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The Rural-Urban Wage Gap Migration and the Working of Urban Labor Market

An Interpretation Based on a Study of the Workers of Bombay City

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The Rural-Urban Wage Gap Migration and the Working of Urban Labor Market : An Interpretation Based on a Study of the Workers of Bombay City

DIPAK MAZUMDAR

SECTION I : THE CURRENT PARADIGM AND ITS ALTERNATIVES[1]

In the study of the economic development of LDCs the analysis of the expansion of urban employment and the attendant process of internal migration is of central importance. Economic analysis and policy in the fifties were dominated by the paradigms proposed by Ragnar Nurkse and W. Arthur Lewis which draw largely rosy conclusions from the possibility of an "unlimited" supply of labor from the rural to the urban areas at a more or less constant real wage. Surplus labor in traditional agriculture in "disguised unemployment" was expected to create favorable conditions for the rapid accumulation of capital through the reinvestment of profits in the modern sector of LDCs, if only the state or the "capitalists" took advantage of this source of concealed savings. No prior act of savings was necessary through a lowering of real wages, as the enclosures might conceivably have brought about during the industrial revolution in Britain.[2] The discussions of the 1950s did not pay particular attention to problems which might develop in the urban labor market. The rural-urban wage gap was not expected to be large (Lewis talked of 30% higher real wages in the urban areas as normal), and unemployment or underemployment in the urban areas could not be substantial: migrants who in the urban areas could not secure an income at least as much as they enjoyed in the rural areas by sharing in the family pot would return to the farms even if their marginal contribution to the rural family income was very small.

[1]The views expressed in this paper are of the author and not of World Bank. My thanks are due to Lalit Deshpande of Bombay University who conducted the field survey with the help of a large staff of interviewers over a period of two years. He is, however, not in any way responsible for the conclusions reached in this paper.

[2]One school of thought contends that when the enclosure movement transformed land ownership from a communal to an individual basis, those with common rights to land had little alternative but to sell out to their more substantial neighbors and join the ranks of the landless.

In the late sixties the paradigm of the urban labor market began to change as observers became conscious of high rates of open unemployment in many urban labor markets and urban poverty showed itself no less oppressive than rural poverty. In the works of Frank (68), Todaro (69) and Harris and Todaro (70), the idea that rural-urban migration just meets the urban demand for labor was superseded by the concept that migration is excessive. There are three distinct elements in this new paradigm :

—There is a large wage gap, maintained by institutional factors, between the rural sector and that part of the urban labor market which is dominated by factories or by public employment (variously termed the "formal", the "organized", or the "ILO sector").
—People migrate in response to expected income, rather than the income they are actually likely to earn, so that they are prepared to accept a period of unemployment in the hope of getting a high wage job.
—Outside the "formal" sector, urban wages subject to competitive market forces can go down to significantly lower levels, and indeed are pushed down below the supply price of migrants as they crowd in to queue for formal sector jobs. Such urban underemployment exists side by side with open unemployment.

I have called this view of migration and the urban labor market a paradigm because although the ideas have been summarized in simple mathematical models, and sometimes the models have produced some predictions about the urban labor market that are not intuitively obvious,[3] they have not yet been tested empirically in any convincing way, and indeed it is likely that the formulations so far devised are too simple to be tested.[4] Todaro, in his recent survey of the empirical testing of this group of ideas[5] was able to point only to studies of "macro" migration functions, rather than studies of individual migrants behavior, as lending support to the idea that migrants respond to expected rather than actual income differentials. Such functions only demonstrate that the rate of migration from a particular area of origin is sensitive not only to the wage level, but also to em-

[3]Some examples are the following. Urban job creation may actually lead to a higher unemployment rate, cf. Todaro (76), revised by Blomqvist (78). Increases in employment and wages in the formal sector may lead to a decline in average earnings over time in the informal sector-Mazumdar (74). For the way induced migration affects the shadow wage rate in project evaluation, see Harris and Todaro, Mazumdar (76), Selowsky (78).

[4]Little attempt seems to have been made in most formulations to go beyond highly simplified views of the factors influencing migrants, decisions, and particularly their expectations about urban employment.

[5]Todaro (76), pp. 67-74.

ployment conditions, in the destination point[6]—relationships that are intuitively obvious and have been well documnented in the inter-regional migration functions of various countries.[7] Such observations of behavior in the aggregate do little to explain the decision of the individual migrant to accept unemployment, or an economic loss in a job paying less than he could earn at home, with the hope of ultimately breaking into the high wage sector, We shall return to this point later in this paper, but suffice it to say here that the length of time for which an individual migrant is prepared to accept such loss is a crucial variable, to be examined both theoretically and empirically if the idea beeind the Harris-Todaro type of migration function is to be properly tested.

Before one comes to the migration function, and the urban unemployment and/or underemployment it might generate, the initial postulate that wages in the urban formal sector are artificially high must be studied carefully. It is not enough to observe the apparent difference between the going unskilled wage in the factory or public sector and the wages prevalent in urban domestio service or in agriculture. One serious deficiency of both the Lewis and the Harris-Todaro paradigms is that they treat labor supplied to the urban market as of homogeneous quality. Yet peasant workers attracted to cities are likely to differ widely with respect to a whole list of variables—for example whether or not they have families to support in the city, how long they intend to stay in the city, or in a given type of work, their responsiveness to urban work, and many others. The differential in wages one observes between the urban formal and informal sectors may in fact reflect differences in labor quality rather than the effect of institutions. In analyzing these wage differences it is possible, with moderate success, to allow for differences in standard human capital variables like education or experience. Such variables have been shown to have a considerable influence on wage rates in LDCs, and perhaps a greater influence than in the industrial economies. Other indicators of labor quality, even when measurable, are less easily tractable in earnings function types of analysis, but may be extremely important. We shall discuss this point more concretely later in the paper.

Empirically it is difficult to quantify wage differences between sectors, if any, for labor of equivalent quality. But when the apparent differential is large, and institutional factors in wage determination seem to be strong, care should be taken to see if differences in labor quality (other than the

[6]Little attempt seems to have been made in most formulations to go beyond highly simplicified views of the factors influencing migrants decisions', and particularly their expectations about urban employment.

[7]See a survey of the migration literature by Greenwood (75).

education-experience variables which are commonly controlled for) are not responsible for a substantial part of the wage difference. Though wages in the formal sector may appear to be determined by institutions, employers can always, to some extent, adjust the quality of labor they employ in order to minimize labor costs if wages are altered substantially by institutional forces.[8] Indeed, institutional factors may often do no more than hasten changes in labor quality standards that employers are already introducing.

One of the most important distinguishing features among rural-urban migrants in LDCs is the type of migration.[9] In particular, a distinction to be made between individual migrants, who live in the urban areas without their families, and migrants who bring up a family in town. Note that the distinction is not between migrants who migrate with or without their families, but between migrants with different family compositions *in* the urban area during their urban residence. In many LDCs a large proportion of male migrants live on their own, or with similar migrants in all-male households. Such households exist side by side with families.

