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(In Two Volumes)

Volume II: Annexes

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CURRENCY EQUIVALENTS

Currency Unit: Cruzeiro

Exchange Rates Effective January 18, 1977

Selling Rate: US\$1.00 = Cr\$12.520
 US\$1 million = Cr\$12,520,000
 Cr\$1 million = US\$79,872

Buying Rate: US\$1.00 = Cr\$12.520

Average Exchange Rates (Selling)

	<u>1974</u>	<u>1975</u>
US\$1.00	Cr\$6.789	Cr\$8.128
US\$1 million	Cr\$6,789,000	Cr\$8,128,000
Cr\$1 million	US\$147,297	US\$123,031

GLOSSARY OF ACRONYMS

BEFIEEX	- Comissao Para Concessao de Beneficios Fiscais a Programas Especiais de Esportacao (Special Export Program)
BNDE	- Banco Nacional do Desenvolvimento Economico (National Economic Development Bank)
CACEX	- Carteira de Comercio Exterior (Foreign Trade Division, Bank of Brazil)
CDI	- Conselho de Desenvolvimento Industrial (Industrial Development Council)
DNER	- Departamento Nacional de Estradas de Rodagem (National Highway Department)
EMBRAMEC	- Empresa Brasileira de Industria Mecanica (Brazilian Mechanics Enterprise)
FINAME	- Agencia Especial de Financiamento Industrial (Special Agency for Industrial Financing)
FINEP	- Financiadora de Estudos e Projetos (Agency for Funding Studies and Projects)
FINEX	- Fundo de Financiamento de Exportacao (Export Financing Fund)
IBC	- Instituto Brasileiro do Cafe (Brazilian Coffee Institute)
IPI	- Imposto de Produtos Industrializados (Industrial Products Tax)
LAFTA	- Latin American Free Trade Area
LIBOR	- London Interbank Offer Rate
NAI	- Nucleos de Articulacao Industrial (Group responsible for planning and execution of federal policy to buy Brazilian machinery and equipment)
OECD	- Organization for Economic Cooperation and Development
PASEP	- Programa de Formacao do Patrimonio do Servidor Publico (Civil Service Compulsory Savings Program)
PETROBRAS	- Petroleos Brasileiros (Brazilian Petroleum Enterprise)
PIS	- Programa de Integracao Social (Social Integration Program)
PND II	- Plano Nacional de Desenvolvimento (Second National Development Plan)

FEDERATIVE REPUBLIC OF BRAZIL
 FISCAL YEAR

January 1 to December 31

ANNEX I

RECENT TRENDS IN EARNINGS AND THE DISTRIBUTION OF
INCOME IN BRAZIL

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ANNEX I: RECENT TRENDS IN EARNINGS AND INCOME DISTRIBUTION IN BRAZIL

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SUMMARY AND CONCLUSIONS

1. This discussion is concerned with the recent behavior of the distribution of personal income in Brazil. The data on recent trends in average and median earnings in manufacturing, commerce and services are reviewed; the empirical evidence concerning the recent behavior of the urban minimum wage, the wages policy executed through "collective bargaining" agreements, trends in occupational wage differentials and the recent behavior of agricultural real wage rates are examined. The report then analyzes employment growth which is directly concerned with distributional issues. Recent trends in the personal distribution of earnings and the likely effects of recently announced changes in wages policy on the distribution of income are then examined. Finally, the effects of the redundancy (unemployment) payments scheme (FGTS) and of the Social Integration Program (PIS) on the distribution of income are considered. A discussion of social welfare programs in Brazil may be found in Annex II.

Recent Trends in Earnings

2. Trends in average earnings of employees (white and blue collar) in manufacturing industry can be seen in an index constructed from data in the annual industrial surveys undertaken by the Brazilian Institute of Geography and Statistics (IBGE). Caution must be used in interpreting these data because the surveys do not cover all manufacturing establishments. The data indicate that real average earnings in manufacturing increased by 27.1% between 1964 and 1975. A second source of data on the trend in average manufacturing earnings is the annual survey of earnings in urban activities undertaken by the Ministry of Labor under the "Law of Two-Thirds" which requires firms to employ a work force in which two-thirds of the employees are Brazilian nationals. These surveys indicate that average real earnings in manufacturing industry increased by 34.0% between 1966 and 1973.

3. While there is little doubt that average wages in the formal sector have increased, changes in average earnings are not necessarily indicative of the behavior of real earnings for the mass of employees if inequality in the distribution of earnings is increasing. In such a case, it is more appropriate to consider the behavior of the median when examining trends in real earnings of the lower half of the earnings distribution. Median real earnings increased by 8.3% between 1966/67 and 1972/73, a compound annual rate of 1.1%, and the ratio of mean to median earnings increased by 25%, showing that inequality indeed increased during the period according to these data. Furthermore, in commerce and services median real earnings were consistently lower throughout the years 1967 to 1973 than they were in 1965. There was also an increase in inequality in these sectors. There may well have been some improvement in the equality of earnings in 1975 and 1976, but comparable data are not yet available for these years.

4. The available data, which are probably representative only of employment in the formal sector of industry, commerce and services, indicate rising real wages over 1967-73 but increasing inequality. The data do not permit analysis of the behavior of real incomes of employees in the informal sector who fall in the lower deciles of the urban distribution.

Urban Minimum Wage Movements

5. Inferences concerning trends in real earnings of workers at the lower end of the urban income distribution are often drawn from movements in the real minimum wage. Data on trends in the real minimum wage in Guanabara (Rio) over the period 1959-1975 shows that a peak was reached in 1961 with declines every year thereafter except 1971, 1972, and 1975. The increase in 1975, following the Government's decision in November 1974 to maintain the real value of the minimum wage and even to increase it, was the largest real increase granted since February 1964. The nominal increase of 44% granted in May 1976 also implied some real growth in the minimum wage, given that the rate of inflation (April 1975 - April 1976) was 41%.

