

# What Has Been Happening to Real Wages in Pakistan?

by

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## INTRODUCTION

It seems unnecessary to prepare an elaborate case emphasizing the need for some knowledge about the movement of real wages. Such knowledge would help confirm our ideas about the supply of labour and its abundance or scarcity, shed light on the mechanism of transfer of labour from the traditional sector to the modern sector by highlighting the incentive differential between wages in these two sectors and its change over time, and provide insight into the question of the distribution of incremental income.

In view of the obvious importance of the subject, it seems unfortunate that practically no enthusiasm has been shown by researchers in estimating the course of this variable in Pakistan. Certainly part of the explanation lies in the inadequacy of statistical information. Over the vast agricultural sector, wage labour is not the dominant mode of production. Whatever wage-labour relations exist there and in the services sectors are not systematically reported by the data collecting machinery in the country. Inevitably one is, therefore, limited to the examination of the wage movement in the manufacturing industries only.

In this note we do not aim at a comprehensive analysis of the movement in real wages. Our aim is the more modest one of *a*) deriving indices of real wages in manufacturing industries in each of the two regions of Pakistan after a reasonably careful examination of the different sources of data, and *b*) obtaining certain related measurements such as the regional difference in wage rates, the relative position of the wage-earners in the scale of income distribution and labour's factor share in the value of output.

## 2. WHAT DO WE WANT REAL WAGES TO MEASURE?

One can distinguish several interesting measures of real wages in the industrial sector or in any single industry. The first of them is the usual index of

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the average standard of living of the workers and is obtained by deflating the index of money wage rates by the index of workers' cost of living :

$$U_{1t} = \frac{w_t}{w_o} \div \frac{P_t}{P_o} \\ = \bar{w}_t / \bar{P}_t \dots \dots \dots (1)$$

Where  $U_1$  = index of workers' standard of living,

$w$  = money wage rate,

$P$  = cost of living, *i.e.*, cost of the consumption bundle of an average worker,

$\bar{w}$  = *index* of money wage rate, and

$\bar{P}$  = *index* of cost of living.

Subscripts refer to time periods:  $t$  to any current period and  $o$  to base period.

Variations in this index indicate the direction and extent of changes in the standard of living of an important social class, the workers. The most important hypothesis about the movement of this index over the long period in a surplus labour economy is that it remains unchanged at some subsistence level which is determined by the average standard of living of the workers in the subsistence (*i.e.*, traditional agricultural) sector plus some mark-up [9].

One can devise a second index of real wages to measure what may be called "the real cost of labour" from the employers' point of view. This is obtained by deflating the index of money wage rates by the index of the price of the product turned out by the enterprise or the industry employing the workers :

$$U_{2t} = \frac{w_t}{w_o} \div \frac{P_t^m}{P_o^m} \\ = \bar{w}_t / \bar{P}_t^m \dots \dots \dots (2)$$

Where  $U_2$  = index of "the real cost of labour" from the employers' point of view,

$P^m$  = price of the product turned out by the workers, and

$\bar{P}^m$  = price index of the product turned out by the workers.

Other things being equal, variations in this index would indicate changes in the capitalists' share of output and hence capacity to reinvest.

That the two indices may easily be different can be demonstrated with the help of the traditional two-sector model of the dual economy. Let us have a

traditional sector which produces food and a modern sector which produces manufactured goods. Cost of living for industrial workers would be determined by the prices of the products of both the sectors:

$$\bar{P}_t = a\bar{P}_t^f + (1-a)\bar{P}_t^m$$

where  $\bar{P}^f$  = price index for food and  $a$  and  $(1-a)$  are respectively the weights of food and manufactured goods in the total consumption of the workers. We therefore have :

$$\begin{aligned} U_{2t} &= U_{1t} (\bar{P}_t / \bar{P}_t^m) \\ &= U_{1t} \left[ \frac{a\bar{P}_t^f + (1-a)\bar{P}_t^m}{\bar{P}_t^m} \right] \\ &= U_{1t} + a \left( \frac{\bar{P}_t^f}{\bar{P}_t^m} - 1 \right) U_{1t} \dots \dots \dots (3) \end{aligned}$$

What it shows is that if food prices rise faster than manufactured prices (*i.e.*, if  $(\bar{P}_t^f / \bar{P}_t^m) > 1$ ); the real cost of labour from the capitalists' point of view would rise even if the workers' standard of living remains unchanged<sup>1</sup>. This would mean, other things remaining unchanged, a fall in the share of profits in manufacturing. This is the famous exception to the theory of growth with unlimited supplies of labour to which Arthur Lewis refers: even if labour supply is infinitely elastic at some subsistence real wage, share of profits in total product will decline and act as a brake on the growth of the economy if "the increase in the size of the capitalist sector relatively to the subsistence sector... turn the terms of trade against the capitalist sector... and so force the capitalists to pay workers a higher percentage of their product, in order to keep their real income constant" [9].

To mention the exceptions to the exception, labour's factor share would still not rise if the increase in "the real cost of labour" is offset by *a*) a rise in the gross value of output per worker, and/or *b*) a rise in the share of value added in the gross value of output. (In this note we subsume the effects *a*) and *b*) under the name of "a rise in labour productivity")<sup>2</sup>.

<sup>1</sup> If  $a = 0.6$  (which seems to be the right order of magnitude for a country like Pakistan) a 10 per cent relative rise in the food price index would mean that  $U_2$  is 6 per cent higher than  $U_1$ .

<sup>2</sup> Note that this is not entirely legitimate. Change in the value added coefficient may not have anything to do with labour efficiency, *e.g.*, if this is caused simply by a change in the relative price of an important input.

The index of labour's factor share (which we call  $U_3$ ) in period  $t$  is given by:

$$U_{3t} = \frac{w_t N_t}{(1-v_t) P_t^m Q_t} \div \frac{w_o N_o}{(1-v_o) P_o^m Q_o}$$

Where  $N$  = total employment of labour,

$v$  = ratio of total raw materials and other current inputs to the gross value of output,

$Q$  = quantity of output.

We have :

$$U_{3t} = \left( \frac{w_t}{w_o} \div \frac{P_t^m}{P_o^m} \right) \div \left( \frac{(1-v_t) Q_t}{N_t} \div \frac{(1-v_o) Q_o}{N_o} \right) \\ = U_{2t}/Z_t \dots \dots \dots (4)$$

Where  $Z_t$  = index of labour productivity according to our definition (*i.e.*, index of real value added per worker) in period  $t$ .

The labour's factor share would remain unchanged (even decline) if labour productivity exactly (more than) offsets the rise in the real cost of labour. Thus, we have a third measure of real wage, that of labour's factor share or what may be called the real cost of labour in efficiency units.

