

Dipak Mazumdar

Labor Supply in Early Industrialization: The Case of the Bombay Textile Industry

Labour Supply in Early Industrialization: the Case of the Bombay Textile Industry

BY D. MAZUMDAR

THE Bombay textile industry was one of the earliest examples of the establishment of modern factories in an "underdeveloped" agricultural country, and it rapidly became a major employer of labour in the region concerned. At the same time, as we shall see, the industry evolved an extremely original, and possibly unique, system of labour utilization, to accommodate itself to the peculiar supply conditions of migrant labour from the rural sector. Section I of this paper sets out what has appeared to students of this subject to be the crux of the problems of labour supply to the Bombay textile industry. In Section II I shall briefly review what I understand to be the various solutions to this problem proposed so far, including that by Prof. Morris David Morris in a recently published book.¹ I will turn to a more positive analysis of this system, and the light it throws on the nature of the labour supply to this market, in Section III, and I hope this analysis will provide a satisfactory solution to the apparent paradox of the labour market.²

I

The Bombay textile industry, which started with its first mill in 1856, was established in an urban area with a sizeable population. In 1864 while the city's population was about 817,000, the total employment in the cotton mills was not much more than 6,000. However, the rate of expansion of employment in the industry was dramatic, through the latter part of the nineteenth century, and by 1906 the industry was employing over 100,000 workers—rather more than 10 per cent of the total population of the city.³ In spite of the rapid increase in the demand for factory workers in textiles, there seems to have been a permanent surfeit of labour. The evidence of labour officers and committees for even very early years of the industry suggested that there was never any problem of securing adequate numbers of workers as raw recruits to the factories. Prof. Morris has referred to the unmistakable evidence on this point in the documents of the period.⁴

¹ Morris David Morris, *The Emergence of an Industrial Labour Force in India* (Berkeley and Los Angeles, 1965).

² My work on this subject was originally done for my doctoral dissertation 'Factors in Wage Disparities between Agriculture and Industry in a Developing Economy' (unpublished Ph.D. dissertation, Cambridge University, 1958). A largely theoretical article based on the Bombay evidence was published: 'Underemployment in Agriculture and the Industrial Wage-rate', *Economica* (November, 1959). The material has now been brought up to date and will form part of a larger work on labour in underdeveloped countries to be published in the near future.

³ Figures on population are to be found in the Census Reports. Employment figures in the cotton mill industry are presented in Morris, *op. cit.* Appendix II.

⁴ *Ibid.* Chapter 3, Section 3.

When there was a period of temporary shortage of labour it was generally caused by natural disasters, e.g. the outbreak of bubonic plague in 1897. And periods of rapid expansion of textile employment, such as that which took place in the twenty years preceding 1891, and again the 40 per cent increase that occurred between 1914 and 1922, did not put any upward pressure on real wages.

There is one other piece of evidence about the surfeit of labour in the market, which Prof. Morris does not mention, but which would seem to be conclusive. This is the peculiar system of labour utilization in the textile industry, known as the *badli* system. The *badlis* were literally substitute labour. In effect, they constituted a casual wing of the labour force — labour that was employed on a day-to-day basis much as in the docks — alongside a permanent “core” of workers paid on a monthly basis. Every morning the “substitutes” gathered in front of the mill gates and were hand-picked by the jobbers responsible for the recruitment of labour. There was no guarantee that a “substitute” appearing at the mill gate would get a day’s work. In fact, there was evidence of considerable underemployment among such workers. Thus the supply of potential recruits to industry was well in excess of the demand on an average day; and the fact that this system of labour utilization became a permanent feature of the industry suggests that the state of excess supply of labour was a normal one.

We have no historical evidence as to when this system of substitute labour came into existence, but there can be no doubt that it existed over most of the life of the industry. An official witness clearly referred to the system in his written evidence to the Royal Commission on Labour for 1892. He wrote: “In the whole matter of Bombay factory labour three blemishes strike me:

- (a) the delay of wage payments
- (b) the evil housing of workers
- (c) the floating residuum of mill hands.

For the floating residuum of mill hands which the Senior Inspector of Boilers put at the startling total of 25,000, no remedy seems apparent.”¹

The statement indicates that by 1892 the floating reserve of “substitutes” had come to be an important part of the labour market scene: the pool was more than a third of the average full-time employment (which was then some 65,000). There was reference to the system in the evidence presented to the factory commission of 1908,² and extensive discussions about substitute labour in the evidence given to the Tariff Board Enquiry into the textile industry in 1927.³

In spite of the general evidence of abundant labour and the specific evidence of the *badli* system pointing to an excess supply of labour at the going wage, there are also important indications that the Bombay textile industry experienced a scarcity rather than surfeit of labour. Prof. Morris has referred to the volume of comments on the labour supply situation before the First World War as “chaotic”,⁴ complaints about “veritably a labour famine” existing side by side with testimonies about the adequate supply of labour. The Indian Factory Labour

¹ Letter from the Collector of Land Revenue, Customs and Opium, Bombay, to the Chief Secretary to the Government, *Royal Commission on Labour* (Parl. Papers, 1892, xxxvi), p. 129.

² *Indian Factory Labour Commission*, (P.P. 1908, LXXIV), Part II, p. 76.

³ *Report of the Indian Tariff Board: Cotton Textile Industry Enquiry*, Bombay, 1927). See particularly the oral evidence of the mill owners in *Evidence*, II, 298.

⁴ Morris, *op. cit.* p. 59.

Commission of 1908 stated categorically in its Report: "The position of the operative has been greatly strengthened by the fact that the supply of factory labour is, and has been, inadequate; and there is, and has been, the present competition among employers to secure a full labour supply."¹ The conventional view among students of Indian economic history on the labour supply question was formed by a frequently quoted passage from the *Report of the Royal Commission on Labour*, 1931:

Throughout the greater part of its history, organized industry has experienced a shortage of labour. Towards the end of the nineteenth century, after the plague epidemics the difficulties of employers were acute, especially in Bombay—speaking generally, it would be true to say that the turning point came during the last five years. Up to that stage, labour tended to have the upper hand in that there was competition for its services; since then the tendency has been for workers to compete for jobs.²

Turning to the level of wages in Bombay factories, evidence is available from a very early date that it was higher than in comparable occupations. Thus in 1892 the Collector of Customs informed the Royal Commission on Labour of 1892, in response to the criticism of the Chief Inspector of Factories about the constancy of factory wages: "The point which Mr. Moos seems to me to miss is that though factory wages have not risen they have continued greatly in excess of the wages the worker seems to have been earning or can earn in any other employment."³ Sixteen years later, the Indian Factory Commission confirmed this statement: "The wages of operatives in textile factories vary from place to place, but are everywhere considerably higher than those earned by the same class of men in other employments."⁴

Perhaps the best indication of the level of wages in the industry is to compare it with the wage rates in the rural areas from which a large proportion of the industrial workers came. The available data are studied from this point of view and presented in the Appendix. It would appear that for much of the period before the First World War the wage level in Bombay factories was nearly 150 per cent above the rate for rural field labour in the most significant catchment area for the mill workers. It is true that the cost of living was certainly higher in Bombay than in the rural areas, so that the wage differential in real terms was less. But the difference in the cost of living could not have been anything like the extent of the wage gap. A study by the author for the year 1954-5, when reasonably firm data were available, showed that the budget of a typical agricultural worker cost 45 per cent more in the city while the budget of an urban industrial worker cost 32 per cent less in the country.⁵ Another point to remember in this connexion is that whereas a full-time worker in the Bombay factories would secure regular and continuous work, employment for rural field labour would be intermittent.⁶

¹ *India Factory Labour Commission* (P.P. 1908, LXXIV), Part II, p. 543.