6. The crucial issue here is the extent to which the official minimum wage represents the full-time earnings of workers at the lower end of the income distribution. That is, what proportion of the active population receives the minimum wage or earnings which are determined by reference to movements in this standard? It is extremely difficult to test this by using the evidence available on earnings. The urban minimum wage may be a poor guide to the growth of real earnings because of the possible existence of intra-enterprise wage scales (internal markets), occupational earnings ladders, and life cycle earnings profiles. At this point it can only be said that the evidence is inadequate to support from conclusions on the relationship between the behavior of the real minimum wage and the trend in real earnings of a substantial proportion of the labor force.

Collective Wage Agreements

7. In general, wage increases for semi-skilled and unskilled workers earning above the minimum are determined as a result of "collective bargaining" agreements (dissidios coletivos). These wage agreements which comprise official arbitration awards, cover broad groups of workers in a particular sector, for example, banking or metalworking industries. The Government's decreed wage increases for groups of unskilled and semiskilled workers in Sao Paulo have lagged behind increases in the cost of living. The apparent real decline in arbitrated wage rates should be interpreted with great caution. The impact of these wage adjustments on differentials through time is not known, nor is the extent to which these average increases are representative. During a period of rapidly growing employment, there is likely to be a substantial degree of earnings "drift" due to the divergence between

industry wide "agreed" wage rates and actual earnings arising from overtime work and shortages of employees with particular skills. Unfortunately, because of the dearth of data on earnings for specific skill grades, it is difficult to draw conclusions about recent trends in real earnings and earnings differentials for workers earning above the minimum wage.

8. Some partial data exist on trends in real earnings by skill category. Data on Sao Paulo industrial enterprises collected by a consultancy firm from 1967-75 clearly demonstrate that all occupational groups experienced a rise in real earnings during this period; however, this was accompanied by a tendency towards increased dispersion. The IBGE data on hourly wage rates in the construction industry in Sao Paulo, demonstrate that real hourly wage rates have been increasing faster than the urban minimum and that the most and the least skilled construction workers have benefitted relatively.

9. Trends in wage rates for the agricultural sector can be examined on the basis of data published by the FGV-Centro de Estudos Agrícolas (for all states except Sao Paulo) and the Secretaria da Agricultura de Sao Paulo. Between 1966 and 1970, the ratio of the rural wage to the urban minimum wage remained constant. However, from 1970 onwards, agricultural wages rose relative to the urban minimum, particularly between 1973 and 1975. A possible explanation is that the agricultural sector, particularly in Southern Brazil, has been undergoing a major transformation in terms of techniques of production, crop mix, and social relations of production. There has been a large increase in acreage, which has been accompanied by the growth of new crops (soybeans) and the revival of more traditional commodities (coffee in Minas Gerais). In addition, especially in Sao Paulo, dependent types of landlord-tenant relationship are disappearing and the rural poor are being transformed into wage laborers. Meanwhile, the exodus to the cities continues with the effect that between 1960 and 1970, for example, the agricultural labor force in Brazil grew by a mere 0.7% a year. The mobility of the work force and its slow growth in relation to the demand for labor have served to push up wage rates, especially after 1973.

Employment Growth

10. The existing data on employment growth, must be used circumspectly, largely because of lack of year-to-year comparability. In manufacturing industry the rate of growth of enterprise employment lagged behind the growth of total sector employment, implying that there was both an absolute and a relative rise in "informal" sector employment during the 1960s. On the other hand, in commerce and in services, enterprise employment grew faster than employment for these sectors as a whole, indicating that "informal" sector employment declined as a proportion of the total. In commerce, there was even a small decline in the absolute level of "informal" sector employment, though this was not true of services. In the secondary sector as a whole, employment grew at an annual compound rate of 11.6% per year, with manufacturing growing by 9.0% and construction by

17.4% a year; in commerce and services the annual compound rate of growth was 15.0% a year. These results may well represent an upper bound estimate of employment growth since the mid-60s. Virtually nothing is known about trends in earnings and employment in the "informal" sector which absorbs approximately 50% of the urban labor force nor about inter-sectoral patterns of mobility.

Trends in the Distribution of Income

11. Few of the participants in the recent debate on Brazilian income distribution have fully recognized the extent of the serious empirical deficiencies of the data upon which most arguments have been based. Leaving such issues aside, the Gini coefficient measures of dispersion, calculated using the Ministry of Labor data, show that, from 1969 to 1973, there was a continuing trend towards increasing inequality in both the industrial sector and in commerce and services. Further difficulties arise concerning the measurement of real income trends in the bottom 40% of the income distribution. This segment contains more or less the bottom 60% of the rural income distribution and the bottom 20% of the urban distribution. The available evidence, however, suggests that both urban and rural poor have benefitted in absolute terms from the recent rapid growth in employment.

12. Since November 1974, the Geisel Government has introduced important modifications in the formula used to compute arbitrated wage agreements. This can be seen as part of the Government's declared policy of reversing the unfavorable trends in income distribution. The minimum wage for the Center-South decreed on May 1, 1975 was a 41.4% nominal increase over the May 1974 value. Taking into account the 10% bonus given in December 1974 (which took the form of an advance on the May 1975 rise), the real minimum in 1975 stood 6.5% higher than in 1974 (a year in which there was a very sharp decline of 8.1%). The nominal increase of 44% granted in May 1976 also implies a rise in real terms of approximately 3%.

13. It is not yet clear what the effect of continuing rises in the real minimum wages will be on the personal functional distribution of income. It appears that one objective of government policy is to reduce income differentials among wage earnings by increasing minimum wages more rapidly than other wage rates. There is reason to believe that it will not be easy to compress earnings differentials. Also, because of the diversity of work relations in the informal sector, it is not clear how the more generous minimum wage policy will affect earnings of the 5.5 million employees and the 4 million self-employed in the "informal" urban sector who are beyond the reach of compulsory minimum wage legislation. This annex deals only with wage and unemployment benefits policies, though government policies such as the POLONORDESTE program are designed to have a positive impact on the incomes of small farmers and sharecroppers in the Northeast, Brazil's poorest region.