A decline in workers' standard of living ( $U_1$ ) would be undesirable from the standpoint of the desirable pattern of incremental income distribution. An increase in labour's factor share or what we call the real cost of labour in efficiency units ( $U_3$ ) may be undesirable from the standpoint of maximizing growth<sup>3</sup>. Depending on what is happening to the relative prices and labour productivity, it is, however, possible for both the standard of living of workers to go up and the labour's factor share to go down.

In this note the basic wage index we derive refers to the index of workers' standard of living. In most of the following sections, we concern ourselves with the problem of estimating this index and analysing the movement of this index. Only towards the end do we consider the other two measures of real wage. The term real wage in the rest of this note means workers' standard of living while the other two measures are respectively called the real cost of labour and the real cost of labour in efficiency units (or labour's factor share).

<sup>3</sup> We are assuming no particular economic system. The argument would hold if the economy were completely socialized. What we now call capitalists' share would then be renamed the share of the state or society. Note we are assuming that the supply of savings is the main constraint to growth and that workers save at a lower rate than do the capitalists or the state.

### 3. DATA

Real wage rate is defined to be the rate of wage at some constant purchasing power. In other words, it is money wage rate deflated by the index of cost of living for the wage earners. Thus the estimation of the real wage index requires the estimation of the rate of money wages and the index of workers' cost of living. We, therefore, turn our attention to the available data on these two indicators.

#### 3.1 Sources of Wage Data

There are at least two possible sources of data on wage rates:

a) Under the Payment of Wages Act, the Ministry of Health, Labour and Social Welfare (HLS) collects information on employment and earnings of workers in manufacturing industries [6]. This series includes the non-production workers and clerks earning upto Rs. 2,400 per year (*see* [2, p. 45]) which is on the average about  $2\frac{1}{2}$  times the earning of a production worker in recent years. These data refer primarily to the 2(j) factories (*i.e.*, those employing 20 or more persons and using power) although for some years at least it seems that some 5(1) factories (employing 10 or more workers) and railwaymen have been included [7]. The HLS publishes two separate series: one for the perennial factories (which we call the HLS perennial series) and the other for all factories, both perennial and seasonal (which we call the HLS overall series).

b) The Census of Manufacturing Industries (CMI) provides information about wages and total number of production workers for each of the census years. By now such information is available for about a decade (from 1954 to 1962/63 in East Pakistan and to 1963/64 in West Pakistan) with a few intermediate years missing. Before 1962/63 the CMIs were confined to 2(j) factories while since 1962/63 5(1) factories have also been covered.

#### 3.2 A Comparison of the Two Sources

After a careful analysis of the two sources, it seems to us that the CMI series is superior to the two HLS series. First, the CMI series refers to the production workers whereas the HLS data include clerical and supervisory workers as well. Thus, the CMI data refer to a more homogenous group of labour force—the one in which our interest primarily lies.

Secondly, the CMI provides enough background information to enable us to check the consistency of the data reported. For each region a four-digit industrial classification is provided so that it is possible to get some rough idea about the effect of the change in the composition of industries on wage rates. It is also possible to estimate wage rates separately for the major industries.

The HLS data for the two regions on the other hand give money wages at the aggregate level only. Although the HLS perennial series for Pakistan as a whole provides some sector classification, regional data are for aggregate manufacturing sector only. Moreover only the money wage rate is shown without any information about wage bill and employment. HLS overall series provides no sector classification either, but it shows total employment and wage bill. The aggregate nature of the HLS data makes it impossible to check the doubtful entries. And there are rather too many doubtful entries. To give some examples: a) in 1959 employment in Karachi goes down by 34 per cent from the preceding year while wage bill goes up by 8 per cent<sup>4</sup>; b) in 1959 employment in West Pakistan (excluding Karachi) goes down by 13 per cent while wage bill goes up by 48 per cent<sup>4</sup>; c) in 1962 wage bill in Karachi goes up by 57 per cent while employment goes down by over 2 per cent<sup>4</sup>. In all these cases money wage rates change by 60 per cent or more. It does not seem likely that wage rates actually changed so erratically, and, therefore, quixotic changes in coverage are probably the cause. Coverage in East Pakistan dropped from 100 per cent of factories in 1960 to only 51 per cent in 1961 (*see* [6] January-March 1964). Coverage in terms of employment in West Pakistan excluding Karachi in 1955 was only about 11 per cent of that in 1954 (*see* [2, p.74]). Such erratic changes in coverage can do anything to the overall wage rate simply by concentrating the undercoverage in a particular year in certain low or high wage industries. From the available HLS sources it is impossible to determine how the changes in coverage were distributed in each year.

In comparison the CMI has generally steadily improved its coverage and for any two consecutive CMIs the change in coverage at the aggregate level is far less than can be called erratic. For individual industries however, there have been certain erratic changes, most of them in the year 1955 over the preceding year. One advantage of the CMI is that it provides enough information to make judgement on the plausibility of such sudden changes. In Appendix Table A-4 we show money wage rates for the major industries of each of the two regions of Pakistan. To emphasize the limitation of the data, we make the following observations :

a) In both regions the major textile industries show no erratic change in wage rates, wage bill or employment. In view of the fact that textiles employ more than half the industrial labour force in each region, this is reassuring. Movement of real wages in textiles can serve as the major basis in testing our hypotheses and deriving our conclusions.

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<sup>4</sup> *See* [2, p.74, Table 28].

b) Certain non-textile industries in East Pakistan (notably printing and publishing, transport equipment, "miscellaneous industries", chemicals and metal products) in 1955 showed rather sharp decline in wages from the preceding year. Some of the declines can at least partly be explained by the change in intra-industry product composition, but quite a few of these changes cannot be explained satisfactorily. This phenomenon exists, although to a much smaller extent, in West Pakistan as well. As a result, real wages in non-textile industries declined in 1955 over 1954. This decline is particularly sharp in East Pakistan—nearly 25 per cent. One inevitably becomes skeptical about such big and sudden change and the skepticism is justified by our inability to explain some of the sharp wage declines in that year.

c) Wages in food manufacturing in East Pakistan have shown severe fluctuations in other years as well. These fluctuations seem to be correlated with fluctuations in the coverage of rice milling which is a low wage industry. In both the regions we have a few more unexplained sudden change, all in the non-textile sectors. Below we estimate for each region two indices of real wages respectively for a) all industries and b) textiles on the basis of the CMI data. In view of what has been said above, our faith in the index for aggregate industries is somewhat less than for textiles.

### 3.3 Adjustments Made in the CMI Data

In view of the above, it appears to us that the CMI data, in spite of obvious limitations, are superior to the other source so that it seems reasonable to use the CMI as our basic source of data and base our conclusions on them with appropriate qualifications. We, of course, compare the findings based on the CMI series with those derived from the HLS data.

