REAL WAGES IN BANGLADESH

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I. INTRODUCTION

A priori, the real wages of unskilled labour should not display any marked fluctuations in countries characterized by surplus labour, underdeveloped natural resources, low savings, low investments and low technology. This paper seeks to construct a model to verify the commonly held notion of a constant real wage and to provide an explanation of the observed oscillations in real wages in the context of one Asian country, Bangladesh.

The time trend in most of the wage time series show fluctuations, marked at times, which are sought to be explained with the following variables, within the framework of a wage model of lagged adjustment of expectations and an adaptive mark up process:

a) rate of inflation;

b) value of the average product in agriculture;

c) short-run profitability of the enterprise;

d) institutional factors, like government intervention and imperfect competition in the labour market.

II. MILIEU

With a population of 80.4 million occupying of 80.4 million occupying a land space of 55,598 square miles only, Bangladesh represents probably the most densely populated greater area in the world, with a density of population per square mile of 1446[1]. Of the entire population, 7.05 million are classified as urban, and 73.75 million or 92 % of the total population live in its 62,000

villages[2]. In 1975-76, agriculture constituted about 61.0 % of the gross value added and industry only about 8.5 %.

Bangladesh is regarded by many as amongst the poorest countries in terms of GNP per capita. A steadily increasing population has continually increased the man-land-ratio. The civilian labour force is roughly put at 35.2 % of the population. In 1969-70, the latest year for which we have the statistics, total labour force was estimated at 24.72 million man years of which 20.82 million (or 84 %) were engaged directly or indirectly in agricultural occupation of some sort. Unemployment/underemployment in agriculture was estimated at 32 % and that in non-agriculture at 8 % by a study[3]. The question of actual unemployment/underemployment in agriculture is anybody's guess.

Between 1951-61, the additions to rural labour force were redundant in rela-tion to the existing capital and other inputs[4], growth in the rural labour force far outpacing the growth in employment opportunities. The rate of growth of population in the decade 1961-71 was even higher, at 3.1 % per annum. Ac-cording to a recent IBRD projection on employment, between 1973 and 1983, the annual average rate of increase in the labour force will be around 2.9 %. According to the same projections, about 85 % of the total labour force would still be in the rural sector in 1993, in spite of an acceleration in the rate of growth of urban employment from its current 5 % to 8 %. This would cor-respond to an increase in urban population from the current figure of 5 mil-lion, to around 20 million in 1993. To shorten the time horizon for purposes of envisioning the labour scenario, in 1978, roughly 92 % of the Bangladesh labour force depended on the rural sector for its sustenance.

A study of real wages in such a context should really be a study of agricultural wages. The labour market in Bangladesh can be considered fairly competitive. Apart from the almost total domination of the agricultural sector, there are two small sub-labour markets, viz., the urban informal and the urban orga-nized market for labour. Entry in the former, i.e., the murky sector is easy, but in the latter extremely difficult. In 1974-75, only 2 % or so of the entire civil labour force of Bangladesh was employed in the formal sector. The manufacturing sector continues to stagnate, accounting for only 8.4 % of the GNP in 1975-76. Bangladesh clearly represents the classic case of a labour surplus economy. In the following pages I propose to study the intertemporal movements of real wages in Bangladesh for a period of nearly 25 years in respect of agricultural wages, and about 15 to 19 years for the aggregate manufacturing and the urban informal sectors.

III. DATA

Agricultural wages are reported on a monthly basis for each of the 19 districts of Bangladesh. Since the 1960's, the Bangladesh Bureau of Statistics has been providing another series on agricultural wages[5]. The series on agricultural wages which I will be using in the present study are from the official source - the Directorate of Agriculture. The only serious shortcoming of this series relates to the question of the weight. What I have collected in Table 1 is an unweighted mean of the wage rates of 19 districts. As A. R. Khan[6] observes, a measurement of actual change in the wage rate would be somewhat handicapped in the absence of appropriate weighing, should wage rates in the component units move haphazardly and in different directions, also if the employment share of the units alters structurally. But, given the fact that it is really one labour market, wage rates are not very likely to be vastly different in the different centers.

