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(V) FINAL COMMENTS

Here is the principal message of this study. The minidevaluation policy adopted by Brazil is essentially the application of the purchasing power parity theory, which, in turn, was inspired by the teachings of the quantitative theory of money. It upholds the spirit of a system of fixed exchange rates, except for the fact that it neutralizes the unfavorable impact of domestic inflation on the balance of current transactions. Hence, there is a twofold role that exchange policy can play: (1) neutralizing the harmful effects of domestic inflation on the trade balance due to the changes in relative prices of domestic goods, on the one hand, and of international goods, on the other, provided the terms of trade remain constant; and (2) avoiding the disequilibrium in the trade balance generated by changes in the terms of trade, which results in inflationary pressures in the case of gain, or in deflationary pressures on production and employment in the case of deterioration in the terms of trade.

Although they are obvious, it is worthwhile to emphasize these basic factors underlying the Brazilian system of minidevaluation, especially at a particularly difficult moment like the present one in Brazil. Finally, it must be pointed out that we have deliberately omitted some of the other aspects of the problem, especially in regard to the capital account. Here the policy of minidevaluation can be understood as an incentive to attract financial resources: if the policy is carried out so that devaluation occurs through the difference between domestic and foreign inflation, the indexation rate on the cruzeiro counterpart of the external debt is necessarily smaller than that applicable to domestic values. Thus, since the capital market abroad does not anticipate external inflation through a rise in the nominal interest rate, the Brazilian businessman is provided with an incentive to obtain resources in the foreign capital market. This aspect of the problem is important and complex, and itself merits a research endeavor, which we hope to undertake in the near future.

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A Critical Review of the Relation between the Post-1964 Wage Policy and the Worsening of Brazil's Size Income Distribution in the Sixties

Since 1964 the Brazilian government has pursued a wage policy that has attracted considerable attention in the literature. In particular, it has been credited with the worsening of Brazil's size or personal income distribution in the sixties by, among others, Fishlow (1972), Hoffman and Duarte (1972), and Baer and Beckerman (1974). It is the purpose of this paper to discuss some of the aspects of that policy and its relationship to this deterioration.

In reviewing some of the existing studies, we found that, both from the conceptual and empirical points of view, the post-1964 wage policy and its role in shaping the Brazilian size income distribution in the sixties require further examination. After taking into consideration several of its aspects not heretofore discussed in the literature we became convinced that the wage policy has not been neutral in its distributive impact, and that this impact is of a much more complex nature than that implied by the analyses reviewed. It will be shown that particular groups of wage earners have been clearly affected by the wage policy. However, on the basis of

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the existing evidence one cannot conclude that the nonneutrality of the wage policy has been responsible for the observed changes in the overall income distribution by size in the sixties. The link between the two phenomena is far more complicated than we have been led to believe thus far. Moreover, the effects of several other factors make it very difficult to isolate the impact of the wage policy and evaluate its relative importance.

For the purposes of this analysis we divide the Brazilian wage policy into three areas: (1) minimum wages; (2) collective wage readjustments emerging from the legally constrained bargaining process between employers and labor unions; and (3) wages and salaries more directly under government control—those of public servants and workers in public enterprises, public utilities, and/or firms subsidized by the government. Sections I, II, and III of this paper discuss each of these three areas separately. Section IV presents some concluding remarks.

[I] THE POLICY WITH RESPECT TO MINIMUM WAGES

The series on real minimum wages after 1964 is probably the most publicized data set related to the Brazilian economy and will not be repeated here. Whatever price index is used, the existing data show that real minimum wages present a declining trend after 1964; this is accepted as an unquestionable point.[1]

Minimum Wages, Wages, and the Income Distribution

From this fact, however, several authors have concluded that real wages in general have decreased and that this is one of the reasons for the worsening of the income distribution in the sixties.[2] This argument is not offered in a theoretical model linking changes in minimum wages to changes in wages and to changes in the income distribution; apparently, the rationale behind it is that the restraint on minimum wages in the sixties has constrained the income of people in the lower brackets of the income distribution, therefore increasing the degree of inequality in the latter. A closer look at the problem, however, shows that this conclusion cannot be taken for granted.

Our first point draws its conceptual basis from a certain dualism encountered in the Brazilian labor markets: the coexistence of formal and informal employment relationships. The formal market is, in broad lines, characterized by relationships of employment that are relatively stable, regulated by law, and that pay relatively higher wages. The informal labor market is characterized by unstable and low-income occupations and includes among other groups, urban and rural workers without regular jobs, the poor self-employed, and domestic servants. The reference to these concepts is necessary here because minimum wages in Brazil actually hold only for wage earners in the formal market. Even in the cases theoretically covered by the minimum wage laws there is the phenomenon of noncompliance, known to occur especially in the rural sector as well as in the urban areas of the more backward regions. Since we will be focusing on the size income distribution, it is also worth mentioning that in the group of those receiving income from sources other than wages there are many whose money income is not necessarily equal to or above the minimum wage. (This is the case, for instance, with some groups of farmers and rentiers.) The implication is that the legal minimum wage is not necessarily the same as the minimum monetary income, and that there is a large difference de facto between the measures of these two concepts. A recent survey of Brazilian households, covering 26 million people with monetary income, showed that 28 percent had a monthly monetary income below half of the legal minimum wage and that 52 percent received up to the legal minimum.[3]

Thus, it is evident that those directly affected by the minimum wage levels are not those at the very bottom of the income distribution. Even if we assume that the minimum wage could be useful as an instrument for income redistribution, a large group of low-income recipients would be outside its direct coverage.

One could argue that the restraint on minimum wages has caused losses to those around the middle and benefited those at the top of the income distribution, so that the overall impact of the minimum wage policy has remained regressive. This argument, however, ignores the possibility that higher minimum wage levels could have caused adverse employment effects for those at the bottom of the income distribution. Higher minimum wages, being a constraint on the wages established for formal relationships of employment, could have benefited those able to find jobs at these wages and caused losses to those left unemployed or forced to accept lower-paid occupations outside the formal market. Therefore, it can be seen that no analysis of the distributive impact of the minimum wage policy can be made without paying attention to the relative impact of the policy on employment in the formal and informal labor markets. This has not yet been done in Brazil; here we do not intend to go beyond the conclusion that one cannot trace the observed changes in the overall income distribution to a set of figures on real minimum wages. In any case, we want to pursue this still further.