In this study, the term wages means wages, dearness allowance, and cash benefits<sup>5</sup>. While the CMIs for 1957, 1959/60, 1962/63 and 1963/64 show these separately, the 1954 and 1955 CMIs show wages and benefits (presumably including non-cash benefits) together while 1958 CMI shows only wages and dearness allowance. To render them comparable, we make the following adjustments. We estimate the proportion of non-cash benefits in total wages and benefits on the basis of the 1957 and 1962/63 CMIs (which provide such information separately) and make downward adjustment in wages and benefits shown in the 1954 and 1955 CMIs. Similarly on the basis of the 1959/60 CMI we ascertain the proportion of cash benefits in total wages and use it to make upward adjustment in 1958 wages shown in the CMI. It is reassuring that all such adjustments are very small<sup>6</sup>.

<sup>5</sup> This definition is partly dictated by the convenience of obtaining data, but seems good enough for our purpose.

<sup>6</sup> Details of adjustments made are described in footnotes to Appendix Tables A-1 and A-2.

For 1962/63 for East Pakistan we use the information for 2(j) factories only. For West Pakistan our information for 1962/63 and 1963/64 is based on unpublished CMI's and they refer to both 2(j) and 5(1) factories. We use these figures for want of separate information about 2(j) factories and make appropriate qualifications in the interpretation of the results.

### 3.4 Cost of Living Index

CSO's General Consumer Price Index for Industrial Workers for the relevant period was originally based on a commodity list and weights derived from a 1943/44 survey of working class family expenditures. The new CSO Consumer Price Index for Industrial Workers is based on weights derived from a more recent (1955/56) family expenditure survey, but cannot be applied to the period before 1961 for want of past price series for the new commodities introduced. However, the CSO claims that "the old series have been spliced into the new series" [4]. This means that the new *relative* weights for the commodities in the old index have been used to recalculate the old index, thus reducing the difference between the two indices to the fact that within each broad group the new index incorporates many new commodities each quantitatively unimportant.

An important limitation of the index is that it uses fixed weights while we should like to allow for changes in consumption pattern caused both by income and price changes. The fixed-weight wage-deflator is given by:

$$P = \sum_i (P_t^i / P_o^i) (P_o^i Q_o^i / \sum_i P_o^i Q_o^i)$$

Where  $P^i$  = price of  $i$ ,  $Q^i$  = quantity purchased of  $i$  and subscript  $t$  and  $o$  refer to time periods. The price relative for the  $i$ -th commodity is weighted by the base-year proportion of total expenditure on  $i$ . If the price increase is concentrated in the commodities with inelastic demand then such a deflator would understate the increase in price because the actual expenditure on the commodities having high price relatives would be higher than the base-year proportion. In Pakistan food prices have risen considerably more than the prices of other commodities in the index over the relevant period [4] and demand for foodgrains is highly inelastic. It seems very likely that an average wage-earner spends a higher percentage of income on food today than when the weights were derived. And this precisely is the condition which is sufficient to show that the present index understates the rise in cost of living (unless of course counterbalancing forces are in operation).

The CSO points out [4] that the prices are collected from the retailers and not from the consumers so that they may have been underquoted to some extent. More importantly, it may have led to the underquotation of the *increase* in



3. This will be the case, for example, if a shortage appears in the supply of a product for which a price norm is suggested either by the producer or by the government.

Finally, for house rent the same price relative is reported each year for want of information. This has almost certainly caused some downward bias in the

In the above we have tried to point out a few factors which may have caused downward bias in the CSO cost of living index. It is possible, though not so obvious, that there are factors which counterbalance the above forces. In the absence of any other estimate of the index of cost of living, we are forced to use the CSO index as our wage-deflator, but the results have to be interpreted with the weakness of the cost of living index in mind.

By far the most important cause of our scepticism about the CSO index is due to the fact that the food price index used by it shows a much lower increase, particularly in East Pakistan, than do the alternative sources of price information<sup>7</sup>. To get an idea of the extent of understatement due to this factor, we make an alternative estimate of the cost of living index for East Pakistan in Appendix B and use it to obtain corresponding indices of real wages.

#### 4. MOVEMENT OF REAL WAGES

Table I shows real wages and real wage indices obtained by deflating the adjusted CMI money wage rate by the CSO General Consumer Price Index for Industrial Workers. For each region we have shown real wages a) for all industries, and b) for textiles separately. The reason we show the index separately for textiles has already been mentioned: it employs more than half the labour force in manufacturing in each region, the composition of labour force in this sector has probably remained reasonably stable (certainly more so than for aggregate manufacturing) with respect to product, skill *etc.*, and finally, we have argued above that the data for textiles are more reliable than for the rest as a whole.

In East Pakistan real wages for aggregate industries have remained lower in all years as compared to the base year (1954). It declines sharply in 1955 (see our comments in Section 3.2) and then remains fairly stable until 1962/63 when the recovery is more pronounced. For textiles in East Pakistan there is a small rise in 1955 over the base year and then a fairly sharp decline in 1957. Recovery starts from 1958 and continues upto 1962/63 when the base-year value is slightly exceeded. It should, however, be pointed out that an upward bias

<sup>7</sup> See Section 8 and Appendix B below.

**TABLE I**  
**REAL WAGES (WAGES DEFLATED BY 1954-BASED COST OF LIVING INDEX) BASED ON CMI DATA**  
*(rupees per year per worker)*

Year	EAST PAKISTAN				WEST PAKISTAN			
	All industries		Textiles		All industries		Textiles	
	Real wage	Index	Real wage	Index	Real wage	Index	Real wage	Index
1954	794.5	100.0	759.4	100.0	966.2	100.0	963.7	100.0
1955	702.3	88.4	783.8	103.2	911.5	94.3	960.5	99.7
1957	726.5	91.4	644.4	84.9	909.4	94.1	892.7	92.6
1958	743.3	93.6	672.4	88.5	933.6	96.6	887.3	92.1
1959/60	737.5]	92.8	718.3	94.6	936.7	96.9	894.4	92.8
1962/63	766.2 (727.8)	96.4 (91.6)	773.0 (727.7)	101.8 (95.8)	854.4	88.4	859.4	89.2
1963/64	...	...	...	...	870.6	90.1	...	...

*Notes:* 1. See Appendix Tables A-1, A-2, and A-3 and notes following them for the background information and the method of estimation.

2. East's 1962/63 figures in parentheses refer to combined 2(j) and 5(1) factories.

3. ... means not available.

4. It may appear that the change of base to 1955 would show steady (though slow) rise in aggregate manufacturing real wages in East Pakistan from that year onwards. But note our argument in Section 3.2 that the 1955 real wage in East Pakistan for aggregate industries is understated.

in East Pakistan textile wages is created throughout the period due to the continuous rise in the share of jute textiles, wages in jute textiles being on the average about 20 per cent higher than wages in cotton textiles (see Appendix Table A-4). If the real wage rates for jute and cotton textiles are estimated separately, we still have very considerably lower real wage in each of them by 1962/63 as compared to the base year (see Appendix Table A-4).

In West Pakistan the result is more striking. Real wage rate for aggregate industries drops in 1955 over the base-year level and remains fairly stable until 1962/63 when it drops sharply again. For textiles we again have a decline in real wages in stages fairly sharply upto 1957 after which it remains stable for about half a decade. It again declines a few percentage points in 1962/63.

