Trend of Real Income of the Rural Poor in East Pakistan, 1949-66

by

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SCOPE OF THE STUDY

Pakistan's gross national product has been rising over time. While GNP per capita remained practically unchanged during the 1950's, it increased appreciably in the 1960's. The trend of per capita income does not, however, indicate whether and to what extent economic development had 'trickle down' effects to improve the lot of the relatively poorer sections of society. Studies of intertemporal changes in inequality of income distributions and in levels of income (consumption) could show what changes actually took place in their absolute and relative income positions.

"Diminishing inequalities in the distribution of income" is one of the professed objectives of Pakistan's Third Five-Year Plan [21, p. 40]. This objective implies both an absolute and a relative improvement in the income level of the poorer sections of population. The two studies which are known to have been made on income distribution in Pakistan do not cover enough ground to indicate whether this was achieved in the past: the study by Mrs. Haq [10] is limited to personal income distribution in the high-income brackets (income tax payers) in urban areas for the period 1948/49 to 1960/61, and that by Bergan [1], although comprehensive, refers to a single year, 1963/64.

It is, however, generally held that Pakistan's pattern of development has generated increasing income inequalities among classes (and also between the two Wings). The development strategy has placed major reliance on private enterprise and sought to generate a higher saving rate through redistributing income in favour of those groups whose saving rates are considered

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to be relatively high. This has meant an increasing concentration of income in the hands of a small group of wealthy industrialists. Apparently some non-industrial groups in trade, profession and services also experienced large increases in their incomes. One cannot even exclude the possibility that the process of economic development redistributed income in such a way and to such an extent that the bottom group (say, the quartile) in the income scale has become absolutely poorer while per capita income of the population as a whole increased.

About two years ago Griffin [8] suggested, on the basis of some important although inadequate data, that the real income of Pakistan's rural population declined from 1949/50 onwards till the early 1960's whenceforward it gradually rose to the 1949/50 level in 1964/65. Griffin's provocative remarks have not been followed up by any research into the changes over time in the level of real income (consumption) of the poorest sections of society in rural areas[1].

The present writer's efforts to make such an enquiry have been hindered by nonavailability of necessary information. This paper, much more restricted in scope than was originally intended, presents the preliminary findings of an attempt to indicate in an indirect way the changes in the level of real income of the bulk of the poorest people in rural East Pakistan from 1949 to 1966. It does not represent a comprehensive study of the intertemporal changes in the inequality of income (consumption) distribution and the levels of living of the various sections of the rural population of East Pakistan. Such a study does not appear to be feasible for lack of necessary historical data[2].

The Central Statistical Office's multipurpose sampling enquiry (National Sample Survey) which collected data on consumption and income of rural households began as late as 1959, and only three rounds (1959, 1960 and 1961) are available. The same enquiry restarted in 1963/64[3] and so far only the 1963/64 survey is available. Because of the short period of time covered by

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[1] Griffin has been rightly criticised by Bergan [1, p.172] for assuming that *agricultural* income is the only income that accrues to the *rural* population. It is, however, very doubtful if the inclusion of income accruing to rural population for their activities in nonagricultural sectors (if such income could be estimated) would show a rising trend of per capita income in rural areas.

[2] Given expenditure distributions (*i.e.*, distributions of persons by total monthly or yearly per capita consumption expenditure, at current prices) relating to different periods, and given the appropriate consumer price indices with which to bring the distributions to some common set of prices, one could attempt an estimate of the intertemporal changes in inequality or level of living. The appropriate consumer price index is unlikely to be the same for all levels of living (income-consumption groups). Hence, if the index varies with the level of income or consumption, it would be necessary to work out not a single price deflator but a set of price deflators, one deflator for each income-consumption group for comparing intertemporal changes in levels of living and inequality of expenditure (income) distributions. About the need for a set of deflators, *see* Iyengar and Bhattacharya[12].

[3] It has been re-named *Quarterly Survey of Current Economic Conditions* which covers both urban and rural areas.

these surveys and the admittedly poor quality of the 1959 survey, one cannot use them for the purpose of studying the long-term changes in the income-consumption level of the poorest among rural population.   They may, however, be used as evidence of such changes (as is shown in Appendix C and Appendix Table C-1) in the early 1960's[4].

Main Assumptions and Findings

Since these limitations of available data preclude any direct estimation of long-term changes in real income of the rural poor, some indirect and somewhat crude methods are used in this study.   The main assumptions which underlie the statistical computations and their interpretations are the following:

An increase in income of the poorest section of rural population would not take place in the absence of an increase in average incomes of agricultural population and rural population.

An increase in per capita income in agriculture would show up in rising crop yield and higher monetary returns from land per head of agricultural population.

Those who are agricultural labourers by chief occupation constitute the bulk of the poorest among rural people and any increase in their real income must show up in the movement of real wages which are the major source of their income.

It is assumed that the dependency ratio per labourer has remained unchanged since 1949.

On these assumptions, the estimated movement of per capita rural income, per capita income in agriculture, crop yield, and real wages, shown in Sections II and III, suggest a decline in the real-income level of the poorest stratum of rural population of East Pakistan in the 1950's and no significant rise in the 1960's.

II. EVIDENCE OF MOVEMENT OF PER CAPITA FACTOR INCOMES OF AGRICULTURAL AND RURAL POPULATIONS

We begin with the observation of estimated changes in real incomes of rural, and agricultural populations of East Pakistan, and urban-rural disparity in per capita income.   A clear distinction is made between rural and agricultural population, and between rural factor income and factor income in agriculture.

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[4]It has, however, been pointed out by Mahalanobis [16] that frequency distributions in which the class ranges are fixed in terms of money value of per capita expenditure (or income) have limitations for purposes of intertemporal comparisons of levels of living.   Even when price changes are corrected by use of the price deflator(s) a fixed range frequency class (income or expenditure) would represent different fractile groups in two or more periods and would not be comparable in any important sense.

Rural population is larger than agricultural population, because rural areas contain almost all people engaged in agriculture, and also a large proportion of nonagricultural population. Similarly, total rural factor income is larger than factor income (gross value added) in agriculture.

Table I presents some estimates of per capita factor incomes of total, agricultural, rural and urban populations of East Pakistan from 1949/50 to 1963/64. The series could not be made upto-date because province-wise breakdown of Pakistan's national income data has not been published, or made available to the author for any year after 1963/64. (The estimates of agricultural, rural and urban populations, and of rural and urban incomes are shown in Appendix Tables A-1 and A-2 which are followed by explanatory notes).

Table II shows some historical data on cropped area per head of agricultural population, cropping intensity, and yield.

TABLE I

PER CAPITA FACTOR INCOMES OF TOTAL, AGRICULTURAL, RURAL AND URBAN POPULATIONS OF EAST PAKISTAN

(in rupees at 1959/60 prices; the last column is in per cent)

Year	Gross provincial product per capita	Agricultural value added per head of agricultural population	Per capita rural income	Per capita urban income	Per capita rural income as % of urban
	(1)	(2)	(3)	(4)	(5)
1949/50	285 ⎤	228 ⎤	271 ⎤	609	44
1950/51	289 ⎮	229 ⎮	274 ⎮	619	44
1951/52	290 ⎬(290)	225 ⎬(228)	274 ⎬(275)	634	43
1952/53	292 ⎮	228 ⎮	277 ⎮	619	45
1953/54	295 ⎦	230 ⎦	280 ⎦	615	46
1954/55	282 ⎤	216 ⎤	265 ⎤	617	43
1955/56	263 ⎮	194 ⎮	247 ⎮	597	41
1956/57	281 ⎬(271)	212 ⎬(201)	261 ⎬(253)	666	39
1957/58	270 ⎮	199 ⎮	253 ⎮	607	42
1958/59	257 ⎦	184 ⎦	238 ⎦	616	39
1959/60	271 ⎤	196 ⎤	252 ⎤	618	41
1960/61	279 ⎮	203 ⎮	259 ⎮	644	40
1961/62	289 ⎬(285)	207 ⎬(202)	267 ⎬(268)	671	40
1962/63	281 ⎮	195 ⎮	258 ⎮	696	37
1963/64	305 ⎦	208 ⎦	279 ⎦	755	37

Note: Figures in parentheses are five-year average.

