
- There is widespread official disapproval of HBEs. Town planners, often influenced by ideas developed in more economically developed countries, usually favour single-use zoning of land. They believe that residential areas should not be sullied with commercial or industrial land use.
- Strict control over HBEs is virtually impossible because, by their very nature, they are integrated into the residential environment as much as possible. They are also very widespread in poor urban areas.

Jahangir Puri

The squatter settlement is very poor and crowded. Dwellings are small — on average about 2.5m wide and about 3m deep. A minority have a second floor, usually reached by an outside ladder.

The streets are irregular in width. Most are wide enough for a rickshaw to pass through, but some are only wide enough for pack animals. There are some small open spaces on the streets — usually at the end of cul-de-sac — but there are a few more formal community spaces, such as temple courtyards.

Drainage is a problem. The site is relatively flat, and is on the edge of a swamp. Many of the open drains are blocked. They are cleaned twice a week, but get full of household waste. In some places streets have been paved with bricks; this raises their level above the floor level of the houses, with obvious consequences during heavy rain.

Most dwellings are built of brick, sometimes to a good standard. Many have roofs of plastic sheet; others have stone slabs laid on a bamboo framework. They often leak. There are occasional water pumps, but also pipes protruding from the street at intervals. These appear to be illegal connections to the mains. A continual trickle of water flows from them and people fill buckets here.

Results from the questionnaire

Fifty householders with HBEs were questioned, to gain an understanding of economic and housing conditions in the settlement. The selection of interviewees was not randomly chosen, because of constraints of time and accessibility.

Many of the buildings had substantial shelves high up in the room to enable floor space to be used below the storage. These are used to store household goods while working, and working goods at other times. One householder had built over a narrow access lane, and used that space as storage. Another has placed a large tin trunk for storage with one edge on his roof and the other edge on his neighbour's roof. The coat-hanger polisher had poles erected below the ceiling to hang up his finished products. Others propped their beds outside in the street during the day, to create more working space.

The retailers have a particularly large proportion of low and very low income customers. They rely on selling very small quantities of goods (soap powder for a single wash, single sweets, small amounts of flour or sugar) to large numbers of customers.

Figure 1: Measures of permanence (median, IQR)

Age of head of household	34.5	(28, 40)
Age at moving in	28	(21, 33)
Years lived in Delhi	15	(10, 18)
Years lived in this dwelling	7	(5, 8)
Years doing current work in dwelling	4	(2, 7)
Years of education	5	(1, 9)

Figure 2: Household size and composition (median, IQR)

People in household	5	(4, 6)
Adults in household	2	(2, 3)
Children in household	2	(1, 3)
Dependency ratio (children/ adult)	1	(0.5, 1.3)

Figure 3: Dwelling characteristics (median, IQR)

Number of rooms	2	(1, 3)
Floor space (m ²)	16	(11, 21)
Living area (m ²)	8.32	(5, 14)
Living area/ person (m ²)	2.06	(1.1, 3.0)
(NB 18 out of 50 dwellings have an upper floor)		

Figure 4: Worker's relationship to head of household (percentages)

Head	42
Wife	23
Daughter	1
Son	7
Other relative	17
Neighbour	3
No relationship	7

Figure 5: Structural modifications to houses for HBE (percentages)

None	49
Wall/ roof modified	5
Shelf(s) added	13
Room added	4
Upper floor added	7
Roof added	4
Shelter added	5
Repairs to wall/roof	4
Wall added	5
Built with HBE in mind	4

Figure 6: Customer's income group (percentages)

Income group	1	1.5	2	2.5	3	3.5	4	4.5	5
	V. high		High		Average		Low		V. low
%	0	2	2	8	6	12	24	41	6

Figure 7: Income characteristics of HBEs by type

	Sturdy goods manufacture ¹ (n = 5)	Light manufacture ² (n = 21)	Retail (n = 15)	Services ³ (n = 6)	Packaging goods (n = 2)	Keeping livestock (n = 1)
% of sample	10	42	30	12	4	2
Ave. workers/HBE	2	1	2	1	2	1.5
Income/worker/mth (Rs)	1,288	850	750	700	800	n.a.
Hours worked/person/week	72	70	70	40	75	30

Notes: ¹ Sturdy goods manufacture includes metal workers, motor winding, making metal straps, repairing metal drums and repairing gas appliances.

² Light manufacture includes, e.g. tailoring, assembling plastic toys, making rubber gaskets.

³ Services include childcare, laundry and medical services

Other questionnaire results

The main raw materials brought into the area are cloth and food. Sheets of metal and drums for repair are the largest items. Most deliveries are made on foot or by light vehicles such as rickshaws, so there is little traffic generated in the area by the HBEs.

Almost all the machinery is manually operated (eg. sewing machines, presses and cutters, weighing scales), so the HBEs cause little noise.

Little waste is generated. Much of the metal and other waste is sold to the *kabari*, or recycler, and most food waste is fed to animals, so again this produces very little negative effect on the living environment.