We must add that the West Pakistan real wage rates for 1962/63 and 1963/64 are estimated for workers employed both in 2(j) and 5(1) factories while all previous years' wage rates are based on 2(j) factories only. On the basis of the information obtained from the 1962/63 CMI for East Pakistan, it seems that wages are lower in 5(1) factories (which are on smaller scales than 2(j) factories). But the share of 5(1) factories is small in both the regions' CMIs and in East the real wage indices for 1962/63 go up only by about 5 percentage points if 5(1) factories are left out. If West Pakistan real wage indices for 1962/63 and 1963/64 are adjusted upward by 5 percentage points, the above conclusions remain unaffected: at the aggregate industry level real wage rates in the last two years would still be lower than in 1959/60 and way below the level in the base year. For textiles, real wages in 1962/63 after this adjustment would only be slightly higher than in 1959/60 but still considerably lower than in the base year.

To summarise: the real wage rates estimated on the basis of the adjusted CMI data show the following pattern during the decade beginning 1954: In East Pakistan not much of a trend can be found; there was a decline early in the decade, followed by a period of steady real wages until at the end of the period near recovery to the base-year level was attained. In West Pakistan, real wages declined early in the decade and remained steady without showing any sign of recovery right upto the end of the period.

How do the HLS data compare with the above findings? Table II shows the real wages for East Pakistan, Karachi and the rest of West Pakistan estimated on the basis of the HLS *perennial* series. For East Pakistan the above finding is confirmed somewhat strongly: real wage rate declines from 1955 to 1959 fairly rapidly and then recovers a good deal but even in 1963 it is lower than in the base period. In Karachi by the end of the period there is a slight rise over the earlier periods but in the rest of West Pakistan considerable drop takes place,

TABLE II

**REAL WAGES (i.e., WAGES DEFLATED BY THE 1954-BASED COST OF LIVING INDEX) BASED ON THE HLS PERENNIAL SERIES**

(rupees per worker per year)

Year	East Pakistan	West Pakistan*	Karachi
1955	845.2	993.2	1084.4
1956	750.3	1136.2	1048.3
1957	709.9	893.0	1058.2
1958	722.5	972.5	1015.5
1959	704.8	979.9	931.7
1960	768.0	907.1	1140.8
1961	765.6	793.4	1117.0
1962	832.4	...	...
1963	826.9	1051.3	

\* Excluding Karachi.

The HLS *overall* series (Table III) however leads to different conclusions. According to this series, real wages in all three areas have shown increases in recent years. Presumably the only difference between the two HLS series is that the perennial series is obtained by subtracting seasonal factories from the overall series. Thus the increase must be concentrated in the seasonal factories. One explanation would be that the seasonal factories operate at the time of peak demand for labour and hence they are better placed for wage bargains. But this does not seem plausible in view of the lower wages in seasonal factories<sup>8</sup> than in perennial factories. What seems more likely (barring of course the possibility of straightforward arithmetic errors) is that the extremely erratic changes in coverage have led to serious changes in the proportion of seasonal factories covered. In other words, the overall wage rate is a weighted average of two rates, one considerably higher than the other. If the relative weights change erratically from year to year, the overall rate may show erratic changes in spite of the fact that the two constituent rates are fairly stable.

<sup>8</sup> Overall money wage rate is lower than that for perennial factories according to HLS data for Pakistan as a whole [2].

TABLE III

REAL WAGES (*i.e.*, WAGES DEFLATED BY THE 1954-BASED COST OF LIVING INDEX) BASED ON THE HLS OVERALL SERIES

(rupees per worker per year)

Year					East Pakistan	West Pakistan
1954	...	...	...	...	682.2	842.7
1955	...	...	...	...	767.1	1095.2
1956	...	...	...	...	690.8	1106.7
1957	...	...	...	...	675.3	970.1
1958	...	...	...	...	676.4	1004.3
1959	...	...	...	...	543.1	944.6
1960	...	...	...	...	724.1	1030.3
1961	...	...	...	...	719.1	937.2
1962	...	...	...	...	793.3	1270.3
1963	...	...	...	...	787.3	1032.3

### 5. SOME QUALIFICATIONS

Insofar as our concern is with the average welfare of the working class as a whole, we should compare the standard of living of an average worker today with that of an average worker in some base period (while allowing the average worker to change between the periods with respect to skill, age, sex, *etc.*) and not the standard of living of a worker of given skill, age, sex, *etc.*, today as compared to that in some base period. For the purpose of measuring the change in the average wellbeing of the workers, it is just as important to know how workers have been moving between jobs of varying rates of skill and income as to know how specific rates have been changing. To illustrate, if nothing happens to the specific rates while all workers move to better paid jobs due to increase in their skills, then it is right to say that the workers' standard of living has increased.

If the above statement is correct then the only adjustment we have to make in our estimates is for changes in the number of hours worked per labourer. If, however, we are interested in measuring the wellbeing of a worker of given skill, age, sex, *etc.*, then our estimates have also to be adjusted for changes in skill, age, sex, *etc.*, composition of the labour force.

We may actually go one step further and argue that in a country like Pakistan it is the average earning per worker (irrespective of the number of hours

worked per labourer) which is the relevant indicator of workers' welfare. In other words it is our measure which is the ideal indicator of workers' standard of living. This claim is based on the reasoning that the marginal utility of leisure at the relevant level of employment and income is probably negligible so that the workers would still be better off (worse off) if wage per hour declines (increases) but wage per worker increases (declines) due to an increase (decrease) in the number of hours worked per labourer.

In the following we comment on the possible effects of the disturbing factors while maintaining that if our argument above is broadly right, our index need not be adjusted for any of these factors to measure workers' "welfare" or real standard of living.

*a) Skill Composition of the Labour Force:* With all the specific wage rates unchanged, the overall rate would change if the skill composition of the labour force changes. There are broadly two types of such change: first, change in the share of more skill-requiring industries in total employment and second, change in the proportion of skill-requiring jobs within individual industries.

Although our overall index is subject to the influence of the first kind of factors, the textile wages are not. The same is true at least to a large extent about many of the individual industries shown in Appendix Table A-4. A comparison of the money wage rates in that table and the relevant cost of living indices shows that real wage rates in most of the major industries have followed the pattern of the overall real wage index.

It also seems unlikely that the skill composition within an industry like textiles would vary significantly over time. If at all, workers on the average are likely to have become generally more "learned" over time. Thus, this factor is unlikely to have "distorted" the change in real wages in the downward direction.

*b) Sex and Age Ratios:* This factor could not have played any significant role in view of the fact that women and non-adults have been an extremely small proportion of total manufacturing labour force (less than 2 per cent and 1 per cent respectively in East Pakistan and less than 1½ per cent and 1 per cent respectively in West Pakistan in as recent a year as 1959/60 [3], the only year for which we have the information).