Sources: Appendix Tables A-1 and A-2 and explanatory notes.

TABLE II

CROPPED LAND PER HEAD, CROPPING INTENSITY AND YIELD

Period (July-June)	Cropped area (in acres) per head of			Cropping intensity (per cent)	Rice yield per acre (maunds)	Rice output per head of agricultural population (maunds)	Total agricultural value added per acre of net cropped land (1959/60 prices; Rs.)
	Agricultural population		Male agricultural labour force				
	Gross	Net	Net				
	(A)	(B)	(B')	(C)	(D)	(E)	(F)
1948/49	n.a.	n.a.	n.a.	131.0	10.8	n.a.	n.a.
1949/50	.73	0.57	n.a.	127.7	10.3	5.9	402
1950/51	.72	0.56	2.07	127.8	10.0	5.6	406
1954/55	.68	0.52	n.a.	131.4	9.7	5.0	415
1955/56	.62	0.49	n.a.	127.0	8.9	4.4	393
1959/60	.58	0.45	n.a.	129.6	10.9	4.9	439
1960/61	.58	0.44	1.74	131.6	11.8	5.2	460
1961/62	.56	0.43	n.a.	130.8	12.3	5.3	478
1962/63	.56	0.42	n.a.	132.5	11.1	4.7	463
1963/64	.55	0.41	n.a.	133.7	12.8	5.2	503
1964/65	n.a.	n.a.	n.a.	n.a.	12.3	n.a.	n.a.
1965/66	n.a.	n.a.	n.a.	n.a.	12.2	n.a.	n.a.
1966/67	n.a.	n.a.	n.a.	n.a.	12.9	n.a.	n.a.

NOTES: $C = \dfrac{A}{B} \times 100$

$E = B \times D$

'n.a.' means not available

Sources: Net cropped area, [4].
Acreage and output of rice, C.S.O. [17] and [20a].
Male labour force, [20].
For others, same as for Table I.

Agricultural stagnation, slow industrial development and rapid population growth characterised the economy of East Pakistan in the 1950's. This resulted in a lower per capita income in the late 1950's than in the early 1950's. Only in the 1960's a slight reversal in the movement of per capita income appears to have begun. As Table I shows, the avarage per capita income during 1949/50 to 1953/54 was 290 rupees, during 1954/55 to 1958/59 271 rupees, and during 1959/60 to 1963/64 285 rupees. During the four-year period, 1959/60 to 1962/63, it was only 280 rupees.

Decline in Per Capita Income in Agriculture

The decline in per capita income of agricultural population was even more pronounced. As Table I shows, from about 228 rupees in the early 1950's it went down to 201 rupees in the late 1950's and to 202 rupees in the early 1960's. But if 1963/64 is excluded the average for the period 1959/60 to 1962/63 becomes only 200 rupees. There is little doubt that the fall in per capita income of agricultural population during the 1950's has not been made good by the slight reversal observed in 1963/64.

Agricultural income data used in this paper are based on the C.S.O. estimates and include value added in fishing, forestry as well as crop production. However, output of crops accounts for 80 per cent of total agricultural income. One can, therefore, go a step further and see whether the combined effect of changes in land per head and yield per acre appears to support the observed decline in per capita factor income in agriculture. It is clear from Table II that both net and gross cropped area per head of agricultural population has declined significantly since 1949/50. The increase in cropping intensity has been too insignificant to offset the decline in net cropped area per head resulting from virtually given land and rapidly growing population. The yield of rice which accounts for over 50 per cent of gross value added in agriculture decreased in the middle-1950's but showed some increase in the 1960's. However, the per cent increase in yield has been smaller than the per cent decrease in cropped acreage per head, so that output of rice per head of agricultural population has been lower in the middle-1950's and the early 1960's than in the early 1950's.

A recent study [15] has shown that the agricultural sector consumes about 80 per cent of rice output and sells about 20 per cent to the nonagricultural sector, and that the wholesale price of rice declined both absolutely and relative to the price of cotton textiles (and other consumer manufacturers) from 1951/52 to 1955/56 but registered some increase from 1956/57 to 1963/64. This indicates that the real returns from the marketed portion of rice output per head of agricultural population clearly declined in the earlier period but may have improved somewhat in the later period.

The decline in gross value added in agriculture per head of agricultural population as shown in Table I is at constant agricultural prices of 1959/60. We have implicitly assumed so far that this decline measures the decline in per capita real income of agricultural population. There may, however, be objections to this on two grounds. One is the movement of the terms of trade of the agricultural sector, and the other is income earned by agricultural population from subsidiary occupations.

Since the agricultural sector sold a part of its output to other sectors in exchange for certain products, a decline in the prices of these products relatively to agricultural prices could partly or fully offset the decline in per capita income in the sector measured in the way stated above. There was, however, no such offsetting influence. For one, the proportion of agricultural output sold outside the sector was likely to be considerably less than 50 per cent. Secondly, as Lewis and Hussain [15] have shown, the terms of trade were actually moving against agriculture till the late 1950's, and only since then there has begun a reversal of this trend.

It is agricultural output which essentially determines the income level of agricultural population. Inclusion of income earned by agricultural population from subsidiary occupations would only slightly raise the absuolte level of per capita income in all years, but would not alter the observed trend over time. Moreover, income from subsidiary occupations is included in our estimate of per capita rural income which also moved roughly in the same direction as per capita income in agriculture, as we shall presently see.

One would expect that a decline in per capita factor income within the agricultural sector would be accompanied by a similar decline in income of the poorer people in the sector, unless the relative income of these people was sufficiently raised by a change in the distribution of income within the sector. But there appears to be no reason why such a redistribution should have taken place over time in favour of poorer agriculturists and agricultural wage labourers. On the contrary, it is reasonable to maintain, as was observed by Papanek [23], that whatever increase in agricultural production occurred in the 1960's has accrued mainly to large farmers who could obtain subsidised fertilizers and some benefits from the government's agricultural development programme.

Fall in Per Capita Rural Income and Increase in Rural-Urban Disparity

As can be seen from Table I, per capita rural income declined from 1949/50 to 1958/59. Although a reversal began from 1959/60, the income level was still lower in 1962/63 than in 1949/50; only in 1963/64 it rose slightly above the 1949/50 level. From an average of 275 rupees during 1949/50 to 1953/54, it fell to 253 rupees during 1954/55 to 1958/59 and moved to 268 rupees

during 1959/60 to 1963/64. If 1963/64 is excluded the average for 1959/60 to 1962/63 comes down to 259 rupees only.