The source of the wage data on the aggregate manufacturing sector is 25 years of Pakistan in Statistics, a publication of the government of Pakistan. For the wage series on urban construction help and urban unskilled workers, I have used the following sources:
- Statistical Digest of Bangladesh - different relevant numbers.
- Quarterly Bulletin of wage rates in the former East Pakistan.
- Statistical Digest of former East Pakistan - different relevant numbers.
- Master Survey of Agriculture, second phase.
- Monthly Statistical Bulletin of Bangladesh - different relevant numbers.
- Quarterly economic indicators, Bureau of Statistics - different relevant isues.

As most of the workers belonging to either the murky or the formal urban sector are located in and around Narayanganj, Dacca, Khulna and Chittagong, I have used the same consumer price index, i. e. , the cost of living index for the industrial workers of Narayangonj, for deflating the nominal wages of the three series: i) urban construction help; ii) urban unskilled workers and iii) aggregate manufacturing.

The commodity weights of the official index which I have used for want of a better expedient are based on the National Family Expenditure Survey of 1968-69, which assigned the following weights to the grouped items of the commodity basket:

Food and Drinks	70. 5 %
Clothing and Footwear	5. 8 %
Housing	16. 2 %
Miscellaneous	7. 5 %
Total	100. 0 %

I do concede that there is a clear likelihood of some differences in the com-
position of the commodity baskets of a regular factory worker and construc-
tion help. But, in the absence of relevant information on the representative
samples of each, I am constrained to use the same deflator in both cases. For
the rural wage series, the consumer price index for agricultural workers
compiled by A. R. Khan has been used, changing the base to the year 1969.

1. Rural Wages

A. R. Khan, Bose and Clay[7] did not discern any clear time trend in the rural
wages of Bangladesh for the same time series data, with minor differences
only. What they observed in separate studies were substantial periodic fluctua-
tions which Clay attributed to fluctuations in the food prices.

From equation (1), Table 1, however, a clear negative time trend fol-
lows. This trend, for the entire period of 25 years, however, conceals the
fact that in the entire time series (Table 1-A), there are distinct phases of
rising and falling real wages. Between 1959- 60 and 1963- 64, real wages
increased; they increased again in 1968- 69 through 1970- 71, and have con-
tinuously declined ever since (Table 1-A). 1971 was the year of national
liberation for Bangladesh. A clear 19 % decline in real wages, as compared
to 1969-70, in 1970-71 can be explained in terms of the war time inflation and
the general fall in the level of aggregate activities, the GDP dropping by
nearly 22 % in 1970-71 over 1969-70.

Since its liberation through 1975, Bangladesh has been in the grip of a runaway
inflation, the consumer price index for the agricultural workers being 389 %
higher in 1974-75 over 1971. Given the fact that the supply of labour has been
rapidly increasing in Bangladesh, it is but obvious that in the absence of a
matching increase in labour demand, wages would decline. Employment in
agriculture is seasonal and except for the peak harvesting season, there is
always a surplus of farm hands all over Bangladesh. On the family farm
income does not fall below a certain level because of the fact that the total
output is simply shared by all, irrespective of individual contributions. There
is strong empirical evidence to support the hypothesis that the utility functions
of the members of the family are interdependent.

The average product in agriculture, therefore, should be a major explanatory
variable of the change in the rate of real wage.

From equation (4), Table 1, it follows that the average product is a
significant factor in the wage equation. The second major explanatory variable,
the rate of inflation, is also significant. It explains 84 % of the variations in

the rate of change in nominal wage rate at 0.002 level of significance (equation (2), Table 1). The sum of the coefficients of PI and PL, the current and the lagged inflation rates, is less than one in all the equations[8], tabulated in Table 1, which means that the agricultural workers do not get fully compensated for inflation. What actually saves them from any worse plight is the productivity in agriculture.

