AN ANALYSIS OF REAL WAGES IN THE GOVERNMENT SECTOR 1971-76

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PREFACE

The present study seeks to analyse the trends of real wages in the government sector during the period 1971—1976. The most important characteristic of this period was a runaway inflation, which gained momentum in late 1971—in fact in early 1972—and reached a peak in 1974-75 petering out in 1975-76. Thus the period under review enclosed most of an important inflationary cycle.

The worst sufferer was the fixed income group, the real value of whose cash balances was reduced drastically by such a substantial and persistent price rise. The government did respond to the situation and sought consciously to repair the damage by raising the money wages of its own employees.

The main objective of this study has been to measure the adequacy of this wage effort. Accordingly, the focus has been on tracing the movement of *real* wages over this period. The results of the study broadly confirm the widely felt *impression* of the government employees that theirs has been a losing fight against the onslaughts of inflation.

One of the policy implication of our analysis is that the situation *can* be remedied by an adequate rise in the *money* wages of the government employees, to keep the *real* wages *constant* over the inflationary cycle. However, any increase in the latter can be allowed only if the real GNP also shows enough improvement. That this effort will not be self-defeating in the sense of provoking a proportionate price rise, is clear from two "facts": (i) inflation is more properly a function of *real* wages rather than money wages; (ii) the wages of its own employees form only a relatively small proportion of total government expenditure. The present study provides a satisfactory documentation of this second "fact", which has seldom been noticed.

The present study departs from the other wage studies, published from time to time in the *PDR*, in its consistent use of the Implicit GNP deflator both to measure inflation and also to estimate the real wages of the government-sector employees. This preference over the Consumer Price and the Wholesale Price Indices, used generally for such purpose, is based on the fact that the GNP deflator is the most comprehensive index of inflation in the economy. Since the welfare of the government employees is most properly seen in the context of economy-wide changes, consistency demands that this index should also be used to estimate changes in their real wages.

The limitations of this study, in particular those flowing from the inadequacy of data, have been noted in the following pages. It is, however, the belief of the author that most of the results of this study will hold even if more satisfactory data were available. However, it is hoped that a fuller analysis will be undertaken by others of the various matters touched upon in this study.

By way of acknowledgements, I must note that this work could not have been undertaken without the financial support of the PIDE and encouragement

provided by its Director, M.L. Qureshi. Thanks are also due to Dr. Sarfraz Khan Qureshi for spending much of his valuable time in seeing this study through various stages after its final submission. In particular, I greatly appreciate his help in divising a scheme to condense the unwieldy statistical appendix in the original manuscript. All computations were done by the technical assistant, Mr. Riaz Mahmood, who handled his difficult job with persistence, diligence and accuracy. I must also thank Professor Stephan Guisinger, with whom the broad concept of the present study was first discussed back in mid 1976. Dr. Salim Khan Naru, Consultant in the Ministry of Finance, was also very helpful in providing the relevant information on various aspects of this undertaking.

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INTRODUCTION

The wage studies done so far in Pakistan [1,3] have been restricted to an analysis of wage policy in the large-scale manufacturing sector. The present study, on the other hand, focuses on government's wage policy. The importance of such a study cannot be over-emphasized. The government is the largest employer and its wage policy may influence the wage structure in the rest of the economy, particularly in the organized large-scale manufacturing sector; and is believed to have important direct and indirect effects on the general price level. Such a study is all the more warranted by prevalent misunderstandings on the subject. For instance, it is widely believed that wages paid to its own employees form an over-whelming proportion of total government expenditure, which is simply not true.

However, unfortunately, the data required for such a study are hard to come by. There is no single source, like the Census of Manufacturing Industries (CMI), where all the relevant material can be found about the government sector. The only systematic information on wages paid by the government sector to its own employees is available for that area of government which comes under the umbrella term: Civil Administration. Even here the data have to be culled from five different sources—from the budget documents of the federal government and the four provincial governments. Furthermore, the wages paid to defence personnel are not included in our estimates since this information is considered "classified" material. This is a substantial exclusion. The data on employment in the government sector needed for the computation of per capita wages are also not available from any published sources. Fortunately, the Establishment Division has conducted recently a census on employment in the federal government; while the information on employment by provincial governments has been obtained from a similar survey done by the office of the Special Assistant to the Prime Minister. As a result, most of the data in this paper have been drawn either from unpublished sources or from documents published by different government agencies.

Within the limitations imposed by the availability of data, the present study provides for the first time a comprehensive overview of wage trends in the government sector. The period had to be restricted to five years since comparable information did not exist for earlier years on all the aspects of wage policy we have tried to highlight in this study. For instance, the data on employment in the government sector go only as far back as 1971. While the application of econometric methods has been precluded by the very small number of 'observations, only five, effective use has been made in this paper of compound growth rates and simple arithmatic percentages to highlight many interesting, but seldom-noticed, aspects of government's wage policy.

It may be noted that the analysis in this study has been conducted in a macro-framework—i.e., dealing with broad magnitudes and changes in them. Specifically, we have been concerned with the behaviour of overall changes in the wages of the government employees, rather than with the changes in the shares of individual sub-groups of government employees furthermore, the

analysis of this paper centres primarily on the "growth" aspects of wage policy; but throws valuable side-light on the vertical "equity" aspect—i.e., the question of maintaining the salary scales in a certain balance along a vertical line. Any scheme which aims at distributive justice will have a greater chance of success in an expansionary than in a contractionary situation. For, according to the well-known principle of Pareto-optimality, net gains are secured only when it is possible for one person in a group to get more while no one else gets less. During the period covered in this study the maxim of Pareto-optimality could not be met, since real wages in general declined.

The focus of this study has been on the computation of real wages in view of the fact that inflation is more appropriately a function of real wages and not money wages. A novel feature of this study is the use of the implicit GNP deflator as a measure of inflation and for computing real wages in preference to the Consumer Price Index, used widely for such purposes. This preference is based on the well-known fact that the implicit GNP deflator provides the most comprehensive measure of inflation. The estimates of real wages based on the implicit GNP deflator reported in this study are broadly in accord with those based on the Consumer Price Index. (Estimates based on the Consumer Price Index and the Wholesale Price Index have also been presented in the Appendix.)

The evidence marshalled in this paper also highlights the important relationship between price inflation and given wage increases. The limited evidence of the past five years indicates that increase in money wages should more properly be considered transmitter of inflation rather than the cause of it. Furthermore, the objective of controlling inflation is best achieved by a properly-devised fiscal and monetary policy. This should help dispel the popular misconception that any increases in the money wages paid by the government tend to push the general price level by *equal* proportion.[1]

It is hoped that the findings of this study will provide a rational basis for the formulation of a realistic wage policy for the government sector. These findings strongly suggest that "realism" dictates a relatively more liberal wage policy than has been followed so far. For instance, it may come as a surprise to many that increases in per capita real wages have lagged behind even the growth of per capita real GNP; or that real wages have grown at a rate slower than real GNP in the past five years!