A second point that can be raised is that, while the level of real minimum wages has decreased since 1964, the proportion of workers receiving minimum wages in the urban formal market has also apparently decreased. Most of the annual data on urban wages in Brazil come from the forms submitted by firms each April to comply with the requirements of the "Law of Two-Thirds." This law requires firms to prove that at least two-thirds of the workers on their payroll are Brazilian citizens, and the forms list name, citizenship, and monthly wages of each employee, among other things. Bacha et al. (1972) utilized the published data from these forms to determine trends in the proportion of workers receiving minimum wages by means of relating the distribution classes to minimum wage figures. Their conclusion, on the basis of data for the states of Guanabara, São Paulo, as well as the country as a whole, for the period 1965–1969 was that this proportion showed a declining trend in that period.[4]

For the state of São Paulo there is evidence that even in the agricultural sector the minimum wage has been losing importance. Table 1 presents a comparison between the average monthly wage paid to a typical rural worker, working on a per diem basis, and the minimum wage in the city of São Paulo, for the period 1960–1974. It can be seen that the ratio of these two series shows a rising trend over time and that in 1973 the minimum wage was surpassed in the agricultural sector of the state.

The results shown by Bacha et al. (1972) and on Table 1 reflect structural changes experienced by the Brazilian economy in the last decade. As the result of the expansion of industry and services, the relative size of the "labor surplus" available for the simplest occupations in the urban areas has been reduced. The fact that the minimum wage has been losing importance is due both to the decline in its real value over time and to the diminished importance of institutional wages in a tightening labor market. It is true that this process has been concentrated in the state of São Paulo and in the southern part of the country. In other regions, however, the phenomenon of noncompliance casts doubt upon the relevance of the legal minimum as an actual lower bound to wages.

A third point examines the meaning of the loss implied by the fall in the real value of minimum wages in the sixties. A group of workers would have lost real income in this case if they had continuously received minimum wages for a period up to a whole decade. This would mean that they were not able to improve their position in the earnings scale above the level of minimum wages. But this is not the way labor markets operate. We have evidence showing that internal labor markets are important in Brazil: workers go up on occupational ladders which increase wages with the length of service in the firm, with a large part of the skills of the Brazilian labor force obtained through on-the-job training.[5] It is difficult to believe that in the formal sector covered by the minimum wage law the people receiving minimum wages in 1970 are the same as those who received minimum wages in 1960. Moreover, there is no guarantee that those employed at the minimum wage levels of 1970 would be employed if the

TABLE 1 State of São Paulo: Comparison between Monthly Wage Received by a Typical Rural Worker and Minimum Wage in the City of São Paulo, 1960–1974 (annual averages)

Year	Rural Worker's Wage Cr$ (1)	Minimum Wage Cr$ (2)	(1)/(2)
1960	3.42	6.64	0.52
1961	4.44	10.23	0.43
1962	6.69	13.21	0.51
1963	10.86	21.00	0.52
1964	22.92	39.03	0.59
1965	41.07	62.00	0.66
1966	53.61	81.00	0.66
1967	74.76	101.50	0.74
1968	98.61	124.07	0.79
1969	116.25	147.20	0.79
1970	154.05	174.27	0.88
1971	193.35	212.80	0.91
1972	257.40	254.40	0.99
1973	340.50	297.93	1.14
1974	475.50	355.20	1.34

SOURCES: 1. Instituto de Economia Agrícola do Estado de São Paulo, *Prognóstico 75/76*. São Paulo: 1975, p. 43.
2. *Conjuntura Econômica* 29 (January 1975).

minimum wages were higher. Therefore, the loss caused by the drop in the real value of the minimum wage cannot be unambiguously determined except under particular conditions.

Following this line of reasoning, we have identified a group of people who have suffered such losses: those who receive transfers, especially pensions and retirement allowances, from the Brazilian federal social security system. These transfers have been tied to minimum wages or to the indexes discussed in the next section of this paper. In both cases, the resulting indexation lagged behind cost of living figures in major parts of the period after 1964. Being outside the labor market, the pensioners and retired people have been affected by the wage policy since they do not have the same chances, open to those in the labor force, of improving their wages in the occupational ladders of the market.

Minimum Wages and Indexation

One could ask why, after all, the government has pursued a policy of restricted minimum wages. On the one hand, it seems that in pursuing an anti-inflationary policy the government has accepted the idea that minimum wages could have an impact on inflation, either by a cost-push mechanism and/or by its effects on the expectations with regard to the future rate of inflation. On the other hand, the minimum wage levels have increasingly been used as a mechanism of indexation, either defined by laws or informally established, covering a wide group of items, from rents and mortgage payments to traffic fines.

This shows that in addition to wages and transfers from the government there are other sources of income affected by minimum wage levels, and that the impact of the minimum wage policy can be analyzed also from the expenditure side, given the fact that some prices in the economy have been indexed to minimum wages. On the whole, the lesson is that an analysis of the distributive impact of the minimum wage policy cannot be limited to minimum wage earners as such.

Early in 1975 the use of minimum wages as a basis for indexation came to an end. Until then they had been the basis for indexation most likely to be affected by government guidelines, since the government uses its own discretion in determining their levels.[6] This discussion of minimum wages as an indexation mechanism points to the fact the Brazilian indexation system is not left to operate to its fullest extent, being at least partly a reflection of government guideposts. On the whole, the minimum wages are equivalent to a series of underestimated price indexes; in the end they came to be viewed by Brazilian policymakers more as indexes than as wages.