Per capita urban income increased steadily, although slowly, during the entire period. It rose from just over 600 rupees in the early 1950's to about 700 rupees in the early 1960's. As a result, rural-urban disparity in *factor* income per capita has increased. The ratio of per capita rural income to urban has gone down from 44 per cent in 1949/50 to 37 per cent in 1963/64. This differs from Bergan's [1, p. 172] estimate of 60 per cent for 1963/64, based on the C.S.O.'s quarterly survey [19]. Total population and its rural-urban distribution used in our estimates are practically the same as in Bergan's. These two estimates are not, however, strictly comparable, because Bergan's measure relates to disparity in *personal* income per capita, while our estimate is based on *factor* income.

There is also some transfer of income between rural households and urban households. Those urban households which receive income remittances from rural areas are usually rich (mainly landlords and businessmen) and those rural households which receive remittances from urban areas are usually poor. If these transfers are taken into account the average per capita factor income accruing to rural population may not be changed very much. But what is likely is that the income enjoyed by the poorer rural people could be found to be higher when these transfers are taken into consideration. We do not know how much higher, but it is unlikely to be very much. This is because urban employment did not increase fast enough to make such remittances significantly large.

The decline in agricultural value added per head of agricultural population and in per capita rural income indicates, if anything, that the real income of the poorest stratum of rural population declined over time, perhaps quite appreciably. This decline is very likely to show up in the movement of real income of agricultural labourers who constitute a large segment, and are among the poorest, of rural population in East Pakistan. This is considered in the following section.

III. EVIDENCE OF DAILY WAGE RATES AND WAGE EARNINGS OF AGRICULTURAL LABOURERS — THE POOREST OF THE RURAL POOR

Size of Landless Agricultural Labour Force and Sources of its Income

In rural areas income is derived chiefly from agriculture, and therefore, landlessness and extreme poverty go together. Although self-employment far outweighs wage-employment in agriculture, and cultivators (owners and tenants) outnumber landless agricultural labourers, the latter constitutes a large proportion of the agricultural labour force in East Pakistan. This proportion has been rising over time. During the period 1951-61, its relative importance in agricultural labour force rose from 14 per cent to 17 per cent (Table III).

Census data show that in this period, while agricultural labour force increased by 33.8 per cent the number of landless labourers increased by 63.6 per cent.

TABLE III

COMPOSITION OF AGRICULTURAL LABOUR FORCE BY LAND TENURE AND SEX: EAST PAKISTAN, 1951 AND 1961 PERSONS OF AGE 12 YEARS AND ABOVE

(in millions, except the percentage)

Year	Sex	Owning all land tilled	Part owner part tenant or fully tenant	Owner tenant or full tenant who also works for hire	Landless agricultural labourers	Total agricultural labour force including others	Landless agricultural labour as % of total
		(A)	(B)	(C)	(D)	(E)	(F)
1951	Both Sexes	3.74	4.96	0.41	1.51	10.72	14.09
	Males	3.38	4.67	0.39	1.40	9.90	14.14
	Females	0.36	0.29	0.02	0.11	0.82	13.41
1961	Both sexes	5.01	5.60	1.01	2.47	14.34	17.22
	Males	4.74	3.75	0.98	2.33	12.00	19.42
	Females	0.27	1.85	0.03	0.14	2.34	5.98
	PER CENT CHANGE						
1951-61	Both sexes	34.0	12.9	146	63.6	33.8	
	Males	40.2	—19.7	150	66.4	21.2	
	Females	—25.0	537.9	50	27.3	185.4	

Sources: [20, 1951, Vol. I, Table 14; 1961, Vol. II, Table 51].

It should be noted, however, that the increase in total agricultural labour force as shown by the census (Table III, Column (E)) is to a considerable extent illusory, while the increase in landless agricultural labourers (Column (D)) is not. This is because there is apparently a distinct underenumeration of female agricultural labour force in the 1951 Census. Out of a total increase of 3.62 million in agricultural labour force (Column (E)), 1.52 million is attributed to female labour force which is shown to have increased from 0.82 million in 1951 to 2.34 million in 1961, *i.e.*, an increase of 184 per cent in ten years. There is no evidence of any great social change which can explain this enormous increase in female participation. It seems, however, that there is no such underenumeration of female landless labourers (Column (D)) in the 1951 Census. Out of the total increase of 0.96 million in the landless agricultural labour force only 0.03 is attributed to females. Also the increase in the number of owners and tenants who also work for hire (Column (C)) is almost entirely attributed to males.

Since the decline in land holding per head has driven an increasing number of small owners and tenants into the employment market for at least a part of the year (Column (C)), the effective supply of man-days seeking employment in agriculture is even greater than is indicated by the increasing number of landless agricultural labourers. It does not follow, however, that wage employment in agriculture (or in rural areas in general) increased in the same proportion.

The main sources of current account income of families of agricultural labourers are presumably *a*) cultivation of land, if any land is held, *b*) agricultural labour, *c*) nonagricultural labour and *d*) other non-farming activities such as handicrafts. No historical series of income of such households is available. But wage earnings, particularly those in agriculture, are likely to be the most important component of their income, and we shall mainly consider this component.

For families of agricultural labourers without any land, wages constitute almost the total income. For all such families with or without land, sampling enquiries made in India indicate that agricultural wages accounted for 64 per cent and 73 per cent of income in 1950/51 and 1956/57 respectively, and non-agricultural wage earnings were respectively 12 and 8 per cent of income in those years [27]. A survey [26] conducted by the Rajshahi University (herein after called the Survey) in East Pakistan for 1965/66 indicates that 53 per cent of income of families of agricultural labourers was derived from wage earnings (see Appendix Table A-4). But in view of the high proportion of landless labourers in agricultural labour force as shown by the census, this estimate for East Pakistan appears to be low.

Sources of Wage Data

Except for the excellent *Report* by Darling [2], the conditions of agricultural labourers and their wages in Pakistan have remained practically an untouched field. Available statistics are also very scanty and poor in quality. No serious importance is attached to collection of such statistics. At the same time the large number of small employers and the conditions obtaining in agriculture and rural life in general make the task very difficult. For studying the movement over time of wage earnings of agricultural labourers we had to make do with the little bits of available data.

The only source of historical data on agricultural wages in East Pakistan is the Directorate of Agriculture, East Pakistan. It prepares a *Weather and Crop Report* [5] either for every week or for every month, which is published in the supplement to the *Dacca Gazette*. It reports the daily money wages for every week or every month in each district of East Pakistan. The series is available from 1948 onwards. The reported wage rate for each district is based on an unweighted average of the rate obtaining in the subdivisions of the district.

The wage rate in each subdivision is reported on the basis of 'random' queries by agricultural officers to a few local farmers, and is not weighted by man-days employed during the week or the month.

Limitations of Wage Data, and Adjustments Made in the Data

Because of this lack of information on employment one cannot directly estimate monthly or yearly wage earnings per labourer. Another problem arises due to the prevalence of wage payment in cash-cum-kind.

Consider first the method of wage payment in agriculture. Payment of wages in money is not universal in East Pakistan's agriculture. As both Darling and Habibullah [2 ; 9] have found, although wage payment in money is much more prevalent, in some cases wages are paid partly in money and partly in kind; *e.g.*, one or two meals a day plus some money. As the rural economy becomes increasingly monetized one would expect money wages to replace wage payments in kind. This would imply that the recorded rise in money wages is partly a replacement of wage payment in kind. Therefore, if the reporting of money wages by the Directorate includes cases where payment in kind has been replaced over years by payment in cash, the rise in wages, would be overstated. However, in the absence of exact information we may assume that the Directorate reports are based on cases where only cash wages have been paid during all years. Further, employers and labourers may be considered to be sufficiently aware of the costs and prices of kind payments so that in any small area the purely cash wage rate would be approximately equal to the cash-cum-kind wage rate expressed in money. This agricultural wage rate is also likely to approximate the prevailing wage rate for the general run of rural unskilled labourers.