TRENDS OF MONEY WAGES : 1971-76

The general thrust of the argument in these sections is to provide a realistic estimate of the real wages, which is the crucial variable to watch in a regime of widespread inflation. The statistical information has been organized to: (i) provide an objective measure of the adequacy of the "wage effort" by the government; (ii) estimate the erosion of this wage effort by inflation; and

[1]It is indeed surprising that anyone these days should be holding such primitive views on inflation. This is exactly what the long-discarded Quantity Theory of Money had preached. Even the modern "monetarist" school does not subscribe to such ideas. This reminds one of Keynes's observation that ideas of "defunct economists" of distant past sometimes get reflected in government policy.

(iii) form an idea of the success of government's policy in responding to this erosion of the purchasing power of the government employees.

In this connection the importance of our estimates of per capita real wage needs to be emphasized. It is a fair question to ask what is the significance of this exercise; in particular, of the estimates of per capita real wage? After all, it may be objected, per capita wage, like per capita income, is not a sure-fire measure of the welfare. This is a valid observation, in general. However, three points should be noted in this connection. Firstly, although a rise in per capita wage may not provide an accurate indicator of the improvement in the welfare of the individual in a group, it nevertheless is a valuable indicator of the potentialities of improvements, if a proper redistributive policy is followed. Secondly, *if a proper redistribution policy* were adopted, the wage-earners individually would stand to gain by an enlargement of the 'pie'. Thirdly, a decline in the per capita wage is a sure indication of the deterioration in living standards of individuals in a group. In such a situation even if a proper redistributive policy were instituted, one's gain would only be at the expense of the others; and furthermore he would be getting this share from a smaller 'pie'. Thus his share in absolute terms might be less even though his proportional share were greater. The situation we have portrayed in these paragraphs is one of a fall in the real wages of government employees.

The estimates of money wages given in this section are based on the wages paid to its employees by the federal and the provincial governments under the general budgetary head, Civil Administration.[2] The most important exclusion are the wages paid to defence personnel since the relevant data are confidential.

These estimates have been presented under two headings: trends of overall money wages; and trends of per capita money wages.

It can be seen from Table 1 (and also Figure I) that total money wages paid to its employees by the federal and provincial governments have shown a uniform upward trend from 1971 to 1976. An interesting feature is the steeper growth rate of wages paid by provincial governments by comparison with those paid by the federal government.

Table 1

Annual Compound Growth Rates of Money Wages paid by the Federal and Provincial Governments 1971-76 (*Excluding Defence*). *Base:* 1971-72

(in percentage)

	Total	Federal	Provincial
1971-72	—	—	—
1972-73	14.97	4.35	20.34
1973-74	22.69	19.81	24.12
1974-75	22.72	18.93	24.54
1975-76	26.83	20.90	29.55

Source: Computed from Appendix.

[2]Included in Civil Administration are such heads of expenditure as Administration of Justice, Police, Lighthouses and Lightships, Education, Medical, Public Health, Aviation, Agriculture etc.

Behaviour of Money Wages and Prices 1971-76

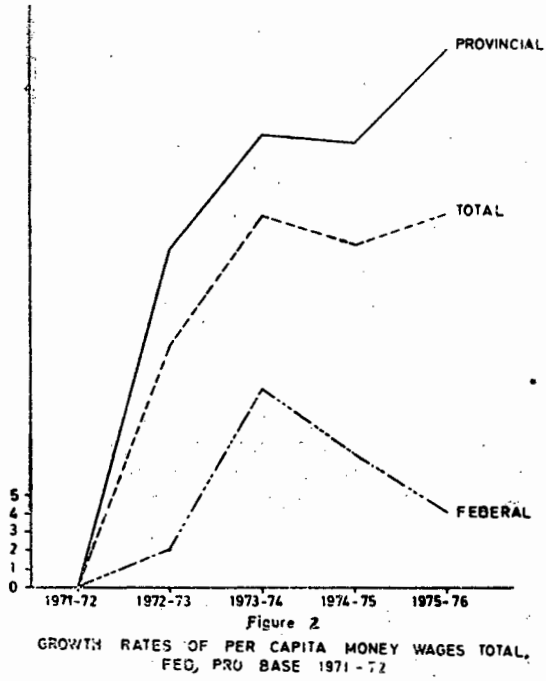

Figure 2

GROWTH RATES OF PER CAPITA MONEY WAGES TOTAL, FED, PRO BASE 1971-72

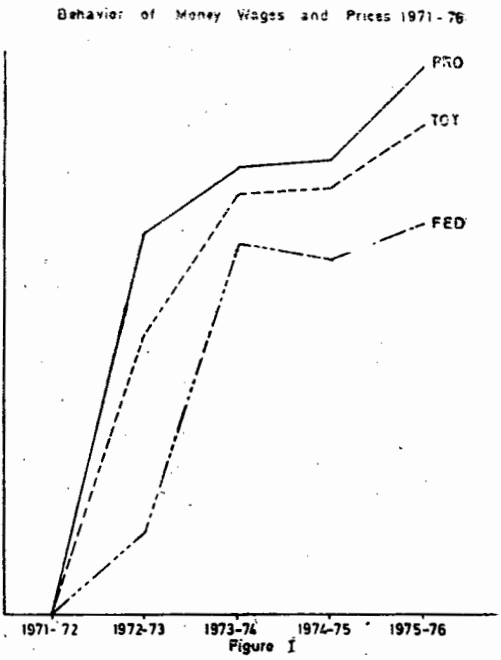

Figure 1

GROWTH RATES OF MONEY WAGES (TOTAL, FED, PRO)

Looking at these figures alone, it appears that the government has consistently followed an adequate expansionary wage policy. However, a deeper analysis of these trends, given in subsequent pages, should dispel this first impression.

The question naturally arises as to how much of this increment in money wages represents an improvement in per capita money wages. In order to compute this, data on money wages have been deflated by an appropriate index of employment in the government sector. The adjusted wage data are presented in Table 2.

Table 2

Annual Compound Growth Rates of Per Capita Money Wages of Federal and Provincial Government Employees 1971-76. *Base:* 1971-72

(in percentage)

	Total	Federal	Provincial
1971-72	—	—	—
1972-73	12.81	1.98	18.25
1973-74	20.18	10.75	24.52
1974-75	18.54	7.18	24.05
1975-76	20.19	4.05	28.93

Source: Computed from Appendix.

An interesting feature of Table 2 is the sharp differences in the growth rates of per capita money wages paid by the federal and the provincial governments. We have not been able to find a reasonable explanation for such disparity. Figure 2 exhibits these differential trends graphically.