From equations (2) through (5) in Table 1, it is obvious that nominal wages adjusted in the case of agricultural workers of Bangladesh with lags to price changes and, therefore, real wages dropped as a result of an acceleration in the inflation rate, the increase in the average product in agriculture being inadequate to make up for the erosion in the real wages due to inflation.

In equation (5), the coefficient of DL, the lagged growth rate, has a perverse sign (for the purposes of my wage model). In the model, I am hypothesizing that a change in the growth rate will cause a shift in both the labour demand and supply functions, and a change in the rate of growth of the average product in agriculture will shift the labour supply function. Presence of both of them together in the same equation raises the R^2, but makes the coefficients of both DI and DL insignificant. Equation (5), Table 1, yields the best fit in terms of explained variations of the dependent variable, the rate of change in the nominal wage rate, even though the sign of some parameters estimated as well as their statistical significance are not meaningful, in terms of the model. There is obviously some problem of multicollinearity between the rate of growth in GNP and the rate of growth in the average product in agriculture (the coefficient of correlation between the two being 0.92). This might explain the lack of response in the rate of change of nominal wages to a change in the growth rate.

My hypothesis about the value of the average product in agriculture setting the wage floor and unanticipated inflation causing real wages to drop in the first rounds, are reasonably well verified by the results of regression analysis tabulated in Table 1. A few observations on the correspondence between the state of the economy and real wages might be in place here. Compared to 1973, real wages declined sharply, by 16.1 %, in 1975. 1971 through 1973 have been the years of economic deterioration for Bangladesh, the growth rate in real GNP being negative. In 1972-73, the GNP, in 1959-60 factor cost, declined by 5 % over 1971-72 (Table 1-A). Even though the impact of the state of the economy on real wages is not very clear from the results of the regression analysis, it, however, is a recorded fact that the years of overall economic deterioration in Bangladesh have also been the years of declining real wages.

To sum up this section then, the model seems to explain reasonably well the measured oscillations in the real wages of the agricultural workers. The

negative trend is not hard to explain in terms of the labour, product and
money market realities of Bangladesh for the corresponding period of time[9].
The economy averaged an annual rate of growth of 2 %, while population grew
at the rate of 3 % over an already colossal base, on a land mass too small to
absorb the extra people in any economically meaningful manner.

2. Wages in the Urban Informal Sector

The two wage series that represent, in my view, the urban informal sector
relate to wages of "construction help" and "urban unskilled workers" who are
not employed in a regular factory. Strictly speaking, however, one can
raise some objections to these two categories of labourers being classified
as the real representatives of the murky sector. A rickshaw puller or a
street vendor would clearly be much better samples for the purpose of wage
analysis of the urban informal sector. But, in the absence of the relevant
time series data on the earnings of such urban workers, I am once again
constrained to use the present series.

A comparison of Tables 2-A and 3-A reveals the fact that there was not
much difference in the wage rates in urban construction and those paid to
other unskilled workers - the men of the two for the period of the study being
Taka 1039 and Taka 946, respectively. From this one could deduce that this
sector is fairly competitive, and there is no institutional intervention in this
labour sub-market. A priori, one would think that there would be a substantial
wage spread between different categories of unskilled workers, with or with-
out assumptions of homogeneity in them, for the reason that there is no free
flow of information and the labour markets are segmented in countries like
Bangladesh. This, however, does not seem to be the case, as is evident from
Tables 2-A and 3-A. The construction sector is fairly competitive,
with small construction companies galore. The wage series on this activity
should provide interesting insight into the operation of market and institutio-
nal forces in setting up its wage structure.