Inter-district wage differences introduce real difficulties, even if a district is considered fairly homogeneous. An estimated daily wage for East Pakistan during any week or month based on a simple average of daily wages in the constituent districts hardly gives a satisfactory description of reality. The adjustment one should make is to weight the wage rate in each district during any month by the number of man-days of agricultural wage labour employed in that district. But this information is not available. Nor do we know the number of landless agricultural labourers in each district for most of the years. We have, therefore, made a simple average of daily wage rates in districts to obtain the daily wage rate for East Pakistan for each month. This provincial daily wage rate for each month is then weighted by the corresponding monthly wage-employment per labourer. An estimate of the number of days an agricultural labourer in East Pakistan gets wage-employment in each calendar month of the year has been obtained from a sub-sample of the Survey. These data on monthly employment have been used for all years to estimate the average labourer's adjusted daily wage rate, and total annual wage-earnings.

Nominal Wage Rates and Wage Earnings

With these adjustments, the average annual wage-earnings per labourer and the daily wage rates for the years 1948-66 are presented in Table IV which also shows the unadjusted daily wage rates reported by the Directorate of Agriculture.

The estimated yearly wage earnings over time are based on the implicit assumptions that the seasonal pattern and total days of wage-employment per year did not change over time in the relevant period. So far as the adjusted daily wage rate for each year is concerned the implicit assumption is only that the seasonal pattern of wage-employment did not change over time.

It is reasonable to assume that the seasonal pattern of wage-employment has not changed in any significant way in the last twenty years. It is, however, possible and even likely that there has been a decline over time, in the quantum of yearly employment per agricultural labourer, chiefly because agriculture remained practically stagnant while rural population grew fast. It has been noted earlier (Table II) that net cropped area per head declined, and cropping intensity did not increase at all significantly. There is also little doubt that cropping pattern remained virtually unchanged, and nonagricultural employment opportunities did not expand as fast as population. Therefore, the assumption of unchanged annual wage-employment per labourer perhaps gives an overestimate of annual wage-earnings per labourer in the later years as compared with those in the earlier years.

Both the adjusted and the unadjusted series shown in Table IV indicate that money wage rates were lower in the early 1950's than in 1949 (or 1948) and began to rise after the middle 1950's, but were above the 1949 level only in the 1960's.

It should be mentioned here that nominal wage rates reported by the Directorate of Agriculture, for the early 1950's are corroborated by the evidence of Darling [2] who obtained some first-hand information on daily wages in various parts of the province. However, the officially reported wage rates for the 1960's are considerably higher than the rates reported to the present author by quite a number of people who are supposed to have first-hand knowledge of the situation in rural areas. Moreover, the subsample of the Survey shows that the daily wage rate during 1965/66 was about 1.75 rupees which is much lower than that reported by the Directorate. On the other hand, it has been reported by both PARD and Rahman [22 ; 24] that average daily wage rate during January-June of labourers employed in the Rural Works Programme was 1.50 rupees in 1962, 2.00 rupees in 1963 and 2.40 rupees in 1964, which are more in line with the agricultural wage rates reported by the Directorate. One may, however, still suspect that the wage rates during the 1960's, as reported by the Directorate, are probably overestimates.

TABLE IV

NOMINAL WAGE RATES PER DAY AND ANNUAL WAGE EARNINGS OF AGRICULTURAL LABOURERS IN EAST PAKISTAN

(rupees per worker)

Year	Nominal wage rates per day		Annual wage earnings (c)
	Unadjusted (a)	Adjusted (b)	
1948	1.81	1.79	464
1949	1.92	1.92	497
1950	1.62	1.62	419
1951	1.56	1.55	402
1952	1.52	1.53	396
1953	1.38	1.38	357
1954	n.a.	n.a.	n.a.
1955	1.32	1.31	339
1956	n.a.	n.a.	n.a.
1957	1.70	1.70	441
1958	1.85	1.86	480
1959	1.85	1.85	478
1960	1.95	1.95	506
1961	2.18	2.18	564
1962	2.25	2.24	581
1963	2.41	2.41	624
1964	2.65	2.65	687
1965	2.34	2.34	606
1966	2.40	2.40	621

Sources and Methods:

Col. (a): Unadjusted daily wage rates as reported by the Directorate of Agriculture and shown in Appendix Table A-3.

Col. (b): Unadjusted wages during each month of the year are weighted by days of employment of an average labourer in each corresponding month, as shown in Appendix Table A-3, to obtain adjusted daily rates for any year.

Col. (c): Wage earnings during any year are estimated by multiplying adjusted daily wage rate during the year by number of days employed in each year (*i.e.*, 259 days) as shown in Appendix Table A-3.

Consumer Price Index

The real worth of money wages depends on prices of goods *purchased* by labourers from the market. The use of an appropriate consumer price deflator is obviously essential for estimating the real worth of nominal wage earnings. While indices of cost of living of industrial workers are prepared and published by the C.S.O., no agency or individual has computed a series of cost of living or consumer price index relevant to agricultural labourers. Hence, we have to compute such an index, however crude and imperfect it may be.

The determination of consumption items and of their relative weights for the construction of this index is far from easy, because, unlike industrial workers, agricultural labourers consume some *own-produced* goods. For example, even the landless agricultural labourers do not purchase fuel, or pay house rent. They erect their huts on deserted spots or on the employer's land, and gather from the surroundings firewood and straw for use as fuel for cooking. They also surely catch some fish from public canals and rivers, and perhaps grow some vegetables around the hut. Because of this fringe income in kind total household income is greater than wage earnings.

Agricultural labourers with some land derive some income from cultivation as well, and most of this income is directly consumed in kind, and only part of this is marketed for other purchases. This general pattern of a mixture of market-purchases and own-produced goods in the consumption bundle of families of agricultural labourers has been observed in studies by both Hussain and Rajshahi University [11; 26] covering both small localities and larger areas in East Pakistan.

However, so far as landless agricultural labourers are concerned, as rough approximation one can assume that they have to purchase all consumption items other than fuel and housing. On this assumption we have estimated the relative weights of various consumption items from the budget data of a subsample of families of agricultural labourers from the Survey. We have excluded from total consumption the imputed value of fuel, and rent, and estimated from the rest the relative proportions of other consumption items at current prices (Appendix Table B-1). These weights have been applied to price relatives based on retail prices of individual items to obtain two series of consumer price index, one taking 1966 price relatives as 100, and the other taking 1949 price relatives as 100[6]. This is done to see if the two indices are significantly different (For the details of weights and prices, *see* Appendix B).