A comparison of Tables 1 and 2 shows that, while the trend of money wages paid by provincial governments has been effected only slightly by this adjustment, the rate of growth of per capita money wages paid by the federal government has in fact been declining in the 1973-76 period. In other words, almost all the increase in money wages paid by the federal government was accounted for by a sharp rise in employment. By comparison, employment in privincial governments increased only slightly (See Appendix).

INFLATION IN PAKISTAN : 1971-76

The next question is about the adequacy of this wage effort: how much of this increase in money wages has represented an improvement in the real purchasing power of the government employees? In other words, how much of the improvement occasioned by increments in money wages has been vitiated by a rise in the general price level? In order to answer this question we present below basic information on inflation rates in Pakistan during the last five years. The three indices used for computing inflation rates in Pakistan are: the implicit GNP deflator, the Consumer Price Index and the Wholesale Price Index. Of these three, the most comprehensive is the implicit GNP deflator, obtained for each year by a comparison of real GNP and current GNP. It is a measure of changes in the prices of goods and services contained in the GNP.[3] As elsewhere in this study, compound growth rates have been used to compute intertemporal rates of change.[4]

All these indicators show the inflationary peak in 1974-75. Note that the Wholesale Price Index in general tends to overstate inflation, while the Consumer Price Index slightly understates it by comparison with the implicit GNP deflator. Figure 3 gives a graphic comparison of these three measures.

Table 3

The Three Measures of Inflation Rates in Pakistan. Base: 1971-72

(in percentage)

	Implicit GNP Deflator	Consumer Price Index	Wholesale Price Index
1971-72	—	—	—
1972-73	15.62	9.72	19.61
1973-74	19.80	19.42	23.44
1974-75	22.09	21.80	24.33
1975-76	19.12	19.17	20.95

Source: Computed from Appendix.

TRENDS OF REAL WAGES : 1971-76

We are now ready to answer the question posed at the beginning of section B: to what extent has inflation vitiated improvements in money wages of the Government employees? Once again the relevant findings are grouped under two headings: overall improvement in real wages, broken down by federal and provincial governments; and improvement in per capita real wages, again computed separately for federal and provincial governments.

[3]It may be noted that the implicit GNP deflator is *not* used to compute real GNP from current GNP. The real GNP is computed by a component-by-component deflation of current GNP using appropriate price indices—the consumer price index and the wholesale price index. The various components of GNP are then added together to obtain total GNP at constant prices—the real GNP.

[4]In general, the compound growth rates are lower than the percentage rates of price changes commonly used to compute inflation. Thus the estimates of inflation given in this study are systematically more 'conservative' relative to those given in government publications.

Behaviour of Money Wages and Prices 1971-76

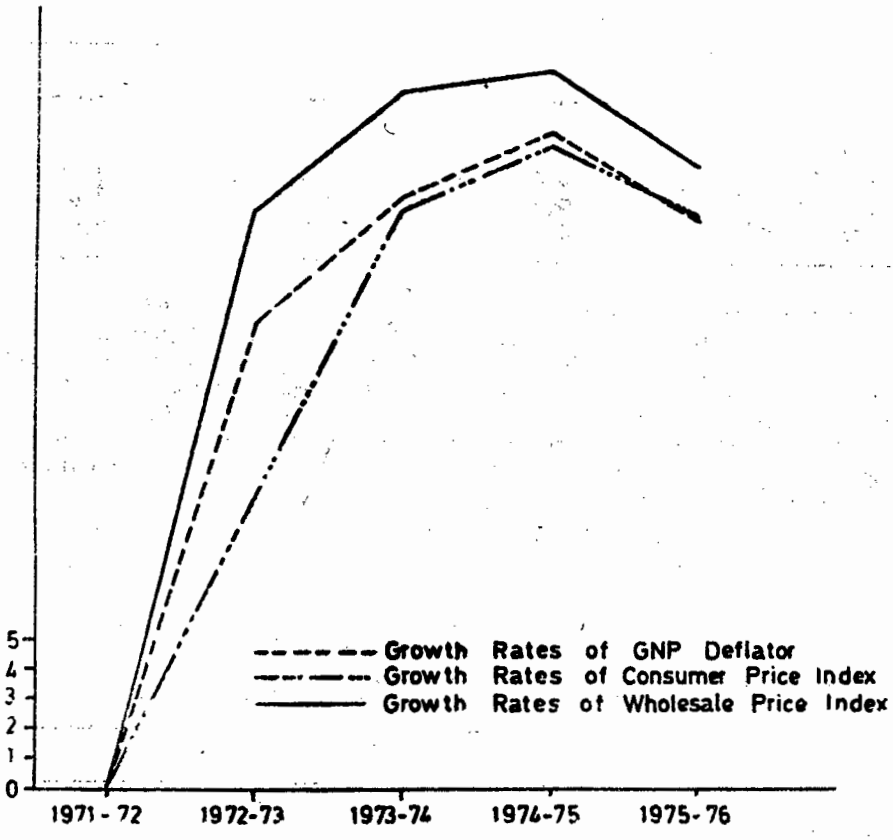

Figure 3

(Inflation in Pakistan 1971-76)

Growth Rates of GNP Deflator, Consumer Price Index and Whole Sale Price Index

We have used the implicit GNP deflator to compute real wages.[5] These estimates are given in Table 4.

Table 4

Annual Compound Growth Rates of Real Wages in the Government Sector 1971-76. Base: 1971-72

(in percentage)

	Total	Federal	Provincial
1971-72	—	—	—
1972-73	—0.57	—9.57	4.08
1973-74	2.41	0.01	3.61
1974-75	0.51	—2.58	2.01
1975-76	6.47	1.48	8.75

Source: Computed from Appendix.

It is clear from a comparison of Tables 1 and 4 that the gains in money wages were all but wiped out by inflation: a 27 percent rise in money wages could occasion a mere 6 percent improvement in real wages during the 1971-76 period. Also noteworthy is the fact that the federal-government employees have been the hardest hit by inflation: their real wages have mostly grown at a *negative* rate—with a small improvement of 1.5 percent in 1975-76, when money wages rose by 21 percent. These trends are clearly depicted in Figure 4.

It is interesting to estimate the per capita gain in the real purchasing power of government employees. In order to do this real wages have been further deflated by an employment index.[6] The results of this exercise are reproduced below:

Table 5

Annual Compound Growth Rates of Per Capita Real Wages of Federal and Provincial Governments' Employees 1971-76. Base: 1971-72

(in percentage)

	Total	Federal	Provincial
1971-72	—	—	—
1972-73	—2.43	—11.79	2.28
1973-74	0.32	—7.56	3.94
1974-75	—2.90	—12.21	1.61
1975-76	0.90	—12.66	8.23

Source: Computed from Appendix

[5]Estimates of real wages and per capita real wages based on the use of deflators of Consumer Price Index and the Wholesale Price Index are reproduced in the Appendix. Without exception, these other deflators yield lower estimates. Thus the estimates based on the GNP deflator, used in the text are the most 'favourable'. Figure 5 illustrates this point clearly. *Source:* Computed from Appendix.