The importance of this distinction between the two types of migrants is that they differ in their supply prices as well as in their desirability for urban employers. The difference in supply prices means that migrants with families are willing to accept employment only at a higher urban wage than individual migrants. The major reasons for the difference in supply prices of the two types of migrants are : (a) the substantially higher housing costs for the family migrant in town; (b) the lower earning strength of the famil in town, because women and children are less easily part of the urban labor force than they are of the rural; and (c) the existence of disguised unemployment on family farms, which could make the marginal contribution of

Upgrading and downgrading jobs in response to changes in labor market conditions, rather than altering the pay associated with the job, has been recognized as a widely practiced method of market adjustment, cf. Reder (55). The increase in labor productivity in response to minimum wage legislation, without a change in production techinques, is dramatically documented in a study of Puerto Rico by Gergory and Reynolds (65).

[9]The difference between migrant types with respect to the permanence of their attachment to the urban labor market have been stressed for a long time in African labor history. One of the mainsprings of the effort to increase wages in the formal sector of Africa through minimum wages legislation has been the desire to stabilize migrating labor which was said to have been a drag on African productivity.

an individual worker low relative to the average income per earner of the family.[10]

The reason for the higher demand price of family migrants is that they are settled in the urban environmet, and likely to be more stable; the relationship between stability and productivity of labour is well documented in the literature.[11] Certain types of employers will pay the higher wage that will attract family migrants, because the higher productivity of such workers will more than offset their higher wage cost.[12]

The relationship between stability and productivity need not be equally strong in all sectors of the urban labor market. In the formal factory sector we could expect employers to profit considerably from the existence of a stable labor force. But in many parts of the informal sector—in small shops or eating houses for example—productivity increase with stability of labor is likely to be minimal. Under competitive conditions, then, we would expect wage differentials to emerge in the urban labor market with the higher wage sectors attracting more stable family migrants.

A. A Revised Hypothesis

I would thus like to suggest a revision of the current paradigm of the urban labor market stemming from the Harris-Todaro work, on each of the three points noted earlier :

— A wage gap exists between the formal urban sector and the rural areas, with formal urban sector wages reflecting the cost of employing migrant workers accompanied by their families, who, like native urban workers,

[10]The family gains an amount equal to the average income because the departing migrant no longer shares in the family pot, and it loses a smaller amount equal to the latter, marginal product. Thus an individual wanting to help his family would be willing to migrate at a very low supply price, perhaps one that will merely cover his subsistence cost in town. This is especially relevant for people who migrate for only a part of the year (seasonal migration) or a part of their working life (periodic migration). In African agriculture the division of labor between the sexes means that able-bodied males, who are responsible largely for the heavy work of felling trees and clearing bushes, needed about every two years, could be absent for two years at a time without affecting the productivity of the family farm.

[11]The economic cost of non-stable labor has been widely studied for African urban labor, based as it was on the migrant labor system. An early and careful study of a Natal Dunlop Factory came to the conclusion that, because of the migratory tendencies of native workers, their productivity came to only 29% of that of European workers while the potential productivity of a stable native worker was as high as 81% of the European worker's—University of Natal (50), Chapter V.

[12]It is necessary for this argument only that the bulk of stable labor be supplied by family migrants. Some individual migrants may indeed be stable without affecting the reasoning.

are more stable and hence more productive than other migrants. Institutional factors affecting wages may push up wages beyond this level, but not necessarily so, and certainly not by as much as cursory glance at earnings data for individual workers would suggest.

— There are different types of migrants attracted from the rural to the urban areas, and the analysis of equilibrium in the urban labor market will be incomplete if we leave out of account the different supply prices of these different types. In particular, the supply price of individual migrants will be substantially lower than that of family migrants.

— The difference in wages between the formal and other sectors of the urban labor market will be related to the difference in supply prices of family and individual migrants. The high-wage formal sector will have a workforce which contains a larger proportion of family migrants, who tend to be more permanent, than the nonformal sectors in which the lower wages will attract predominantly individual migrants of lesser stability.

— The revised hypothesis provides an explanation of wage differentials-between the rural and urban markets and between different sectors of the urban market. It does not —as the Harris-Todaro paradigm purports to do—contain any prediction of excessive migration or urban unemployment. But then we have yet to see empirical work which demonstrates that urban unemployment rates are extremely high except for particular groups—mainly educated labor—for which specific analysis and diagnosis are called for.[13]

I have used the framework of this hypothesis, with its stress on different migrant types, as the basis for the analysis of wage determination in the textile industry of Bombay[11] before the Second World War. My attempt was to provide explanations both for the rural-urban wage gap and for earnings differentials between casuals and permanents employed in the industry. Thus the hypothesis is not so much a new proposal as an attempt to introduce into the analysis of urban labor markets in LDCs earlier ideas which had been inexplicably neglected in the current literature.

I was fortunate in obtaining the collaboration of Bombay University in undertaking a special survey of the Bombay labor market in the years 1972-73. The Survey answered the need to obtain information on different parts of the labor market—the formal as well as the informal—on a range

[13]See, for example, Mark Blaug and Richard Layard, *Graduate Unemployment in India*, London, 1970, and my own forthcoming work on the problem of urban unemployment in Malaysia.

[14]See Mazumdar (59) for an early theoretical suggestion and Mazumdar (73).

of common topics. The Survey sample is described in Section II, after a brief review of the broad structure of the Bombay labor market.

In Section III we begin the analysis of the material obtained from the Survey on the differences in earnings between sectors. Section IV sets out the profile of the workforce in each sector to highlight its composition, distinguishing migrants in terms of their duration of residence in the city and their period of work in their current job. Section V analyzes impermanence of migration in the different sectors in terms of the material presented in the previous sections, the question of waiting before the first job, and job changes in the urban labor market. It then proceeds to discuss family size in Bombay. The latter is a crucial variable in the argument linking the degree of permanence of migration on the one hand, and the supply price of migrants on the other. We conclude with a recapitulation of the main results.

We should be careful to note that throughout the analysis all the results refer to *male wage earners* only. Female workers are in a small minority in the Bombay labor market. Our survey did collect information on females, but an analysis of this important topic is outside the scope of this paper.

SECTION II : THE BOMBAY LABOR MARKET AND A DESCRIPTION OF THE SURVEY SAMPLE

A. Structure of the Bombay Labor Market

Heather and Vijay Joshi[15] have given a breakdown of the city's labor force between the organized ond the unorganized sectors, classified by industry and the worker type, for the year 1961. They used the employment data collected by the Directorate of Employment and Training (which covered all public sector establishments and privately owned establishments employing 25 or more workers) to map out the limits of the "organized" sector. The difference between this set of figures and the Census returns for the same year give the structure of employment in the "unorganized" sector. The Joshis note that this classification more or less identifies the organized sector with workers who are effectively covered by labor legislation, although theoretically the Factory Act extends beyond this limit to workers in establishments with no less than 10 employees, if they use electric power in their operations.

[15]Heather Joshi and Vijay Joshi, *Surplus Labour and City : A Study of Bombay* (Delhi 1976.