² *Report of the Royal Commission on Labour*, 1931 (Calcutta, 1931), p. 21.

³ *R.C. on Labour* (P.P. 1892, XXXVI), p. 128.

⁴ *India Factory Labour Commission* (P.P. 1908, LXXIV), para. 28.

⁵ See Mazumdar, 'Factors in Wage Disparities', chapter II.

⁶ No data are available on this point before 1950-1, The *Agricultural Labour Enquiry* of the Government of India revealed that the number of days of employment secured during the year by a male agricultural

We can conclude, therefore, that although the wage level in the Bombay textile industry showed remarkable stability over long periods it was maintained at a level substantially higher than the alternative earnings of labour in the rural sector. Moreover, the stability of wages in the face of rapidly expanding employment is further proof of the level of wages being "high", as is the excess supply of labour, and particularly the formation of the reserve force of "substitutes". But then the paradox emerges: if there was indeed a surplus supply of labour, what caused the maintenance of wages at this level?

It might be possible to argue that although wages were higher than the alternative earnings of labour, employers never felt the pinch of the high cost of labour, either because wages were low relative to the value productivity of labour in modern industry or because labour costs were not important compared to other costs. In fact, however, the historical evidence suggests that there were several periods when employers were acutely conscious of labour costs. There was considerable restlessness among textile employers about the wage situation after the initial boom which ended around 1890. The Royal Commission on Labour for 1892 reported that profits "have fallen considerably during the last 30 years, and if it continues the present rate of wages must be reduced".¹ Again, in 1927 the Indian Tariff Board made a detailed inquiry into the conditions of textiles which were going through a period of economic depression. The Report of the Board clearly revealed that all was not well with labour as a factor of production: it laid great stress on the high cost of Bombay labour; made suggestions at considerable length on possible methods of improving labour efficiency; and concluded that wages could not reasonably be reduced, since an attempt to do so had led to widespread strikes in 1925.²

II

This then is the crux of the paradox of the textile labour market: in spite of evidence of excess supply of labour, there was an undercurrent of complaint of labour shortage, high wages, and high labour cost per unit of output. The traditional solution of this paradox is the "instability thesis". Starting with the fact that textile workers were mostly migrants from the agricultural sector, a widespread notion was built up that labour was not firmly committed to industrial work, even when it was available in abundant quantity.³

A reading of the historical evidence on the subject, however, quite clearly suggests that the "instability thesis", if it is applied to the bulk of the Bombay labour force rather than to a section of it, is patently false.⁴ Even the Royal Commission on Labour of 1931, which leaned towards an acceptance of the "instability thesis", was careful to point out that "the factory population cannot be regarded as composed of a mass of agriculturists serving a short term in industry,"⁵ And the Labour Investigation Committee of 1944 confirmed this conclusion.

worker was 181 for 1950-1 and 217 for 1956-7, in the area concerned. (*Reports of the First and Second Enquiry*, Simla, n.d.).

¹ *R.C. on Labour* (P.P. 1892, xxxvi), p. 105. ² *Report of the Indian Tariff Board*, 1, 133-45.

³ See Morris, *op. cit.* pp. 84-5, especially note 3 for references.

⁴ Morris, *op. cit.* Chapter v, and Mazumdar, 'Factors in Wage Disparities', p. 157.

⁵ *R.C. on Labour* (Calcutta, 1931), p. 13.

Although most of the workers in the sample of 679 interviewed visited their village homes regularly and many owned some land, they took no part in agriculture; the average number of their rural visits in the previous twelve months was 1.06 and the average duration no more than 20.9 days.¹ Length-of-service data which were available for as early a date as 1927-8 showed that only 37.5 per cent of the sample investigated had worked in the Bombay cotton mill industry for less than five years, and this group obviously included quite a few "freshers".² The same sample inquiry found that nearly half the workers had been employed in only one mill in their career, and 47 per cent had been in service in the current mill for more than five years.

While the available evidence does not support the myth of a floating mass of labour with a high turnover in the Bombay industry, there was a serious complaint that the industry suffered from the incidence of a related but distinct phenomenon—that of absenteeism, i.e. the practice of regular workers absenting themselves from work without formal leave or notice. The pre-war average rate of daily absenteeism was in the region of 10 per cent of the labour force, which is high. Even so, there are reasons to believe that the official figures might have been exaggerated,³ and a study of 1926 showed that nearly half the operatives worked full time in the month of the investigation, while those missing one, two, and three days of work in the month accounted respectively for 17, 10, and 6 per cent of the work force.⁴ The problem of absenteeism then was not of vast proportions, nor did it affect a large body of workers.

A second approach to the solution of the paradox is along lines that make a distinction between skilled and unskilled labour—a co-existence of surplus unskilled workers with scarce skilled labour. This plausible idea, however, begins to look inadequate when one reflects on the evidence of S. D. Mehta, the official historian of the cotton textile industry, that unskilled occupations accounted for a "very high proportion probably exceeding 90%" of the labour force, and that this "was particularly so during the early years when the industry spun more yarn than it could weave in its own sheds and was confined to a production structure that was both plain and coarse".⁵

In fact, a low level of skill formation required of the labour force is the normal response to the market conditions one would expect in a newly industrialized area. When there is a potential shortage of skill the volume of machine work, instead of being carried through by a small group of carefully selected and trained operatives, tends to be spaced out over a large number of workers with lower skill. Thus, in the spinning section of the Bombay industry the number of spindles looked after by each operative in 1927 was only 180. In Japan it was 240, in England 540 to 600, and in the U.S. 1,120.⁶

Detailed data giving distribution of workers by the level of earnings is available

¹ *Main Report of the Labour Investigation Committee* (Delhi, 1946), p. 96.

² *Bombay Labour Gazette*, ix, 5 (Jan. 1930), 457-61. ³ See, on this point, Morris, *op. cit.* pp. 92-6.