Estimation of the equation $w = e^{(a+b \cdot T)}$ yields a strong negative time trend
for the wage series of "construction help", i.e., $\log w = 7.43 - 0.04\ T, R^2 =$
0.81, the coefficient of T, 0.04, being significant at 0.005 level[10]. A closer
look at the time series reveals the following:

a) Between 1958-59 and 1963-64, real wages rose continually. The 1960's
were considered the good years for the undivided Pakistan. The average rate
of growth in GNP during 1958-59 through 1963-64 was around 5 %, a high
figure considering the fact that for the entire period of the study the average
rate of growth in GNP comes to only 2 %.

b) Between 1964-65 and 1971-72, except for the two years 1967-68 and
1970-71, real wages declined continually. In 1972-73, they were only 52 %
of their 1963-64 level, the year when real wages for the construction help
were the highest ever. Incidentally, the period 1965 through 1972 was one of
considerable political unrest and economic deterioration. In 1971, Bangla-
desh eventually broke away from the troubled federation and became inde-
pendent.

c) Real wages rose sharply, by 22 %, in 1975-76 over 1974-75.

An analysis of the results of regression, tabulated in Table (2), shows
equation (1) explaining 72 % of the variations in the dependent variable,
WI. Inflation, current and lagged by a year, plays the significant explanatory
role, the level of significance of the coefficients of both being 0.005. The sum
of the two coefficients, however, turns out less than one in all the three
equations estimated for this wage series, which again points out the lag with
which the measured nominal wages adjust to actual inflation. The best fit for
the series is equation (3), Table (2), even though three of the explana-
tory variables, PI, API and DL, emerge with perverse coefficient signs.
Multicollinearity seems to be a problem here. Average product is significant,
at 0.05 to 0.1 level, in equation (2) and the growth rate in equation (3).
But due to linear dependence between API and DI, when both are used in a
stepwise manner the scenario gets diluted. Like in the case of the agricultural
labourers, "construction help" also is saved by the productivity in agriculture
which emerges as a viable link with the wage rate in urban construction.

The real wage series for all "urban unskilled workers", at Table 3-A, has
the following time trend:

$$\log w = 7.21 - 0.03 \ T \ (R^2 = 0.78)$$
$$(30.0) \quad (-1.94)$$

But the entire period, like in the case of wages in the rural sector and in
urban construction, can be sliced into distinct phases of rising and declining
wages. Between 1958-59 and 1963-64, real wages rose continuously, except
in 1961-62. Between 1965-66 and 1967-68, they rose again, except in 1966-67.
Real wages declined sharply in 1971-72, 1972-73 and 1974-75, recovering
markedly in 1976-77. The trend here is more or less the same as in the case
of real wages of urban construction help, which tend to indicate that the labour
market for the "urban unskilled workers" is really not all that segmented as
is commonly assumed.

Equation (3), Table (3), provides the best overall fit for this series
in terms of explained variations in the dependent variable, WI. The best fit,
however, has a few disturbing features:

a) The rate of change in the average product, lagged by a year, AP2, which
is significant as an explanatory variable in equation (2), becomes insignificant
with the introduction of growth rate as a variable in equation (3).

b) The current rate of inflation, PI, is not only insignificant in equation (3),
but also has the wrong sign on its coefficient.

c) Except for the lagged inflation rate, PL, no other explanatory variable is
significant in equation (3).

These are possible outcomes of multicollinearity. PI and PL are both signifi-
cant in the estimates that do not include the growth rate as an explanatory
variable, i. e. , equations (1) and (2), Table (3). Growth rate itself comes
barely significant, but the lagged growth rate is both insignificant and has the
wrong sign on its coefficient in equation (3).

A few remarks on the quality of the basic wage statistics of urban unskilled
workers are in place here. The highest ever real wage rate for the series
was in 1970-71 (T a b l e 3 - A). This seems somewhat bizarre considering
the fact that 1970-71 was a very bad year for Bangladesh which was then
under the occupation of the Pakistan army. It is quite possible that the
military junta might have released inflated wage statistics to project an
image of normalcy on the labour front. In any case, the reliability of the data
cannot be rated very high for the series.