TABLE 1

STRUCTURE OF EMPLOYMENT, GREATER BOMBAY, 1961
(Percentages of the Total Workforce)

Industry	*Organized Employees*	*Total*	*Unorganized Sector Employees*	*Others*	*Employers*	*Total*
Manufacturing (including Primary Production)	28	12	7		2	43
Construction and Utilities	3	1	*	1	*	4
Trade and Commerce	3	12	5	7	3	18
Transport and Communications	6	5	3	2	*	11
Services	9	14	10	4	*	24
Total	50	45	26	19	5	100

Note: The total workforce of Bombay in 1961 was 1.687 million. An asterisk means less than 1%. Some totals do not add up exactly due to rounding.

Source: Joshi and Joshi, *op. cit.*, Table III. 2, pp. 54-5.

Table 1 gives a breakdown of the employment structure in 1961 by broad categories as calculated by the Joshis. The unorganized sector, which provided about half of the employment in the city, accounted for a disproportionately large share of trade, commerce and services, although it is interesting to note that the manufacturing unorganized sector was also quite large. A little less than half of the workers in the unorganized sector were non-employees. These were single workers, family workers and workers in household industry. The category of single workers should be explained. The Bombay labor market, then as now, makes use of a large number of workers employed on a daily contract, as and when work becomes available, much like dock labor in industrial countries. These workers are not attached to any particular enterprise but they do show a significant amount of occupational and industrial specialization. There are well known areas in the city, almost like market places, where such workers assemble each day

and are hired on a casual day-to-day basis. Such casual labor is a substantial part of the non-employee labor force of the unorganized sector; the figure given for 1961 in the table probably underestimates the share of the unorganized sector in the total employment in Bambay at that time. This is likely because casual laborers working in the manufacturing sector would have been included in the returns on total employment obtained by the Directorate of Industry from the individual enterprises. In the textile industry such labor at this date could have accounted for as much as 20-25% of the work force.

B. Changes in the Composition of Employment, 1961-1971

Our survey of the labor market was undertaken in 1973-74. Joshi and Joshi have provided estimates of the growth of employment by sector for the intercensal decade 1961-1971. Their figures are given in Table 2.

It should be noted that the Census of 1971 used a different, and in effect more conservative, definition of workers from that used in 1961. Thus, using the 1961 definition, the Census figure for workers for 1971 is an under estimate; Joshi and Joshi suggest of the order of 4 percent. The "organized" sector figures given in Table 2 were obtained from the returns of the Directorate of Industry and are not affected by this change in definition. Thus, allowing for the change in census definitions, the growth of organized sector employment in Bombay lagged behind that of total employment by perhaps 1 percent per annum; the lag was greater for the manufacturing sector of Greater Bombay. However, Table 2 also shows that if we include the expansion of employment in the satellite towns of Thana urban districts the lag in the organized sector growth rate is substantially less.

TABLE 2

PERCENTAGE RISE IN EMPLOYMENT BETWEEN 1961 AND 1971

	Greater Bombay	*Greater Bombay and Thana Urban Districts*
Population	43.8	46.1
Workers : Census	30.3	32.8
Workers : Organized	25.8	34.4
Manufacturing : Census	35.0	39.9
Manufacturing : Organized	22.3	35.0

Source : Joshi and Joshi, *op. cit.*, Table III. 3, pp. 58-59.

Another aspect of the organized sector employment growth needs to be noted. It is the major change in the industrial composition of employment in Bombay City during the decade. Employment in cotton mills, which accounted for almost one-half of total manufacturing employment in the organized sector of the city in 1961, remained virtually stagnant throughout the decade. The increase in employment in organized industry came largely from very high rates of growth in newer industries—particularly the more skill-intensive industries like petro-chemicals, pharmaceuticals and electronics.

C. The Survery Sample

It was decided to cover three sectors of the market : (*a*) the single workers and the casuals as we have described them above ; (*b*) the workers in the small-scale sector; and (*c*) the workers in factories. We also decided to exclude form the sample owner/workers and family workers who constitute an important proportion of the city's "informal" sector of workers. the study was deliberately limited to wage earners.

The sample framework was provided by lists of establishments in the city-for factories, the list maitained by the Chief Inspector of Factories, and for small establishments, the registers maintained by the Municipal Ward Offices. The sample size of workers to be interviewed was predetermined for each of the three sectors of the labor market, and the total for each sector was distributed among establishments belonging to different industrial groups, so as to ensure that for each sector of the market the sample of establishments reflected the industrial distribution of the wage earners. For each of the factories selected, the quota of workers to be interviewed was selected at random from the employee rolls, while for the small-scale sector, whose average employment was 2.9 workers per establishment, all the wage earners in each of the sample establishment were surveyed. This size of the sample was about 2,700 workers in factories and 2,000 workers in small-scale units.

The casual workers are not attached to any establishments. Thus we do not have a sample frame for an establishment-based survey. It was decided to survey 1,100 casual workers randomly selected from those who gathered for work in the well-known market places for casual workers, but taking care to ensure that the industrial composition of the sample reflected the industrial distribution of the population of single workers in the city, as derived from census data.

D. The Labor Market Problem in Bombay City : Open Unemployment vs. Low Income

The survey emphasized the differences in earnings between sectors, and *inter*

alia, the causes of low incomes. Those totally unemployed at the date of the survey were not included. The casual workers by definition were not employed on a regular basis, and would be unemploy-ed some days of the month, but the survey found only a small incidence of unemployment among them. The average number of days worked per month by the sample of male casual workers was 23, giving an overall rate of underemployment of about 10 percent (assuming 20 days to be full employment for most workers).

An aspect of unemployment captured for the entire sample was the period that migrants waited for their first job in the city. Migrants were asked whether they had a fixed job or firm offer of a job before they came. At another point they were asked about the length of unemployment before their first job in Bombay at still another about who supported them during their period of waiting. The results for the sample are reported in Table 3 by sector.

TABLE 3

PERCENTAGES OF MIGRANTS WITH LITTLE WAITING BEFORE FIRST JOB

Sector	*Migrated with fixed job or firm offer*	*No unemployment before first job*	*No need for support because of no waiting*
Factory	21.2	32.2	45.2
Small-scale	24.9	36.3	49.8
Casual	13.8	20.0	n.a.

It is interesting to see how the proportion of migrants who said they had no long wait increased as the questions were phrased more loosely. In both the factory and small-scale sectors, it appears nearly half the sample of migrants more or less sailed into their first urban job. Waiting was clearly more common among casual workers.

The distribution of migrants sampled by their reported period of actual unemployment before the first job is given in Table 3.

It is clear that those who were unemployed for a reasonably long period, say more than 3 months,[16] were in a minority. It is also interesting to note that this proportion was higher in the factory sector than in the other sectors-which is consistent with the model of queueing up for high wage jobs.

[16]We checked to see if these figures were affected by excluding from the sample those who had arrived in the city as children. They were not.

In the absence of a model specified in detail it is difficult to assess the prevalence of long periods of unemployment. Intuitively, a mere 15% of the sample waiting more than 6 months does not appear to be an excessive proportion in a normally functioning labor market, without a preponderance of Harris-Todaro gamblers.