[6]It may be useful at this point to note two equivalent ways of computing growth rates of per capita wages, nominal and real. According to the first method money wages are divided by employment to give the per capita wages in absolute terms, the inter-temporal changes in which are then computed by the application of the compound growth rate formula. The second method deflates money wages by an employment index to give the absolute adjusted figures. As in the first method, the inter-temporal changes are computed according to the compound growth rate formula (Appendix). The second method also yields an employment index.

Behaviour of Real Wages 1971-76

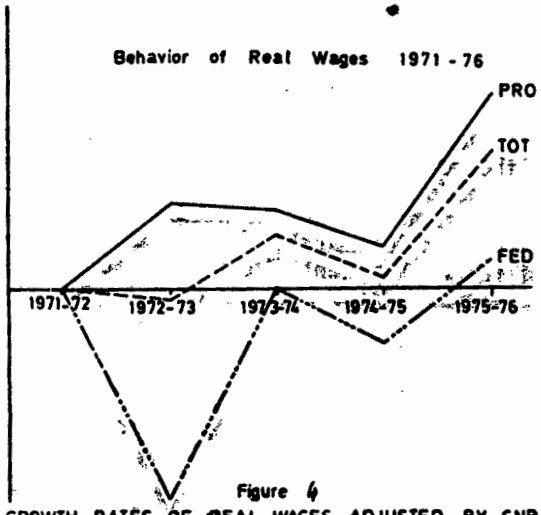

Figure 4

GROWTH RATES OF REAL WAGES ADJUSTED BY GNP DEFLATOR (TOTAL, FED, PRO)

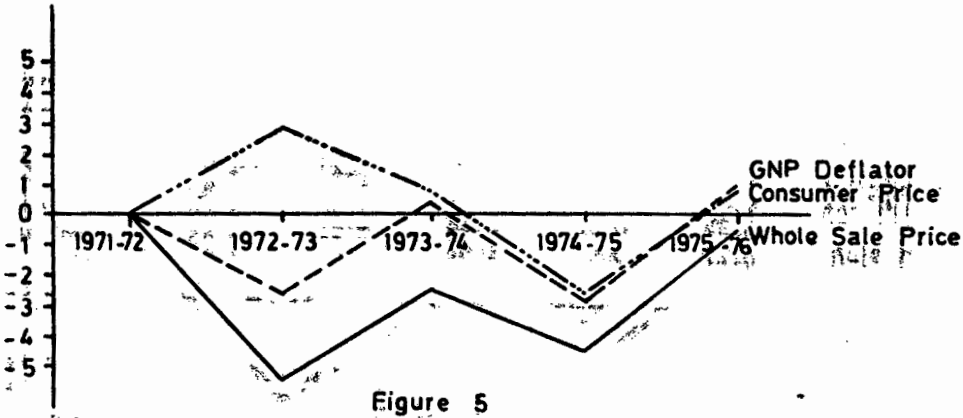

Figure 5

ESTIMATES OF REAL WAGES BASED ON GNP DEFLATOR CONSUMER PRICE INDEX AND WHOLE SALE PRICE INDEX

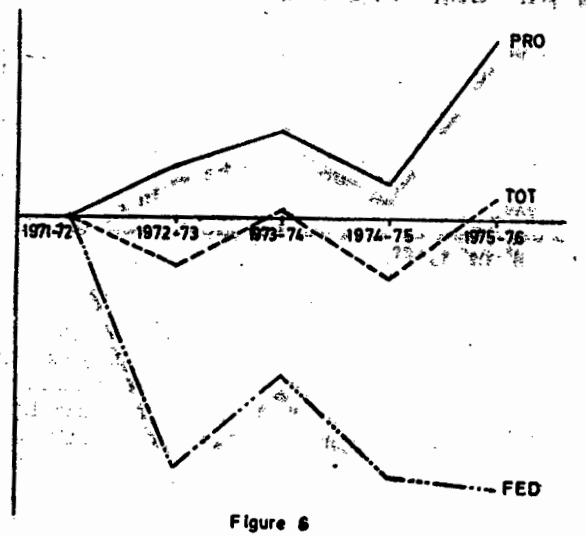

Figure 6

GROWTH RATES OF PER CAPITA REAL WAGES (TOT, FED, PRO)

The figures in Table 5 bring out in a dramatic fashion the extent of the erosion of purchasing power of the government employees: per capita real wages in fact declined over 1971-75 period, with a slight recovery in 1975-76. Once again the lot of the federal-government employees worsened the most: during 1971-76 their per capita real wages declined sharply at an annual compound (negative) growth rate of about 13 percent! Provincial government's employees fared better but not much. Figure 6 shows these trends with striking clarity.

Table 6

Annual Compound Growth Rates of Real GNP, Per Capita Real GNP, Real Wages and Per Capita Real Wages: 1971-76. *Base:* 1971-72

(in percentage)

	Real GNP	Real Wages	Real Wages of Federal Govt. Employees	Per Capita Real GNP	Per Capita Real Wages	Per Capita Real Wages of Fed. Govt. Employees
1971-72	—	—	—	—	—	—
1972-73	7.35	—0.57	—9.75	4.26	—2.43	—11.79
1973-74	6.48	2.41	0.01	3.33	0.32	— 7.56
1974-75	5.37	0.51	—2.58	2.27	—2.90	—12.21
1975-76	5.27	6.47	1.48	2.20	0.90	—12.66

Source: Computed from Appendix.

These data tell a story quite different from the one told by Table 1: if the monetary veil is removed, the 'real position' of government employees is seen to have actually worsened over the last five years. Government's wage policy, instead of being liberal, turns out to be strikingly inadequate in even protecting from inflation the purchasing power of its employees. Figures 7 and 8 bring together the monetary as well as the real increments in the wages of the government-sector employees. The sharp decline in the real position of the federal government employees stands out.

THE INFLATION POTENTIALITIES OF WAGE IMPROVEMENTS

The inadequacy of government's wage effort can be seen still more clearly by gains in real wages trailing behind even the increments in per capita real GNP. Similarly, with the exception of 1975-76, the growth rate of real wages has been slower than that of real GNP.

It is interesting to note in Table 6 that, during the 1971-75 period, while the real GNP rose at an annual compound rate of 5.4 percent, real wages remained virtually static—the real wages of federal government employees in fact declined at a compound rate of 2.6 percent; showing visible improvement in 1975-76. Even more strikingly, while per capita real GNP increased by 2 percent during 1971-75, per capita real wages declined at a compound rate of

nearly 3 percent—the real wages of federal government employees declined by 12 percent annually. The situation did not improve even in 1975-76 —the year of highest pay increase *and* in which there was a let-off in the severity of inflation.