3. Wages in the Manufacturing Sector

One of the main shortcomings of the present study on real wages in Bangla -
desh is the inadequacy of wage data for the modern organized sector. The
only series that I have ends in 1969-70 and since then no statistics on wages
are available in forms which are comparable to the earlier time series data.
In 1975-76, the share of industry in the GNP of Bangladesh was only 8. 4 %
and around 2 million workers were employed in the modern sector; this works
out to 7 % of the civilian labour force. In terms of magnitudes, this sector is
small both as provider of jobs and contributory to the total value added of the
economy. But, basic consumer goods and 60 % of the exports of Bangladesh
are produced in this sector. The urban élite working class is absorbed here
and there is institutional intervention to ensure that their wages stay reason-
able. The workers are unionized and the unions are effective and powerful.
In the absence of relevant data, however, I could not test the impact of labour
unions on the wages in the modern sector.

Regressing the logarithm of real wages on a constant and time, we get the
following fitted time trend:

log w = 6.65 + 0.03 T, 0.03 being significant at 0.005 level and the explained variations in the log of real wages by time comes to 0.87 of the total variations for the 14 years. Thus, while wages in the rural and the murky sectors have declined for the period of this analysis, they have steadily increased for the workers of the aggregate manufacturing sector, except for two years, viz., 1958-59 and 1966-67[11].

Results of regression analysis, Table (4), show that AP2, the rate of change in the average product in agriculture lagged by a year, is significant as an explanatory variable in equations (1) and (3), Table (4). API is highly significant in equation (1), but the introduction of growth rate as another explanatory variable makes API insignificant in the subsequent equations. It is, however, clear from the tabloid information that the linkage between the value of the average product in agriculture and the urban manufacturing sector wage is strong.

The best fit for the series we get from equation (3), with inflation rate, rate of change in the average product and the growth rate, all current and lagged, and the government intervention dummy, GD, as the explanatory variables. The impact of the growth rate on real wages turns out significant, as does that of the government intervention dummy and the rate of change in the average product lagged by a year. None of the two inflation rate variables or the lagged growth rate has any significance. As a matter of fact, the rate of inflation continues to remain insignificant for this wage series for some reasons that I can not explain.

To sum up our analysis of real wages in Bangladesh for a period of nearly 25 years in the case of agricultural wages and 14-19 years in the cases of the urban wages, I would want to make particular note of the following:

1. Except in the case of the manufacturing sector wages, for which the time series is rather short for the period of my study, real wages show a negative time trend.

2. Wages in the urban formal sector, on the average, were nearly 1.4 times higher than in the rural sector.

3. My assertion that there is a functional relationship between the per capita value added in agriculture and the wage rate is fully verified, quantitatively, within the framework of the model tested.

4. The impact of inflation has been marked in explaining some of the observed changes in the real wages, the rate of change in nominal wage, however, lagging behind the rate of change in the consumer price index.

5. From the results of the regression analysis in respect of the only wage series in the manufacturing sector, it is clear that institutional factors do

play an important role in the wage setting process. The government intervention dummy used in the least squares estimations to capture the impact of minimum wage laws on real wages came out to be highly significant. As the minimum wage laws can not be effectively enforced elsewhere, i.e., in the cases of rural or informal sector wages, I did not use this variable for analyzing those wage series.

6. Even though I have not estimated either a dynamic labour supply or a labour demand function, per se, it is clear that the intertemporal movement of real wages has been in accord with the realities of labour supply and demand in the case of Bangladesh. Labour supply has increased rapidly, without a corresponding increase in the labour demand. This has acted as a sort of wage depressant, and in the absence of sharing arrangements on family farms and institutional intervention by government fiat, real wages probably would have fallen even more steeply.