[II] THE POLICY WITH RESPECT TO COLLECTIVE WAGE READJUSTMENTS

Some Basics on the Policy

We may begin by defining the scope of this branch of Brazil's wage policy. As it stands now, it covers the urban workers under the system of the Consolidation of the Labor Laws (CLL). This means that it affects workers in the formal urban sector except public servants (the latter are subject to different regulations). It also covers the workers in public enterprises, that is, the public sector organized as corporations. The coverage of the program was broadened in the course of time. In the beginning it comprised solely workers in public enterprises and/or public utilities and/or firms subsidized by the government. Policy criteria were constantly extended until they reached all urban workers under the CLL.[7]

Turning to the way the policy operates, it should be noted at the outset that in Brazil there are no collective labor contracts, that is, contracts in which a firm deals with a labor union to negotiate labor services to be provided by a group of union members. Nevertheless, once an individual is employed he is placed, under a set of public regulations, within the jurisdiction of a particular labor union which represents the workers as a group. The major issues dealt with by the labor unions are collective wage readjustments primarily designed to compensate workers for inflation.

On the employer side, the firms are similarly placed by public regulation under the jurisdiction of an association of firms that represents them as a group. Thus, the bargaining process takes place between labor unions and associations of firms. Prior to 1964, the readjustment rates were negotiated free of government limitations. The high rates of inflation and the political agitation that followed the resignation of President Janio Quadros in 1961 made the negotiations increasingly difficult, and strikes by the major unions became commonplace in the period 1961–1963. These strikes were certainly one of the ingredients of the political fermentation that led to the military takeover of 1964.

The new government took steps in the direction of avoiding the social and political turmoil involved in wage readjustment negotiations. Except for a very insignificant number of cases, strikes were forbidden and collective wage readjustments in the area covered by the policy became bound by monthly indexes published by the government. These indexes refer to annual rates to be observed in each month's readjustment. For instance, bank clerks have their readjustment in September; if the index for September is 130, they are entitled to a readjustment of 30 per cent. In the period 1962–1963 the strongest unions were able to obtain readjustments on a six-month basis, but since 1964 readjustments for a period shorter than one year have been ruled out.

The system operates as follows. The National Wage Department informs the labor courts of the rate of wage readjustment to be observed in court cases. In case of disagreement between workers and firms as to the rate, the case goes to the courts, which cannot grant increases above the level established by the National Wage Department. Since, as a rule, the labor unions ask for rates of readjustment higher than the official rates, the case goes to the courts, which decide by following the rate established by the government.

The rates established by the government are computed by a formula the details of which can be found elsewhere.[8] When it was first established, the basic elements of the formula were: (1) an indexation mechanism designed to restore the real wage of the workers to its average value, on the basis of the last 24 months prior to the month of readjustment; (2) half of the rate of inflation expected in the following one-year period; and (3) the annual rate of increase in the national average productivity per worker.

Two major changes have occurred in the formula since it was first introduced. Until 1968 the expected rates of inflation estimated by the government, i.e., the second element of the formula, were unrealistic and consistently below the rates of inflation that actually occurred. Such underestimation brought complaints from the labor unions and in 1968 an attempt was made to correct it by means of a modification in the formula. Putting it in rather simple terms, the new formula then adopted was provided with an automatic mechanism for correcting an underestimation of the expected rate of inflation in the preceding readjustment. Thus, when establishing the new rate of readjustment, rather than considering wages actually paid during the period in which the latest readjustment was in effect, the negotiations considered those wages that would have been paid if the expected rate of inflation used in the calculations had precisely coincided with the subsequent actual rate of inflation.

The second major change occurred in January 1975, when the base period for restoring the real value of the average wage was reduced from 24 to 12 months. This was done because, after a period of diminishing inflation, its tempo accelerated again in 1973 and, based on an average of 24 months, the rates of readjustment lagged far behind the increasing rate of inflation.

In addition to these changes in the formula as such, its application has been subject to government interference of various other sorts. The cost of living index that serves as a basis for the indexation mechanism of the formula is an average of regional government indexes that are themselves affected by government interference. Furthermore, the difficulties involved in computing the rate of increase in average national productivity, another element of the formula, have made this rate subject to ad-hoc estimation.

In view of all the problems surrounding the formula and the computation of its components, it is not surprising that the resulting readjustment rates have received strong criticism. It has concentrated on the question of whether or not the government's rates have been close to actual changes in the cost of living plus gains in productivity. Here are the major points:[9] (1) There is no convincing justification for adopting the formula as such; on the whole, it is a complicated mechanism for subjecting collective readjustments to government guidelines. The adoption of a 24-month period as a basis for the reconstruction of the real wage at the time the policy began to be applied is considered a device designed to result in low rates of readjustment. (2) As a result of the 24-month rule and the underestimation of the expected rate of inflation, the rates of readjustment were persistently below cost of living figures until 1968. (3) From 1968 on, the rates have matched cost of living figures more closely but have not incorporated gains in productivity.

As noted above, in early 1975 the formula underwent a major change. As a result, the rates of readjustment authorized in 1975 have been slightly above those of the cost of living figures. For the whole 1964–1974 period, however, the government indexes seem to indicate that the rationale behind the policy was one of restraint on the rates of readjustment authorized by the government.

The Meaning of the Restraint Imposed by the Wage Policy

The perfunctory attention we paid the analysis of the government's formulas and indexes was intentional. We are convinced, for reasons to be explained below, that one cannot judge the impact of the policy by simply looking at these formulas and indexes. It will be shown that they do not necessarily impose a binding constraint on either actual rates of readjustment or the absolute level of wages observed in the market.

In fact, the wage readjustment rates calculated pursuant to the formula cannot be considered as an upper or lower limit that cannot be exceeded. On the one hand, in spite of the fact that collective wage readjustments are subject to the policy, the firms and workers are free to negotiate wage readjustments above those established by the formula, on an individual basis. The firm can also extend this practice to all its workers if it feels that it is necessary to do so. In such a case the only risk is that firms subject to the guidelines of the Price Control Board (generally large firms in the manufacturing sector) will not receive approval for price increases deriving from collective wage readjustments granted above rates determined by the wage policy. In theory, they will have to absorb the difference by means of improvements in labor productivity. In practice, the Price Control Board follows ad-hoc procedures, the effectiveness of which, in terms of price and wage controls, remains to be determined.

On the other hand, the wage policy does not prevent a firm from firing workers if it finds the new wage level resulting from the wage policy mechanism to be above the value of the workers to the firm, nor does it prevent workers from leaving the firm if they consider their wages below what they could be earning elsewhere.