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[6]The two indices are not identical. We have used the same weights (based on 1965/66 expenditure proportions) in both cases. This weight for the *i*-th item can be written symbolically as:
$$\frac{P_i^{65} \, q_i^{65}}{\Sigma P_i^{65} \, q_i^{65}}$$

The relative weights of various items, as obtaining in the twelve-month period, August 1965 to July 1966, may be considered reasonably normal. The only important factor that might have distorted the relative weights was the abnormally high price of rice in that period. The implicit average retail price of rice, as estimated from the subsample, was about 31 rupees per maund. This was somewhat higher than the prices obtaining in the earlier three or four years. A higher price of rice — a basic need and the most important consumption item—would usually give a large weight to it and hence smaller weights to other items. But in this particular case there was an offsetting factor. This was the substitution of some wheat for rice. Increasing quantities of wheat at prices substantially lower than those of rice have been made available to East Pakistan, including its rural areas, since the early 1960's. There is little doubt that both the absolute quantity of wheat and the proportion of total expenditure spent on wheat by rural households were higher in the mid-1960's. Therefore, the estimated relative weight can be considered as reasonably normal. These weights are roughly in line with the findings of several other surveys, as shown in both Hussain and Rao [11 ; 27].

There is another way of roughly judging the reasonableness of these relative weights. We may ask whether the wage earnings of a family in recent years could be considered adequate for sheer subsistence and whether its allocation in the way indicated by the estimated relative weights would buy such quantities of basic consumption goods as are necessary for subsistence. Assuming that an average agricultural labour family has 4.5 members including 1.1 wage earners as shown by the Survey[7], it may be said that these conditions are roughly met.

It should be emphasised that our consumer price index is almost certainly an underestimate. This is chiefly because of the constant price assumption for 17.5 per cent of household expenditure[8] and because coarse saree prices are

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(*continued from previous page*)

Then our index in year t for the *i*-th item will be as follows, when 1949 is the base year:

$$(1) \qquad \frac{P_i^{65} q_i^{65}}{\Sigma P_i^{65} q_i^{65}} \times \frac{P_i^t}{P_i^{49}} \times 100 = I_1$$

But the expression will be as follows, when the base is 1966 instead:

$$(2) \qquad \frac{P_i^{65} q_i^{65}}{\Sigma P_i^{65} q_i^{65}} \times \frac{P_i^t}{P_i^{66}} \times 100 = I_2$$

From expressions (1) and (2) we can see that $I_2 = I_1$, if $\dfrac{P_i^{49}}{P_i^{66}} = \lambda$

It follows that $\Sigma I_2 = \lambda \Sigma I_1$ (*i.e.*, the composite index based on 1966 is λ times the index based on 1949), if $\dfrac{P_i^{49}}{P_i^{66}} = \lambda$ for all i's, which is very unlikely.

[7]*See* Appendix Table A-4.

[8]*See* Appendix B.

assumed to represent clothing as a whole. As a matter of fact other varieties of cloth such as shirting and long cloth registered greater increases in price than sarees.

Movement of Real-Wage Earnings

Nominal-wage earnings are deflated by each of these two consumer price indices, and these two indices and estimated real-wage earnings are shown in Table V. The price index based on 1949 along with indices of nominal and real-wage earnings are plotted in Figure 1.

TABLE V

NOMINAL-WAGE EARNINGS, CONSUMER PRICE INDEX, AND REAL-WAGE EARNINGS

Year	Nominal wage earnings (*Rupees*)	Consumer price index		Real-wage earnings			
		Based on 1949 (A)	Based on 1966 (B)	Nominal earnings deflated by index (A) based on 1949		Nominal earnings deflated by index (B) based on 1966	
				(Rs.)	(*Index*)	(Rs.)	(*Index*)
1949	497	100.0	71.3	497	100.0	697	112.1
1950	419	89.2	63.1	471	94.8	666	107.1
1951	402	104.8	73.3	386	77.7	549	88.4
1952	396	103.7	70.5	383	77.1	562	90.5
1953	357	95.5	69.6	363	72.9	513	82.5
1954	n.a.	77.6	57.6	n.a.	n.a.	n.a.	n.a.
1955	339	73.6	53.7	461	92.8	635	102.3
1956	n.a.	105.5	71.5	n.a.	n.a.	n.a.	n.a.
1957	441	112.9	77.6	389	78.1	567	91.3
1958	480	110.7	75.9	435	87.5	632	101.7
1959	478	108.8	74.7	440	88.5	642	103.3
1960	506	115.4	79.5	438	88.0	635	102.1
1961	564	113.2	76.9	500	100.5	733	117.9
1962	581	121.9	82.4	477	96.0	704	113.4
1963	624	123.3	82.5	505	101.6	756	121.7
1964	687	115.7	80.5	593	119.3	852	137.1
1965	606	125.6	83.5	482	96.9	723	116.2
1966	621	152.2	100.0	409	82.3	621	100.0

Sources: Nominal-wage earnings reproduced from Table IV. Consumer price indices based on weights shown in Appendix Table B-1, Column (6) and retail prices of items discussed in Appendix B. Real-wage earnings are obtained by deflating nominal-wage earnings by each price index.

1949. Thus, the notion of increased poverty of wage earners is completely ruled out. This, however, is unrealistic.

It is more appropriate to think that the subsistence level means the conventional minimum standard of living, and not the minimum calories and the minimum clothing required for survival. This conventional standard of living may be depressed at times by the pressure of circumstances. A simple example is the possible reduction in consumption level as a result of two or three successive crop failures. Again it is possible that agriculture is squeezed in the process of industrial development, resulting in some reduction in the consumption level. Agricultural labourers and small farmers may be compelled to eke out a living with smaller quantities of rice, pulses, cloth and other consumption goods. They may reallocate consumption in favour of goods which are cheaper and/or of poorer quality and this may adversely affect their well-being. Thus, a temporary reduction in level of consumption below the conventional minimum is possible.

Our estimates indicate some such reduction in the level of living of the very poor in rural areas after 1949 and 1950. In some years of the early 1950's the actual level appears to have been considerably below the conventional minimum. A reversal began in the late 1950's, and real wages seem to have fluctuated around the conventional minimum standard of living in the early 1960's.

REFERENCES

1.   Bergan, A., "Personal Income Distribution and Personal Savings in Pakistan, 1963/64", *Pakistan Development Review*, Vo. VII, No. 2, Summer 1967.

2.   Darling, M., *Report on Labour Conditions in Agriculture in Pakistan.* (Karachi: Ministry of Labour, Government of Pakistan, 1955).

3.   East Pakistan, Bureau of Statistics, *Monthly Economic Statistics of East Pakistan.* (relevant months).

4.   East Pakistan, Bureau of Statistics, *Statistical Digest of East Pakistan, 1965.* (Dacca: Bureau of Statistics).

5.   East Pakistan, Directorate of Agriculture, *Weather and Crop Report.* (weekly and monthly issues).

6.   East Pakistan, Finance Department, *Budget Documents, 1965/66* and *1967/68.* (Speech of Finance Minister).

7.   East Pakistan, (A group of experts), *Transportation Survey of East Pakistan, 1967.*

8.   Griffin, K.B., "Financing Development Plans in Pakistan", *Pakistan Development Review.* Vol. V, No. 4, Winter 1965.

9.   Habibullah, M., *The Pattern of Agricultural Unemployment: A Case Study of an East Pakistan Village.* (Dacca: Bureau of Economic Research, Dacca University, 1962).

10. Haq, K., "A Measurement of Inequality in Urban Personal Income Distribution in Pakistan", *Pakistan Development Review*, Vol. IV, No. 4, Winter 1964.

11. Hussain, M., *The Pattern of a Peasant Economy: Puthia, A Case Study.* (Rajshahi: Socio-Economic Research Board, Rajshahi University, 1963).

12. Iyengar, N.S. and N. Bhattacharya, "On the Effect of Differentials in Consumer Price Index on Measures of Inequality", *Sankhya*, Series B, Vol. 27, September 1965.