PIS (Programa de Integracao Social)

14. PIS (Social Integration Program) was designed as a mechanism for supplementing the monetary income of employees in the enterprise or "formal" sector of the urban economy. A similar fund exists for public sector employees known as PASEP, and on July 1, 1976, they were unified as PIS/PASEP. The receipts of PIS come from enterprise contributions of two kinds: the first is a fraction of the value of total enterprise sales (0.5% since 1974) and the second is a transfer of 5% of corporate income tax revenues. PASEP receives 2% of the receipts accruing to each level of government. The Fund distributes these receipts (cotas) annually to employees in the form of individual shareholdings: half of the available resources are distributed according to the employee's age and half on a strictly earnings-related basis. These shares can only be cashed in under specific circumstances such as marriage, death (when the money accrues to dependents), retirement or house purchase. The resources of PIS/PASEP are administered by the BNDE and are mostly invested in the private sector, as well as profits, if any.

15. In June 1975, the average value of an accumulated cota in PIS was Cr\$1,080 (almost twice the value of the highest regional minimum wage) and Cr\$2,440 in PASEP. The yield, which is made up of monetary correction, interest and profits on the accumulated shareholding, will vary a great deal from year to year -- at least in current prices -- but in 1975, the average yield was about 1/5 of the current monthly minimum wage. In 1974 the total number of individual employee accounts in PIS was 10.8 million and there were 3.4 million employees in PASEP. While in absolute amounts, the yields to which shareholders have access have been small, the main beneficiaries are the urban working class in the enterprise of "formal" sector. This is precisely the group which lost most from the process of income redistribution which occurred between 1960 and 1970.

16. A complete assessment of the redistributive impact of the Social Integration Program must consider possible alternative uses of the PIS/PASEP funds. About 75% of PIS receipts come from the levy on sales, but this has been compensated by reductions in the state value added tax. The rest of the resources find their counterpart in lower effective federal corporate taxation. In this sense, PIS/PASEP receipts can be viewed as a transfer of resources from the Government budget to an investment fund which, because immediate access to the benefits on the part of employees has been somewhat limited and because many of the lowest income groups have not been included, has mainly benefitted private sector enterprises. An alternative use of the resources with a greater redistributive impact might, for example, have been to increase the level of public expenditure on transfer payments or public consumption goods destined for the poor. Recent legislation and relaxation of the criteria governing withdrawals by low-income account holders can, however, be expected to have beneficial effects on the distribution of income within the "formal" sector.

The Redundancy Payments Fund (Fundo de Garantia do Tempo de Serviço) and the National Housing Bank (Banco Nacional de Habitacao)

17. FGTS, introduced in 1966, replaced a previous redundancy payments scheme which had several disadvantages so far as both employers and employees were concerned. Redundancy payments are especially important in Brazil because of the complete absence of an unemployment benefits system. Under FGTS, employers credit each employee's account every month with a sum equal to 8% of the employee's salary. Currently, the accounts are credited annually with monetary corrections, as well as a 3% real rate of interest. Employees can withdraw the entire sum in their account upon being made redundant. Otherwise, the sum in an employee's FGTS account can only be withdrawn under special circumstances, such as retirement, house purchase and improvement, the purchase of a small business or grave sickness and other family emergencies.

18. At present, there are between seven and eight million FGTS accounts, which implies that between 40 and 50% of the employed urban labor force has a claim to redundancy payments; the self-employed and employers are, of course, automatically excluded. In general, as with the PIS scheme, FGTS only covers employees in the formal or corporate sector, thus excluding a very sizeable proportion of wage employees in urban areas whose employers do not contribute to the FGTS.

19. A further question concerns the rate of return on the Fund and the uses which are made of the very substantial financial resources at its disposal -- a total of Cr\$26,465 million (US\$3 billion) at the end of 1975. The agency which administers the Fund is the Banco Nacional de Habitacao (BNH); the Bank's major aims since its inception in 1964 have been to provide finance for house purchase, particularly house purchase among low-income recipients, and to help finance water supply and sewerage investments. At the same time, the Bank is expected to administer housing finance programs in order to provide an acceptable return on the accounts which employees hold in the FGTS. There is a fundamental contradiction between these two requirements since the more ambitious the attempt to provide traditional forms of low-income housing, the greater the subsidy involved and the lower the return to accounts in FGTS. In attempting to lower the average cost of its housing loans, BNH has reduced the return paid to FGTS.

20. In order to make a complete assessment of FGTS, particularly its impact on the distribution of income, it is necessary to examine the activities of the National Housing Bank (BNH) whose main source of deposits comes from FGTS. BNH's general purpose has been to coordinate programs designed to reduce Brazil's substantial housing deficit and to keep the urban housing stock increasing in line with urban population growth. Since about 70% of urban households receive incomes less than three minimum wages, BNH has had special responsibilities for stimulating the construction of housing for owner-occupation by low-income recipients. Up to now, there has been little public sector activity in the area of rental accommodation in Brazil. Surveys reveal that owner-occupation is firmly established as most Brazilians' preferred housing situation.

21. The major way in which BNH attempted to increase the supply of housing between 1964 and 1974 was by financing the operations of the State Housing Authorities (COHABs). The COHABs present plans to BNH of public housing projects (conjuntos habitacionais) which are intended for purchase by low-income households. BNH then provides COHABs with finance for construction and the COHABs make mortgage agreements with the individual home purchaser. Poor performance in the area of low-income housing led the Bank to a reappraisal of its activities, resulting in the announcement of the PLANHAP program in 1973. The aims of the new program are twofold: to reduce the cost of conventional housing loans and to experiment with financing new areas of activity. PLANHAP's target is 2 million new and improved dwellings by 1983. The specific measures adopted include increasing the lower and upper limits included in the low income housing scheme, lowering the rates of interest paid by low-income final borrowers, and establishing a new urban sites and services program to encourage self-help housing construction (PROFILURB).