Therefore, the wage policy can be viewed, in practice, as determining *the minimum rate of wage increases for permanent employees*. Under these conditions it becomes evident that the already-mentioned policy of setting yearly rates of increase below the rate of inflation, or below the rate of inflation plus productivity, is particularly detrimental for employees linked to their jobs by stable employment relationships so that the minimum rate of increase determined by the wage policy becomes the only readjustment they obtain.

The question arises whether sizable groups of workers find themselves in this situation. In the next section, it will be shown that some groups can be singled out as particularly affected by the wage policy in this fashion. On the whole, however, it should be pointed out that actual rates of wage readjustment are not necessarily those established by the policy.

First, labor turnover in Brazil is large enough to pose a barrier between official and actual rates of readjustment. The data obtained through the "Law of Two-Thirds" revealed, for instance, that 36 percent of those employed in the manufacturing sector of the state of São Paulo in 1970 had less than one year of service in the firm, and 60 percent had less than two years.[10] In general, the collective wage readjustment "agreements" state that employees with less than one year in the firm will have a readjustment on the basis of the official rate but proportional to their length of service in the firm. In any case, the wage negotiated by the individual when entering the firm (the basis for this readjustment) is freely negotiated between the worker and the firm at that time and can be above or below the wage received in the previous employment. Given the high rates of turnover, after a few years it becomes difficult to see to what extent the individual's wage has been affected by the wage policy and to what extent by the new wages negotiated when moving from firm to firm.

A second point is the existence, mentioned above, of internal labor markets in Brazil. This means that the individual worker has access to higher wages by means of improving his position on the occupational ladder of his firm. Once there is a group of stable employees in the firm, they will receive at least the minimum readjustment established by the wage policy. Therefore, to establish and maintain a wage structure of the type usually encountered in the internal markets, the firm will have to grant from time to time wage readjustments above those of the official indexes to at least a part of its labor force.

Thus, turnover and stability are important elements in the analysis of the wage policy, since they make actual readjustments not necessarily equal to those dictated by the official rates. Turnover implies that the former can be above or below the latter, while stability, within a hierarchical wage structure, implies the possibility of wage readjustments above the official rates. In sum, our contention, as in the case of minimum wages, is that the effectiveness of the policy, designed to impose guidelines, is limited by the operation of labor market mechanisms. We have shown that the actual rates of readjustment can be above or below the indexes established by the government, so that the impact of the wage policy on real wages becomes an empirical question. We thus proceed to discuss the evidence for real wages in the period 1964–1970, before returning to the question of the impact of the wage policy on the Brazilian size income distribution in the sixties.

The Evidence for Wages

In addition to real minimum wages, some studies have used average wages per worker in the manufacturing sector in the sixties, deflated by cost of living figures, as a basis for showing the impact of the wage policy.[11] The major arguments for this are that (1) for the period as a whole, and particularly after 1968, real average wages have shown an increasing trend (although the overall rate of increase has been below that of productivity due to the restraint on wages imposed by the wage policy); and (2) during the period 1964–1968, average wages remained constant or decreased. Since this period, the argument goes, coincides with that in which expected rates of inflation have been underestimated in the application of the collective wage readjustment formula, this slackening in the growth of real average wages is also the result of the wage policy.

Table 2 presents indexes of real average wages in the manufacturing sector in the sixties (1959 = 100), computed on the basis of three cost of living indexes, the general price index, and the wholesale price index for industrial products.

Our discussion of this type of evidence will focus on conceptual problems associated with the use of average wages and the empirical difficulties behind the interpretation of the Brazilian data on average wages in the manufacturing sector in the sixties.

Average wages have been so widely used as a measure of wages that some of the problems involved in this ad-hoc procedure have been lost

TABLE 2 Brazil: Manufacturing Sector, 1962–1970, Indexes of Real Average Wages per Worker (1959 = 100)

Year	(1)	(2)	(3)	(4)	(5)
1962	113.3	104.8	103.9	108.2	110.2
1963	127.7	110.7	115.1	115.6	120.6
1964	123.4	116.2	114.1	115.3	117.4
1965	115.6	109.0	109.3	109.8	116.0
1966	113.8	98.7	103.9	113.6	117.2
1967	106.3	90.9	97.8	116.3	111.5
1968	112.5	94.5	102.3	113.0	116.2
1969	127.5	105.6	114.4	135.6	132.9
1970	128.4	110.4	118.7	141.8	137.1

NOTE: The indexes are computed with the following alternative deflators: (1) Cost of living, Rio de Janeiro; (2) Cost of Living, São Paulo, computed by DIEESE, a labor union research institute; (3) Cost of Living, São Paulo; (4) Wholesale Price Index of Industrial Products; (5) General Price Index. Deflators (1), (2), (4), and (5) obtained from *Conjuntura Econômica*, published monthly by the Getúlio Vargas Foundation, Rio de Janeiro.

SOURCE: Raw data on average wages obtained from surveys and censuses of manufactures, published by Fundação Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro.

sight of. We think it is useful to review some of them in the context of the Brazilian economy. For one thing, particularly in time period comparisons, it is very difficult to trace changes in average wages to particular causes. Analysts of the wage policy have generally been treating average wages as if these averages could clearly indicate the effect of the wage policy. Actually, this is not the case and they might have been misled in one direction or another. We shall discuss some points that show that this can be the case.

The first problem we want to point out is that, due to the existing paucity of data, most of the information on average wages comes from the manufacturing sector, where data are relatively less scarce. The sector has been analyzed as a whole or at the two-digit level, and we are convinced that this causes serious problems of aggregation. The manufacturing sector has been growing at fast rates and important structural changes have occurred within it. We have found, for instance, that one of the reasons for the increase in the sector's average wages in the late sixties and early seventies has been that those industries that pay more are those where employment expands at the higher rates.[12] The use of industry data only partially solves the problem since intraindustry structural changes are not uncommon.