⁴ *Report on an Enquiry into Wages and Hours of Labour in the Cotton Mill Industry* (Government of Bombay, 1926), p. 77.

⁵ S. D. Mehta, 'Professor Morris on Textile Labour Supply: A comment', *Indian Economic Journal*, 1, 3 (January 1954), 333.

⁶ *Report of the Indian Tariff Board*, p. 136. In India the spinning operatives, moreover, were male, while they were mostly female in the other countries.

for the first time for 1926.¹ The following statistics can be extracted from the available data for male operatives in Bombay:

Category	Rupees
Average monthly earnings of "Coolies" (unskilled workers doing heavy work):	24·4
Average monthly earnings of all male workers:	37·6
1st Quartile of earnings distribution for all male workers:	24·2
Mode of earnings distribution for all male workers:	25·0
Median of earnings distribution for all male workers:	30·8

It is seen that because of the skewed distribution of earnings the overall average male earnings were 50 per cent above the unskilled average. But the first quartile and mode of the distribution was more or less on the same level as the unskilled wage, while the median was no more than 25 per cent higher. The wage data thus support the point that the degree of skill formation among a large proportion of the textile labour force was low. Consequently, any attempt at a solution of the paradox of the labour market making a distinction between unskilled and skilled workers is not going to be successful.

In his book Prof. Morris leans towards a thesis which seeks to explain the paradox, not in terms of the peculiarities of the supply of labour to the market, but of the attitudes and policies of management regarding the administration of the labour force. Labour was available in sufficiently elastic supply and with sufficient commitment to industrial work, but the methods of recruitment and administration of labour were not of the type needed to develop a "structured" and disciplined labour force. The central factor in the casual organization of the labour force was the dependence of management on the jobber system. The jobbers were intermediaries selected from the ranks of workers. Originally they were presumably employed to bridge the cultural and linguistic gap between foreign managers or supervisors and the rank and file of workers. But they continued to flourish as intermediaries even after Indians had taken over positions in mill administration. They were primarily responsible for the recruitment of new workers. To a large extent the enforcement of work discipline was also their responsibility. There is a widely held view among most students of the subject that the management's dependence on the jobber led to unsatisfactory recruitment and slack discipline inside the mill. It was a common practice for workers to pay bribes to jobbers when obtaining work, so it was in the interest of jobbers to have a rapid turnover of labour in the mills.

The importance of the jobber system in the history of the recruitment and utilization of labour in the Bombay textile industry cannot be denied. But whether in fact the jobber encouraged a less trained and disciplined labour force than was possible to achieve at the time, given the conditions of the labour market, is a more debatable question. This problem will be dealt with at a later stage. First, however, it is necessary to go further into the *badli* system of labour utilization in the Indian textile industry.

III

In fact, one of the major gaps in the literature of the labour market for Indian industry is the very limited amount of quantitative information available about

¹ *Report on an Enquiry into Wages and Hours, 1926*, op. cit., Table XIII, p. 115.

the *badlis*. Indeed, really firm data on even the *extent* of casual employment in Bombay textiles has become available only recently after the decasualization scheme was introduced in 1947. In 1946-8 the ratio of *badli* employment to total employment was reported to be about 16-18 per cent.¹ For earlier periods the only official statistic I have been able to find is for May 1934. The Bombay Labour Office, in the course of conducting a wage census, asked all mills in Bombay to state the number of substitutes who were taken on in the census month, and each substitute was counted only once irrespective of the number of times he acted.² The percentage of substitutes to the total number employed (i.e. on the permanent payroll) came to 27-28 per cent; the ratio of *badli* employment to total employment would necessarily be smaller than this, because the average *badli* got less than full-time employment. An inquiry at a much later date (1963) provides the only firm information on this point - and gives the average under-employment among *badlis* at about 33 per cent.³ If, in fact, they secured on the average two-thirds of full-time employment in May 1934, then the ratio of *badli* employment at this date would have been of the order of 18 per cent—much the same level as reported for 1946-8. Some data were collected by M. N. Shah for the years 1939-40. Shah found that the percentage of *badli* employment for the mills surveyed was highest for the months of April-May at about 30-33 per cent; it was also high for December-January, but the figure generally did not fall below 20 per cent in any month.⁴

I shall now turn to a discussion of hypotheses which can explain the Bombay textile industry's historical and continued dependence on a substantial casual wing, under conditions of an apparent excess supply of labour in the market.

Any system of casual labour has two aspects that need to be explained: on the one hand, a primary demand for a certain volume of labour that it is profitable to hire on a casual day-to-day basis; on the other, the maintenance of the wage-rate at a level higher than the alternative income of job-seekers coming into the market. Given the differential between the supply price of labour and the wage rate a volume of labour is drawn into the casual labour market in excess of the total demand for casual work. The available volume of casual employment tends to get distributed among the job-seekers with everybody getting less than full employment. Given chance selection, where every job-seeker has an equal chance of being selected, the total volume of labour drawn into the market will be such (and the average degree of underemployment will be such) that the average income of a casual in the market will equal the marginal-supply price of that volume of labour.⁵

¹ Data collected by the Bombay Millowners' Association, quoted by Ralph C. James, 'Labour Mobility, Unemployment and Economic Change', *Journal of Political Economy*, LXVII (1959), 553.

² *General Wage Census, I, Third Report* (Bombay, 1934), p. 20.

³ 'An investigation into socio-economic life of a *badli* worker', *Bombay Textile Research Association Report, No. 4*, 1963, p. 7. Information is given about the frequency distribution of *badlis* with respect to the number of days worked per month (during the year 1963). The modal group (42 per cent of the *badlis*) was 16-20 days. This is roughly the degree of underemployment that can be calculated indirectly for 1946-53 from the records of the Bombay Millowners' Association. See Mazumdar, 'Factors in Wage Disparities', pp. 124-8.

⁴ M. N. Shah 'Labour Recruitment and Turnover in the Textile Industry of Bombay' (unpublished Ph.D. dissertation, University of Bombay, 1941), p. 106.

⁵ For an analysis of the casual labour market, see W. H. Beveridge, *Unemployment: A Problem of Industry* (1909).