None of the migrants financed themselves, from savings or borrowings, while unemployed. Of those who needed help, 50% said they received support from their family members—and rather more did so in the factory sector, perhaps a reflection of the higher income of the relatives who helped them. Even the two other types of helpers who were mentioned in significant numbers in the response of the workers to the questionnaire-viz. "caste fellows" and "native persons" (from the same area of origin)—typically did not accept any payment for their support.

We conclude that there is little evidence of the type of "investment in unemployment" for the fresh migrant to the urban market which has been stressed in the Harris-Todaro paradigm. Since much of urban unemployment in their view is ascribed to this phenomenon, it would appear that this particular problem is not important in the Bombay labor market. On the other hand, as we shall see, the differences in earnings in different parts of the market are significant.

SECTION III : EARNINGS DIFFERENCE BETWEEN SECTORS

We begin our exploration of the working of the Bombay labor market by analyzing the difference in earnings between the three sectors distinguished-casual, small-scale and factory. To make the comparison meaningful the analysis is confined to male manual workers. The earnings of such workers would, of course, be affected by their personal characteristics as well as by their sector of employment. We want to know about the extent of earnings differences after controlling for the human capital endowments of the workers.

The form of analysis which we found most convenient to undertake for this statistical exercise is Multiple Classification Analysis—"a method of displaying the results of the analysis of variance especially when there are no significant interaction effects."[17] This form is particularly useful when the explanatory variables are in categoric terms, so that they can best be entered into the analysis as sets of dummy variables. The details can best be explained by reference to Table 4 which sets out the results of the Multiple Classification Analysis of the log of earnings (LNWAGE)[18] in terms of six explanatory variables entered in categoric terms and two variables—age and

[17]SPSS, p. 409.

[18]Earnings are defined as total monthly earnings in cash *plus* income in kind (food, accomodation) in the main employment.

age)^2—used as continuous ones. The grand mean of 5.73 at the top of the Table gives the overall mean of the log by earnings of the entire sample. The first column of the Table lists the explanatory variables, and within each group the categories which have been distinguished. Thus for sector of employment (called SIZE) the explanatory variable categories distinguishnot only the casual, and the small sectors, but also factories of four different size groups (in terms of employment). The other variables and the categories within each variable can be readily read off from this column. The second column (N) gives the number of observations falling under each category. This is a very useful piece of information to display, since it gives the relative importance of the different categories in the sample. The third column gives the effect of each variable (i.e. each subcategory of those entered in the set of explanatory variables) upon monthly earnings of the sample when each variable is working alone : it is expressed as the gross deviation of the mean earnings of the particular category from the overall grand mean. The next column—col (4)—on the other hand, displays the "net" effect of each variable on earnings—that is after controlling for the effect of the other variables. The statistics—ETA and BETA—entered under columns (3) and (4) correspond to simple and partial correlation co-efficients—ETA gives the proportion of the variance in earnings explained by each variable (in this case each package of the subcategories used, e.g. Size, Education etc.). BETA, on the other hand, is the proportional reduction in the residual variation after the effect of the other variables has been taken into account. The BETA statistics thus gives an idea of the ranking of each explanatory variable in explaining the monthly earnings of workers. The last column gives the set of deviations of earnings from the grand mean for each category when we control for the other explanatory variables which are entered as continuous ones—called covariates. These are AGE and (AGE)^2. It is seen that the gross deviations for the various categories are reduced when other factors are controlled for in the last two categories.

The model performed remarkably well explaining no less than 69 percent of the variance. The program gives the significance of the variables included (not shown). All of them were significant at the one percent level. The significance of the interaction among the independent variables was also tested. Only two of the ten possible two-way interactions were significant—that between size and training, and that between training and occupation. Even in these two cases the F-values were pretty low—2.26 and 2.30 respectively—compared to the explanatory variables taken singly.

The analysis of earnings in the MCA program given in Table 4 shows the remarkable importance of the sector of work as the major determinant of earnings for manual workers in the Bombay labor market. This is revealed by the ranking given by the BETA values *and* the spread of earnings

TABLE 4

DETERMINANT OF THE LOG OF EARNINGS OF BOMBAY MANUAL WORKERS
(Multiple classification Analysis)

Grand mean = 5.73

Variable and Category	*N*	*Unadjusted*		*Adjusted for Independents*		*Adjusted for Independents + Covariates*	
		Dev'n	*Eta*	*Dev'n*	*Beta*	*Dev'n*	*Beta*
Size							
1 Factory 10-99	498	0.11	—	0.10	—	0.06	—
2 100-499	452	0.43	—	0.40	—	0.35	—
3 500-999	174	0.58	—	0.50	—	0.41	—
4 1000+	1339	0.54	—	0.53	—	0.41	—
5 Small	1580	—0.35	—	—0.34	—	—0.26	—
6 Casual	900	—0.57	—	—0.54	—	—0.44	—
	—	—	0.77	—	0.73	—	0.58
English							
0 No English	3878	—0.07	—	—0.03	—	—0.02	—
1 some English	1065	0.25	—	—0.10	—	0.07	—
	—	—	0.22	—	0.09	—	0.06

Training							
1 Trained	1233	0.28	—	0.09	—	0.08	—
2 Untrained	3710	—0.09	—	—0.03	—	—0.03	—
	—	—	0.27	—	0.09	—	0.08
Education							
0 Illiterate	1022	—0.10	—	—0.04	—	—0.10	—
1 Literate no schooling	53	—0.34	—	0.08	—	—0.01	—
2 GRDS 1-3	507	—0.03	—	—0.01	—	—0.05	—
3 GRDS 4-6	1319	—0.03	—	0.02	—	0.00	—
4 GRDS 7-10	1029	—0.02	—	—0.02	—	0.02	—
5 GRDS 11-12	943	0.17	—	0.02	—	0.10	—
6 Diploma and degree	70	0.33	—	0.18	—	0.35	—
			0.17		0.05		0.12
Occupation							
2 Skilled blue collar	1031	0.20	—	0.07	—	0.07	—
3 Unskilled blue collar	3912	—0.05	—	—0.02	—	—0.02	—
			0.18		0.06		0.06
Multiple R^2					0.619		0.688
Multiple R					0.787		0.830

between the subcategories within each variable. Thus taking education as the next most important variable in the determination of earnings, the "net" spread in the log of earnings between illiterates and those with Diplomas is 0.33. On the other hand, the spread of the log of earnings between casual workers and those working in large factories is no less than 0.84.[19] It is also interesting to note that within the factory sector itself, earnings of manual workers are different after controlling for other factors. In particular those working in factories employing 10-99 workers earn considerably less than those working in larger foctories, although they earn substantially higher than casual workers or those in small establishments. The cut-off point within the factory sector seems to come at the level of units with 100 or more workers. The "net" difference in earnings in the three size classes distinguished in factories above this size are not very large.

The importance of the net effect of the size of establishments on earnings within the factory sector cannot be overstressed. The Factory Act covers workers generally in most units employing 10 or more workers. The fact that even within the units covered by labor and wage legislations, we find significant increase in earnings with factory size suggests that institutional factors are not entirely responsible for the result obtained.