In advanced economies, increments in *real* wages are considered an important determinant of the rate of inflation. By contrast, in underdeveloped countries wage increases have not been found to be significant elements in the inflationary process. Several recent studies done on the inflationary countries of South America, the countries of Central America, the Far East and Africa bear out this point. An important finding of these studies [1] is that in *none of the regional groups does one discover any evidence that wage and salary movements are important originating factors in economic development or inflation.* Less inflation and high rates of increase in real wages have coexisted in these countries. It will be interesting to see to what extent this holds true for Pakistan also.

However, among other things, such a study to be meaningful will require time-series data on the relevant variables for a period of at least ten years. In the present context no regression analysis, designed to isolate the contribution of real wages to inflation, is possible because we are studying here only the wages paid in the government sector, not even in whole of the public sector. Also, the number of observations are only five which severely restricts the "degrees of freedom". However casual empiricism such as we have employed in this paper, will establish that moderate increases in real wages cannot account for the sharp rates of inflation in Pakistan in the last five years.[7]

In order to understand the inflationary consequences of marginal wage increments it may be noted that price inflation is basically a function of real wages rather than the money wages, for the simple reason that changes in the former provide the primary impulse to revise contracts based on the latter.[8] Furthermore, an increase in real wages will be inflationary only *if* it outstrips the growth rate of GNP and *if* no excess capacity exists in the economy. In this connection, the evidence presented in Table 6 is highly revealing. It suggests that increments in real wages have been considerably less than the rate of growth of real GNP—with the exception 1975-76, when the two were nearly equal—and can therefore be ruled out as an inflationary factor. This *presumption* gains further strength from the fact that considerable excess capacity has existed in the economy : according to most estimates 50-60 percent of installed capacity has been idle.[9]

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[7]However, in so far as a rise in government sector wages provokes similar demands of wage increase in the rest of the economy, it may indirectly contribute to inflation. The fundamental question here is the magnitude of such "reaction". This is entirely an empirical matter and no *a priori* conjecture is possible.

[8]In fact a recent comprehensive econometric study [2] on "Wages and Prices in the U.K.—1949-68" points out: "Empirically the form of the equation below arose by noting that if the lagged real wage is introduced as a variable into a standard Phillips curve wage equation it is statistically significant. *This is enough to reject models which exlcude this variable*" (Italics supplied. Ch. 4). This finding is very significant because the usual Phillips curve representation relates unemployment with money wages.

[9]It may be noted that we are *not* implying here that the deficiency of effective demand is the sole or even an important, cause of idle capacity in the industry. It may have been caused by several factors, like the shortage of necessary spare parts and raw material and strikes in the industrial sector etc.

We now come to a very important point. Contrary to the widely-held belief, money wages paid by the government to its employees form a relatively small proportion of its total expenditure, development and non-development. Table 7 presents the relevant data in this respect.

Table 7

The Share of Money Wages in Total Expenditure (Development and Non-Development) of Federal and Provincial Governments (Excluding Defence) 1971-72 to 1975-76

	Money Wages as Percent of Total Government Expenditure					
	Total		Federal		Provincial	
	Percentage Share	Compound Rate of Change (Base: 1971-72)	Percentage Share	Compund Rate of Change (Base: 1971-72)	Percentage Share	Compound Rate of Change (Base: 1971-72)
1971-72	15.58	—	6.69	—	41.12	—
1972-73	12.05	—22.64	5.80	—13.35	22.89	—44.44
1973-74	10.29	—18.71	4.68	—16.35	23.67	—24.19
1974-75	7.54	—21.50	2.97	—23.68	23.27	—17.33
1975-76	10.43	—9.54	4.03	—11.89	26.71	—10.27

Source: Computed from Appendix.

The information brought together Table 7 is highly significant. First, the share of money wages in total government expenditure has ranged widely between 7 and 17 percent during 1971-76 period. Second, it was only in 1975-76 that this share could regain the 1973-74 level. Third, while money wages took a disproportionately large chunk of provincial-government expenditure, it accounted for a only small part in the case of federal government. Fourth, as the second column of each panel shows, the general trend has been for this share to decline throughout the period.

The general practice in *speculating* about the inflationary consequences of marginal increments in money wages is to look at its share in non-development expenditure rather than in total government expenditure. This is incorrect. At any given point of time, the contribution, *from the supply side*, to inflation of marginal increments in money wage will be determined by the *net* addition it occasions in total money supply. It can be argued that, in the long run, it is non-development expenditure rather than development expenditure which is *wholly* inflationary. True, development expenditure swells the money supply but it also enhances the supply of goods and services. However one can hardly claim on these grounds that in time these effects tend to cancel each other, thus making a zero contribution to inflation. For, as Solow [5] has recently shown, in modern-day societies prices are inflexible downward.