Extracts from the interviews

These are presented in translation, with some editing but without further comment. They are chosen to provide a feeling for the place and for the lives of the people living there.

Ram Lal works with his brothers finishing high quality hardwood coat hangers for the export market.

Figure 8: Plan of Ram Lal's dwelling

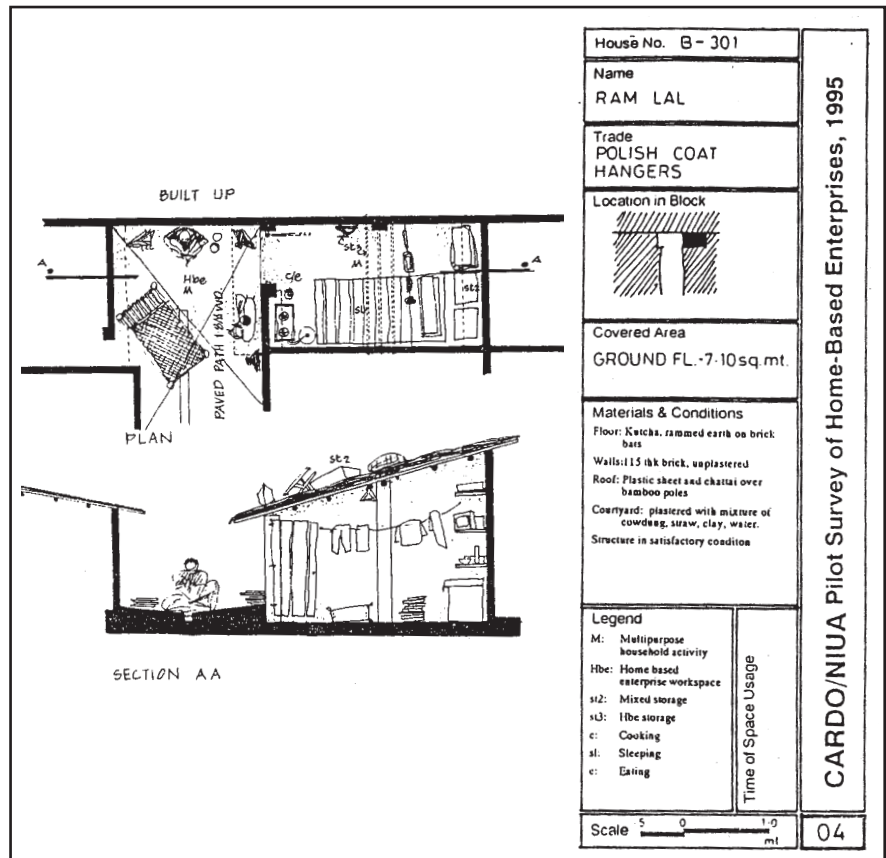
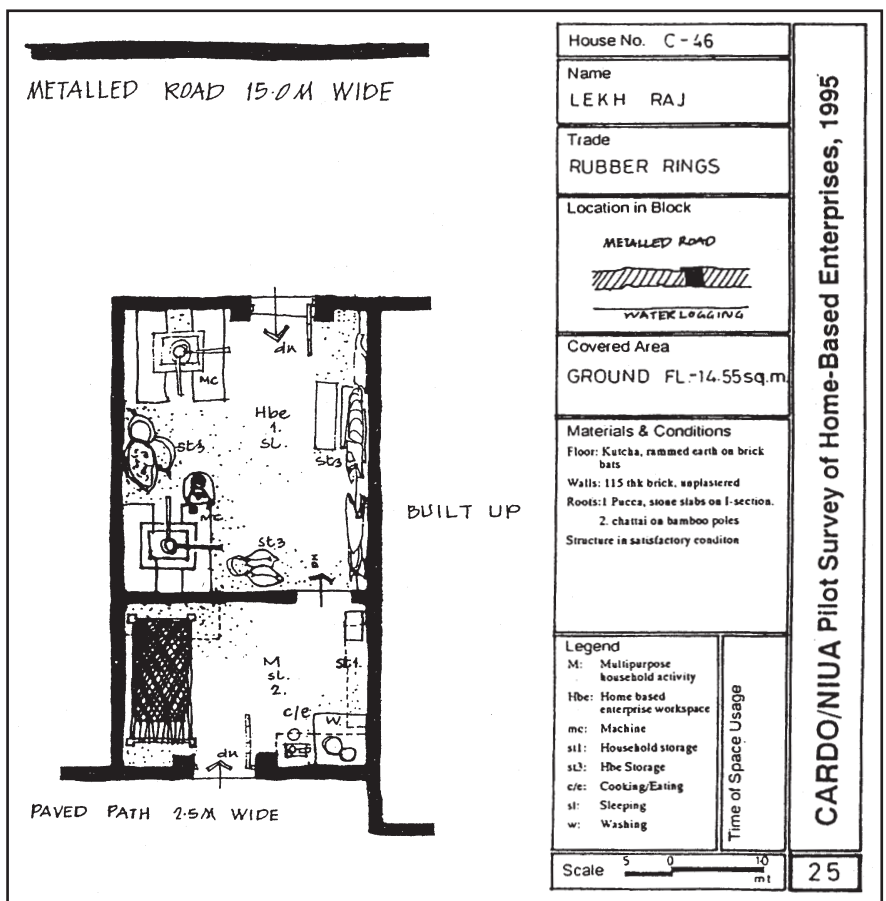