The institutional hypothesis

The hypothesis which one is tempted to suggest as answering both these questions, in the case of Bombay textile labour, is the institutional maintenance of the wage-rate. This is particularly so as, quite clearly in the industry as it exists today, the system of labour utilization (including the *badlis*) can be explained only in institutional terms. Since 1948 the wage-rate in the industry has been fixed by state regulation, which also lays down a certain number of fringe payments that have to be made to the permanent workers. There is wage discrimination against the *badlis* because they are not entitled to these fringe benefits or the annual bonus. Also, a permanent worker has a privileged status as far as his tenure of employment is concerned. No worker can be deprived of employment by a factory without an elaborate process of justification before state labour tribunals. In a period characterized by technological change the advantage of keeping a part of the labour force as a temporary wing is therefore very marked.¹ At the same time the system of registration and regulation of the *badlis* under the state-sponsored decasualization scheme has probably reduced the difference in efficiency between the permanent and *badli* workers. The fact that *badlis* are willing to work with only an average of eighteen days' employment in the month and with limited prospect of promotion to the permanent cadre reflects the difference between the supply price of textile labour and the institutional wage.

No such strong institutional influence can, however, be found for much of the history of the textile industry in Bombay, although, as we have seen, the *badli* system is a very old one. The first representative union seems to have been formed only in 1925, and it was reported that about half the workers in Bombay were covered by trade unions in the early 1930's.² But there was no permanent effort at wage settlement. As the memorandum of the Bombay Government for the Royal Commission on Labour stated: "The law of supply and demand in conjunction with custom, appears to have been the basis of wage fixation so far as the existing rates of wages are concerned."³ But although collective bargaining was unknown, strikes and industrial action were common in Bombay, and it may be suggested that, even in the absence of a formal machinery, the organized influence of workers (or the threat of industrial action) did affect the wage level over a period of years. What is the historical evidence on this point?

The history of industrial disputes in Bombay indicates that large strikes on wage issues were important only after the First World War. The Factory Commission of 1908 reported that "While the operatives fully understand the machinery of local strikes . . . they are as yet unable to combine over any large area with the object of securing a common end by concerted action."⁴ It was the rapid rise in the cost of living during the war years, leading to a falling real wage level, that was instrumental in sparking off concerted action on the part of the industrial workers of Bombay. There were industry-wide strikes in 1917 and 1918 which secured for the workers "dearness allowance", although the allowance clearly did not compensate fully for the increase in the cost of living. Only with the fall

¹ For an analysis of the present-day system, see James, *op. cit.*

² *R.C. on Labour* (Calcutta, 1931), Evidence, 5, 31. ³ *Ibid.* 121.

⁴ *Indian Factory Commission*, P.P. 1908, LXXIV, 20.

in the cost of living after the war did real wages begin to rise. They seem to have reached their pre-war level by the early 1920's.¹

The 1920's were marked by four general strikes as workers resisted attempts by millowners to cut wages following the continued fall in the cost of living.² The major strike of 1925 brought in the government, which induced the millowners to withdraw the proposed wage cut in return for the abolition of the excise duty on cloth. When, however, conditions became worse for the industry during the depression, wage cuts were made in 1933-4. The workers tried to resist these cuts through a general strike in 1934, but the strike was never very complete, and although it continued for three months, it fizzled out in the end.³ The wage cuts were, however, not nearly as great as the fall in the cost of living. One index shows that in 1934 the average monthly earnings per worker in real terms stood at a level 30 per cent higher than in 1923.⁴

Turning to the index of the ratio of industrial earnings to the rural wage given in the Appendix, it is seen that it reached a high plateau in the early 1930's, reflecting the fact that the fall in industrial wages lagged not only behind the fall in the cost of living, but also behind rural wages. However, as discussed in the Appendix, the variations in the urban : rural wage ratio for the entire period 1900-37 were small, and by 1937 it had fallen back markedly towards the level of the early years of the century. We conclude, therefore, that the quantitative significance of the upward institutional pressure on wages during the inter-war deflation was small and confined to a limited period. In any case, it cannot explain the gap between the established wage and the supply price of labour that can be inferred from the underemployment of *badlis*. As already mentioned, the *badli* system was well-established before this period.

Another point to note is that the resistance to the wage cuts was not led or even started by trade unions which had successfully organized the workers. It is remarkable how the workers, in spite of their loose organization, were on some occasions able to bring about a general stoppage of the mills for prolonged periods. It might have been expected that the *badli* labour existing in the market—overtly in excess supply and with earnings below the full-time wage—would provide a kind of reserve army of labour making successful strikes difficult to achieve in the absence of powerful trade union organization.

It is interesting to note that in the late nineteenth century, even while there was no general stoppage on wage matters, observers felt that a reduction in wages (which seemed desirable due to the falling profits) would be difficult to achieve without provoking strikes or a general combination of workers on wage matters. The Collector of Customs wrote to the Royal Commission on Labour of 1892:

Hitherto the maintenance of the high level of wages has prevented any serious wage dispute. . . Individual workers allow their wages to be cut for objects which their caste or community hold worthy of support. . . The workers pay willingly. They

¹ K. Mukherjee, 'Trend in Real Wages in Bombay City', *Artha Vijnana* (Golkale School of Economics, 1 (1959), 92-3.

² See, for further details, the Bombay Government memorandum in *R.C. on Labour* (Calcutta, 1931), Evidence, 1.

³ *Bombay Labour Gazette* (July 1934), p. 809. ⁴ Mukherjee, *op. cit.*

understand the object; they trust the agency. They hold aloof from similar subscriptions for wage purposes. They have no experience of an influence that can unite stranger and unconnected workers. . . . So long as wages maintain their present level the workers seem to me to show both shrewdness and sense in refusing to commit themselves to the burden of a general combination. At the same time any attempt at a widespread lowering of wages seems to me not unlikely to overcome this distrust. If leaders are forthcoming a widespread and resolute combination seems to me not improbable. Unless losses have beforehand closed several mills and abnormally increased the competition for work, the opposition to any general reduction of wages seems likely to be general and to prove hard to overcome.¹

It will be recalled that in the same testimony the witness referred to the very sizeable body of the "floating residuum of mill hands" who constituted the pool of substitute labour. It is evident that the permanent workers in the textile industry were in some sense a pre-selected group who could not be so easily replaced by freshers from the floating mass of *badli* labour and who, could, therefore, enforce the maintenance of wages at a relatively high level without the support of formal institutions.

This non-homogeneous character of the labour supply may in fact provide a clue to help explain the problems already outlined. Before proceeding, however, it is necessary to specify the nature of the apparent non-competitiveness of labour. Reading through the statements and evidence submitted by the employers to the various commissions of inquiry on textile labour leaves one in no doubt that it was connected with the question of the stability of the labour force. As an example, the following passages occur in the short section on labour in the written memorandum of the Bombay Millowners' Association to the Tariff Board Enquiry Committee of 1927.² "The *badli* system materially affects efficiency in Bombay mills. Unfortunately the system has to be adopted to fill up the gaps caused by wholesale absenteeism." "We do not think that continuity of labour supply can be secured by the grant of bonuses or the institution of provident funds. These methods have been tried in Bombay, but have contributed nothing towards the solution of the labour problem owing to the migratory habits of the workmen." "There is no reasonable prospect of training operatives to attend more spindles and looms in the near future, but if a permanent factory population existed in Bombay something might be done." In these passages the millowners reveal clearly that the problem of inefficiency of labour was seen to be basically a problem of instability of the labour force—and in their minds the *badli* system of casual labour was linked with this problem of instability.