Behaviour of Real Wages 1971-76

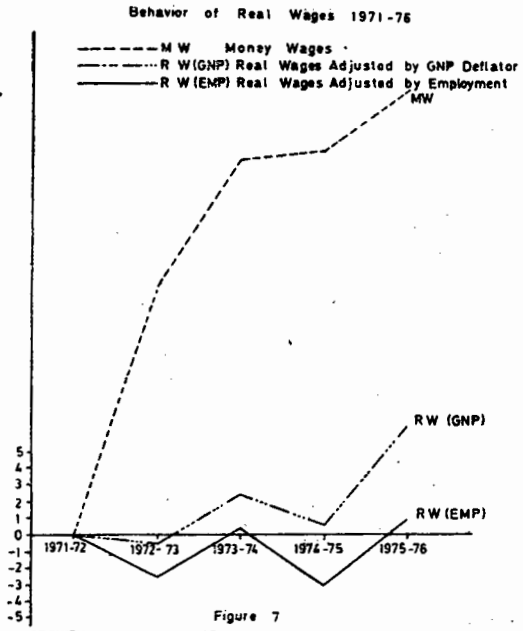

Figure 7

GROWTH RATES OF TOTAL MONEY WAGES, REAL WAGES BY GNP DEFLATOR, REAL WAGES FURTHER ADJUSTED BY EMPLOYMENT

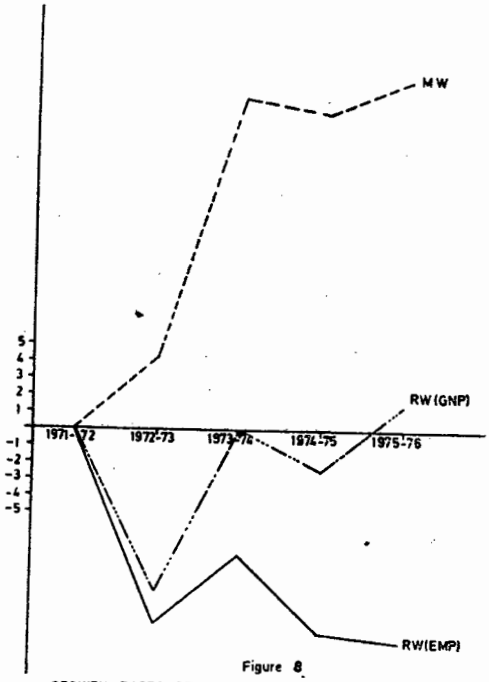

Figure 8

GROWTH RATES OF FEDERAL MONEY WAGES, REAL WAGES ADJUSTED BY GNP DEFLATOR REAL WAGES, FURTHER ADJUSTED BY EMPLOYMENT

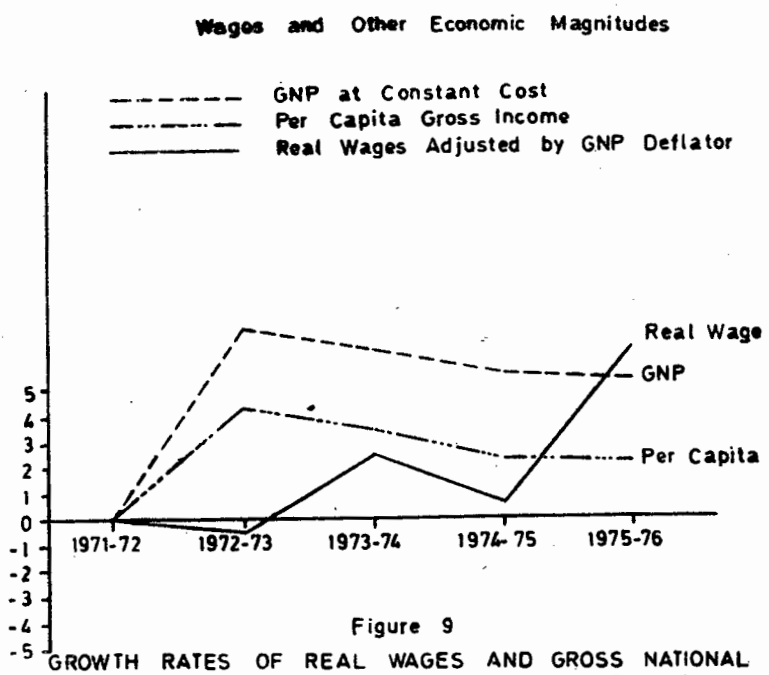

Figure 9

GROWTH RATES OF REAL WAGES AND GROSS NATIONAL PRODUCT AT CONSTANT FACTOR COST (1971-76)

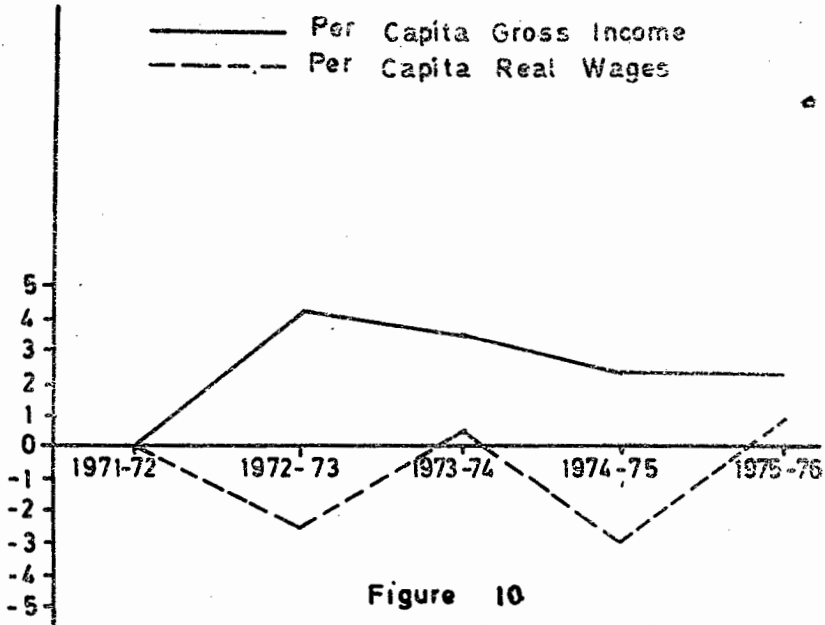

Figure 10

COMPARISON OF GROWTH RATES OF PER CAPITA GNP AND PER CAPITA REAL WAGES (TAKING 1971-72 AS BASE)

At the same time, in a growing economy, relative prices keep changing because of the differential growth rates of various sectors of the economy. With prices refusing to move downe, the only way in which these changes in *relative* prices can be 'accommodated' is by an upward drift of the *general* price level. If the long-run tendency is for the general price level only to rise, then it is obvious that, in a dynamic context, the two opposite effects of development expenditure on the general price level do not cancel out.

All that can legitimately be claimed is that an undue increase in non-development expenditure should be discouraged. However, this applies to all components of non-development expenditure and not only to money wages paid to government's employees.. It is interesting to note that, contrary to popular notions, money wages do not form a predominant share of non-development expenditure. The relevant information is summarized in Table 8.

Table 8

The Share of Money Wages in Non-Development Expenditure: 1971-76

	Money Wages as Percent of Non-Development Expenditure					
	Total		Federal		Provincial	
	Percentage	Compound Rate of Change	Percentage	Compound Rate of Change	Percentage	Compound Rate of Change
1971-72	18.37	—	7.88	—	56.41	—
1972-73	17.59	—4.24	7.14	—9.37	49.23	—12.72
1973-74	16.01	—6.66	6.33	—10.36	57.39	0.87
1974-75	14.24	—8.13	5.66	—10.42	42.91	—8.71
1975-76	18.38	0.02	6.99	—2.94	49.17	—3.38

Source: Computed from Appendix.

It can be seen that, first, money wages have formed only about 18 per cent of non-development expenditure. However, in the case of provincial governments money wages account for nearly half the non-development expenditure. Second, this share declined during the entire 1971-76 period. This contrasts with the trends in other advanced countries where this share, which is much greater, has increased over time.

The main thesis of this section gains further strength from the fact that money wages form only a miniscule proportion of total consumption expenditure in the economy. Table 9 makes this point clear.