*c) Number of Hours Worked:* If working hours per labourer have been getting longer (shorter) then our figures would overstate (understate) the increase in hourly real wage rates. The only information we have is limited to the change in East Pakistan over the period between 1959/60 and 1962/63 (Table A-4) which shows that in the latter year an average production worker worked about

## 6. COMPARISON OF REGIONAL REAL WAGES

It is estimated by the Planning Commission that the regional per capita income in West Pakistan is 31 per cent higher than in East Pakistan for the year 1962/63 (see [10, chapter IX]). Such comparisons are made on the basis of regional outputs at constant prices of a particular year (1959/60 is the latest CSO base) without any correction for the regional difference in the purchasing power of income.

How do regional real wages compare? Again without any adjustment for the regional difference in the purchasing power, real wages at the aggregate level have on the average been about 25 per cent higher in West than in East<sup>10</sup>. To overcome the possible distortion due to the difference in regional composition of industries, one could refer to the regional disparity in cotton textile workers' wages: it is considerably greater than the disparity for the aggregate manufacturing sector (about 45 per cent higher in West than in East on the average)<sup>11</sup>.

TABLE V

## WEST'S REAL WAGE AS MULTIPLE OF EAST'S REAL WAGE

(Based on CMI Data)

Year					All industries	Cotton textiles
1954	...	...	...	...	1.22	1.38
1955	...	...	...	...	1.30	1.46
1957	...	...	...	...	1.25	1.46
1958	...	...	...	...	1.26	1.47
1959/60	...	...	...	...	1.27	1.48
1962/63	...	...	...	...	1.17	1.42

*Note:* Figures for 1962/63 refer to both 2(j) and 5(1) factories while for other years they refer to only 2(j) factories.

<sup>10</sup> If adjusted for the difference in the purchasing power of wages in the two regions, the disparity would be greater. This claim is based on a forthcoming study by Mr. Abdul Ghafur of this Institute. He compares the relative prices of wage goods of the two regions by using workers' consumption bundle in the two regions as weights separately. Prices of wage goods on the average are about 10 to 15 per cent higher in East for the years for which he undertakes the study.

It should be noted that similar correction would also give a greater disparity in regional incomes per head than is shown by the simple comparison of regional incomes. It has been claimed that such correction factor is much greater than 15 per cent. See [5, p. 93].

<sup>11</sup> Cotton textile wages in East are lower than the average industrial wages while wages in West Pakistan cotton textiles are just about equal to the average industrial wage. If the disparity between the cotton textile wages of the two regions approximately represents the difference between skill-specific wages of the two, then production workers in manufacturing industries have a higher level of average skill in East so that the overall wage disparity is less than the disparity in cotton textile wages. It should also be noted that the regional disparity in cotton textile wages is greater than the regional disparity in per capita income as measured by the Planning Commission while the regional disparity in overall manufacturing wages is less than the regional disparity in per capita income.

## 7. WHERE DO THE INDUSTRIAL WAGE-EARNERS STAND IN THE INCOME DISTRIBUTION SCALE?

In 1962/63 in East Pakistan wage rate at current price was Rs. 1004.4 per worker per year (in all 2(j) and 5(1) factories together). In 1959/60 purchasing power thus turns out to be Rs. 936.9. Number of dependents per *earner* in the working class families in East Pakistan average at 4.6<sup>12</sup>. Thus per capita income of an average wage-earner's family turns out to be Rs. 203.7 or about 73 per cent of regional per capita income (see [10, chapter IX]) at 1959/60 prices.

West Pakistan's average wage rate per year in 1962/63 was Rs. 1035.5 at current prices or Rs. 976.9 at 1959/60 purchasing power of the workers. Average number of dependents per wage earner being 4.7<sup>12</sup>, per capita income turns out to be Rs. 207.9 or 54 per cent of regional per capita income.

It is interesting to note that a very large majority of rural population in each region is better off than an *average* industrial worker. Approximately less than 40 per cent of East's rural population has lower income than average urban wage earners (compare data shown in [1] with our wages). A comparison of our findings with those of [1] also reveals that urban wages are way below average income in rural areas (*not* average rural "workers" income)<sup>13</sup>.

We have already noted that over the period under review real wages have failed to rise and almost certainly they have declined somewhat. During this period per capita income has increased, particularly in the urban areas and quite impressively in West Pakistan. Thus income distribution over the decade under review must have changed unfavourably for the working class and in particular urban income distribution must have become more unequal. This effect must have been more pronounced in West Pakistan than in East Pakistan.

## 8. REAL LABOUR COST FROM EMPLOYERS' POINT OF VIEW AND LABOUR'S FACTOR SHARE

The above discussion is exclusively concerned with one of the three indices of real wages to which we referred in Section 2, that of workers' standard of living ( $U_1$ ). In this section we discuss what little we can about the behaviour of the other two indices, those of the real cost of labour from employers' point of view ( $U_2$ ) and labour's factor share ( $U_3$ ).

We cannot estimate  $U_2$  for the aggregate industrial sector for want of an index of producers' price for the products of the entire sector. We, however,

<sup>12</sup> Average for Dacca, Chittagong, Narayanganj and Khulna in East Pakistan and average for Karachi, Lahore, Peshawar, Hyderabad, Multan and Quetta in West Pakistan. Source [2].

<sup>13</sup> The comparison between urban wages and rural incomes must be qualified by the statement that it depends a good deal on the relative coverage given to the components of income by [1] for rural areas and by the CMI for urban wage earners.



estimate it for jute and cotton textiles in East and for textiles in West Pakistan, products for which we have some price information of the necessary type.

In a recent study, Stephen Lewis Jr. and S. Mushtaq Hussain find that the relative prices of agricultural goods have risen very considerably faster than the price of manufactured goods over the relevant period in both the regions of Pakistan [8]. Since our estimates show that  $U_1$  has gone down only very slightly in East Pakistan and not very much in West Pakistan over the whole period, can we conclude from this, according to our equation (3) in Section 2, that  $U_2$  has risen rapidly over the period under review for the manufacturing sector as a whole? Our answer is in the negative because of the following: In the CSO cost of living index (which is our wage-deflator in obtaining  $U_1$  from money wage rates) food prices have over 60 per cent of total weights [4]. The food price index that is included in our wage-deflator shows much smaller increase than the food price index used by Lewis and Hussain to reach their conclusions (Table VI). If we had substituted the Lewis-Hussain food price index in our wage-deflator we would undoubtedly get a very great decline in real wages (*i.e.*, in  $U_1$ , the index of workers' standard of living) and particularly so in East Pakistan<sup>14</sup>. To what extent the adverse terms of trade for manufacturing as shown by Lewis

TABLE VI

## COMPARISON OF FOOD PRICE INDICES

Year	East Pakistan		West Pakistan	
	Lewis-Hussain	CSO: Cost of Living Index	Lewis-Hussain	CSO: Cost of Living Index
1954 ...	100.0	100.0	100.0	100.0
1959/60 ...	192.8	133.0	131.0	122.8
1962/63 ...	199.1	141.1	135.5	127.2
1963/64 ...	—	—	146.3	132.9

*Note:* Lewis-Hussain index is the one that uses the marketed quantities as weights. *Source* [8]. *Source* for the CSO index is [2]. In both cases the 1954 index is the average of the 1953/54 and 1954/55 indices.