A second point is that during the sixties the government established several social security taxes and other tax equivalent obligations to be paid by firms as a proportion of their payroll. The incidence of these taxes has not yet been investigated and this poses another problem for the interpretation of average wage figures in the sixties. If at least part of the incidence of these taxes is on labor, this could be a factor accounting for a slower growth of real average wages in that period.[13]

A third source of variation in average wages that must be taken into account from a time period perspective is the impact of labor turnover. When a firm increases its labor force, the mechanism of the internal labor markets is such that most of the new employees are hired at the lower levels of the wage distribution. This will have a negative effect on average wages. In the case of reductions in employment, the layoffs or resignations will also occur mostly at the lower level, thus raising the average wages of those remaining in the firm. Evidence drawn from the Brazilian manufacturing sector indicates that labor turnover at the lower levels of the wage distribution is of a degree where its implications on average wages cannot be ignored.[14]

A fourth point is the fact that Brazilian data show average wages per worker and not average hourly wages. Changes in the number of hours per worker are an obvious source of bias when figures on average wages per worker are interpreted as wage rates. For reasons to be explained shortly in connection with business cycles in the Brazilian economy, there probably were changes in the number of hours per worker in the sixties.

A fifth argument emerges directly from our previous claim that the wage policy does not necessarily impose a constraint on the operation of market mechanisms of wage determination. An overview of the labor market in the sixties will be presented below in order to elucidate how the forces of supply and demand might have affected wage determination in the sixties.

Let us now relate some of the points discussed above to the overall performance of the Brazilian economy in the period under discussion. The basic point is that this performance, although characterized by an impressive overall rate of growth, was characterized by the occurrence of business cycles. The years of 1963–1966 were a period of recession or slack growth, whereas the period from 1967 on was characterized by boom years.[15] In the first period, the economy experienced sluggish employment and even unemployment in some sectors.

Note that the period when real average wages were found slackening or decreasing (1964–1967) roughly coincides with the years of recession or slow growth, whereas the period of increase in real average wages starts with the boom years. It is against this background that we can now piece together the arguments developed above with respect to the evidence on real average wages: the figures in Table 2 are consistent with several hypotheses, which casts doubt upon their significance as indicators of wage policy effects alone. The basis for this argument is twofold. On the one hand, the performance of real average wages in the period 1964–1966, although consistent with the hypothesis that it is a result of the wage policy, is consistent with the following as well: (1) lower wages deriving from market conditions characterized by a slackening demand for labor, and (2) a probable reduction in the number of hours worked per man during that period. On the basis of the third argument raised above, average wages should be higher in recession years since the wages of the laid-off workers are below average. The fact that an increase is not found in 1965 could be the result of the counteracting effects mentioned in (1) and (2).

On the other hand, the performance of average wages after 1967 might have hidden or lessened the effect of the wage policy, since it reflects higher wage rates deriving from a market which became tighter and less bound by the wage policy constraints and/or an increase in the number of hours worked per man, a phenomenon which is likely to occur in boom years. The following hypotheses are also consistent with the behavior of average wages after 1967: (1) if it were not for the wage policy, they would have grown faster; (2) they have increased because the government corrected the formula for the underestimation of the expected rate of inflation; (3) they have not grown faster because expansion in employment in the late sixties occurred mostly at the lower level jobs, thus moderating the rising trend in average wages; (4) the fact that they have increased reflects expansion of the industries paying higher wages.

Let us now summarize our arguments up to this point. The behavior of average wages per worker in the Brazilian manufacturing sector in the sixties is a phenomenon affected by several factors, some of which were mentioned above. Until their partial effects are disentangled, one is on thin ice when trying to infer particular conclusions from the existing data.

Finally, it should be noted that, while we have been talking about average wages, following current usage, what we actually have available are figures on average earnings. Wells (1974) and Bacha (1975) have suggested that the wage policy can cause regressive effects within the distribution of earnings as executives and blue-collar workers in high hierarchical status have improved their positions in the earnings structure relative to those in the lower level jobs whose bargaining position has been weakened by the ineffectiveness of the labor unions. This shows that the figures on average wages, besides being prone to ambiguous interpretations, have a limited usefulness in the analysis of the distributive impact of the wage policy, since the type of regressiveness pointed out by Bacha and Wells could have occurred with increasing or decreasing average wages. Of course, with the wage policy affecting wages as a whole the problem would be more serious.

The Impact on Income Distribution

Let us suppose, for the sake of argument, that additional research would lead to the unambiguous conclusion that the wage policy has generally restricted growth in real wages in the manufacturing sector as well as other covered sectors. Could one infer, then, that this could be a factor explaining the worsening of the Brazilian size income distribution in the sixties? Some of the existing studies have given an affirmative answer to this question on the basis of what seems to be simple intuition. In actual fact, however, the link between the two phenomena is not that simple, as we now proceed to demonstrate.

First, let us look at the concept of real wages to be adopted in the discussion. As Table 2 indicates, the result depends very much on the index chosen to deflate nominal wages. It can be seen from that table that, in general, cost of living indexes lead to lower real wages than general price indexes or wholesale price indexes for the manufacturing sector. Therefore, to go from those who have lost to those who have gained is not a simple task. What these indexes show is that some items that have an important weight in the cost of living indexes have experienced faster price increases than those in the industrial sector and the general price index of the economy. Let us consider, for example, two important items in terms of cost of living changes: food and services. For these groups it would be necessary to analyze how the price changes are translated into the personal income distribution within the agriculture and service sectors. The fact that some of the most important prices in terms of cost of living indexes are administered prices received by government enterprises (e.g., in electricity, fuel, water supplies, and urban transportation) complicates the problem even further, since this would involve the role of the government in setting the personal income distribution from the point of view of its pricing and expenditure policies, a problem not yet investigated in Brazil. It is important to emphasize that the prices in the area under direct government control were heavily subsidized before 1964 and that their increase since then has been well above the average rates of inflation, thus making the government sector a gainer in terms of price increases after 1964. Intersectoral differences in the rate of price changes thus pose a major difficulty for the analysis of the relation between wage policy and personal income distribution.

Leaving aside the problem of deflating wages, let us turn to a particular case, the manufacturing and mining sectors. We assume that, due to the impact of the wage policy, wages have lagged behind profits within these sectors. This brings us to a second point of our discussion. A recent analysis of the largest 318 corporations in these sectors has shown that, in 1972, public enterprises accounted for 35.4 percent of their total net worth, multinationals, 35.4 percent, and private Brazilian enterprises, 24.2 percent.[16] Thus, a major part of the sector's profit share would go to the government and to foreigners, leaving the impact on personal income distribution unclear: the income accruing to foreign capital does not enter into the Brazilian size distribution of income, while the income going to the government is distributed through expenditure, which brings us again to the problem of how this expenditure affects income distribution.