We have already noted that the two-way interaction between SIZE and EDUCATION was not significant. This was independently varified by looking at the percentage distribution of workers in the three sectors by educational levels—and no striking difference was observed. Evidently, educational credentialism does not play any role in recruitment to the high wage sector of the manual labor market in Bombay as has sometimes been suggested in other LDCs.

SECTION IV : DIFFERENCES IN THE INCIDENCE OF TEMPORARY MIGRATION

Having established the existence of very large differences in earnings between casual, small-scale sector, and factory workers, our next task is to analyze the differences in the proportion of temporary migrants in the three sectors, before assessing how they correspond to differences in earnings.

Migration may be temporary in two senses. Migrants may come to the city for some seasons of the year, but also take part in economic activity in their rural areas of origin. No Significant number of the migrants sampled were "temporary" in this sense. About a third of the entire sample had not visited their ancestral homes at all during the last *three years*. Even the other two-thirds only visited occasionally, for short periods. About half of

[19]That is, controlling for other factors earnings of workers in the largest factories are 2.3 times those of casual workers.

those who did visit their native place said their purpose was to "visit relatives". Only 14% mentioned helping family farms or businesses as reasons for visiting.

Migration may also be seen as temporary if migrants decide to return to their place of origin after a few years. Migrant workers who return need not be the classical figures portrayed in the economic literature of Africa who decide in advance to work in towns only for a limited period to earn a fixed amount of cash. Their decision to remigrate may come gradually during their urban careers, and thus it is not possible to assess the importance of this phenomenon by asking migrants in a sample survey their intentions about urban residence. In fact, in the Bombay survey 4 out of 5 migrants asked about their purpose in migration indicated permanent employment as their reason. Education came next in importance. Only in the casual sector did a perceptible number—about 5% of the sample—explicitly indicate that they came to the city for temporary employment; in the other sectors migrants with this declared purpose were negligible.[20]

Unfortunately, no accurate measures of return migration—its rate and demographic composition—can be obtained from a one shot survey in an urban area. For such measures we need information at two points of time on migrants' duration of residence, by age groups, such as can be derived from census of population data. However, some suggestive conclusions—particularly on the differences between different sectors of the urban labor market—may be inferred from the profiles of migrants.

Table 5 gives the percentage distribution of the workforce in each sector by duration of residence.

TABLE 5

PERCENTAGE DISTRIBUTION OF SAMPLE BY DURATION OF RESIDENCE IN THE CITY

Sector	*Years*						*Natives*
	1	*1-2*	*3-5*	*6-10*	*11-20*	*20+*	
Casual	4.9	14.8	21.2	20.7	12.4	5.1	20.9
Small-Scale	4.5	8.6	16.3	17.0	19.3	14.0	20.3
Factory	0.1	0.8	4.3	10.3	30.4	32.6	22.3

[20]Even in Kenya, where temporary migrants could be expected to be more common, Rempel found that in his sample survey only about 13% indicated their purpose of migration in a way that classified them as "circulator migrants"; cf. H. Rempel (1971).

The proportion of urban natives in the labor force is roughly the same in all three sectors. But the non-factory sector appears to be dominated by recent migrants and the factory sector by long-term migrants: the proportion of migrants who have been in the city more than 10 years is larger in the small-scale than in the casual sector, and much larger in the factory sector.

One point of clarification is called for regarding the proportions of migrant types just noted. A migrant is defined as someone who was born outside the city; hence, migrants include those who came as children with their families; and were really brought up in the city.[21] If such "child migrants" were disproportionately concentrated in the factory sector, our results just quoted could be misleading. Table 6 shows, for each sector, the proportion of migrants who came to the city as children, and the proportion of recent migrants assessed with and without these child migrants. It is seen that the larger proportions of recent migrants found in non-factory sectors are *not* due to a disproportionate concentration of child migrants in the factory sector. Workers who migrated as children are indeed more likely to be longer-term migrants no matter what the sector, so that when we confine our attention to migrants who came to the city as adults, recent migrants form a greater proportion of the total migrants in every sector (see the last column of Table 6). Even so, the interesectoral differences in the proportions of recent migrants are, if anything, increased.

TABLE 6

PROPORTIONS OF CHILD MIGRANTS AND RECENT MIGRANTS

Sector	*Proportion of migrants who came at and below age 15*	*Proportion of migrants of 5 years' or less duration*	
		Including child migrants	*Excluding child migrants*
Casual	17.2	40.9	44.4
Small-scale	29.6	29.4	32.9
Factory	33.5	5.2	6.8

[21]In Indian cities mothers often return to their ancestral homes in the villages at the time of childbirth. Thus the proportion of migrants in the population is exaggerated.

The smaller proportion of recent migrants in the factory sector may be caused by one or a combination of three factors :

— slow growth in factory employment;
— a larger proportion of recruits to the factory sector being natives or longer duration migrants; and
— return migration among migrants employed in the non-factory sectors.

As Table 2 suggested, in the last decade, employment in factories grew a little more slowly than that in the rest of the economy of Greater Bombay—a difference of about one percentage point per annum.[22] A difference of this size is unlikely to explain the much larger percentages of short—duration workers in the casual and small—scale sectors. The number of new jobs coming up in each sector would also be affected by the rate of turnover—and this rate could be lower in factories. Table 7 gives the percentage distribution of workers in the different sectors by the duration of their current job. It shows that factory workers hold their jobs for much longer than those in the other sectors.

TABLE 7

PERCENTAGE DISTRIBUTION OF WORKERS BY DURATION OF CURRENT JOB [23]

Sector/Yrs.	*year*	*1-2*	*3-4*	*5-6*	*7-9*	*10-14*	*15-19*	*20-29*	*30+*
Casual	14.3	34.4	22.9	8.0	10.6	5.6	1.9	2.3	2.3
Small-scale	18.6	26.9	15.0	10.5	7.6	9.2	5.3	5.2	1.6
Factory	1.6	5.1	8.8	13.3	12.6	19.4	14.4	17.8	6.5

A. The Importance of Return Migration

It is now necessary to investigate how far the short periods for which workers in the small—scale and casual sectors hold their jobs are due to job mobility within the urban market, and how far they are due to return migration. In the casual secotor, the number of jobs changed is a difficult concept because the workers are not attached to specific establishments : job

[22]This is true of Greater Bombay but not of the surrounding urban area.

[23]In the small—scale and the factory sectors "current job" means employment in the enterprise in which he is currently working. In the casual sector It means the occupation he is currently pursuing.

mobility can only be measured if workers change occupations or change sectors. Our survey, however, collected data on the number of job changes from the sample now employed in the small—scale and factory. sectors. Generally, the degree of mobility was surprisingly low. In both sectors about 40% of the migrants and 50% of the natives reported having no change of jobs at all in the urban market. Of course, this proportion drops with increase in age, but even for the age group 35-44 the percentages of "non-movers" were as follows :

Migrants: in factories 38; in small—scale sector 35.
Natives: in factories 44; in small—scale sector 30.

Table 8 gives the *average* number of job changes by duration of residence for the migrants in the two sectors. These are very low figures. Migrants on the average might have had one other job after being in Bombay about 5 years in the small—scale sector, and 10 years in the factory sector.