The dual nature of the labour supply to the textile industry was noticed and commented upon by other contemporary observers. For example, a Labour Officer in his evidence before the Royal Commission on Labour stated that there were various types of workers in the Bombay industry³:

- (i) only a small proportion of the mill population is permanently settled in Bombay;
- (ii) the majority of the mill population who depend almost entirely on the mill industry

¹ Letter from the Collector of Customs in *R.C. on Labour* (P.P. 1892, xxxvi, e), 128.

² *Report of the Indian Tariff Board* (1927), *Evidence*, II, 138-9.

³ *R.C. on Labour* (Calcutta, 1931), *Evidence*, II, 192.

for their livelihood visit their village homes every year for change and rest—necessarily for one or two months. Most of them have ancestral houses and have relatives in the villages.

- (iii) Those on the other hand who take factory work as supplementing agricultural income have their families stationed in the villages, and return home far more frequently. Their usual stay in Bombay is only about eight months.
- (iv) The agriculturists who take up factory work at intervals of some years cannot be said to belong to the permanent labour force. They spend more years in agricultural work than in mill work in the City.

If, then, the supply of labour to the textile industry consisted of two basic types—the stable and the unstable from the point of view of commitment to industrial work—we have to see how far such heterogeneity could answer the two main problems about the *badli* systems, namely: the existence of the gap between the full-time wage of permanents and the supply-price of *badlis*; and the employment of a substantial proportion of the workforce as *badlis* on a casual day-to-day contract.

Explanation of the earnings-disequilibrium

The preference employers would have for a stable and committed labour force, suggests that its demand price would be greater than that for non-stable labour: employers would be willing to pay a higher wage for stable labour because of its higher productivity.¹ This, however, could not explain the establishment of the wages for such labour at a level higher than the supply price of the general mass of non-stable labour. Such an outcome would be conceivable only if, along with its high demand price, the supply price for stable labour was also at a higher level. And this in turn might be so if, for example, the bulk of the stable labour was composed of migrants who settled in town with their wives and children at least for their working life in the factories, while the non-stable labour supply was largely that of individual migrants coming to the urban area as “visitors” or “target workers”; and if, further, the supply price of family migrants was at a higher level than that of individual migrants.

The importance of the connexion between family migrants and stable labour is clear from the fact that as late as 1931 the proportion of mill hands born in Bombay was still only 26 per cent, compared to 10 per cent in 1911. Moreover, migrants were not on the whole recruited from the immediate vicinity of the city: most came from rural districts between 100 and 200 miles south and west of Bombay. A sizeable group (12 per cent of the migrants in 1931) came from the United Provinces over 750 miles away—an area which the millowners had an eye on as a possible recruiting area as early as 1897.² (This situation can be contrasted with the experience of industrial development in many African cities, where labour stability seems to have been achieved with individual migrants recruited to urban areas from the immediately surrounding countryside—a type

¹ The cost of non-stable labour has been widely studied for African urban labour. See the study of a Natal Dunlop Factory which came to the conclusion that because of the migratory characteristics of native labour, the productivity of native labour came to only 29 per cent that of a European worker, while the possible productivity of a responsive native was as high as 81 per cent—*African Factory Worker*, University of Natal, (1950), ch. v.

² Cf. Morris, *op. cit.* Table VI-VII, p. 63. On U.P. as a source of labour, see *ibid.* pp. 54-5.

of labour which is perhaps more properly called commuter rather than migrant labour.¹)

Turning to the supply price of family migrants, it could be expected to be significantly above the supply price of individual migrants for at least three different reasons.

First, the cost of movement and rent in town would be much larger for family migrants.

Secondly, in many family farms the marginal product of an individual worker would be quite low in particular seasons, or over a period of his working life when he is a secondary earner in the farm household. In such cases if the individual migrant is interested in his personal income maximization, then his supply price will be the income *per capita* of his farm family. But if he is interested in improving the income position of his household then he will migrate as long as he can cover his subsistence cost in town (assuming no income transfer from the village to the farm), for while the family loses to the extent of his marginal product it gains a larger amount equal to the *per capita* consumption of the farm family. In either case, the supply price of a permanent family migrant would be the "long-term" income *per earner* of the farm which will be necessarily higher.

Thirdly, in the Bombay region the earning strength of the family was much lower in the city than in the rural areas, because adult women and even sometimes children helped with the agricultural work, whereas the employment of women in the city has always been severely restricted.² A family moving permanently into the city had then to be compensated for the loss in earning strength, and would have a supply price higher than the income *per earner* in the agricultural sector.

If then the supply price of family migrants was higher than that of lone migrants, and employers found that their higher cost was more than offset by the higher productivity of stable labour, we would expect the wage level for permanent workers to be established at the relatively higher supply price of family migrants. At the same time, if there was some opportunity for employment of temporary migrants in a section of the labour force (the reason for which will be examined below), an unstable labour force of lone migrants would be drawn into the market so as to secure equilibrium between their lower supply price and their earnings. Thus the co-existence of the two levels of earnings for the two sections of the textile labour force could be explained.

The historical evidence required to substantiate the hypothesis just presented would have to show first, that the casual wing of the labour force was distinguished from the permanent core with respect to both its stability and the family status of the migrants composing it; and second, that the supply price of lone migrants as reflected in their earnings was significantly lower than that of the more stable family migrants.

¹ Cf. Walter Elkan, *Migrants and Proletarians* (Oxford, 1960), ch. 10.

² A family budget inquiry among industrial workers in Bombay City in 1932, for instance, reported that the average numbers of earners in the family were 1.19 men and 0.34 women. (Bombay Labour Office, *Enquiry into Family Budgets of the Working Class in Bombay City* [1932], p. 11). Another inquiry in 1944 gave the number of earners per family in Bombay City as 1.28 males and 0.24 females (*Family Budget Enquiry*, [Govt. of India, 1945], p. 15). As against this the modal earning strength in the agricultural labourer's family was two—the adult female forming a part of the labour force: *Rural Manpower* (Govt. of India, 1951), p. 77.