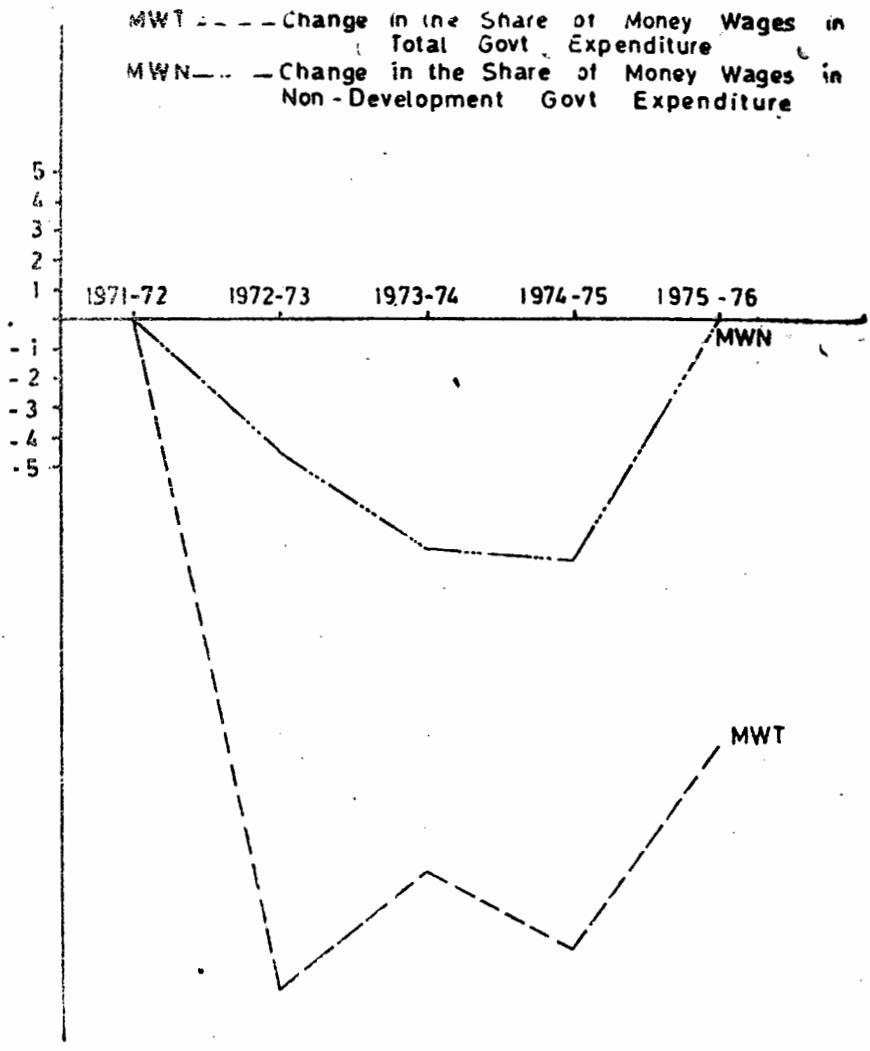

Figure II

Changes in the Share of Money Wages in Total Govt. Expenditure and in Non-Development Govt. Expenditure 1971-72 to 1975-76 (Base 1971-72)

Table 9

Money Wages in the Government Sector as Proportion of Total Consumption Expenditure: 1971-76

(in percentages)

	Money Wages as Percentage of Total Consumption Expenditure	Annual Compound Rate of Growth. Base: 1971-72
1971-72	3.09	—
1972-73	2.90	—6.15
1973-74	2.85	—3.96
1974-75	2.64	—5.11
1975-76	3.15	0.48

Source: Computed from Appendix.

It may be noted that, over the last five years, the share of money wages in total consumption expenditure has been confined within the range of 2.6 to 3.2 percent. The second column shows that these ratios have either declined over these years or remained unchanged. Once again it is clear that moderate changes in money wages in the government sector *per se* are not likely to produce substantial inflation (However see footnote 7).

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

We have presented, in the preceding pages, evidence on various aspect of government's wage policy during the 1971-76 period. While money wages rose at an annual compound rate of 22 percent till 1975, these gains were completely wiped out by a runaway price inflation of equal magnitude leaving behind a real gain of only 0.5 percent. However, the situation improved somewhat in 1975-76. If proper adjustment is made for the rise in wage bill caused by an expansion of employment in the government sector, the resulting picture turns somber: per capita real wages *declined* at an annual compound rate of about 3 percent during 1971-75 period, and inched forward at a rate of 0.9 percent in 1975-76. The 'real' position of the federal government employees has worsened even more: per capita real wages fell at an annual compound rate of nearly 13 percent during the 1971-76 period.

In a period of rapid inflation, such as Pakistan has recently experienced, the fixed-income group suffers the most. Social justice demand that steps be taken to compensate this class for the loss in its purchasing power. All the more, because government employees do not have the bargaining power that organized trade unions confer on labour in the large-scale manufacturing sector. Furthermore, unlike the industrial sector where an appropriate capital-labour ratio determines optimal resource allocation and employment level, the government's wage policy is primarily an instrument of ensuring reasonable standards of remuneration to its employees. Again, what is "reasonable" cannot be decided by imputing to government employees any gains in govern-

ment's productivity, as is possible to do in the case of industrial labour. The only relevant criterion for determining the appropriate wage level is the gain in the productivity of the economy as a whole, best summarized by the growth rate of real GNP.

The evidence presented in this paper suggests that by this criterion, government's wage effort with respect to its own employees, in particular the employees of the federal government, has been inadequate. During 1971-75 while real wages crept up by a mere 0.5 percent—the real wages of the federal government employees in fact declined by 2.6 percent—the real GNP increased by a little over 5 percent during the same period. The situation improved visibly in 1975-76, even though real wages of the federal-government employees increased only by 1.5 percent compared to a 5.3 percent increase in real GNP. An even more striking comparison is between per capita real wages and per capita real GNP. While the latter *rose* by 2.3 percent during 1971-75, the former *fell* by 2.9 percent, the per capita real wages of federal government employees declining by 12 percent! Even in 1975-76, the year of a substantial wage increase, the situation was not much improved.

What can be said then about this situation? The remedy suggested by our analysis is a relatively liberal wage policy which aims at *fully offsetting* the effects of inflation; and in addition redirecting a moderate share of increase in GNP to improve over time the real position of government employees. The ones in greatest need for redress are federal-government employees who have suffered the maximum erosion of their real 'positions'. Such a policy will, among other things, imply a steady increase, over time, in the share of money wages in non-development expenditure. We have seen that so far this share has at best remained constant.

Having said this, what effects would such an expansionary policy have on the intensity of inflation in the country? This is a deep question and cannot be answered definitively without a full-scale econometric study, necessitating, among other things, at least double the number of observations we have reported in this study. However the evidence we have presented lends support to the view that, in so far as price inflation is related to real wages, wage increases could hardly have been an important *causatory* factor in the inflationary process in the last five years—the years of the most intense inflationary spiral in Pakistan's thirty years history. Furthermore, money wages have formed a mere 3 percent of total consumption expenditure. We have also noted that, contrary to the widely-held belief, money wages paid by the government to its own employees constitute a modest proportion of *total* government expenditure—in 1975-76 wages paid by the federal and provincial governments accounted for only 10 percent of their total expenditure.