<sup>14</sup> In Appendix B we make an attempt to re-estimate the *minimum (maximum)* increase in cost of living (real wages) in East Pakistan (for which the discrepancy between Lewis-Hussain and CSO is very great) by substituting retail food prices from alternate CSO source for the food prices used in the CSO cost of living index.

TABLE VII

**INDEX OF REAL LABOUR COST FROM THE MANUFACTURERS'  
POINT OF VIEW**

Year	East Pakistan		West Pakistan
	Cotton textile	Jute textile	Cotton textile
1954	100.0	100.0	100.0
1955	111.8	92.8	118.0
1957	105.2	79.5	97.2
1958	95.4	92.9	104.2
1959/60	95.7	90.6	98.6
1962/63	98.7	101.8	103.9

*Note:* These are obtained by dividing money wage rates shown in Appendix Table A-4 by the index of respective product prices shown in Appendix Table A-5.

Not much of a trend can be found for real labour cost in any of the three cases. If anything, for cotton textiles in East Pakistan there seems to be a downward trend after an initial rise. For jute textiles we observe a gradual decline upto 1957 and then, followed by a period of stability, recovery just above the base-year level by the end of the decade. For cotton textiles in West Pakistan there is quite a bit of fluctuation, but no definite trend. One should note, however, that the index of workers' standard of living for all three industries shows some decline over the period, markedly so for cotton textiles in both the regions. Thus in general  $U_2$  has a higher value relative to  $U_1$  in all three cases.

TABLE VIII

**LABOUR'S FACTOR SHARE**

Year	All industries	Cotton textiles	Jute textiles
<b>A. East Pakistan</b>			
1954	.463	.356	.454
1955	.378	.371	.381
1957	.370	.422	.551
1958	.394	.451	.510
1959/60	.376	.370	.423
1962/63	.260 (.288)	.438	.295 (.411)
<b>B. West Pakistan</b>			
1954	.303	.305	
1955	.367	.399	
1957	.380	.392	
1958	.329	.384	
1959/60	.341	.384	
1962/63	.338	.361	

*Note:* Factor share is defined as total employment cost (production and non-production workers) divided by gross value added. Since 1962/63 is the first year in which CMI includes indirect tax in value of output and value added, we have subtracted them to make the values added comparable with other years. We are still left with sudden fall in labour's factor share in jute textiles and all industries in East. Low share in jute textiles in that year is due to high share of value added which is caused by the serious underestimate of raw jute input as the comparison with previous CMIs reveals. If we revise 1962/63 raw jute input by using the 1959/60 ratio of raw jute to jute manufactures in physical weight, we get a lower value added coefficient and a higher coefficient of labour's factor share which is shown in parentheses.

Table VIII shows labour's factor share ( $U_3$ ) in the three industries listed above and also in the aggregate manufacturing sector of the two regions. For West Pakistan we observe quite a sharp rise very early in the period and gradual decline since. For East Pakistan it declines for aggregate industries and goes up a bit for cotton textiles. For jute textiles there is quite a bit of fluctuation, an increase upto late fifties and then a decline.

The fact that labour's factor share shows somewhat higher increase by the end of the period over the base period than real labour cost in cotton textiles in both the regions shows that labour productivity according to our definition declines somewhat in both cases (equation (4) of Section 2). A closer examination reveals that this is due primarily to the declining share of value added in gross value of product. Similarly, the rather sharp reduction in recent years in labour's factor share in East's jute textiles in the face of rising real labour cost indicates dramatic increase in "labour productivity", again largely caused by the rising share of value added in gross value of product (which again is largely due to the reduction in the price of major input).

## 9. CONCLUSIONS

None of the findings about the course of real wages is startling. In a surplus-labour economy, one expects real wages to stabilise around some subsistence level. Fluctuations would still occur in so far as cost of living changes and it takes time for wages to adjust, and as wage adjustment can rarely be exactly equal to change in cost of living because of forecasting and estimating difficulties.

Again in the situation of general surplus labour, one does not expect the industrial wages to be disproportionately greater than the average "wage" in the traditional (*i.e.*, agricultural) sector. Some differential has probably to be maintained to compensate for the urban-rural differences in cost of living (such costs being broadly defined). But industrial wage cannot remain disproportionately in excess of the average agricultural "wage"; competition in the labour market would lower the gap near the minimum level dictated by the incentive-differential requirement. The cost of rudimentary training provided to the unskilled or semi-skilled workers, the presence of the trade unions, and government actions in regulating minimum wages are not formidable enough to create a large gap.

The experience of West Pakistan in recent years shows that the industrial employers have been able to draw labour from rural areas at a rapid rate with steady real wage and fairly low incentive differential. Only about a quarter of the rural population had lower income than average income of a wage-earning

family. But labourers (presumably from the poorest income groups) nevertheless moved from villages to urban areas. During the period 1951 to 1961 urban labour force grew at nearly 4 per cent per year while rural labour force grew at only 1 per cent per year (population censuses quoted in [2]).

It is also interesting to note that urban-rural wage differential is considerably greater in East than in West<sup>19</sup>. This may have something to do with the tenancy system in the traditional sector of the two regions. In West Pakistan agriculture pure wage-labour relations are more dominant while in East Pakistan there are fewer landless wage-earning labourers. Thus the choice before a rural labourer in East is frequently not one between a job in a rural area and a job in an urban area. It often involves giving up the status of a farmer partly owning his land and this has to be adequately compensated for.

### REFERENCES

1. Bergan, Asbjorn, *Personal Income Distribution and Personal Saving in Pakistan, 1963/64*. Mimeographed. (Karachi: Pakistan Institute of Development Economics, 1966).
2. Pakistan, Central Statistical Office, *Statistical Yearbook, 1964*. (Karachi: Central Statistical Office, 1965).
3. Pakistan, Central Statistical Office, *Census of Manufacturing Industries*. Relevant numbers. (Karachi: Central Statistical Office).
4. Pakistan, Central Statistical Office, *Consumer Price Index Numbers for Industrial Workers (1961=100)*. (Karachi: Central Statistical Office, 1964).
5. Haq, Mahbubul, *Strategy of Economic Planning*. (Karachi: Oxford University Press, 1963).
6. Pakistan, Ministry of Health, Labour and Social Welfare, *Pakistan Labour Gazette*. (Quarterly). Relevant issues.
7. Pakistan, Ministry of Health, Labour and Social Welfare, *Working of the Payment of Wages Act*. Relevant issues.
8. Lewis (Jr.), Stephen R. and S. Mushtaq Hussain, *Relative Price Changes and Industrialisation in Pakistan, 1951-64*. (Karachi: Pakistan Institute of Development Economics, 1967).
9. Lewis, W. Arthur, "Economic Development with Unlimited Supplies of Labour", *Manchester School of Economic and Social Studies*, May 1954.
10. Pakistan, Planning Commission, *The Third Five-Year Plan*. (Karachi: Manager of Publications, June 1965).
11. PIDE, Monetary and Fiscal Section, *A Measure of Inflation in Pakistan, 1951-60*. (Karachi: Pakistan Institute of Development Economics, March 1961).