Although some individual migrants might indeed have been potentially stable labour, the main argument will be unaffected so long as the *bulk* of the stable labour were family migrants. In fact, the evidence about the two sections of the textile labour force both as regards the family status of the migrants and their stability seem to be consistent with the hypothesis offered. While we would expect that a typical migrant wanting to work in the textile industry would, in the first instance, come on his own and do a spell of work as a *badli*, in the hope of securing a permanent job and sending for his family, scattered references in the literature also point to the great instability of *badli* workers. M. N. Shah who went through the *badli* records of a few mills found that: "Two substitutes have to be kept ready for the average employment of one per day in the case of monthly shift, but this figure . . . goes as high as eight when the annual shifts among the substitutes is taken into account."¹ Contrasted with this we have already underlined the picture of relative stability found among the permanent textile workers from an early date. Further, the labour force of Bombay has always been composed of a disproportionate number of male workers, signifying the predominance of temporary migrants (between 1901 and 1951 the number of females per 1,000 males averaged only about 580 at each census). Finally, evidence accumulated in the family budget surveys conducted by the Bombay Labour Office also suggests that migrants with families were an important part of the permanent factory labour force from an early date. Although based on an unsystematic sample, the 1921 survey collected 2,473 working-class family budgets as against 603 single men's budgets.² There was another inquiry into family budgets in 1932, which was confined to a sample of "households". A third sample survey of families with permanent industrial work was undertaken in 1944. And this Report estimated that, of all the workers living in the predominantly working-class areas of Bombay, about 20 per cent were living singly.³ The proportion has a close resemblance to that of single men's budgets collected in 1921. (The average size of the family in the 1944 inquiry came to 3.96 persons of whom 1.37 were adult males, 1.30 adult females, and the rest children.⁴)

It can therefore be safely concluded that in spite of the predominance of lone male migrants in the labour force of Bombay city as a whole, the *permanent* workers in organized industry (which was dominated by the textile industry) were from an early date largely made up of family migrants. This could have come about only through a process of selection of stable workers in industry, who were induced to settle with their families in town in response to the relatively high wages offered.

Turning to the question of the supply price and earnings of the two types of migrants, it will be remembered that there was a substantial gap between the average daily earnings of the permanent workers of the Bombay textile industry and the average daily wage rates of field labour in the rural areas from which the migrants came. A significant part of this gap can be explained when we remember

¹ Shah, *op. cit.* p. 110.

² G. Findley Shirras, *Report on an Enquiry into Working-Class Budgets* (Labour Office, Govt. of Bombay, 1923).

³ S. R. Deshpande, *Report of an Enquiry into Family Budgets of Industrial Workers in Bombay* (Government of India, 1946), p. 5.

⁴ *Ibid.* p. 9.

that the bulk of the permanents were family migrants whose earner-dependent ratio was lower in the city. In fact, the fall in the earning strength of the family, the higher cost of living in town and the differential due to skilled workers would *each* account for significantly higher earnings for the permanent workers compared to rural wages. We have also seen that an excess supply of substitute labour resulted in a considerable degree of underemployment among the job-seekers. Unfortunately, measures of the degree of underemployment among substitutes are only available for the post-1950 period, when they were found to be employed for only about two-thirds of the working days in a month. Since complaints about wage discrimination against substitutes are rare, the gap between their earnings and those of the permanents has to be accounted for largely in terms of the underemployment of the former rather than of a differential wage structure within the industry. From this viewpoint, therefore, in so far as lone migrants were predominant among the substitute workers the gap in earnings of the two sections of the textile labour force is consistent with the hypothesis offered regarding different supply prices for the lone and family migrants. In addition, however, there are two pieces of direct evidence concerning the lower supply price of temporary lone migrants.

The first must be seen in the context of the fact that in periods when the marginal product of a lone migrant from a family farm is below the consumption *per capita* of the family, the family will gain from his departure — as long as he is able to meet his cost of subsistence in town. In this respect, the Indian Factory Commission of 1908 estimated, while it was customary for a single migrant to lodge with a family or with other male workers who had a female member doing the household duties for the group, the “general rate [in Bombay] for board and lodging, where the boarders with their host and his family share one room, is apparently Rs. 6 a month for an adult and about Rs. 5 for a youth.”¹ Since the average monthly earnings for a full-time worker in the textile industry at this date was Rs. 15·36 there was obviously a fairly large gap between the wage level established in the industry and the supply price of an important category of lone migrants.

The second piece of evidence relates to the possibility that the wage level in the organized industry is set by the relatively higher supply price of permanent family migrants, while in other occupations in the same urban market, the connexion between stability and efficiency will be weak, so that in some it may not even be possible to develop a stable labour force. The lone migrants with their lower supply price will then be predominant in these sectors of the labour market, and their earnings will be significantly lower than the wage level in organized industry. Although wage data outside the organized industry in Bombay are very difficult to find the Factory Commission of 1908 suggested that the earnings and the living standard of textile workers were significantly higher than those of other urban labourers: “In Bombay City, where efforts have been made to obtain accurate mortality returns, it has been found possible to compare the death-rate of factory operatives with that of general labourers . . . the average mortality per 1,000 of the population for the seven years 1900–06 (for all causes) is 31·58 for general labourers and 18·45 for factory operatives.”²

¹ *Indian Factory Labour Commission* (P.P. 1908, I.xxiv), p. 29.

² *Ibid.* para. 33.

Official statistics on earnings in the non-factory sector of Bombay are available for the first time for 1936—and that for retail trade only. The data on earnings distinguish daily from monthly-paid personnel. One would expect that the employees on a daily contract would contain a larger proportion of casuals. The frequency distribution of earnings for the two categories are given below (in percentage):

For workers on a monthly basis:¹

<i>Below Rs. 5</i>	<i>Rs. 5-10</i>	<i>Rs. 10-15</i>	<i>Rs. 15-20</i>	<i>Rs. 20-25</i>	<i>Rs. 25 & above</i>
2·10	11·40	11·84	14·69	12·00	48·10

For workers on a daily basis:

<i>Below As. 8</i>	<i>As. 8-12</i>	<i>As. 12-R. 1</i>	<i>R. 1-1·25</i>	<i>Rs. 1·25 & above</i>
10·90	23·64	22·80	16·62	25·04

The earnings of an *unskilled* factory worker at this date ranged between Rs. 18 and Rs. 20 per month, or about 12 As. per day. Thus more than 30 per cent of the workers in retail trade had earnings below the unskilled wage in the organized textile industry.

In summary, then, the difference in the levels of earnings between permanent factory operatives, on the one hand, and the substitutes in the casual labour market and the earners in the trade sector, on the other, is consistent with the hypothesis of a gap in the supply prices of lone and family migrants. However, it still remains to offer an explanation for the continued existence of the casual wing of the labour force—and it is to this problem that we now turn.