Because of the crucial explanatory roles of inflation and value added per capita in agriculture, it is clear that for a substantial improvement in the real wage income of the unskilled (or those whose skills have become obsolete), acceleration in the rate of growth in the agricultural sector and anti-inflation measures by the government are the two most relevant policy palliatives that follow from our analysis.

Notes:

1) The statistical materials of this paper are mostly taken from Chapter IV of the author's doctoral dissertation "Intertemporal movements of real wages: A case study of Bangladesh, India and Indonesia (Boston University, U.S.A., 1979).

2) Census Report, 1972.

3) W. Tims: Employment by Regions and Sectors: 1950-85.

4) E. Clay: Institutional Changes and Agricultural Wages in Bangladesh, B.D.S., October, 1976.

5) The two series are, by and large, similar.

6) Poverty and Inequality in Rural Bangladesh; World Employment Programme Research: Working Paper WEP 10-6/WP 1.

7) op. cit.

8) But we might not be able to differentiate statistically from one. In any case, the most likely estimate < 1.

9) The trend seems heavily influenced by the years 1971-72 through 1974-75, when real wages declined sharply.

10) Again this is probably due to the impact of the years 1971-72 through 1974-75.

11) Since the series ends in 1969-70, and 1970-71 through 1974-75 have been the real bad years on the real wage front of Bangladesh, any conclusion on the basis of the fitted time trend for this wage series has to be accepted with some reservations.

Tables:

Symbols used:

1. LWS = Logarithm of Real Wage
2. W_1 = Rate of change in nominal wage
3. C = Constant
4. P_1 = Rate of Inflation
5. P_L = P_1, lagged by a year
6. AP_1 = Rate of change in the average product in agriculture
7. AP_L = AP_L, lagged by a year
8. D_1 = Rate of change in GNP
9. D_L = D_1, lagged by a year
10. T = Times
11. GD = Government intervention Dummy
12. Figures inside parentheses are the t-statistics of the estimated parameters.

Table 1: Matrix of Regression Coefficients (Rural Wages) (n = 26)

Dependent Variable	C	P_1	P_L	AP_1	AP_2	D_1	D_L	T	R^2
1) LWS	2.5							-0.06	0.72
	(2.7)							(-1.2)	
2) W_1	0.01	0.33	0.32						0.84
	(0.6)	(3.33)	(3.1)						
3) W_1	0.02	0.33	0.28	0.12	0.07	0.06			0.87
	(1.22)	(2.82)	(2.42)	(0.3)	(0.44)	(0.14)			
4) W_1	0.02	0.35	0.3	0.14	0.06				0.86
	(0.73)	(2.9)	(2.41)	(1.05)	(0.4)				
5) W_1	0.05	0.22	0.34	-0.02	0.72	0.27	-0.88		0.88
	(1.52)	(1.52)	(2.73)	(-0.15)	(1.3)	(1.3)	(-1.2)		

Table 2: Matrix of Regression Coefficients (Urban Construction Help) (n = 18)

Dependent Variable	C	P_1	P_L	AP_1	AP_2	D_1	D_L	R^2
1) W_1	0.01	0.33	0.43					0.72
	(0.4)	(2.6)	(3.06)					
2) W_1	0.01	0.45	0.39	0.34	0.46			0.79
	(0.6)	(3.3)	(3.02)	(1.41)	(1.9)			
3) W_1	0.02	-0.07	0.72	-1.3	1.06	1.79	-1.5	0.86
	(0.6)	(-0.3)	(3.8)	(-1.7)	(1.5)	(2.2)	(-1.6)	

Table 3: Matrix of Regression Coefficients (Urban unskilled workers) (n = 19)

Dependent Variable	C	P_1	P_L	AP_1	AP_2	D_1	D_L	R^2
1) W_1	0.02	0.16	0.39					0.69
	(1.28)	(1.73)	(4.17)					
2) W_1	0.01	0.18	0.41	−0.15	0.29			0.73
	(1.07)	(1.61)	(4.12)	(−0.8)	(1.31)			
3) W_1	0.02	−0.08	0.57	−0.86	0.58	0.82	−0.77	0.76
	(0.95)	(−0.28)	(2.68)	(−1.2)	(0.93)	(1.15)	(−0.8)	