22. The quantitative results of the low-income housing program up to 1975 are disappointing. During a ten-year period, BNH financed, wholly or partially, a total of 1,142,265 housing units, of which only 252,160 units were for households earning up to three minimum wages. With Brazil's urban population gaining 2.7 million inhabitants a year, BNH's housing program for low-income families has hardly scratched the surface of the housing problem.

23. BNH has also diversified its loan activities into the area of urban services and infrastructure: the main beneficiaries of these programs are state and municipal authorities responsible for water, sanitation, transportation and urban renewal. In 1971, the Government embarked on a new program, PLANASA, with the objective to serve 80% of the urban population living in 4/5 of Brazil's urban communities with adequate water supply by 1980 and to furnish satisfactory sewerage services to residents of the main urban centers. Up to 1975, PLANASAS's progress was disappointingly slow and it developed some serious problems. However, recent revisions should enable PLANASA to meet its objectives readily.

24. In order to assess the redistributive effect of the combined FGTS-BNH program, the following points need to be considered:

- (a) FGTS provides a strictly earnings-related pension or redundancy payment; as such, it does little to modify the distribution of income, except as between the corporate and the "informal" sector, to the benefit of the corporate sector workers as a whole;
- (b) the incidence of the employer's contribution needs to be considered: would wages be proportionately higher in the absence of FGTS, or are the employer contributions being financed through higher prices? If the latter, then taking the distribution of both costs and benefits, FGTS may actually be harmful to the distribution of income;

- (c) considering the distribution by size class of income of employees' quotas in FGTS and the distribution of housing loans by income class, low-income households (which have the highest ratio between total FGTS quotas and total housing loans) have been making substantial transfers to middle and upper income households (which have the lowest). This transfer increases with (i) any decreases in the return on FGTS quotas compared with an alternative rate of return, (ii) any increase in the differential between the cost of BNH house finance loans compared with the cost of finance from conventional sources, and (iii) increases in the divergence between the share of lower income groups in the fund and their share in housing finance. Either owner-occupation or a public sector rental program will have to be subsidized by the Treasury in a much bigger way or more flexible design and construction systems and standards adopted if greater progress is to be made in resolving low-income housing problems without seriously decapitalizing the Redundancy Payments Fund.

I. TRENDS IN EARNINGS

A. Average Earnings in Manufacturing Industry

1. Trends in average earnings of employees (white and blue collar) in manufacturing industry can be seen in an index constructed from data in the annual industrial surveys undertaken by the Brazilian Institute of Geography and Statistics (IBGE). Caution must be used in interpreting these data because the surveys do not cover all manufacturing establishments. For example, those undertaken between 1962 and 1971 probably cover firms producing 90% of total manufacturing output, whereas the monthly surveys used as the source for 1971-75 cover only the thousand largest firms. In addition each source is not strictly consistent in terms of its coverage from year to year. It seems likely that since the surveys tend to cover only larger enterprises, the estimates probably give an upper-bound estimate of the rate of growth of earnings.

2. As seen in Table 1, the data indicate that real average earnings in manufacturing increased by 27.1% between 1964 and 1975. There was a decline in average real earnings between 1964 and 1967, but, thereafter, there were positive real increases in every year up to 1975, except for 1974, when the rate of inflation accelerated due to the rise in the price of oil and price adjustments following a year of repressed inflation (1973). The real increase during 1975, when the aim of government policy was to raise the real minimum wage, was almost the largest annual increase during the period under consideration.

3. Another source of data on the trend in average manufacturing earnings is the annual survey of earnings in urban activities undertaken by the Ministry of Labor under the "Law of Two-Thirds" which requires firms to employ a work force in which two-thirds of the employees are Brazilian nationals. As with IBGE data, discussed above, the survey is undertaken at the enterprise level. The Law of Two-Thirds is supposed to cover all employment protected by the official labor legislation which grants workers certain rights such as minimum wage, paid holidays, an eight-hour day, protection against unfair dismissal and the right to redundancy payments. However, there is some evasion of this legislation and many employees in small enterprises are not covered. This means that they are, in effect, in the "informal sector". Comparison with census figures indicates that the Ministry of Labor survey includes about 85% of all employees covered by official labor legislation and about 51% of all urban employees .

Table 1: AVERAGE EARNINGS IN MANUFACTURING INDUSTRY, 1959-75

	Index of Average Annual Earnings of All Employees in Manufacturing (1959 = 100) (1) <u>1/</u>	Index of Average Earnings Deflated by Guanabara Retail Price Index (1959 = 100) (2)	% Change in Real Average Earnings (3)
1959	100	100	-
1960	-	-	-
1961	-	-	-
1962	303.3	116.2	-
1963	583.2	130.8	+12.6
1964	1,081.3	126.7	-3.1
1965	1,637.2	115.7	-8.7
1966	2,195.5	109.8	-5.1
1967	2,779.4	106.5	-3.0
1968	3,573.9	111.9	+5.1
1969	4,824.6	123.9	+10.7
1970	6,070.0	127.0	+2.5
1971	7,808.5	136.0	+7.1
1972	9,871.6	147.6	+8.5
1973	12,238.4	149.4 <u>2/</u>	+1.2
1974	15,955.3	146.9	-1.7
1975	22,580.0	161.1	+9.7

1/ 1959: Censo Industrial; 1962: Registro Industrial; 1963-67: Inqueritos Economicos; 1968-71: Pesquisa Trimestral; 1971-75: Pesquisa Mensal. The index was constructed by dividing the annual salary bill by year-end employment between 1959 and 1964, and by dividing by average annual employment between 1964 and 1971.