A third point is that, in general, in sectors where corporations prevail, profits are often not distributed to asset holders and therefore do not necessarily appear in the data from which the size income distribution is analyzed.

Finally, as in the case of minimum wages, we think it important to look at the position, in the size income distribution, of those affected by this branch of the wage policy. Since the sectors covered by the latter are within the urban formal market and, on average, pay wages above the minimum, the position in question is above the average of that distribution. Thus, we are talking about groups of people not at the bottom of the income distribution and, furthermore, if they have relatively lost position in the sixties, it is not clear, for the reasons explained above, how the gains would appear in the size income distribution. Secondly, the wage policy may have had an impact on employment in the covered sectors, attracting people from other sectors where their income was lower due to unemployment or underemployment. For these people the concept of loss could be questioned.

[III] THE WAGE POLICY WITH RESPECT TO PUBLIC SERVANTS AND WORKERS IN PUBLIC ENTERPRISES AND/OR PUBLIC UTILITIES AND/OR FIRMS SUBSIDIZED BY THE GOVERNMENT

It is in this area that the wage policy has had the clearest impact on wages. Three main factors are responsible: the overall economic policy followed by the government, the particular forms assumed by the employment relationships in this area, and some intricacies of this branch of the wage policy.

Public Servants

The case of public servants must be put in historical perspective. Until the early sixties jobs in public service were favorably regarded in the labor market. Salaries paid in these jobs were close to those encountered in the private sector for similar occupations. Moreover, the fringe benefits were clearly more plentiful in the public sector: earlier tenure rights, leaves of various sorts, medical assistance, earlier retirement, better pension plans, and so forth.

The distribution of employment in the public sector was highly regarded by politicians as a means of obtaining political prestige, and, as a result, government payrolls became increasingly inflated. The federal government was faced with persistent deficits, financed by money creation, and the increasing payrolls were one of the elements contributing to these deficits. It is well known that the governments after 1964 placed a strong emphasis on the control of inflation and on economic growth. Given its impact on inflation (through the government deficit) and on economic growth (through the restraint imposed on public investment), control of government payrolls became a primary target of the post-1964 economic policy. As a result, the readjustments granted to public servants came to lag behind inflation indexes.

This overall view is supported by the data presented in Table 3. It shows a comparison between changes in the salaries of federal civil servants and changes in the value of the minimum wage in Rio de Janeiro. There were 18 "references" in the Federal Civil Servants' Salaries Scale (FCSSS) in 1960 and 22 in 1964 and 1970. Comparison has been made in terms of references 5, 10, and 15. Minimum wage figures were obtained for the dates closer to the dates when the FCSSS references were modified. The comparison is made in the last two columns of the table and, for the purpose of showing the impact of the post-1964 wage policy, two distinct periods are highlighted: 1960–1964 and 1964–1970. It is clear that in the first period the readjustments of the FCSSS references were made at a rate above that of the minimum wage; the reverse was the case in the second period.[17]

TABLE 3 Salaries of Federal Civil Servants versus Minimum Wages

Minimum Wage	New Values (Cr$) (1)	(2)	(3)	Ratios 1960–1964 (2)/(1)	1964–1970 (3)/(2)
FCSSS Ref. 5	13.00[a]	66.00[c]	207.36[e]	5.08	3.14
FCSSS Ref. 10	18.00[a]	100.00[c]	315.36[e]	5.56	3.15
FCSSS Ref. 15	27.50[a]	149.00[c]	470.88[e]	5.42	3.16
Minimum Wage in Rio de Janeiro	9.60[b]	42.00[d]	156.00[f]	4.38	3.71

SOURCES: FCSSS references obtained from the text of Law No. 3826 (11/23/1960), Law No. 4345 (6/26/1964) and Decree-Law No. 1073 (1/9/1970). Minimum wage figures obtained from *Conjuntura Econômica* 26 (November 1972).

[a] As of 11-23-1960.
[b] As of 10-18-1960.
[c] As of 6-1-1964.
[d] As of 2-24-1964.
[e] As of 2-1-1970.
[f] As of 5-1-1969.

Since it is well known that minimum wages have lagged behind inflation after 1964, there is no doubt that the FCSSS references have had their purchasing power eroded in the period. A study by the DIEESE (1975) has shown that rates of readjustment of the minimum wages have been below the collective rates of readjustment discussed in Section II. This implies that civil servants obtained the worst rate of readjustment of the three branches of the wage policy discussed in this paper.

Thus far this paper has been critical of the use of average and minimum wages as a basis for conclusions on the impact of the wage policy. We now claim that these FCSSS references do not suffer from major ambiguities in showing that the wage policy has caused real salary losses to civil servants of the federal government. We support this claim with the following arguments, some of which emerge from points already discussed in this paper.

1. For the private sector in general, it was pointed out in Section II that the wage readjustments under the policy are not mandatory at the individual level. Salaries of civil servants, however, are not negotiated at the individual level, but depend on salary scales. Thus, the readjustments they obtain are more likely to be affected by a wage policy oriented to wage changes for groups of workers.

2. Under such conditions, the only possibility of obtaining readjustments beyond those established for the salary scale is by means of promotion. On the basis of the information we obtained by interviewing a few federal civil servants, it seems that promotions did not occur on a scale large enough to compensate for the low rates of readjustment. In fact, promotion schemes

became themselves a target of expenditure control, with the result that promotions have not been made regularly. In general, the only additional increases beyond those of the readjustments of the FCSSS are seniority allowances, at the rate of 5 percent each five years.[18]

3. Due to the existence of benefits associated with seniority and to the career system, civil servants in Brazil are a group with low rates of turnover. We have seen, in the analysis of Section II, that interfirm and interindustry turnover was one way of escaping the control of the wage policy. In the case of civil servants this possibility was not open.

4. For all these reasons, whereas in the private sector the rate of readjustment established the minimum rate of readjustment for stable employees, in the case of civil servants the government's rate became the rate of readjustment.