TABLE 8

MIGRANTS : MEAN NUMBER OF JOBS CHANGED IN URBAN MARKET, BY DURATION OF RESIDENCE AND SECTOR OF CURRENT JOB

Duration of Residence (years)	*Small-scale*	*Factory*
less than 1	0.21	0·19
1-3	0-49	0.39
3-5	0.85	0.43
5-7	1.01	0.51
7-9	1.17	0.91
9-14	1.40	1.01
14-19	1.54	1.20
19-29	2.69	1.29
Above 30	1.85	1.50

These data on the low turnover rate of workers remaining in the urban labor market, together with the evidence in Table 10 that in the small scale

sector a large proportion of the sample holds jobs only for short periods, suggest that there is a high incidence of return migration in this sector,

We know from the work of demographers that return migration is significant in Bombay City. Zachariah (68), using information from the 1951 and 1961 censuses. found that in that decade outmigration from Bombay was around 500,000 persons, of whom three—quarters were returning migrants. Roughly half the influx of population into Bombay during the decade was offset through outmigration. As a percentage of the *stock* of migrant population in 1961, the rate of outmigration was about 20%. Contrary to some prevalent models, the peak rate of outmigration was not among the older, post-retirement, age groups. The highest rate of outmigration was observed in the 30-35 age group.

The 1971 census migration data have not yet been fully analyzed, but preliminary calculations by Joshi and Joshi show that return migration continued in the decade 1961-71. However, along with a reduced rate of migration, relative to natural increase, the volume and rate of outmigration seem to have fallen. Outmigration during 1961-71 probably offset one—third rather than one-half of gross inmigration as in the previous decade.

This quantitative evidence of return migration for the Bombay population as a whole provides only indirect evidence of the return migration of migrants who have worked in the small-scale sector. To cast some light on whether that sector has a higher than average incidence of return migration, Table 9 compares the distribution by duration of residence of the migrant male population of Greater Bombay, obtained from the Census of 1971, with that for the small-scale sector of our sample.

Another possible reason for the differences shown in Table 12 is that migrants may spend their early years in Bombay working in the casual-or small scale sectors and then move to organized sector jobs. As we document more firmly in the next section, such movement is of limited significance. Thus, among migrants of less than 10 years residence in Bombay, return migration is substantially more common among migrants in the small-scale and casual sectors than it is for all migrants as a group—and we have already seen that the average incidence of return migration is high.

TABLE 9

PERCENTAGE DISTRIBUTION OF MIGRANTS BY YEARS OF RESIDENCE IN GREATER BOMBAY, 1971

Population Years	*1*	*1-4*	*5-9*	*10-14*	*15+*
All male migrants	2.4	12.6	18.7	15.2	51.1
Small-scale sector	5.7	22.5	23.7	16.6	31.5
Casual sector	6.2	37.2	29.0	13.4	14.2

B. *Return Migration, "Graduation", and the Harris-Todaro Paradigm*

In the Harris-Todaro view of the migration process migrants enter the urban labor market through the "informal" sector, and if they fail to "graduate" to the formal sector within a reasonable (unspecified) period of time many of them would return to their rural areas of origin. Thus, the larger proportion of recent migrants that we have observed in the small-scale sector, and the greater importance of return migration that we have inferred in this sector are predicted both by the Harris-Todaro paradigm and the alternative hypothesis advanced at the outset of this paper. The real distinguishing point of the two models is the mechanism of wage determination in the formal sector. In the Harris-Todaro view the elevated wage in the formal sector is institutionally maintained; in the alternative hypothesis it is determined by the higher supply price of more permanent migrants. We shall turn to the question of what determines the higher formal sector wage in the next section. But it might be appropriate at this stage to draw attention to one aspect of the empirical evidence on "graduation" provided by our sample survey in Bombay City.

For the Harris-Todaro paradigm of the migration process, it is movement out of the non-factory to the factory sector which is relevant. Such movement will only be a fraction of the total mobility discussed above. Evidence was collected in our survey about migrants with regular jobs now (both in the small-scale and factory sectors) who initially worked at casual jobs and subsequently moved to regular employment. Movers of this type were only 11% of the total number of migrants who had changed jobs at least once.[24]

Unfortunately, our data set at the moment does not allow us to quantify the movement from the small-scale to the factory sector. But we have information on job changes within sectors, and thus can look at the 57% of the sample of migrants in the factory sector today who had changed jobs. Data on the industry of their first jobs in the city show that 67% of these workers started in manufacturing, where they are now. The other 33% came from different industries—particularly trade and services. The trade and service establishments in which the migrant factory workers of today and their first jobs are very likely to have been in the small-scale sector. Thus, assuming that a fair proportion of those who changed jobs within manufacturing also moved from small manufacturing units to factories, perhaps as many as half

[24]The figure for those in the factory sector was higher—about 17%. This partially reflets the casual system of recruitment of labor in the textile industry, discussed in Mazumdar (1973), in which a worker serves as an apprentice or as a substitute worker on the day-to-day basis before getting a regular contract. The number of workers in the textile industry affected by this system must be much smaller now, as employment in textile factories has been stagnant for some time.

of those who had changed jobs in the factory sample had moved from the small-scale sector. This makes the proportion of such movers about 25-30% of the migrant sample in factories.

Thus there is a fair support for the "graduation" hypothesis for factory workers, but it is by no means the dominant pattern of entry into the factory sector. It is also relevant to ask how long "graduation" takes for the fresh migrant, if he does in fact graduate to the factory sector.

In simple formalizations of the Harris-Todaro paradigm it is usual to express the new migrant's decision to come to the urban market as being governed by his probability of getting a formal sector job. But surely a very important influence on his decision would be the length of time he would expect to be in the informal or small-scale sector before his possible "graduation".

Some light might be shed on this question by examining the length of residence in the city of workers who have been employed in their current job for less than 5 years. Table 10 shows the distribution of these workers by length of urban residence, for the small-scale and the factory sectors. Among the factory workers with recently acquired jobs a relatively large number are natives of the city and migrants of longer duration. Further probing revealed that only a minority of these longer duration migrants came to the city as children; the majority had had a prior spell of work in Bombay City, presumably in the small-scale sector. Thus it appears from Table 10, column 2 that, of the migrants recruited to the factory sector in the last five years, nearly two-thirds had been in the city more than 5 years before obtaining a factory job.

A point of some importance begins to emerge at this stage. If conditions in Bombay City are typical of those in urban labor markets, what kind of importance will a potential migrant to the city attach to the probability of getting a factory job, if he has no prior connection to the factory sector? If the recent past is any guide, the number of factory jobs opening up in the next 5 years in Bombay City will be very limited, and even for this small number, the new arrival would have less than one-third the chance of getting a job of the natives and the longer term migrants already in the market. The small-scale sector has several times more jobs opening up, and the possibility of a new migrant getting such a job is substantially higher than that of other job seekers. It would appear that unless the potential migrant's time horizon is inordinately long, the economic gains from employment in the small-scale sector must weigh much more heavily on his decision-making than conditions in the factory sector, even though the wages in the latter are so much higher.