2/ A figure of 22.5% for the rate of inflation in 1973 has been used instead of the official figure of 12.6%.

4. The Ministry of Labor surveys indicate that average real earnings in manufacturing industry increased by 34.0% between 1966 and 1973. This estimate is quite close to that of the IBGE industrial surveys. The increase in average real earnings in commerce and services over the same period (+ 25.7%) is lower than for manufacturing. According to these data, real manufacturing earnings fell in only one year (1971) and in commerce and services in two years (1969 and 1971).

5. While there is little doubt that average wages in the formal sector have increased, during a period in which inequality in the distribution of earnings increases, changes in average earnings are not necessarily indicative of the behavior of real earnings for the mass of employees. Trends in real earnings for the lower half of the earnings distribution can be seen better from the behavior of the median. Median real earnings increased by 8.3% between 1966/67 and 1972/73, a compound annual rate of 1.1%, and the ratio of mean to median earnings increased by 25% showing that inequality increased during the period. Furthermore, in commerce and services median real earnings were consistently lower throughout the years 1967 to 1973 than they were in 1965. There was also an increase in inequality in this sector.

6. In summary, available data which are probably representative only of employment in the formal sector of industry, commerce and services indicate rising real wages over 1967-73 but increasing inequality. The data do not permit analysis of the behavior of real incomes of employees in the informal sector who fall in the lower decile of the urban distribution or possible improvements in income distribution in 1975 and 1976.

Table 2: AVERAGE AND MEDIAN EARNINGS IN MANUFACTURING INDUSTRY
1966-73

	Average Monthly Earnings (Current Cr\$)	Index of Average Real Earnings (1966 = 100)	% Change in Real Earnings	Median Earnings (Current Cr\$)	Index of Median Real Earnings (1966 = 100)	% Change in Real Earnings	Index of Ratio of Average to Median Earnings
1966	130.8	100	-	95.4	100	-	100
1967	176.9	103.6	+3.0	122.2	98.1	-1.9	105.6
1968	235.0	112.5	+8.6	159.7	104.9	+6.9	107.4
1969	287.6	112.9	+0.4	190.0	102.3	-2.5	110.4
1970	360.05	115.2	+2.0	238.7	104.7	+2.3	110.1
1971	429.2	114.3	-0.8	278.4	101.6	-3.0	112.5
1972	546.3	124.9	+9.3	340.2	106.7	+5.0	117.1
1973	718.2	134.0	+7.3	421.1	107.8	+1.0	124.4
1966/67- 72/73	<u>1/</u>		+27.2			+8.3	

1/ We have chosen to average over the years at the beginning and end of the period because any single year's observations may be subject to considerable error.

Source: Boletim do SEPT, various years. Median estimated by simple linear interpolation between income class limits. Price deflator used was Guanabara retail price index.

Table 3: AVERAGE AND MEDIAN EARNINGS IN COMMERCE AND SERVICES
1965-73

	Average Monthly Earnings (Current Cr\$)	Index of Real Average Earnings (1965 = 100)	% Change in Real Earnings (Deflated by Guanabara Retail Price Index)	Median Monthly Earnings (Current Cr\$)	Index of Real Median Earnings (1965 = 100)	% Change in Real Median Earnings	Index of Ratio of Average to Median Earnings (1965 = 100)
1965	117.4	100	-	80	100	-	100
1966	154.9/156.8	93.4	-6.6	100.0/107.1	88.5	-11.5	105
1967	212.5	97.0	+3.9	140.0	88.6	+0.1	109
1968	285.0	106.3	+9.6	183.5	95.0	+7.2	111
1969	347.2	106.1	-0.2	219.5	93.1	-2.0	113
1970	434.2	108.2	+2.0	265.1	91.7	-1.5	117
1971	517.4	107.3	-0.8	299.0	86.0	-6.2	123
1972	656.0	116.9	+9.0	373.2	92.2	+7.2	125
1973	807.5	117.4	+0.4	442.6	89.3	-3.1	129

Source: Boletim do SEPT, various years

B. Urban Minimum Wage Movements

7. Inferences concerning trends in the real earnings of workers at the lower end of the urban income distribution are often drawn from movements in the real minimum wage. Table 4 contains data on trends in the real minimum wage in Guanabara (Rio) from 1959 to 1975. The data indicate that the real minimum wage had been falling prior to the 1964 revolution, having peaked in 1961. From 1964 onwards the real value declined in every year except 1971, 1972 and 1975. The increase in 1975, following the Government's decision in November 1974 to maintain the real value of the minimum wage and even to increase it, was the largest real increase granted since February 1964. The nominal increase of 44% granted in May 1976 also implied some real growth in the minimum wage, given that the rate of inflation (April 1975-April 1976) was 41%. Despite the high rate of inflation of the first quarter of 1976, the decision to increase the real minimum wage by approximately 3% is consistent with this more liberal wages policy.

8. The crucial issue here is the extent to which the official minimum wage represents the full-time earnings of workers at the lower end of the income distribution. That is, what proportion of the active population receives the minimum wage or earnings which are determined by reference to movements in this standard? It is extremely difficult to test this using the evidence available on earnings. The source usually referred to in this context, the Ministry of Labor Law of Two-Thirds statistics, is unsatisfactory for this purpose because all workers included in this survey should, by law, be earning at a full-time rate which is no less than the minimum. Thus, the fact that there appear to be workers covered by the Law of Two-Thirds who earn less than the minimum is explained by other factors: (a) part-time employment; (b) sickness and absenteeism; (c) employees who change jobs during the month of the survey and (d) the fact that some employees may work for several enterprises during a month may be included by each enterprise employing them at a wage which might well be less than the minimum.^{1/} National Household Survey (PNAD) data, the only alternative source for examining the level in earnings of the lower half of the income distribution also have serious deficiencies.

^{1/} To a certain extent, the estimates of median earnings above are open to similar objections; what is really required is an estimate of median full-time earnings.