Explanation of the casual wing of the labour force

The traditional explanation of the employment of a large volume of *badlis* alongside the permanent core was that the former were needed to substitute for daily vacancies created by unpredictable "absenteeism"—and since such vacancies were only known on the day, the casual daily contract was the only one that could be adopted. This view, however, does not stand up to scrutiny. First, the average percentage of absenteeism seems to have been a good deal less than the percentage of *badlis* employed—10-12 per cent of the workforce as against 20 per cent or more of *badlis* employed. Secondly, if over a period of time the percentage of absenteeism could be known with some certainty, then the day-to-day vacancies due to this phenomenon could have been filled by having extra hands on the payroll equal to the expected percentage of absentees. Since "no work no pay" was the general rule, the system would not have added to the wage bill. The Tariff Board Enquiry of 1927 actually recommended that a system like this should be adopted to make the textile labour force more permanent, but the industry did not accept the recommendation. In any case, the fluctuations in absenteeism were not sufficiently great to justify the use of the *badli* system rather than a permanent labour force.

A second possible hypothesis relates to the inelasticity of supply of permanent workers. Although the textile industry gained by having a permanent core of its labour force made up of stable family migrants with a relatively higher supply

¹ *Report on an Enquiry into Wages, Hours of Work and Conditions of Employment in the Retail Trade of some Towns of Bombay Presidency* (Bombay Labour Office, 1936), Appendix B.

price, it was not necessarily the most profitable solution for it to employ *only* stable labour. Temporary migrants, available at a lower supply price, could be used with a stable core provided they could be employed at a lower cost. It is, however, reasonable to expect that as more and more temporary labour was added to a given volume of the stable core, the marginal cost of employing an unstable worker would increase as the efficiency of the labour force decreased. The two types of labour would then be used in such proportions as to equate the marginal cost of employing an additional worker of each type. Given the migrating nature of the unstable component, the casual day-to-day contract would seem to be an effective method of making use of such labour. Now, even though there is not much evidence of wage discrimination against the temporaries, the marginal cost of employing a temporary could be lower than that of a permanent, even with no wage discrimination, if, for any volume of permanent labour, the wage rate had to increase to attract more permanents. Temporary labourers would, of course, be in perfectly elastic supply if they were paid the wage needed to attract a volume of permanent labour, since their supply price was so much less. They would then be used for a given volume of permanent labour, with diminishing efficiency, until the point where the marginal costs of employing the two groups was equalized.

On this view temporaries were employed as *badlis* partly because *at the going wage* permanents were in short supply to meet the labour demand in the industry. It may be misleading to think of this purely as a physical shortage, and this brings us to a point which probably provides the most important part of the explanation of the *badli* system - even though the various hypotheses mentioned are not by any means mutually exclusive.

The short supply of permanents may, indeed, not have been one of absolute shortage at the going wage, but rather a shortage of labour of the required skill and commitment to industrial work which the employers required of the permanent wing. We have already seen that the *badlis* were, in some sense, probationaries. Every migrant seeking a permanent job in the textile industry had to gain entry by first serving a period as a *badli*. The *badli* system could have served effectively as a system of recruitment, giving an opportunity to the hirers to screen the job-seekers and select those showing the best potentiality for a stable commitment to industrial work. This hypothesis is supported by several points of consideration.

First, it conforms with the managements' concern for an adequate supply of labour firmly attached to industrial work and with their complaint before the various commissions of inquiry on this point.¹

Secondly, the hypothesis provides an explanation for the limited wage discrimination against the *badlis*, as shown by the excess supply and under-employment of *badlis* in the casual part of the market. If the *badli* system were to serve as an effective system of screening and recruitment it was necessary to have an excess supply of job-seekers in the casual market from whom the permanents could be selected.

Thirdly, the continued dependence of management on the jobber system of recruitment (to which the reference has already been made)² becomes easier

¹ See p. 486 above. ² See p. 482 above.

to explain if we accept the hypothesis of short supply of stable labour of the "right type". Recruitment difficulties meant that jobbers were needed to keep in touch with and select such men from the floating mass competing for jobs in the industry.¹ The jobber was the person who contacted new recruits from the villages, and helped in their urban settlement during the first months in the city. The jobber thus helped to render the supply of stable labour more elastic than it would have been otherwise. The alternative would have been an elaborate programme of training and registration of workers, so that the "right type" could be selected by reference to objective and carefully determined standards (e.g. period of experience in industrial work). The employment of jobbers for selection purposes, along with the *badli* system, was the substitution of cheaper recruitment methods for a dearer one; while the fact that the jobber was culturally and socially nearer to the workers was an added advantage.

We could go back at this point to the traditional criticism of the jobber system—a system which Morris presented as one of the problems of labour supply in the textile industry. The essence of the argument seems to be that the jobbers tended to benefit from an excessive turnover of labour, because it increased the dependence of job-seekers on them and increased the payments that the jobbers could extract from the migrants in the form of bribes. To that extent the interest of jobbers did not coincide with that of management in providing a "committed" labour force. The pertinent question to ask is: if this was the case why did management continue to depend on the jobber system for so long? In their evidence before the various Commissions of Enquiry millowners invariably defended the jobber system of recruitment, and even claimed it to be indispensable.² It is hard to believe that they would have done so if the system encouraged very much greater instability (and consequent lower efficiency) of labour than was warranted by the condition of the labour market—specially when we remember the reported anxiety of management about the stability of the labour force. Morris agrees that the jobber system was not a system of contract labour: rather, the jobber's role was strictly that of an intermediary. Once a worker was employed in the mill, the jobber's influence diminished rapidly as the former came in contact with other personnel responsible for production.³ If the jobber had encouraged inefficiency of labour, and more efficient substitute labour was readily available, the jobber could have been by-passed.

We conclude that the *badli* system of employing a casual wing of the labour force, and the accompanying methods of recruitment through jobbers, reflected a rational response of employers to the problem of a labour market which contained diverse types of migrants, and from which a body of permanent workers

¹ Cf. Evidence of a millowner to the Tariff Board of 1927 (*Evidence*, II, 347):

"Q. Don't you get any applicants at the millgates?"

A. Every morning we get them.

Q. If that is so, could not the weaving master or spinning master take them on after considerations of their past records?

A. Taking a casual man like that at the millgate—you know nothing about him. Whereas if a jobber gets a man he knows him and the chances are that he will be a more skilled man."

² See in particular the *Report of the Indian Tariff Board* (1927), *Evidence*, II, 347-52.

³ As a representative of the Millowners' Association put it: "The jobber's duty is to get as many men as possible but it does not rest with him to keep them. After all the superiors [e.g. the spinning master] decide whether these men are to be employed or not."—(*Ibid.*, II, 348).

with sufficient stability and attachment to individual work had to be selected. It is, of course, possible that a system once evolved may go on too long through inertia. Towards the mid-1930's as we have seen, real wages had risen through institutional factors, and the rate of increase of employment had also fallen. It was at this time that the Millowners' Association were putting forward tentative proposals for the control and decasualization of *badli* labour. But the situation was changed very soon by the rapid expansion of the war years, and by strong government intervention in the labour market in the immediate post-war period.