13. Khan, A.R., "What has been Happening to Real Wages in Pakistan?", *Pakistan Development Review*, Vol. VII, No. 3, Autumn 1967.

14. Khan, T.M., and A. Bergan, "Measurement of Structural Change in the Pakistan Economy: A Review of National Income Estimates, 1949/50 —1963/64", *Pakistan Development Review*, Vol. VI, No. 2, Summer 1966.

15. Lewis, S.R. and S.M. Hussain, *Relative Price Changes and Industrialization in Pakistan, 1951-64.* (Karachi: Pakistan Institute of Development Economics, 1967).

16. Mahalanobis, P.C., "A Method of Fractile Graphical Analysis", *Econometrica,* Vol. 28, No. 2, April 1960.

17. Pakistan, Central Statistical Office, *Pakistan Statistical Year Book, 1964.* (Karachi: C.S.O).

18. Pakistan, C.S.O., *Statistical Bulletin* (monthly).

19. Pakistan, C.S.O., *The Quarterly Survey of Current Economic Conditions, 1963/64.* (Karachi: C.S.O.).

19a. Pakistan, C.S.O., *National Sample Survey 1960* and *1961.* (Second and Third rounds). (Karachi: C.S.O.).

20. Pakistan, *Census of Pakistan, 1951* and *1961.* (Karachi: Manager of Publications).

20a. Pakistan, Ministry of Finance, *Economic Survey, 1966/67.* (Rawalpindi: Office of the Economic Adviser, Ministry of Finance).

21. Pakistan, Planning Commission, *Third Five-Year Plan (1965-70).* (Karachi: Manager of Publications, 1965).

22. Pakistan Academy for Rural Development, (PARD), *An Evaluation of the Rural Works Programme: East Pakistan, 1962/63.* (Comilla: Pakistan Academy for Rural Development, 1963).

23. Papanek, G.F., *Pakistan's Development—Social Goals and Private Incentives.* (Cambridge, Mass., Harvard University Press, 1967).

24. Rahman, A.T.R., *An Evaluation of the Rural Works Programme: East Pakistan, 1963/64.* (Comilla: Pakistan Academy for Rural Development, 1966).

25. Rahman, M.A., "East-West Pakistan: A Problem in the Political Economy of Planning" in G.F. Papanek (ed.) *Government Policy and Private Enterprise in Pakistan* (forthcoming; tentative title).

26. Rajshahi University, Committee for the Economic Evaluation of the Rural Works Programme in East Pakistan, "Survey of Employment, Income and Expenditure of Rural Households in East Pakistan, 1965-66". (Unpublished proformas).

27. Rao, V.K.R.V. (ed.) *Agricultural Labour in India.* (Bombay: Asia Publishing House, 1962).

Appendix A

A Note on the Subsample of Rajshahi Survey

As mentioned in the text, some information used in this paper has been obtained from a subsample of a survey [26] conducted by the Rajshahi University (Committee for the Economic Evaluation of the Rural Works Programme in East Pakistan) during the period August 1965 to July 1966. This was a sample survey of employment, income and expenditure of rural households in general, and not of households of agricultural labourers only. Five areas (thanas) from different parts of East Pakistan were selected on the basis of important crops. From each of these areas one union was selected. From these five unions a random sample of rural households totalling 234 was drawn and they were interviewed weekly over a period of 12 months. In this sample of 234 households, 48 households reported themselves as agricultural labourer by occupation. We made a random selection of 50 per cent (*i.e.*, 24) of proformas related to these 48 agricultural labour households. Because of non-reporting of certain data, 3 out of these 24 proformas were rejected.

Our estimates of employment, pattern of consumption expenditure, family size, and wage-earners per family are based on these 21 households. It should be clear that characteristics of such a small subsample selected in this way cannot be claimed in a statistical sense to be representative of agricultural wage labourers in East Pakistan. But these estimates may roughly reflect the actual order of magnitudes.

TABLE A-1

EAST PAKISTAN'S POPULATION

(in millions)

Year	Total	Urban	Rural	Agricultural
1949/50	42.25	1.83	40.42	35.43
1950/51	43.29	1.88	41.41	36.37
1951/52	44.35	1.96	42.39	37.33
1952/53	45.44	2.04	43.40	38.32
1953/54	46.56	2.13	44.43	39.34
1954/55	47.70	2.22	45.48	40.38
1955/56	48.86	2.31	46.55	41.45
1956/57	50.06	2.41	47.65	42.55
1957/58	51.29	2.52	48.77	43.68
1958/59	52.56	2.62	49.94	44.84
1959/60	53.85	2.74	51.11	46.02
1960/61	55.25	2.87	52.38	47.22
1961/62	56.69	2.99	53.70	48.45
1962/63	58.16	3.12	55.04	49.70
1963/64	59.67	3.25	56.42	50.99
1964/65	61.22	3.39	57.83	52.04
1965/66	62.81	3.69	59.27	53.39

Sources and methods:

   a) Total population based on Planning Commission estimates taken here from Khan and Bergan [14]; from 1964/65 onward the estimates are ours based on a 2.6-per-cent compound rate of growth per year, as assumed by the Planning Commission.

   b) Urban-rural breakdown for 1949/50 and 1950/51 is based on proportions shown by the Census of Pakistan, 1951 and the same for 1960/61 based on the 1961 Census [20]. Between 1950/51 and 1960/61 urban population is assumed to have grown at a compound rate of 4.3 per cent per year. This growth rate is also assumed for the period after 1960/61.

   c) Agricultural population was first estimated by using census data, *i.e.,* by multiplying agricultural labour force by the ratio of rural population to rural labour force. This showed that in the census populations of 1951 and 1961, agricultural populations were 83.85 per cent and 85.46 per cent respectively. The proportion obtaining in 1951 is applied to the estimated total population of 1949/50 and that of 1961 to 1959/60 population. This shows that between 1949/50 and 1959/60, agricultural population grew by 29.89 per cent, *i.e.,* at an annual compound rate of 2.65 per cent which is applied to the intervening years. It is assumed that the proportion of agricultural population to total remained 85.46 per cent from 1959/60 to 1963/64, and was 85 per cent in 1964/65 and 1965/66.

TABLE A-2

EAST PAKISTAN: GROSS PROVINCIAL PRODUCT AT 1959/60 FACTOR COST, AND ITS DISTRIBUTION BY ORIGIN TO AGRICULTURAL AND NONAGRICULTURAL SECTORS AND RURAL AND URBAN AREAS

(in million rupees)

Period	Gross provincial product	Agriculture	Non-agriculture	Rural	Urban
	(1)	(2)	(3)	(4)	(5)
1949/50	12,052	8,074	3,978	10,937	1,115
1950/51	12,495	8,344	4,151	11,332	1,163
1951/52	12,849	8,394	4,455	11,607	1,242
1952/53	13,270	8,751	4,519	12,007	1,263
1953/54	13,737	9,048	4,689	12,428	1,309
1954/55	13,438	8,704	4,734	12,069	1,369
1955/56	12,856	8,043	4,813	11,476	1,380
1956/57	14,062	9,012	5,049	12,458	1,604
1957/58	13,851	8,696	5,156	12,321	1,530
1958/59	13,515	8,234	5,281	11,902	1,613
1959/60	14,568	9,042	5,526	12,875	1,693
1960/61	15,434	9,590	5,844	13,585	1,849
1961/62	16,368	10,012	6,356	14,361	2,007
1962/63	16,367	9,675	6,692	14,195	2,172
1963/64	18,171	10,599	7,572	15,718	2,453

Sources and methods:

The first three columns are computed essentially from Khan and Bergan [14] which again is based on Pakistan's G.N.P. estimates made by the C.S.O. But, we allocated to East Pakistan 37 per cent of the value added in Transport and Communications, and 33 per cent of Banking and Insurance, and 30 per cent of Central Government and Defence, while Khan and Bergan allocated them in a ratio of fifty-fifty to the two Wings. This is the only difference between this estimate and theirs. The percentages which we used for these sectors were once estimated by the C.S.O. and used by a group of experts in *Transportation Survey of East Pakistan, 1961* [7]. Another estimate by M. Anisur Rahman [25] allocates an even smaller share to East Pakistan.