Table 4: TRENDS IN THE REAL VALUE OF THE MINIMUM WAGE IN GUANABARA

	Nominal Value/ ¹ of the Minimum Wage (Cr\$)	Guanabara Retail Price Index 1965/67=100	Index of the Real Value of the Mini- mum Wage (1959=100)	% Change in the Real Value of the Minimum Wage	
1959	6.00	4.98	4.98	100	-
1960	6.75		6.44	87.0	-13.0
1961	10.40		8.58	100.6	+15.6
1962	13.44		13.0	85.8	-14.7
1963	22.75		22.2	85.1	-0.8
1964	41.71		42.5	81.5	-4.2
1965	67.17		70.5	79.1	-2.9
1966	87.75		99.6	73.1	-7.6
1967	109.96		130	70.2	-4.0
1968	133.79		159	69.8	-0.6
1969	159.47		194	68.2	-2.3
1970	191.53		238	66.8	-2.0
1971	230.53		286	66.9	+0.2
1972	275.60		333	68.7	+2.7
1973	322.40		402 ²	65.6	-4.5
1974	393.00		541	60.3	-8.1
1975	540.27		698	64.2	+6.5
1976	835.85		n.a.	n.a.	n.a.

¹ The minimum wage adjustments frequently occur in the middle of the year; each figure is, therefore, the weighted average for the whole year of ruling monthly figures. After 1963, data include effect of 13th salary (paid in December).

² We have used a figure for the rate of inflation in 1973 of 22.5%, which government spokesmen now admit to be closer to the true value than the official figure of 12.6%.

Source: Conjuntura Economica, various issues.

9. The urban minimum wage may be a poor guide to the growth of real earnings because of the possible existence of intra-enterprise wage scales (internal markets), occupational earnings ladders, and life cycle earnings profiles. The minimum wage, for example, might be regarded as a starting salary. Thus, it is considered unlikely that someone would remain at the minimum for more than a few years. Either the worker would be promoted within the enterprise or change jobs, thus effectively ensuring that his real earnings actually rise. There are frequent complaints in Brazil that the rate of labor turnover is high, which could mean that employees are making use of inter-firm mobility to improve their earnings. While a comprehensive analysis of labor turnover remains to be undertaken, available research results tend to support this. They indicate that turnover is higher in low skill, low income jobs and in small firms. However, before a definitive judgment can be reached on the trend in real earnings of low income workers more empirical evidence is needed on: (a) the functioning of enterprise or occupational earnings ladders which, at first sight, appear to favor higher skills to a disproportionate extent; (b) the nature, causes and effects of high rates of labor turnover and (c) life-cycle earnings profiles. In this respect, it would be useful if the IBGE were to initiate a re-interview sample survey on incomes as part of its census enquiries. At this point, however, it can only be said that the evidence is inadequate to allow reaching conclusions on the relationship between the behavior of the real minimum wage and the trend of real earnings of a substantial proportion of the labor force.

C. Collective Wage Agreements

10. In general, wage increases for semi-skilled and unskilled workers earning above the minimum are determined as a result of "collective bargaining" agreements or dissidios coletivos. These are agreements which cover broad groups of workers in a particular sector, for example, banking or metalworking industries. As seen in Table 5 the Government's decreed wage increases for groups of unskilled and semiskilled workers in Sao Paulo have lagged behind increases in the cost of living. These data were prepared by a trade union research organization in Sao Paulo - DIESSE (Departamento Inter-Sindical de Estatistica e Estudos Socio-Economicos) and the cost of living index used differs somewhat (although not substantially) from the FGV index. Free collective bargaining in Brazil has been suspended since 1965/66 and most negotiations go to arbitration, where employers and employees are bound to accept the increases decreed by government wages policy. One problem with the aggregate figures agreed in such collective bargains is that there is no indication of, nor any data available on, how these increases affect earnings of employees of different skill levels. In addition with the suspension of full collective bargaining, labor unions have had no power to operate on the wage front and have been forced to concentrate on a variety of non-wage demands. There has been some progress in increasing non-wage benefits which is not captured in these statistics.

11. The cause of the apparent decline in real wages conceded in collective bargaining agreements stems from the formula used by the Ministry Labor for calculating the nominal increases awarded by arbitration tribunals. Before November 1974, the index was composed of two main elements: the first (or base) component consisted of a factor to restore (using a set of índices de reconstituição salarial) the average real wage to the level prevailing during the 24 months prior to the new agreement. This factor was augmented by a second element consisting of an estimate of one half of the expected rate of inflation during the coming 12 months plus an estimate of productivity growth. This method contributed to a decline in arbitrated wage rates because earnings were averaged over 24 months rather than taking the previous peak in real earnings. Had real wages been moving along a rising trend, averaging over 24 months, as compared with, say, 12, would also tend to reduce the adjustment. Furthermore, the cost of living indices were lower, in most years, than either the FGV or the DIESSE cost-of-living indices. In addition, the expected rate of inflation used in the calculation diverged from the actual rate by a considerable margin prior to 1968, partly because of overoptimistic expectations concerning the results of counter-inflationary policies, and such underestimations were not corrected ex post. After 1968, estimates of the expected rate of inflation were much closer to the actual, and an ex post "correction factor" was introduced into the formula. Finally, the estimate of productivity growth was far below the growth of per capita GDP in most years and also the productivity element was simply summed to the other components rather than multiplied. It should be noted that alterations in wage policy announced by the Geisel Government in November 1974 have corrected the most negative features of the wage formula.