IV

The identification of the two basic types of migrant seeking work in the Bombay textile labour market—the temporary individual migrant and the permanent family migrant—would go a long way to explaining some of the apparent paradoxes of the market. Unless this distinction is made, the picture is one of a marked excess supply of labour in the market paradoxically combined with a wage level well above the apparent supply price of labour and continuing complaints of instability of labour. One solution of the paradox would be the traditional thesis of migrants not wanting to make the town their permanent home. In view of the attachment to industrial work of the permanent core of the labour force, one explanation of this puzzle (exemplified by Prof. Morris) is that employers did not develop a “structured” and stabilized labour force out of the plentiful labour available, because of faulty policies of recruitment and labour management. Enough has been said in this essay, however, to show that employers *did* care about and pursue policies towards developing a permanent core of workers attached to industrial work. Wages were set at a high enough level to attract stable family migrants—well in excess of the supply price of temporaries. And the evidence of the stability of this permanent core as early as 1927–8 is impressive. In fact, the excess supply of labour observed in the market is compatible both with the relatively high wage level and with a shortage of stable labour of the requisite type. The excess supply was that of temporary migrants with a lower supply price and much greater instability, and was to be found in the casual *badli* section of the labour market. The fact that the casual wing of the labour force was so important and existed for so long does in itself suggest that stable labour of the type desired by management was not readily available in adequate quantity. The *badli* system was in all probability a system of screening and recruitment of the stable core out of the mass of migrants coming into the labour market.

London School of Economics

International Bank for Reconstruction and Development

APPENDIX

*The Course of the Rural Urban-Wage Differential**Industrial and Agricultural Earnings, Bombay and Konkan, 1900-37*

Year	Bombay	Rural Konkan:	Ratio:	Index of Column (3)
	Industry: average daily earnings (pice) (1)	field labour daily wage (pice) (2)	(1) to (2) (3)	1900 = 100 (4)
1900	90·76	37	2·45	100
1901	92·90	39	2·38	97
1902	92·97	38	2·45	100
1903	92·97	37	2·51	102
1904	92·97	38	2·45	100
1905	92·97	38	2·45	100
1906	92·97	40	2·32	95
1907	106·04	43	2·47	101
1908	113·43	44	2·58	105
1909	114·17	47	2·43	99
1910	114·17	47	2·43	99
1911	98·95	48	2·06	84
1912	104·20	50	2·08	85
1913	104·94	54	1·94	79
1914	120·89	56	2·16	88
1915	123·69	58	2·13	87
1916	123·91	59	2·10	86
1917	125·61	60	2·09	85
1918	155·67	65	2·39	98
1919	182·77	70	2·61	107
1920	227·08	77	2·95	120
1921	226·19	94	2·41	98
1922	234·02	107	2·19	89
1923	241·85	116	2·08	85
1924	—	—	—	—
1925	241·85	111	2·18	89
1926	255·21	108	2·36	96
1927	255·21	108	2·36	96
1928	255·21	99	2·58	105
1929	255·21	114	2·24	91
1930	255·21	—	—	—
1931	255·21	—	—	—
1932	255·21	78	3·27	133
1933	255·21	75	3·40	139
1934	201·23	70	2·87	117
1935	201·23	72	2·79	114
1936	201·23	79	2·55	104
1937	210·02	76	2·76	113

Sources: (i) Average industrial earnings of Bombay industrial workers are taken from the article by Mukherjee, op. cit. Mukherjee's material on earnings make use of wage data for a few occupations for 1900-22 in the Government of India publication, *Prices and Wages in India*, and of more complete wage surveys undertaken by the Bombay Labour Office for a number of years after 1914. For the period 1900-22 Mukherjee constructs figures of weighted average of earnings, using as weights estimated proportions of workers in the occupations reported. For the later years figures of average daily earnings were available directly from the wage surveys (gaps in the data were found for the years 1924-5, 1927-32, and 1936). Mukherjee compared the earnings data from the two sources for three overlapping years and they were found to be very close.

(ii) The statistics on rural wages are available for 1900-22 in the publication *Report on an Enquiry into Agricultural Wages in the Bombay Presidency* by G. Findley Shirras (Government of Bombay, 1924), and for

later years in the periodical published by the Bombay Labour Office, called the *Bombay Labour Gazette*. The basic source for the material for all the years is the same. "The statistics were collected month by month for each district headquarter's towns and also for another town, not the district headquarters town, but typical of the more rural areas in that district. . . This second group of towns shows the predominant rates paid in the rural areas uninfluenced by the industrial or administrative centres of population." The rural wages given refer to this latter group of figures. They are simple annual averages of the monthly rates and refer to the category of field labour (doing miscellaneous agricultural work on a casual daily basis) for the economic region of the Konkan.

The above Table reproduces a series of average daily earnings for Bombay textile workers and daily wage rates for field labour in the rural areas of Konkan. The latter was chosen for the rural-urban wage comparison because it is and always has been the single most important source of labour supply to Bombay industry. Both the absolute value and the index of the ratio of industrial earnings to rural wages are given for the period 1900-37.

The most interesting point about the index of the urban-rural wage ratio is the narrow range within which it has moved over time. From 1900 to until 1929, the maximum deviation of the ratio from its initial level was only 20 per cent in either direction. During this period the rural money wage nearly trebled. In the first decade of the century the differential was maintained at roughly the same level—industrial earnings being something like 150 per cent above the rural wage. Between 1910 and 1917, while rural wages rose steadily the wage differential was narrowed to some extent to the order of about 18 per cent. There was a sharp increase in rural wages after the World War I and through the early 1920's. The wage differential in this period rose and then sagged, but at the end of the decade was roughly at the same level as at the beginning of the century. It was in the early 1930's that the wage differential widened substantially in favour of the city as the industrial wage rate lagged behind falling prices (and rural wages). The maximum value of the ratio was reached in 1933—39 per cent above the level of the first decade—but by the end of the period, it was again only slightly above this level.

The relative stability of the wage differential over a period of forty years marked by considerable changes in the price level is impressive and is consistent with the hypothesis developed in the text that the industrial wage level was determined by basic economic forces originating in the supply price of stable migrants from the rural areas. The differential appears to be large—especially taking into account the fact that the total days of employment secured by an average rural worker during the year would be substantially less than those secured by an industrial worker. However, we need not expect that average annual earnings should be equalized in equilibrium between the two sectors. Even while industrial workers secure a larger number of days' work, this will tend to increase the disutility cost of their labour relative to rural workers. As mentioned in the text, other factors which help explain the wage gap are the cost of living difference between town and country, the skill requirements for industrial workers, and the decline in the earner-dependent ratio of a worker's family in the city as compared to the rural areas.