Figure 9: Plan of Lekh Raj's workshop



'My brother was looking for work, he was a wall painter. We went with him for two or three days, then someone told us there is work there, so I went to the company and asked them. I said: "All my brothers are painters, they can do it." At first my brothers helped me and I learnt. They used to go out to work, this work was less. When the work increased all three of us started doing it.'

We sit and work from 9.00 in the morning till 9.00 at night, with an hour off for lunch. There's no time for resting during the day. You see, we need the sun to dry the varnish. If the sun's intensity decreases it won't dry. During the rains we have to keep watch. As soon as it starts to drizzle we bring them inside until it clears up. Even if one drop falls it'll get spoilt.'

When you have extra work where do you look for extra workers?

'To people we know, people in the neighbourhood and we don't have so much work that we need to give it to strangers. They might take off with it.'

Ram Bhurvi makes embroidered hair bands:

'My husband left his village to work in the city. They were farmers, but people from the village were coming here and he came with them. At first he got a job installing hand pumps, but he didn't like the work so he got a job in the *mandi* [wholesale vegetable market] unloading lorries. He hurt his back so lost his daily wage. My income is critical. I am able to buy vegetables and oil and it helps when there is no wage from my husband. It doesn't look good if I have to go out to work and anyway, he wouldn't let me.

The people know what kind of workforce is available here, so women who are not supposed to go out have work given to them by these agents who in turn make a big profit. They pay us very little but its better than just doing nothing.'

Can you save?

'Why should I try to save for the future? I can't go hungry and save. The children are here, maybe they will start earning. I would like to help them start a business.'

Lekh Raj makes rubber rings for gaskets for TATA trucks, built near Bombay, in the formal sector of the economy. In his workshop there is virtually no furniture. It appears to be essentially a place of work.

Where do you sleep?

'I sleep here under this machine. The *childrenwalas* sleep there at the back. My wife has gone home to the village now, but when she comes I sleep with her in our other shack. When she's not here that place is kept locked. We sleep here so we can guard everything.

In the future I think that our work will increase and we'll have more machines. I've earned money and bought lands, by working hard and saving. I have bought 50 square yards of land back in the village for R30,000. No loans. We will build a house when we have saved the money. We can take a loan for work but not to build a house. We have space here to run another machine. But then I'd need to have more workers and that's a problem. I really don't trust them. And if we get a polishing machine it will need electricity and we'll have to pay the *electricitywala*. You can have 10 light bulbs, no one is bothered, but the moment you put in a machine, that's it — they'll come and ask for money, or someone comes and cuts the wires and runs away with it.'

Hypotheses

From this pilot project a number of hypotheses have been identified. They are currently being tested in larger surveys in other cities — Cochabamba, Bolivia; Surabaya, Indonesia; Pretoria, South Africa; and in another part of Delhi. The hypotheses are as follows:

- Dwellings containing HBEs are in better condition than those without. They have more permanent materials, more services and are better maintained.
- HBEs are transport efficient, being locally based for workers, customers and suppliers.
- The nature of HBEs is dictated by local supply and demand, rather than by the formal skills of the population.
- HBE operators and workers have lower hourly incomes than non-HBE workers in similar trades.
- HBE workers with no choice of supplier or customer have lower hourly incomes than those with such choice.
- HBEs increase danger within the home by introducing sources of heat, noxious substances and potential for tripping and collision injuries.
- Byelaws to prevent HBEs on the grounds of their damaging the residential neighbourhood are probably unnecessary and counterproductive, as HBEs cause few problems.

- HBEs need support from central and local government in the form of good infrastructure and less restrictive legislation.

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Focus Questions

1. Find evidence from the article which describes:
 - (i) the site
 - (ii) the layoutof the settlement of Jahangir Puri.
2. Find evidence which describes the buildings in the settlement. Refer to:
 - (i) materials
 - (ii) methods of construction
 - (iii) the size and layout of buildings.
3. 'For many people the concepts of "living" and "working" were so interrelated that it was almost impossible to distinguish between the two.' Look for evidence that supports this statement.
4. To what extent are the HBEs in Jahangir Puri part of the 'formal economy'?
5. Suggest why the pilot study set up the hypothesis 'Byelaws to prevent HBEs ... are probably unnecessary'.
6. Suggest how local and national government could best support the people of Jahangir Puri and their HBEs. Justify your suggestions.