12. The apparent decline in arbitrated wage rates should be interpreted with great caution. The impact of these wage adjustments on differentials through time is not known nor is it known to what extent these average increases are representative. During a period of rapidly growing employment, there is likely to be a substantial degree of earnings "drift" due to the divergence between industry wide "agreed" wage rates and actual earnings. Overtime work and shortages of employees with particular skills will be the cause of such "drift". Since wage agreements are made individually between employer and employee, there is likely to be considerable scope for the operation of such factors during a period of rapid employment growth, when labor's bargaining position is strengthened somewhat. Highly skilled engineering workers, foremen, construction workers and even the least skilled construction workers are some of the groups of workers which appear to have benefitted from specific labor shortages, while the widespread existence of overtime work during the period of rapid growth boosted the pay of all workers, including those paid at the normal time rate of the minimum wage. Unfortunately, because of the dearth of data on earnings for specific skill grades, it is difficult to draw conclusions about recent trends in real earnings and earnings differentials for workers earning above the minimum wage.

13. Some partial data exist on trends in real earnings by skill category. One set was collected by the consultancy firm of Morris and Morgan in Sao Paulo industrial enterprises during the period 1967-75. The data clearly demonstrate that all occupational groups experienced a rise in real earnings during this period; however, this was accompanied by a tendency towards increased dispersion. The trend increases in real earnings were as follows: (i) for employees earning between 1-4 minimum wages: 2.16% a year; (ii) for employees earning between 4 and 9 minimum wages: 4.40%; (iii) for employees earning between 9 and 20: 5.11%; (iv) for employees earning between 20 and 70: 7.24% and (v) for employees earning more than 70: 8.89% a year. An additional survey undertaken by Morris and Morgan confirms the tendency towards increasing inequality among executives' earnings during the period 1969-75.

14. The data on hourly wage rates in the construction industry in São Paulo, published by IBGE, demonstrate that real hourly wage rates have been increasing faster than the urban minimum and that the most and the least skilled construction workers have benefitted relatively. Taking 1969=100, the São Paulo minimum stood at 105.8 in 1975. The index of real hourly wage rates for various categories of construction workers behaved in the following way: carpenter: 109.3; site foreman: 231.5; bricklayer: 105.4; painter: 118.8; laborer: 132.8 (the least skilled grade). These IBGE statistics on hourly wage rates are the only official series on occupational wage rates, but their main drawback is that they do not measure trends in occupational earnings. The collection and publication of more extensive data on trends in occupational earnings would be of immense value in measuring and interpreting trends in the distribution of earnings.

15. Another relevant source of data on trends in wage rates are those published for the agricultural sector by the FGV-Centro de Estudos Agrícolas (for all states except São Paulo) and the Secretaria da Agricultura de São Paulo (see Tables 6 and 7). The data in Table 6 refer to: (i) monthly wages paid to permanent wage laborers; (ii) daily wage rates paid to casual labor, and (iii) monthly wages paid to tractor drivers. The series for all of Brazil is the unweighted average of state-wide series (excluding São Paulo). Given the difficulties of finding an appropriate deflator with which to deflate the nominal values and of estimating the total monthly income wage accruing to day laborers; it was decided to express the nominal values in terms of the nominal value of the urban minimum wage.^{2/} Between 1966 and 1970 the ratio of the rural wage to the urban minimum wage remained static. However, from 1970 onwards there was a rise in agricultural wages relative to the urban minimum, which was particularly rapid between 1973 and 1975.

^{2/} There is no minimum wage in rural areas.

Table 6: TRENDS IN AGRICULTURAL WAGE RATES, 1960-75

	Average Wage of Permanent Wage Laborer (Current Cr\$ Per Month) (1)	Ratio of (1) to the Urban Minimum Wage ^{/2} (2)	Average Daily Wage Rates of Casual Rural Workers (Cur- rent Cr\$/day) (3)	Index of the Ratio of (3) to the Urban Minimum (4)	Average Monthly Wage Rate of Tractor Driver (Current Cr\$/month) (5)	Ratio of (5) to the Urban Minimum Wage (6)
1966	48.72	.56	1.63	100	90.05	103
1967	64.28	.59	2.14	105	110.27	100
1968	75.22	.56	2.58	104	131.99	99
1969	87.92	.55	3.05	103	155.85	98
1970	106.96	.56	3.65	103	188.67	99
1971	135.77	.59	4.63	108	234.55	102
1972	163.88	.60	5.61	110	290.88	106
1973	222.79	.69	7.83	131	368.52	114
1974	323.5	.82	13.00	178	513.5	131
1975	434.5	.80	17.50	174	738.0	137

^{/1} Unweighted average of average values for each state excluding Sao Paulo.

^{/2} Fundacao Getulio Vargas, Centro de Estudos Agrícolas.

16. This picture is confirmed by the data in Table 7 on trends in real wage rates for rural workers in Sao Paulo state. Although the nature of the price deflator used is unknown, the Sao Paulo series are broadly consistent with the data from the rest of Brazil.

17. A possible explanation is that the agriculture sector, particularly in Southern Brazil, has been undergoing a major transformation both in terms of techniques of production and crop mix, as well as in terms of its social relations of production. On the one hand, there has been a large increase in acreage, which has been accompanied by the growth of new crops (soya beans) and the revival of more traditional commodities (coffee in Minas Gerais). On the other hand, especially in Sao Paulo, dependent types of landlord-tenant relationship are disappearing and the rural poor are being transformed into wage laborers; meanwhile, the exodus to the cities continues with the effect that between 1960 and 1970, for example, the agricultural labor force grew by a mere 0.7% a year. The mobility of the work force and its slow growth in relation to the demand for labor have served to push up wage rates especially after 1973.

Table 7: TRENDS IN REAL WAGE RATES IN AGRICULTURE IN SAO PAULO
1960 - 75

	Resident Farm Hand's Daily Wage at Cons- tant 1971 Cr\$	Casual Farm Laborer's Daily Wage at Cons- tant 1971 Cr\$	Tractor Driver's Monthly Wage at Constant 1971 Cr\$
1960	4.76	4.59	172.71
1961	4.51	5.21	159.20
1962	4.48	5.10	157.37
1963	4.14	4.56	146.74
1964	4.59	4.89	163.02
1965	5.24	5.93	238.92
1966	4.96	5.75	203.86
1967	5.39	5.49	187.80
1968	5.73	6.46	189.93
1969	5.59	5.99	218.43
1970	6.18	6.80	220.87
1971	6.44	7.04	233.86
1972	7.16	8.00	248.48
1973	8.43	8.84	279.64
1974	9.15	10.53	290.24
1975	9.23	11.46	307.55

Source: Secretaria de Agricultura do Sao Paulo; the price index used to deflate nominal values is not stated in the source.