But we are already begging the question about higher wages in the factory sector. The higher wages in factories—which our analysis in Section III establishes—may not be artificially raised by institutional factors. Our

TABLE 10

PROPORTIONS OF NATIVES AND MIGRANTS AMONG THOSE WITH RECENTLY ACQUIRED JOBS

Sector Duration of Residence	*Natives*	*Migrants of 5 years' duration*	*Migrants of 6 10, years duration*	*Migrants of 11-16 years duration*	*Migrants of 16+ years duration*
Factory	27.1	28.3	17.8	10.8	16.1
Small-scale	20.3	45.5	14.3	9.7	10.2

alternative hypothesis offered in Section I would ascribe a large part of the wage difference between the sectors to a difference between the supply prices of temporary individual migrants on the one hand, and those of more permanent family migrants on the other. It is to a discussion of this group of issues that we turn in Section V.

SECTION V : "TEMPORARINESS" OF MIGRATION, EARNINGS AND FAMILY SIZE

Despite the lack of direct evidence, we have established that the three sectors of the Bombay labor market differ substantially in terms of the propensity of migrant workers to remigrate. Migrants in the factory sector, where earnings are highest, have typically been in the city longer than migrants in other sectors; those in the casual sector, where earnings are lowest, appear to be much more recent arrivals. To this extent the positive association of the level of earnings and the permanence of migration has been established. In fact, we can go further. The small-scale sector sample can be broken down into shops and commercial establishments on the one hand, and eating houses and hotels on the other. In the latter, which accounts for about a fifth of the establishments sampled, a high proportion of those employed are very recent migrants. Natives were practically nonexistent in this subsample; migrants with duration of 2 years or less constituted 25% of the subsample, and those with less than 5 years' duration 52%. The respective figures for commercial establishments and shops were 22% native, 12% migrants with less than 2 years' residence, and 28% migrants with less than 5 years'. The earnings in eating houses and hotels were substantially lower—almost 45% *in eating* below the average for shops and commercial establishments in gross terms, and 22% below controlling for other significant factors such as workers' educational levels.

The relationship between the degree of permanence of migration and the level of earnings is governed, in the hypothesis set out in Section I, by the

family size of the migrant, which determines his supply price. A stylized contrast was presented between the individual migrant who is temporarily in the urban labor market all by himself, and the permanent type who stays in town with his family. In reality, of course, there will be no such stark contrast : along with a continuous distribution of migrants by their degree of permanence (approximated by the duration of residence). We will observe a continuous distribution of family sizes. The critical link between the permanence of migration and the supply price of the migrant is then his *average* family size in Bombay or, alternatively, the proportion of his total family living with him in Bombay.

A comment on each of the two aspects of the variable average family size in Bombay (hereafter called FSB) is called for—its relationship to the permanence of migration, and to the supply price of migrants. First, Bombay has an unusual predominance of single family households. (This is reflected in the city's abnormal sex ratio. The 1971 Census reported that there were only 716 females in the city's population for every 1,000 males.) The proportion of single-member families is substantial in all three sectors of the labor market included in our sample survey—45% in the casual, 49% in the small-scale and 28% in the factory sector. The proportion of such families among migrants drops with duration of residence in the city, but is still high among long-term migrants. Even among migrant factory workers, about a third of those of 20-25 years duration are single-member families. The question that arises is : does not this possibility of lone workers being more or less permanent migrants undercut the link between FSB and the permanance of migration? The answer is that the relationship is valid as long as family size in Bombay increases with the duration of residence, signifying the necessity of attracting larger proportions of bigger families at the margin to achieve a more permanent workforce.

Second, the supply price of migrants can be expected to increase with family size because of the higher cost of living in town and a higher dependency ratio.[25] But the supply price has not been observed. All we can do in the subsequent analysis is to test for a significant relationship between FSB and the income of the earner. But establishing this link does not prove that lower earnings in certain sectors are caused by the lower supply price of migrants with smaller families. It is only consistent with the hypothesis, and we have to refer to other evidence to strengthen the direction of the causal link, if we can.

Our first task, then, is to assess the strength of the relationship between FSB and the permanence of migration (as approximated by the duration of

[25]The majority of single migrants were found to be in "free" accommodation. In the factory sector, 14% of the single migrants slept at their place of work, 38% lived with friends and relatives without any payment, and only 36% lived in rented houses.

residence on the one hand, and the income of the principal earner of the family on the other. For each sector, separately, a multivariate analysis of FSB was undertaken with the duration of residence in Bombay and the income of the principal earner as explanatory variables. Control variables were used for the family size at home (in the rural areas) and income of the family in town other than that of the principal earner. In *each sector* all four variables were significant and together explained 28-37% of the variance.[26] In the small-scale and the factory sectors, but most of all in the casual sector, the income of the principal earner and the duration of residence were positively correlated. Hence, we used the interaction terms (in categories of the product of the two variables) in the final multiple classification analysis. As an example, the results for the small-scale sector are portrayed in Graph 1. The major point emerging from the graph is that while the average family size of migrants increases both with the income of the principal earner and with the duration of residence, it is much more sensitive to the former. It is seen that even 10 years duration of residence does not increase migrants' family size in Bombay to near the level of the natives, except at monthly income levels of Rs. 401-800. On the other hand, migrants with an income level above Rs. 800, irrespective of their duration of residence, have a FSB more like that of Bombay natives.

If the relationship between the FSB and earnings holds within each sector, we can expect the average FSB to vary across broad sectors of the labor market in the same way as "net" earnings. This is indeed what we find, as the data in Table 11 show.