A Note on Estimation of Rural-Urban Factor Income

The method of rural-urban distribution of the gross provincial product is very crude, and almost certainly it overestimates rural income. The following formula is used:

$$\text{Rural Income} = \frac{\text{agricultural income} \times \text{Agr. L.F. in rural areas}}{\text{total agricultural labour force}}$$

$$+ \frac{\text{non-agr. income} \times \text{non-Agr. L.F. in rural areas}}{\text{total nonagricultural labour force}}$$

Urban income is obtained by deducting rural income from the gross provincial product.

The proportion of total agricultural labour force working in rural areas, and the proportion of total nonagricultural labour force working in rural areas have been estimated mainly from data shown in the censuses of 1951 and 1961.

The census data for 1951 and the estimates for 1961 show that in both years 99 per cent of total agricultural labour force was in rural areas, but of total nonagricultural labour force 74 per cent was rural in 1951 and 70 per cent in 1961.

On this basis it is assumed that in all the years 99 per cent of agricultural income originated in rural areas. The proportion of nonagricultural income originating in rural areas is rather arbitrarily assumed to have declined in following way:

1949/50—1953/54	74%
1954/55—1955/56	73%
1956/57—1957/58	72%
1958/59—1959/60	71%
1960/61—1961/62	70%
1962/63—1963/64	69%

The urban-rural distribution of labour force used in this computation is discussed below:

CENSUS DISTRIBUTION OF POPULATION AND LABOUR FORCE

(in million)

	1951			1961		
	Urban	Rural	Total	Urban	Rural	Total
Population	1.82	40.11	41.93	2.64	48.20	50.84
Labour force (age 12 and above)	0.67	12.22	12.89	(0.92)	(15.94)	16.86
Agricultural labour force	0.12	10.60	10.72	(0.16)	(14.18)	14.34
Nonagricultural labour force	0.55	1.57	2.12	(0.76)	(1.76)	2.52
Labour force (age 10 and above)	*n.a.*	*n.a.*	*n.a.*	0.94	16.50	17.44

Source: [20].

The figures in parentheses are our estimates, made on the following assumptions:

For 1961, it is found that labour force age 10 and above is 3.4 per cent larger than labour force age 12 and above. It is assumed that in urban areas it is only 2 per cent larger, because a higher proportion of children of age 10-12 go to school in urban areas. It is also assumed that agricultural labour force in urban areas was 33 per cent higher than that in 1951. The other figures in brackets are then easy to obtain.

TABLE A-3

**AVERAGE DAILY WAGES IN RUPEES (WITHOUT FOOD) AND
MONTHLY EMPLOYMENT IN DAYS**

Month → Year ↓	January	February	March	April	May	June	July
1948	1.72	1.67	1.73	1.66	1.71	1.79	1.78
1949	1.91	1.91	1.88	1.91	2.01	2.07	2.03
1950	1.74	1.72	1.67	1.61	1.66	1.59	1.58
1951	1.51	1.50	1.46	1.52	1.59	1.55	1.55
1952	1.55	1.55	1.54	1.54	1.62	1.61	1.61
1953	1.37	1.37	1.39	1.39	1.41	1.37	1.36
1954	—	—	—	—	—	—	—
1955	1.30	1.31	1.23	1.21	1.23	1.19	1.37
1956	—	—	—	—	—	—	—
1957	1.82	1.82	1.85	1.70	1.68	1.72	1.51
1958	1.66	1.66	1.91	1.80	1.87	1.84	1.83
1959	1.78	1.76	1.85	1.77	1.85	1.90	1.81
1960	1.83	1.84	1.85	1.80	1.96	1.95	1.96
1961	2.02	2.03	2.05	2.11	2.30	2.28	2.23
1962	2.29	2.21	2.19	2.21	2.45	2.35	2.26
1963	2.10	2.18	2.24	2.22	2.46	2.60	2.53
1964	2.52	2.49	2.49	2.61	2.86	2.70	2.86
1965	2.41	2.22	2.33	2.43	2.37	2.41	2.36
1966	2.94	2.99	2.29	2.35	2.33	2.26	2.26
Number of days employed each month	20	20	22	23	21	22	18

TABLE A-3 (*Concld.*)

AVERAGE DAILY WAGES IN RUPEES (WITHOUT FOOD) AND MONTHLY EMPLOYMENT IN DAYS

Month → Year ↓	August	September	October	November	December	Annual average	
						Simple	Weighted by employment
1948	1.79	1.93	1.92	1.87	1.85	1.81	1.79
1949	2.01	1.97	1.86	1.78	1.71	1.92	1.92
1950	1.59	1.62	1.59	1.51	1.54	1.62	1.62
1951	1.59	1.62	1.60	1.60	1.55	1.56	1.55
1952	1.52	1.53	1.42	1.42	1.42	1.52	1.53
1953	1.35	1.37	1.40	1.37	1.39	1.38	1.38
1954	—	—	1.22	1.20	1.21	—	—
1955	1.40	1.40	1.36	1.34	1.37	1.32	1.31
1956	—	—	—	—	—	—	—
1957	1.50	1.52	1.65	1.81	1.84	1.70	1.70
1958	1.98	1.95	1.92	1.96	1.86	1.85	1.86
1959	1.90	1.96	1.77	1.86	1.93	1.85	1.85
1960	2.03	1.98	2.08	2.04	2.12	1.95	1.95
1961	2.30	2.21	2.24	2.04	2.33	2.18	2.18
1962	2.16	2.23	2.23	2.13	2.19	2.25	2.24
1963	2.55	2.38	2.62	2.46	2.57	2.41	2.41
1964	2.93	2.71	2.75	2.48	2.44	2.65	2.65
1965	2.27	2.28	2.38	2.29	2.33	2.34	2.34
1966	2.22	2.30	2.28	2.26	2.35	2.40	2.40
Number of days employed each month	23	22	23	23	22		

Sources: Daily wages from Directorate of Agriculture, East Pakistan [5].
Employment per month, from Rajshahi University Survey [26].

TABLE A-4

INCOME, CONSUMPTION, LAND HOLDING, AND FAMILY COMPOSITION OF THE AVERAGE AGRICULTURAL LABOUR FAMILY IN EAST PAKISTAN

(Reference Period 1965/66)

(A) AVERAGE INCOME BY SOURCES

(rupees per year)

(1)	Total	Wages	Scale of agriculture products	Own-produce consumed	Wages as per cent of total
	(2)	(3)	(4)	(5)	(6)
Income per household	909	481	77	351	53
Income per capita	201	106	17	78	53
Consumption per capita	190				

Source: The Survey [26].

(B) LAND HOLDING, TOTAL MEMBERS AND ACTIVE MEMBERS PER FAMILY

Land (*in acres*)	Family members	Active members		Children under age 10
		Male	Female	
1.11	4.52	1.1	1.2	2.1

Source: The Survey [26].