<sup>19</sup> Compare 1962/63 current price wages with rural incomes per head in 1963/64 shown in [1].

# Appendix A

## Supplementary Statistical Tables

TABLE A-1

**CFI DATA ON WAGES AND EMPLOYMENT OF PRODUCTION WORKERS  
IN EAST PAKISTAN**

Year			Employment	Wages (thousand rupees)	Money wage rate (rupees)
<b>All Industries</b>					
1954	...	...	53,161	43,544 (1)	819.1 (794.5)
1955	...	...	78,710	57,673 (1)	732.7 (710.7)
1957	...	...	89,303	76,883 (3)	860.9
1958	...	...	106,900	94,511 (2)	884.1 (910.6)
1959/60	...	...	121,166	115,000 (3)	949.1
1962/63	...	...	133,589	141,247 (3)	1057.3
<b>Textiles</b>					
1954	...	...	27,638	21,639 (1)	782.9 (759.4)
1955	...	...	37,807	30,916 (1)	817.7 (793.2)
1957	...	...	54,499	41,615 (3)	763.6
1958	...	...	65,354	52,261 (2)	799.7 (823.7)
1959/60	...	...	75,730	70,010 (3)	924.5
1962/63	...	...	84,242	89,873 (3)	1066.8

*Notes:* 1) Includes non-cash benefits which are about 3 per cent vide CMIs 1957 and 1962/63. Money wage rate is adjusted by 3 per cent downward and shown in parentheses.

2) Excludes cash benefits which are about 4 per cent vide 1959/60 CMI for both production and non-production workers. We adjust upward by 3 per cent on the assumption that non-production workers get more of such benefits. Adjusted figure in parentheses.

3) Includes wages, dearness allowance and cash benefits which is our definition of "wages".

Figures are for 2(j) factories throughout.

**TABLE A-2**  
**CMI DATA ON WAGES AND EMPLOYMENT OF PRODUCTION**  
**WORKERS IN WEST PAKISTAN**

Year			Employment	Wages (thousand rupees)	Money wages rate (rupees)
<b>All Industries</b>					
1954	...	...	126,457	124,044 (1)	980.9 (966.2)
1955	...	...	185,185	165,865 (1)	895.7 (882.3)
1957	...	...	207,911	202,870 (3)	975.8
1958	...	...	234,568	229,936 (2)	980.3 (1019.5)
1959/60	...	...	265,828	284,610 (3)	1070.7
1962/63	...	...	297,206	307,747 (3)	1035.5
1963/64	...	...	286,118	317,369 (3)	1109.2
<b>Textiles</b>					
1954	...	...	69,741	68,236 (1)	978.4 (963.7)
1955	...	...	99,525	93,949 (1)	944.0 (929.8)
1957	...	...	111,343	106,651 (3)	957.9
1958	...	...	130,696	121,762 (2)	931.6 (968.9)
1959/60	...	...	142,872	146,055 (3)	1022.3
1962/63	...	...	151,754	158,070 (3)	1041.6

*Notes:* 1) Includes non-cash benefits which are 1.7 per cent vide 1957 CMI and 1.2 per cent vide 1962/63 CMI. We make a 1.5 per cent downward adjustment.

2) Cash benefits are excluded; these are 7 per cent in 1959/60 and 4 per cent in 1962/63. We make a 4 per cent upward adjustment.

3) Includes wages, dearness allowance and cash benefits which is our definition of "wages". Figures in parentheses are the adjusted money wage rates.

1962/63 and 1963/64 figures include 5(i) factories while other years include only 2(j) factories.

**TABLE A-3**  
**GENERAL CONSUMER PRICE INDEX FOR INDUSTRIAL**  
**WORKERS: 1954=100**

Year			East Pakistan	West Pakistan	Karachi	Lahore
1955	...	...	101.2	96.8	97.9	96.6
1956	...	...	112.5	98.8	100.7	99.6
1957	...	...	118.5	107.3	108.2	107.3
1958	...	...	122.5	109.2	109.4	108.7
1959	...	...	126.0	110.5	111.3	108.7
1959/60	...	...	128.7	114.3	...	...
1960	...	...	129.1	117.6	115.4	116.3
1961	...	...	132.7	121.9	118.1	121.7
1962	...	...	136.9	122.1	118.9	122.2
1962/63	...	...	138.0	121.2	...	...
1963	...	...	139.0	124.3	...	...
1963/64	...	...	...	127.4	...	...

*Notes:* East Pakistan refers to the Narayanganj index. West Pakistan refers to the average of the indices of Karachi, Lahore and Sialkot. All indices are from [4] but they are recalculated with base 1954. CSO index is shown for fiscal year. Calendar year values are obtained by taking the simple average of the two adjacent fiscal year values.

East Pakistan wages are deflated by the East Pakistan index while West Pakistan (including Karachi) wages are deflated by the West Pakistan index. HLS perennial series for Karachi is deflated by the Karachi index while the HLS perennial series for the rest of West Pakistan is deflated by the Lahore index.

TABLE A-4  
MONEY WAGES IN SELECTED INDUSTRIES  
A. EAST PAKISTAN

Industry	1954	1955	1957	1958	1959/60	1962/63
Cotton textiles ...	717.0 (717.0)	751.2 (742.3)	735.0 (620.3)	715.9 (584.4)	788.1 (612.4)	835.9 (605.7)
Jute textiles ...	881.2 (881.2)	873.3 (862.9)	777.7 (656.3)	848.7 (692.8)	987.0 (766.9)	1163.5 (843.1)
Food manufacturing ...	597.9	576.9	848.9	912.9	794.3	799.5
Paper and paper products ...	—	—	1778.9	1232.4	1357.9	2766.5
Printing and publishing ...	1222.3	839.3	1144.7	1108.7	1161.5	1201.7
Leather and leather products	623.6	929.3	880.0	893.5	889.3	935.3
Chemicals ...	676.7	501.7	787.5	1120.1	841.8	903.5
Non-metallic minerals ...	754.8	771.9	721.2	770.3	833.9	803.5
Transport equipment ...	1077.5	645.2	1241.2	1015.3	1206.3	1224.4
Metal products ...	995.4	865.4	911.0	948.1	994.7	978.1
Miscellaneous ...	855.2	436.4	1218.6	1022.0	1194.8	1178.2

(Contd.)