Table 4: Matrix of Regression Coefficients (Aggregate Manufacturing) (n = 14)

Dependent Variable	C	P_1	P_L	AP_1	AP_2	D_1	D_L	GD	R^2
1) W_1	0.07	0.6	−0.6	0.62	0.73				0.87
	(3.05)	(0.1)	(−1.2)	(3.6)	(4.4)				
2) W_1	0.12	−0.36	−0.32	0.87	−0.23	−1.16	0.72		0.24
	(0.78)	(−0.3)	(−0.29)	(0.74)	(−0.1)	(−0.73)	(0.38)		
3) W_1	0.05	0.11	−0.8	−0.32	1.33	1.5	−1.04	0.21	0.92
	(1.75)	(0.2)	(−1.6)	(−0.55)	(2.98)	(1.71)	(−1.6)	(4.8)	

Table 1 A: National Account Statistics of Bangladesh (1949/50 - 1974/75)

Year	W	WS	P	P₁	Y
1949 - 50	1.77	3.15	56.16	-	11298
1950 - 51	1.59	2.89	54.99	-0.02	11905
1951 - 52	1.54	2.78	55.34	0.06	12305
1952 - 53	1.45	2.58	56.24	0.02	12677
1953 - 54	1.44	2.59	55.60	-0.01	13253
1954 - 55	1.41	2.75	51.32	-0.08	12957
1955 - 56	1.46	2.74	53.21	0.04	12414
1956 - 57	1.65	2.78	59.26	0.11	13740
1957 - 58	1.78	2.75	64.75	0.09	13464
1958 - 59	1.85	2.71	68.28	0.05	12712
1959 - 60	1.90	2.80	67.85	-0.006	14161
1960 - 61	2.07	3.04	68.07	0.003	15987
1961 - 62	2.22	3.14	70.60	0.04	15987
1962 - 63	2.33	3.20	72.77	0.03	16272
1963 - 64	2.53	3.52	71.95	-0.01	17790
1964 - 65	2.50	3.42	73.09	0.16	18073
1965 - 66	2.37	2.87	82.50	0.13	18686
1966 - 67	2.50	2.68	93.16	0.13	18869
1967 - 68	2.68	2.79	96.19	0.03	20536
1968 - 69	2.94	3.00	97.97	0.02	21139
1969 - 70	3.05	3.13	97.33	-0.007	21504
1970 - 71	3.07	3.24	94.65	-0.03	16826
1971 - 72	3.54	2.62	135.14	0.43	16049
1972 - 73	4.76	2.23	213.08	0.58	15267
1973 - 74	6.82	2.09	326.69	0.53	16750
1974 - 75	8.74	1.89	463.58	0.42	17464

W = Nominal Wage, in Taka, per day
WS = Real Wage
P = Consumer Price Index for Agricultural Workers (1969 = 100)
P₁ = Rate of Inflation
Y = GNP in 1959-60 Factor Costs; in 000,000 Taka

Sources: 1) Dacca Gazette
          2) A. R. Khan: WEP 10-6/WP 1 (Working Paper)
          3) M. Alamgir: BOS, October, 1974
          4) Statistical Yearbook