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Annexure: Basic Statistical Information

Variables		1971-72	1972-73	1973-74	1974-75	1975-76
1.	Employment in Government Sector (in 000)					
	Federal	64.67	66.17	75.69	88.37	117.86
	Provincial	170.62	173.62	169.53	172.69	173.88
	Total	235.29	239.79	245.22	261.01	291.74
1a.	Employment Index					
	Federal	1.0000	1.0232	1.1704	1.3665	1.8225
	Provincial	1.0000	1.0176	0.9936	1.0121	1.0191
	Total	1.0000	1.0191	1.0422	1.1093	1.2399
1b.	Compound Growth Rates of Employment Index (in %)					
	Federal	—	2.32	8.19	10.97	16.19
	Provincial	—	1.76	—0.32	0.40	0.47
	Total	—	1.91	2.09	3.52	5.52
2.	Money Wages and Salaries (Million Rs.)					
	Federal	487.2	508.4	699.4	819.6	1040.8
	Provincial	962.8	1158.6	1483.3	1859.9	2711.7
	Total	1450.0	1667.0	2182.7	2679.6	3752.5
3.	Per Capita Money Wages (in Rs.)					
	Federal	7533.63	7683.24	9240.32	9274.64	8830.82
	Provincial	5642.95	6673.19	8749.48	10773.28	15595.24
	Total	6162.61	6951.92	8900.99	10266.27	12862.48

—Continued

Annexure—*Continued*

	Variables	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
4.	Money Wages adjusted by GNP Deflator (in Million)					
	Federal	325.23	293.53	325.30	300.66	344.98
	Provincial	642.72	668.94	689.91	682.28	898.80
	Total	967.96	962.47	1015.21	982.98	1243.78
5.	Per Capita Real Wages (In Rs.)					
	Federal	5029.07	4436.00	4297.79	3402.29	2927.03
	Provincial	3766.97	3852.90	4069.54	3952.04	5169.08
	Total	4113.90	4013.80	4140.00	3766.06	4263.32
6.	Consumer Price Index	110.67	121.40	157.79	199.97	223.28
6a.	Consumer Price Deflator	1.0000	1.0970	1.4258	1.8069	2.0175
7.	Money Wages adjusted by CPI	1450.0	1519.60	1530.86	1482.98	1859.98
7a.	Compound Growth Rates of (7)	—	4.81	2.75	0.74	6.41
8.	Money Wages adjusted by CPI, EI	1450.0	1491.12	1468.87	1336.86	1500.10
8a.	Compound growth rates of (8)	—	2.84	0.65	—2.67	0.85
9.	Wholesale Price Index	150.31	179.74	229.07	288.89	321.69
9a.	Wholesale Price Deflator	1.0000	1.1958	1.52398	1.92196	2.14018
10.	Money Wages adjusted by WPI	1450.0	1394.048	1432.237	1394.202	1753.357
10a.	Compound Growth Rates of (10)	—	—3.86	—0.61	—1.30	4.86
11.	Money Wages adjusted by WPI, EI	1450.0	1367.92	1374.24	1256.83	1414.1
11a.	Compound Growth Rates of (11)	—	—5.66	—2.65	—4.65	—0.62
12.	Implicit GNP Deflator	1.498	1.732	2.150	2.726	3.017
13.	Per Capita GNP (in Rs.)	517.0	539.0	552.0	553.0	564.0
14.	GNP at Constant Cost (in Million Rs.)	32745.0	35153.0	37126.0	38300.0	40201.0
15.	Total Consumption Expenditure (in Million Rs.)	46978.0	57407.0	76554.0	101675.0	119096.0
16.	Private Consumption Expenditure (in Million Rs.)	40500.0	50183.0	67743.0	89557.0	105796.0
17.	General Government Current Expenditure (in Million Rs.)	6478.0	7224.0	8811.0	12108.0	13300.0
18.	Money Wages and Salaries (in Million Rs.)	1450.0	1667.0	2182.7	2679.6	3752.5

—*Continued*

Annexure—*Continued*

	Variables	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
19.	Money Wages as % of Total Consumption Expenditure	3.09	2.90	2.85	2.64	3.15
19a.	Compound Growth Rates	—	—6.15	—3.96	—5.11	0.48
20.	Total Government Expenditure (Million Rs.)					
	Federal	6970.8	8771.5	14941.1	27568.1	25818.2
	Provincial	2337.5	5062.4	6265.5	7993.2	10154.3
	Total	9308.7	13833.9	21206.6	35561.3	35972.5
21.	Non-Development Exp. (Million Rs.)					
	Federal	6186.8	7123.5	11053.1	14477.6	14894.0
	Provincial	1706.9	2353.4	2584.4	4334.3	5515.4
	Total	7893.7	9476.9	13637.5	18811.9	20410.4
22.	Development Expenditure (Million Rs.)					
	Federal	784.0	1648.0	3888.0	13090.5	10923.2
	Provincial	630.6	2709.0	3681.1	3658.9	4639.9
	Total	1414.6	4357.0	7569.1	16749.4	15563.1
23.	Money Wages as % of Total Development Expenditure					
	Federal	6.689	5.796	4.681	2.973	4.031
	Provincial	41.189	22.886	23.674	23.269	26.705
	Total	15.577	12.050	10.293	7.535	10.432
23a.	Compound Growth Rates					
	Federal	—	—13.35	—16.35	—[illegible].68	—11.89
	Provincial	—	—44.44	—24.19	—17.33	—10.27
	Total	—	—22.64	—18.71	—21.50	—9.54

—*Continued*

Annexure—*Continued*

Variables	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
24. Money Wages as % of Non-Development Expenditure					
Federal	7.875	7.135	6.328	5.661	6.988
Provincial	56.406	49.231	57.394	42.911	49.166
Total	18.369	17.590	16.005	14.244	18.385
24a. Compound Growth Rates					
Federal	—	—9.37	—10.36	—10.42	—2.94
Provincial	—	—12.72	0.87	—8.71	—3.38
Total	—	—4.24	—6.66	—8.13	0.02

Source of Data for Money Wages and Employment:

(*a*) Central and Provincial Budget Documents for 1971-72 to 1975-76
(*b*) Establishment Division
(*c*) Office of the Special Assistant to the Finance Minister
(*d*) For CPI (Consumer Price Index) CSO Bulletins
(*e*) For CPI (Consumer Price Index) CSO Bulletins
(*f*) For GNP Deflator: National Income Accounts
(*g*) For Per Capita GNP: National Income Accounts
(*h*) For GNP at constant cost: National Income Accounts
(*i*) For Expenditures: Federal and Provincial Budgets: 1971-72 to 1975-76.

Note: The tabular format of this Annexure was suggested by Dr. Sarfraz Khan Qureshi.