The analysis above has been limited to the case of the federal civil servants. It would be interesting to extend it to military personnel and public servants at the state and municipal levels. As to the former group, there are indications that they fared somewhat better than the civil servants, but this is not a great accomplishment.[19] It remains to be seen whether or not they have translated their new political status into real income gains. With regard to public servants at the state and municipal levels, it should be noted that these two levels of government lost most of their autonomy after 1964 and have been subject to the guidelines emerging from the economic policy of the federal government. On the whole, we are convinced that public servants in general have been the group most clearly affected by the wage policy; it takes only casual knowledge to perceive that jobs in the public service no longer have the attraction of the pre-1964 era.

Workers in Public Enterprises and/or Public Utilities and/or Firms Subsidized by the Government

In addition to being subject to the wage policy formula discussed in Section 2, this group has been affected by particular aspects of the wage policy. They were the first group to be covered by that formula, which started as early as 1964, whereas the extension of the formula to the private sector in general was accomplished only in 1966. This early attention is explained by the fact that the government deficits are affected by the payrolls of these firms via the government outlays they receive as subsidies. Therefore the control of these payrolls also became a prime target of the post-1964 economic policy, given the relation of these deficits to the overall problem of inflation and growth.

This group must submit requests for collective wage readjustments to the

National Council on Wage Policy (NCWP). The Council calculates the annual rates of readjustment by making use of the formula, and then authorizes the readjustment. In the case of firms subsidized by the government, the concurring approval of the subsidizing agency must be obtained in addition to the authorization from the NCWP.

After the policy had been applied in this fashion for some time, these firms realized that their wage and salary scales, readjusted strictly on the basis of the government indexes, were lagging behind the wages and salaries of the private sector in general. In coping with this problem they began to ask the NCWP for wage increases over and above the official rates of readjustment, especially in the case of certain particular occupations and professions. After an analysis by the technical staff of the NCWP such requests have often been approved. In examining these requests for wage increases beyond the official rates, however, the NCWP acts in a discriminatory way, either by the force of other wage policy regulations or as a result of ad-hoc procedures.

Discrimination arising from the wage policy regulations arises in the following fashion. In examining a request, the NCWP follows the rule of considering whether or not the petitioning firm has its own resources to support the additional increase in its payroll. If it does, the extraordinary readjustment is more easily granted. This has obviously placed the workers in the deficit-ridden enterprises, such as the government-owned railways and shipping lines, in the position of having their wages bound by the official rates, which are known to have lagged behind prices during major time periods.

Discrimination arising from ad-hoc criteria can be seen from the fact that these extraordinary readjustments have been disguised in the shape of promotion plans and "reclassification schemes" varying from one firm to another. It is also conceivable that the NCWP's decisions are influenced by the prestige of some of these firms and the political power of their directors and top executives.

In order to substantiate this part of our discussion one would have to obtain data from these firms, and this is not an easy task. Unofficial information emerging from various sources indicates that workers in railways and shipping as well as longshoremen have been treated in the same manner as federal civil servants, whereas workers in public enterprises in the areas of oil prospecting and refining, mining, telecommunications, and electricity have fared far better in terms of wage readjustments.

Although we have not been able to draw more precise conclusions with regard to this particular area of the wage policy, we are convinced that additional research could lead to the identification of groups whose wage readjustments have been clearly restricted by the wage policy, as well as of those who were able to evade these regulations almost entirely.

[IV] CONCLUDING REMARKS

On the Concept of Loss Arising from Wage Readjustments

Attempts to illustrate the effects of the wage policy on wages have usually compared measures of wages at isolated points in time. As we shall see, this can provide only a partial and maybe not the most important picture of the eventual loss in real wages arising from collective readjustments given to compensate for inflation.

Let us make the argument more precise. We assume that (1) the nominal wage rate remains the same between two consecutive readjustments, and (2) inflation is continuously changing at the rate of $100r$ percent. Then the real wage loss between two readjustments occurring at points 0 and x will be

$$L = \int_o^x [(\overline{w}/p_o) - (\overline{w}/p_o)\, e^{-rt}]\, dt$$

where L = real wage loss between $t = 0$ and $t = x$ evaluated in terms of p_o, which represent the price level of $t = 0$; $\overline{w}$ = constant nominal wage rate; and r = continuous rate of inflation.

In a period between two readjustments, the real loss thus depends, in a simple way, on the length of the time interval between readjustments, on the rate of inflation, and on the level of wages at the base period. The loss will be greater the higher the level of wages at the base period, the longer the time interval between readjustments, and the higher the rate of inflation. Furthermore, over a period of years, the loss will also depend on how the wages are recomposed by each readjustment.

Therefore, if one looks only at the real wage at $t = 0$ and the readjusted wage at $t = x$, two important elements are being neglected: the length of the time interval between readjustments and the behavior of the inflation rate within the same period. The implication is that even increasing real wages between periods can hide sizable losses occurring within the periods.

Assume now that wage and price controls are important for bringing down the rate of inflation. In criticizing the post-1964 wage policy one must recognize the implications of the fact that the inflation rates in 1960–1964 averaged roughly twice the average of the 1965–1969 period. In this respect the above formula shows that the loss caused by the rate of inflation became alleviated in the second period. The fact that we are talking about only one element of the formula needs to be underscored. In 1962 and 1963, for instance, the strongest labor unions were able to obtain readjustments on a six-month basis.

Another source of real wage losses could emanate from expectations regarding the future rate of inflation. If these expectations are influenced by government guidelines, this could lead workers to settle for lower wages in periods when the actual inflation rate turns out to be above that indicated by the government. We think that this line of reasoning could serve as a basis for a model showing that the Brazilian economic policy in general and the wage policy in particular may have hurt workers by raising false expectations with regard to the future rate of inflation.

On the Relation between the Wage Policy and the Size Income Distribution in the Sixties

A few remarks are still necessary to close our discussion of this problem. We have shown that the post-1964 wage policy has not been neutral in its distributive impact. Our approach to this question has been rather different from the studies which have attempted to reach the same conclusion by simply relating figures on minimum and average wages to the worsening of the size distribution in the sixties. As we have seen, the latter approach leads to unconvincing results. We suggest that, at the current stage of knowledge, a more fruitful line of research would be to identify the groups that have been unambiguously affected by the wage policy. This we have done in the case of retired people and pensioners receiving transfers from the federal social security system, federal civil servants, longshoremen, and workers of the government-owned railways and shipping lines. Obviously, our analysis could be improved by additional details; other groups could be identified in this fashion or along other lines of research, some of which have been suggested in this paper. With this approach we would certainly obtain a clearer picture of the effects of the wage policy on the income of various groups in society.