TABLE A-4 (Contd.)  
MONEY WAGES IN SELECTED INDUSTRIES

## B. WEST PAKISTAN

Industry	1954	1955	1957	1958	1959/60
Cotton textiles	...	986.4	1052.3	972.9	940.6
Food manufacturing	...	872.0	850.8	966.1	982.5
Footwear and other apparel	...	1161.8	905.7	1009.6	1377.5
Printing and publishing	...	1121.8	1160.7	1157.7	1277.9
Chemical and chemical products	...	1113.6	880.3	989.3	1069.6
Non-metallic mineral products	...	1029.9	1053.9	1065.5	1166.4
Basic metal	...	959.5	1013.1	1060.5	1024.9
Metal products	...	950.0	816.6	841.0	815.6
Non-electrical machinery	...	931.0	808.7	834.4	864.7
Transport equipment	...	1085.1	776.6	1289.2	1165.2
Electrical machinery	...	872.5	—	966.8	989.4
Miscellaneous	...	844.5	515.9	932.3	975.8
					933.9

Notes: Figures in parentheses are corresponding real wages in 1954 constant purchasing power.

1. We show money wages. Real wages are shown in parentheses for jute and cotton textiles in East Pakistan only. For others, real wages can be estimated by dividing money wages by the relevant cost of living index shown in Appendix Table A-3.
2. We do not make the adjustments discussed in Section 3.3. To make them, wages in 1954 and 1955 have to be reduced a little (3 per cent in East and 1.5 per cent in West) and wages in 1958 have to be raised a little (3 per cent in East and 4 per cent in West).
3. In Section 3.2 of the text we have discussed the rather sharp decline in the wage rates of certain industries in 1955 over 1954. We have also discussed the possible cause of the violent fluctuation in East Pakistan food processing industries. Some of the other sharp changes that we find hard to explain are:
  - a) Over a 100 per cent increase in wages in paper industry in East Pakistan in 1962/63 over 1959/60;
  - b) Over a 40 per cent increase in chemicals wages (due primarily to rise in wages in match industry) in East Pakistan in 1958 over 1957.

TABLE A-5  
PRICES OF TEXTILES

Year	East Pakistan		West Pakistan
	Cotton textiles	Jute textiles	Cotton textiles
1954	...	100.0	100.0
1955	...	106.8	81.8
1957	...	111.0	102.3
1958	...	103.7	96.5
1959/60	...	123.6	107.6
1962/63	...	129.7	104.0

*Note:* Source of data for the period 1957 to 1962/63, [2]. Before that for cotton textiles in East the prices of indigenous cloth and for cotton textiles in West the prices of medium cloth from *A Measure of Inflation in Pakistan, 1951-60* [11] have been spliced into the series. For jute textiles for years before 1957 the source of price information is [8]. Indices have been recalculated with base 1954.

## Appendix B

### ALTERNATIVE ESTIMATES OF THE COST OF LIVING AND REAL WAGE INDICES FOR EAST PAKISTAN

In the new CSO General Consumer Price Index for Industrial Workers in Narayanganj nine food items have together 81.42 per cent of total food weights and their *relative* weights are (source [4]):

	(per cent)
Wheat	2.7
Rice	58.7
Pulse	4.6
Milk	6.8
Edible oil	6.4
Meat	5.3
Fish	9.9
Tea	2.8
Sugar	2.8
Total	100.0

Retail prices of these goods in Narayanganj are shown in [2, p. 372]. Using these prices and the above relative weights we calculate the price index for these nine food items.

An examination of [2] reveals that other food prices have also been rising in this period. But since we want to estimate the minimum increase in food cost of living, we assume other food prices absolutely constant in the years following 1954/55. We, therefore, estimate for each year the minimum cost of living index for food as follows:

$$P_M^f = .8142 P_K^f + .1858 (100.0)$$

Where  $P_M^f$  = estimate of the minimum cost of living index for food,

$P_K^f$  = price index for our nine food items using relative weights shown in [4].

.8142 = total weights of the nine items in CSO's food price index for industrial workers,

.1858 =  $(1 - .8142)$  = weight of all other food.

We obtain our revised minimum cost of living index ( $P_M$ ) according to the following formula:

$$P_M = .6977 P_M^f + .3023 P_{CSO}^{nf}$$

Where  $P_{CSO}^{nf}$  = CSO's non-food cost of living index for industrial workers (estimated from [2]), and .6977 and .3023 are weights of food and non-food items respectively in CSO's new cost of living index (see [4]).

Table B-1 shows the above computations. Note that our minimum food price index shows a much greater increase than CSO's, but still considerably less than Lewis-Hussain's. The revised cost of living index shows a much greater increase than does the CSO cost of living index which is our wage-deflator in the text.

TABLE B-1

			P	$P^f$	$P^{nf}$	$P_K^f$	$P_M^f$	$P_M$
1953/54	...	...	100.0	100.0	100.0	100.0	100.0	100.0
1954/55	...	...	86.1	82.2	98.0	83.1	83.1	87.6
1955/56	...	...	102.2	103.9	97.0	102.2	101.8	100.3
1959/60	...	...	119.7	121.1	115.4	144.3	136.1	129.8
1960/61	...	...	120.5	120.5	120.5	133.2	127.0	125.0
1961/62	...	...	125.2	124.5	127.3	149.2	140.1	136.2
1962/63	...	...	129.3	128.5	131.8	158.8	147.9	143.0

Note: P=CSO general cost of living index.  $P^f$ =CSO cost of living index for food.  $P^{nf}$ =CSO cost of living index for non-food. Base for these three changed to 1953/54.  $P_K^f$ =Price index for nine food items.  $P_M^f$ =Our minimum food cost of living index.  $P_M$ =Our alternative minimum cost of living index.

Table B-2 shows real wages in East Pakistan estimated by deflating money wages by the revised cost of living index. Real wages in aggregate industries, jute textiles and cotton textiles decline rather sharply over the decade—respectively by 13 per cent, 13 per cent and 24 per cent. The corresponding rates of decline by using the CSO cost of living index are respectively 4 per cent, 5 per cent and 15 per cent.

**TABLE B-2**  
**REVISED REAL WAGES IN EAST PAKISTAN**

Year			All industries	Jute textiles	Cotton textiles
1954	...	...	794.5	881.2	717.0
1955	...	...	709.3	871.6	749.7
1959/60	...	...	685.8	713.2	569.4
1962/63	...	...	693.3	763.0	548.1

We have done the calculation for East because the comparison between CSO food prices and Lewis-Hussain food prices (text Table VI) shows that the CSO seriously understates the increase in East while in West the understatement is relatively small. Moreover the recalculation of the index is comparatively easy in East where it is shown for only one centre. In West Pakistan the cost of living is estimated at several centres. It seems to us that a similar revision of the West Pakistan index will show that the CSO index is an understatement, but not nearly by as much as in East Pakistan.