Appendix B

A NOTE ON WEIGHTS AND PRICES USED IN THE CONSTRUCTION OF THE CONSUMER PRICE INDEX

The pattern of consumption of families of agricultural wage labourers (classified according to the chief occupation of the male active member(s) of a family) has been obtained from a subsample of the Survey [26] and is shown in Table B-1. Total consumption of such families includes certain goods purchased from the market, and certain own-produced goods for which values are imputed in the Survey data. As one would expect, it is found that the importance of own-produced goods in consumption varies with the amount of land held by the family. But fuel for cooking is not purchased from the market by any family of agricultural labourers, and rent is paid only by those who have some land. Even those who are completely landless also grow some vegetables and catch some fish for their own consumption, although they have mainly to rely on market purchases of these items. We have, therefore, obtained the weights from the total consumption excluding fuel for cooking and housing (rent) of an average family of agricultural labourers (Table B-1, Column (6)). In other words, it has been presumed that landless labourers usually purchase all their consumption items except fuel for cooking, and housing. Some items have been grouped together because item-wise information about consumption is not available in all cases.

Retail prices of the items, as far as available, have been taken mostly from the C.S.O. For each year a simple average of the prices of an item obtaining at several locations in East Pakistan is considered as the representative price for the province. Items of which price series are available are mentioned below:

Rice (coarse), onion, salt, dry chillies, mustard oil, gur (*i.e,.* raw sugar), saree, kerosene oil, and bidi.

Sources of prices are:

a) 1952 onwards all items, except gur, kerosene oil and bidi, from C.S.O. [18].

b) 1949, 1950, 1951, all items, and from 1952 to 1961 bidi, gur and kerosene, from C.S.O. [17]; split year shown in the source is treated as calendar year; *e.g.,* 1949/50 as 1949.

c) 1962-66 bidi, gur, and kerosene, from East Pakistan, Bureau of Statistics [3].

Since such series are not available for all items certain assumptions were used for our purpose:

a) To ensure that the index does not overestimate the increase in prices, no price change has been assumed for certain food items—wheat, pulses, milk, fish, beef, mutton, chicken, eggs, which constitute 13 per cent of total consumption, and also for pan, betel-nuts and other non-food items together representing 4.5 per cent of consumption.

b) For the items grouped together in the weights, the price of one important item in the group has been taken as representative of the group; *e.g.*, saree for clothing, bidi for tobacco, kerosene for lighting, dry chillies for chillies and spices, onions for fruits and vegetables, and mustard oil for edible oil.

TABLE B-1

PATTERN OF CONSUMPTION OF THE AVERAGE HOUSEHOLD OF AGRICULTURAL LABOURERS IN EAST PAKISTAN
(1965-66)

Item	Value (*in rupees*)			Per cent distribution		
	Market purchased	Own-produced	Total consump-tion	Market purchased	Total con-sumption excluding fuel & rent	Total consump-tion
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rice	248.37	211.60	459.97	48.8	60.5	53.8
Wheat	32.86	—	32.86	6.5	4.3	3.9
Pulses	13.06	0.37	13.43	2.6	1.8	1.6
Milk	4.89	2.00	6.89	1.0		0.8
Fish	22.48	10.81	33.29	4.4		3.8
Beef	4.39	2.01	6.41	0.9	6.9	0.7
Mutton and chicken	2.21	2.20	4.41	0.4		0.5
Eggs	0.36	1.26	1.63	0.1		0.2
Fruits and vegetables	22.13	20.36	42.49	4.3	5.6	5.0
Edible oil	28.07	—	28.07	5.5	3.7	3.3
Salt	8.51	—	8.51	1.7	1.1	1.0
Chillies	9.94	1.63	11.57	1.9	1.5	1.3
Spices	10.18	0.22	10.39	2.0	1.4	1.2
Gur	7.12	—	7.12	1.4	0.9	0.8
Lighting	14.17	—	14.17	2.8	1.9	1.7
Fuel (firewood)	—	92.06	92.06	—	—	10.8
Clothing	32.76	—	32.76	6.4	4.3	3.8
Tobacco	10.69	1.02	11.71	2.1	1.6	1.4
Pan, betal-nuts and other non-food	33.35	0.55	33.90	6.5	4.5	4.0
Rent	3.49	—	3.49	0.7	—	0.4
Total	509.04	346.10	855.14	100.00	100.00	100.00
Total, excluding fuel and rent	505.55	254.04	759.59			

Source: The Survey [26].

Note: The relative weights shown in Column (6) are used for computing the consumer price index.

Appendix C

A NOTE ON CHANGES IN INCOME OF THE RURAL POOR INDICATED BY C.S.O. SURVEYS (1960—1963/64)

From the C.S.O's National Sample Survey [19a] and Quarterly Survey [19], some information about the average income and consumption of rural population of East Pakistan, and the proportion of households and population which can be considered very poor is available for the years 1960, 1961, and 1963/64, and is shown in Table C-1.

It is found that the proportion of households and population with a monthly household income of 100 rupees (at current prices) declined considerably from 1960 to 1961 but did not change appreciably between 1961 and 1963/64. The median income of all rural households increased during the entire period, while the mean income increased in 1961 but declined a little in 1963/64. Per capita consumption rose in 1961 and declined in 1963/64 below the level of 1960. This leaves a significant excess of income over consumption in 1963/64, which cannot be easily explained.

Since consumer prices rose somewhat in 1963/64 from the levels of 1960 and 1961, it is very likely that the mean income per capita in real terms was appreciably lower in 1963/64 than that in 1961 although it was but still higher than that in 1960. In view of this rise in prices, it is clear that mean consumption in 1963/64 in real terms was lower than that in 1960 or 1961. It is reasonable to think that in these surveys reporting of consumption is usually more reliable than reporting of income, particularly since certain conceptual errors were made in regard to the latter which, however, will not be discussed here.

TABLE C-1

CHANGES IN INCOME AND CONSUMPTION IN RURAL EAST PAKISTAN
1960, 1961, 1963/64 (AS INDICATED BY C.S.O. DATA)

A. PERSONAL INCOME DISTRIBUTION

Monthly income per household	Per cent of households			Per cent of population		
(*rupees*)	1960	1961	1963/64	1960	1961	1963/64
below 50	12.8	10.4	7.3	6.5	5.0	3.3
50—99	37.1	30.5	30.8	29.2	22.3	23.8
below 100	49.9	40.9	38.1	35.7	27.3	27.1
100 and above	50.1	59.1	61.9	64.3	72.7	72.9

B. AVERAGE INCOME
(*rupees*)

Mean income	1960	1961	1963/64
Per household	131.1	153.4	148.3
Per capita	24.9	28.4	27.1
Median income[a]			
Per household	100.2	117.0	122.0
Average household size	5.3	5.4	5.5

[a]The median income is more representative because the distribution of income is very skewed. The figures are approximate estimates calculated by assuming linearity in the relevant income range.

C. MONTHLY PER CAPITA CONSUMPTION (ALL RURAL POPULATION)

Important Food Items

(*in seers*)

Year	Total (*rupees*)	Rice	Wheat	Mutton+Beef	Fish	Milk+Butter
1960	23.0	15.0	0.5	0.15	0.6	1.3
1961	28.3	16.3	0.1	0.10	1.2	1.7
1963/64	21.7	14.0	0.9	0.18	1.0	0.9

Sources: C.S.O. [19; 19a].