As to establishing its relation to the worsening of the size distribution in the sixties, this will require stronger efforts, since the effects of the wage policy must be translated in terms of personal income distribution as a whole. The latter has been measured in the aggregate, by means of indexes of income inequality. We have seen that the effects of the wage policy are not necessarily translated into the personal income distribution and that those covered by the wage policy are found in its upper half. The distribution includes groups of people whose income bears little, if any, relation to the wage policy, such as professionals, self-employed people, landowners, agricultural workers, and rentiers in general. It also excludes the role of the government, which absorbs a major part of the income flow generated in the Brazilian economy, and omits the income that accrues to foreign investment.

The image of the wage policy reflected in the mirror of the size income distribution is thus both only partial and blurred. Since, in general, the distributive impact of the wage policy occurs first in the context of the wage-profit dichotomy, we consider the functional income distribution within the various sectors to be a more adequate mirror. One should be careful, however, not to neglect the role of the government in taking its share of taxes of various sorts. Nor should the possibility be ignored that the impact of the wage policy could also appear within the labor share. In this respect, the contributions of Bacha (1975) and Wells (1974) deserve special attention.

By proceeding in a piecemeal fashion one could eventually reach a clearer view of the impact of the post-1964 wage policy. In any case, we should be humble about the importance of any one particular explanation for the worsening of the Brazilian size distribution in the sixties. As a country following a process of rapid economic development, Brazil has experienced important structural changes while simultaneously suffering from endemic inflation and occasional business cycles. Among the several factors likely to have influenced the behavior of the size income distribution in the sixties, we can mention the following, some of which are interrelated: (1) access to subsidized credit under conditions of inflation, which is one of the key elements in the process of capital accumulation in Brazil; (2) changing regional inequalities—interestingly, the degree of personal income inequality within the rich and poor parts of the country is lower than for the country as a whole;[21] (3) the role of education (this has been the focus of a 1973 study by Langoni that became a source for endless controversy);[22] (4) the effect of sizable increases in employment at the lower levels of the wage scales in the market; (5) different patterns of sectoral growth, including the foreign sector; (6) capital gains of all sorts that usually follow rapid structural change (e.g., the rapid increase in the real price of land in the areas experiencing fast urbanization); (7) the distribution of wealth in general; (8) the role of occupational mobility—in a recent analysis, Costa (1975) has found evidence of a systematic relationship between the degree of income inequality and the corresponding groups of occupations within each state and for the country as a whole; and (9) the role of the government via taxation, expenditure, economic policy in general, and as an entrepreneur.

NOTES

1. For an analysis of minimum wage data, see Suplicy (1972). He shows that the declining trend started in 1962 and became pronounced after 1965.
2. See, for instance, Fishlow (1972), Hoffman and Duarte (1972), and Baer and Beckerman (1974).
3. See *Pesquisa Nacional por Amostras de Domicilios: Total das Regiões I a IV*. Instituto Brasileiro de Geografia e Estatistica, 1972, p. 39.
4. Bacha et al. (1972), pp. 97–102.
5. For the concept of internal labor markets, see Doeringer and Piore (1971). For evidence in the case of Brazil, see Macedo (1974a), chapter 4.

6. The major basis for indexation was, and still is, the value of the ORTN (indexed Treasury Bonds). The value of the ORTN is linked to a price index, but it has also been, from time to time, affected by government controls, although to a lesser extent than minimum wages before 1975.
7. The workers in public enterprises and/or public utilities and/or firms subsidized by the government are affected by particular intricacies of the wage policy in addition to those that will be discussed in this section. Their implications will be dealt with in the next section of the paper.
8. See Fishlow (1974), p. 267.
9. For detailed accounts, see Carvalho (1973) and DIEESE (1975).
10. See *Mercado de Trabalho: Distribuição e Composição da Mão-de-Obra—São Paulo—1970.* (Rio de Janeiro: Ministério do Trabalho e Previdência Social, 1971).
11. The emphasis on data from the manufacturing sector is due to the lack of reliable data on an annual basis for other sectors and for the country as a whole.
12. Macedo (1974b), pp. 65–66.
13. For a detailed account of the social security taxes and other tax equivalent obligations established by the government, see Bacha et al. (1972), chapter 3. On page 108, a table is presented showing that real average wages in the manufacturing sector in 1969 were 38.5 percent above 1959 levels. In the same period, the real average cost of labor to the firms increased 57.6 percent, the difference being explained by the impact of the social legislation of the sixties.
14. The theoretical and empirical basis for the argument presented in this paragraph is explained, with additional details, in Macedo (1974a), chapter 4.
15. The index of production in the manufacturing sector shows decreases in 1963 and 1965. See *Anuário Estatístico do Brasil–1969*, Fundação Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro, p. 175.
16. See von Doellinger and Cavalcanti (1975), p. 38.
17. It should be noted that the value 3.71 encountered for the comparison between minimum wages in 1970 and 1964 can be considered an underestimation of the increase in minimum wage. We have intentionally biased the comparison against the minimum wage by taking the minimum wage established in May 1969 and the FCSSS references of February 1970. The new minimum wage established on May 1, 1970, would change the result from 3.71 to 4.45.
18. It should be noted that these FCSSS references correspond to salaries for a six-hour day. For some groups, the government opened the possibility of higher salaries by extending the working day to eight hours. Given the implicit loss in welfare, higher salaries in this case are a misleading compensation for the effects of the wage policy. In any case, this again shows that the personal income distribution fails to account for some of the implications of the wage policy.
19. See, for instance, Rezende da Silva (1972), p. 79.
20. On the basis of the General Price Index published by *Conjuntura Econômica*, these averages were 31.3 percent in the latter period and 56.7 percent in the former.
21. See Costa (1975), p. 251.
22. For a partial account, see Tolipan and Tinelli (1975).

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