Table 2 A: Wages of Urban Construction Help, Bangladesh

Year	W	WS	P	P_1
1958-59	651	942.65	69.06	–
1959-60	713	988.08	72.16	–
1960-61	786	1 082.05	72.64	0.007
1961-62	858	1 125.39	76.24	0.05
1962-63	950	1 228.02	77.36	0.01
1963-64	1 041	1 322.07	78.74	0.02
1964-65	1 050	1 278.31	82.14	0.04
1965-66	1 025	1 236.73	82.88	0.009
1966-67	1 032	1 134.07	91.00	0.10
1967-68	1 077	1 166.59	92.32	0.01
1968-69	1 088	1 121.42	97.02	0.05
1969-70	1 086	1 086.00	100.00	0.03
1970-71	1 113	1 088.30	102.27	0.02
1971-72	1 172	832.03	140.86	0.38
1972-73	1 410	686.83	205.29	0.46
1973-74	2 124	741.88	286.30	0.39
1974-75	2 928	698.71	419.06	0.46
1975-76	3 237	852.18	379.85	-0.09

W = Nominal Wage, in Taka per Year
WS = Real Wage
P = Consumer Price Index for Industrial Workers of Narayanganj
P_1 = Rate of Inflation

Table 3 A: Wages of Urban Unskilled Workers, Bangladesh

Year	W	WS[+]	Year	W	WS[+]
1958-59	750.5	1 086.74	1968-69	1 043.0	1 075.04
1959-60	751.5	1 041.44	1969-70	1 079.0	1 059.00
1960-61	752.5	1 035.93	1970-71	1 155.0	1 129.36
1961-62	753.0	987.67	1971-72	1 230.0	873.21
1962-63	794.0	1 026.37	1972-73	1 347.0	656.15
1963-64	857.0	1 088.39	1973-74	1 867.0	652.11
1964-65	882.0	1 073.78	1974-75	2 388.0	569.85
1965-66	903.0	1 089.53	1975-76	2 632.0	692.91
1966-67	932.0	1024.18	1976-77	2 720.0	744.21
1967-68	975.0	1 056.11			

W = Nominal Wage, in Taka, per Year; WS = Real Wage

+) Deflator used to derive the real wage is the same as in the case of Urban
Construction Help, i.e., Consumer Price Index for the Industrial Workers
of Narayanganj.

Table 4 A: Real Wages in Aggregate Manufacturing, Bangladesh

Year	W	WS	CPI	Year	W	WS	CPI
1956-57	789	883.04	89.35	1963-64	1 155	1 058.47	109.12
1957-58	866	913.98	94.75	1964-65	1 207	1 060.35	113.83
1958-59	748	781.61	95.70	1965-66	1 258	1 095.34	114.85
1959-60	804	804.00	100.00	1966-67	1 353	1 072.87	126.11
1960-61	945	938.80	100.66	1967-68	1 491	1 087.23	127.94
1961-62	1 006	952.11	105.66	1968-69	1 543	1 147.64	134.45
1962-63	1 091	1 017.63	107.21	1969-70	1 815	1 309.71	138.58

W = Nominal Wage, in Taka, per Year; WS = Real Wage;
CPI = Consumer Price Index for Industrial Workers of Narayanganj in 1950-60

Table 5 A: Correlation Matrix, Bangladesh

	Means (1)	Standard Deviations (2)	Coefficient of Variation (3)
PI	0.122326	0.178626	1.46
PL	0.130980	0.171156	1.31
AP1	-0.141853 E-01	0.786316 E-01	5.55
AP2	-0.125146 E-01	0.811509 E-01	6.48
D1	0.171874 E-01	0.734372 E-01	4.29
DL	0.232630 E-01	0.770827 E-01	3.35

Correlation Matrix

	PI	PL	AP1	AP2	D1	DL
PI	1.00000	0.517160	-0.199734	-0.309165	-0.500691 E-01	-0.494008
PL	0.517160	1.00000	0.22835	-0.145090	0.117769	-0.896984 E-01
AP1	-0.199734	0.222835	1.00000	-0.116131	0.866541	0.426566 E-01
AP2	-0.309165	-0.145090	-0.116131	1.00000	0.156344	0.928996
D1	-0.500691 E-01	0.117769	0.866541	0.156344	1.00000	0.232118
DL	-0.494008	-0.896984 E-01	0.426566 E-01	0.928996	0.232118	1.00000
	1	2	3	4	5	6