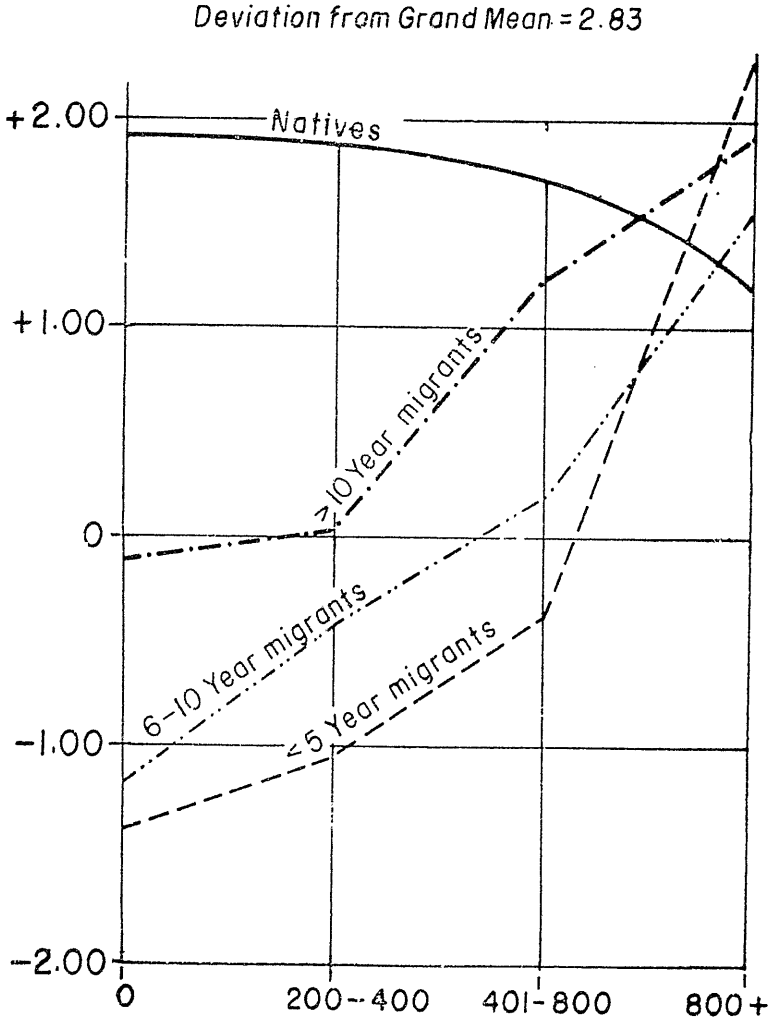
TABLE 11

AVERAGE SIZE OF FAMILY IN BOMBAY

Sector	*Migrant*	*Non-migrant*	*All*
Factory	3.30	5.59	3.99
Casual	2.34	4.49	2.88
Small-scale (All)	2.30	5.59	2.97
Shops	—	—	3.64
Commercial Establishments	—	—	3.44
Eating Houses	—	—	1.17

[26]The majority of single migrants were found to be in "free" accommodation. In the factory sector, 14% of the single migrants slept at their place of work, 38% lived with friends and relatives without any payment, and only 36% lived in rented houses.

Family Size in the Small-Scale Sector in Bombay



Earning Group of Principal Earner (Rs. per Month)

Graph 1.

All the evidence is thus consistent with a hypothesis of wage determination at the individual firm level. Higher wage jobs go to migrants who have a long duration of residence and a larger family with them in Bombay. The need of more permanent migrants to support a larger family in the city *causes* wages to be higher than in other parts of the labor market.

The causal chain in this hypothesis can be broken only if we are able to provide evidence of an alternative mechanism for wage differentials. Does

the hypothesis that wages are institutionally determined provide such an alternative in the Bombay labor market? Outside the factory sector there are no institutional influences on wages, and thus the evidence of differences within the non-factory sector with respect to earnings, duration of residence of migrants, and family size may be crucial. The fact that throughout the non-factory sector earnings rise with the duration of residence and the size of the family in Bombay tends to support the hypothesis.

In the factory sector wages have been institutionally determined, along with other conditions of work, for about a decade. But two points should be noticed. First, my work on wages in the textile industry in the city showed the existence of a substantial wage gap with respect to certain other types of labor in the labor market for many years, well before the era of institutions[27]. Second, it is not at all clear that institutional wage setting has increased real earnings of workers in Bombay factories significantly since the Second World War. At the same time, the factory labor force, as we have seen, shows a very high degree of permanence of residence and stability of job tenure-even more than it did before the institutional interventions of the post-war years.

SECTION VI : CONCLUSIONS

The following are the major conclusions of the paper, some less unequivocally proved than others.

Differences in earnings are substantial between sectors of the labor-market, and are only reduced when we control for factors (such as education) typically allowed for in earnings function analysis. Workers in the largest factories earn just above twice as much as casual workers.

Activities with lower levels of earnings have a larger proportion of migrants with a short duration of urban residence. Taken in conjunction with the distribution of workers by length of work in the current job, and the degree of mobility within the labor market, this phenomenon suggests a higher incidence of return migrartion in low wage activities.

Family size in Bombay is also significantly smaller for migrants in low wage activities. This finding is consistent with the hypothesis which links the lower supply price of temporary migrants (because of the smaller family size) to the lower wages established in these activities.

The alternative view of wage differences caused by institutional factors is a second runner, because the mechanism outlined by us is seen to operate within the non-factory sector, in which institutions do not play any obvious role in wage determination. Factory wages in Bombay have been determined by institutions since 1950 but there is no evidence to suggest

[27]Mazumdar (1973).

that the latter have widened the differential with respect to the nonfactory sectors beyond what is caused by differences in the supply prices of migrants.

The Harris-Todaro paradigm of migration responding to the expectation of an elevated factory sector wage is not useful unless it can be demonstrated that wages are, in fact, higher than the relevant supply prices. It is further weakend by the small number of new jobs opening up for fresh migrants in markets like the Bombay one.

Unemployment before the first urban job was very uncommon among Bombay migrants. "Graduation" in the urban labor market is significant, but given the low rate of mobility, the process does not work quickly enough to make much difference to the calculation of migrants.

REFERENCES

Barnum, H.N. and Sabot, R H., "Education, Employment Probabilities and Rural-Urban Migration in Tanzania," *Economic Development and Cultural Change*, 1977.

Blaug, Mark, and Layard, R.S. and Woodhall, M., *The Causes of Graduate Unemployment in India*, 1969.

Blomqvist, A.G., "Urban Job Creation and the Unemployment in LDCs," *Journal of Development Economics*, 1978.

Frank, C R. Jr., "Urban Unemployment in Africa," *Oxford Economic Papers*, 1968.

Greenwood, H., "Research in Internal Migration in the United States," *The Journal of Economic Literature*, 1975.

Gregory, P. and Reynold, L.G., *Wages, Productivity and Industrialization in Puerto Rico*, 1965. (Homewood, Illinois, 1965).

Harris, J.R. and Todaro, M.P., "Migration, Unemployment and Development : A Two-Sector Analysis," *American Economic Review*. 1970.

Joshi, Heather and Joshi, Vijay, *Surplus Labor and the City : A Study of Bombay*. Delhi 1976.

Lewis, W.A., "Economic Development with Unlimited Supply of Labor," *Manchester School*, 1954.

Mazumdar, D., "Underemployment in Agriculture and the Industrial Wage Rate," *Economica*, 1959.

Mazumdar D., "Labour Supply in Early Industrialization : The Case of the Bombay Textile Industry," *Economic History Review*, 1973.

Mazumdar, D. "The Theory of Urban Underemployment in Less Developed Countries." *World Bank Staff Working Paper No. 198*, 1975.

Mazumdar D., "The Rural-Urban Wage Gap, Migration and the Shadow Wage." *Oxford Economic Papers*, 1976.

Nurkse, R., *Capital Formation in Less Developed Countries*. London, 1979.

Reder, M.W. "The Theory of Occupational Skill Differentials," *American Economic Review*, 1955.

Rempel, H. "Labor Migration into Urban Centres and Urban Unemployment *in Kenya*." Unpublished Ph. D. dissertation, Madison, Wisconsin, 1971.

Selowsky, M. and Pinera, Sebastian, "The Opportunity Cost of Labor and the Returns to Education Under Unemployment and Labor Market Segmentation," *Quarterly Journal of Economics*, 1978.

Todaro, M.P., "A model of Labor Migration and Urban Unemployment in LDCs," *American Economic Review*, 1969.

Todaro, M.P. "Urban Job Expansion, Induced Migration and Rising Unemployment," *Journal of Development Economics*, 1976.

University of Natal, "The African Factory Worker," Durban. Zachariah, K.C. 1968. "Migrants in Greater Bombay. "Bombay, 1950.

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