II. EMPLOYMENT GROWTH

18. It is worth analyzing the existing data on employment growth, both from the point of view of market forces affecting trends in earnings and in relation to the discussion on the implications of increasing inequality. The data sources on this question are rather unreliable, largely because of the lack of year-to-year comparability in the statistics. For example, the IBGE annual surveys on industrial employment, which are frequently quoted in this context, are not at all comparable from one year to the next. The National Household Survey (PNAD) is also unreliable on this question, since it is not clear whether the 1968 survey (based on an augmented sample drawn from the 1960 census) is strictly comparable with the 1972 survey (based on an augmented sample drawn from the 1970 census). Data, used by government sources, on the growth of contributors to PIS/PASEP, FGTS (Redundancy Payments) and INPS (Health and Social Insurance) undoubtedly give an overestimate of the rate of employment growth because of continuing improvements in the coverage of these schemes.

19. Table 8 contains estimates of the long-run rate of growth of employment between 1960 and 1970 - a decade of fluctuating output growth rates and probably a similar employment experience. The data are presented in two ways: the upper portion of the Table contains estimates of employment in the enterprise sector, taken from the Economic Census in both years. In the lower portion of the Table are estimates of the economically active population, drawn from the Demographic Census. This definition goes beyond enterprise sector employment by including employees and the self-employed in the 'informal' sector. Since the Demographic Census definition of the economically active population includes the unemployed, it is not possible to draw conclusions concerning the long-run trend in open unemployment. However, in the absence of a system of unemployment benefits, the rate of open unemployment would, of necessity, be rather low. In manufacturing industry, the rate of growth of enterprise employment lagged behind the growth of total sector employment, implying that there was both an absolute and a relative rise in 'informal' sector employment during the decade of the sixties. On the other hand, in commerce and in services, enterprise employment grew faster than employment for these sectors as a whole, indicating that 'informal' sector employment declined as a proportion of the total. In commerce, there was even a small decline in the absolute level of 'informal' sector employment, though this was not true of services.

20. The data in Tables 9 and 10 on employment growth in manufacturing, construction, commerce and services for the period 1966-73 are taken from the Ministry of Labor earnings survey. The year-to-year comparability of the data seems to be ensured by the fact that the survey is carried out in the same month of each year, and it appears that there is little change over time in the percentage of enterprises covered. Even so, year-to-year comparisons may not be very accurate, and

Table 8: EMPLOYMENT AND EMPLOYMENT GROWTH, 1960-70

	1960	1970	% Change 1960-70	Compound Annual Rate
<u>In the enterprise sector</u>				
Manufacturing /1	1,861,856	2,589,842	39.1	3.1
Commerce /2	953,149	1,709,373	78.9	6.0
Personal & Commercial Services Services/2	521,259	870,907	67.1	5.3
Property Companies /3	-	29,110	-	-
Commercial Banks	-	232,972	-	-
Finance Houses /3	-	17,089	-	-
Insurance /3	-	19,244	-	-
<u>Economically Active Population from the Demographic Census</u>				
Agriculture, Fishing, Vegetable Extraction	12,163,000	13,090,000	7.6	0.7
Mining	108,000	175,000	62.0	4.8
Manufacturing Industry	2,069,962	3,241,861	56.6	4.6
Construction	785,014/4	1,719,714	119.1	8.2
Commerce	1,520,046	2,263,539	48.9	4.1
Transport & Communication	1,088,798	1,246,395	14.2	1.3
Services	2,732,148	3,626,494	32.7	2.9
Others - Public Utilities, Public Sector, Banking, Liberal Professions	2,184,054	4,195,439	92.1	6.7
Total non-agricultural	10,488,000	16,467,000	57.0	4.5

/1 The first figure refers to 1959. Employment in both 1959 and 1970 is averaged over the whole year. End-of-year data yield a percentage increase of 54% or an annual compound rate of 4.0%.

/2 Employment measured by averaging over the whole year.

/3 Year end employment totals.

/4 This is possibly an under-estimate since self-employed construction workers were included under 'Services' in the 1960 Demographic Census.

Sources: Economic Census, 1960 and 1970.

Demographic Census, 1960 and 1970.

the trend rate of growth of employment has been calculated by averaging over initial and terminal years. In industry as a whole, employment grew at an annual compound rate of 11.6% a year, with manufacturing growing by 9.0% and construction by 17.4% a year; in commerce and services the annual compound rate of growth was 15.0% a year. These results may well be an upper bound estimate of employment growth since the mid-60's. The results should be interpreted in the light of the following factors: (i) employment growth is being measured between the trough (1966-67) and the peak (1972-73) of economic activity, and this partly accounts for the very high rates of growth observed; (ii) the data are consistent with the Census data, analyzed above, showing that between 1960 and 1970, formal sector employment growth was in the aggregate about equal to the growth of the total non-agricultural labor force. During the period of recovery in economic activity (1967-69), employment growth was very rapid. Though at a lower rate, employment growth from 1970 onwards was still quite rapid, particularly in manufacturing and construction. This empirical evidence tends to confirm the qualitative evidence of labor shortages so frequently mentioned in 1973-74; (iii) the data in Tables 9 and 10 measure employment growth in the 'formal' sector, which may well exceed the rate for the urban economy as a whole (including the 'informal' sector). Finally, it is worth observing that virtually nothing is known about trends in earnings and employment in the 'informal' sector nor about inter-sectoral patterns of mobility. Such data on this poorer 50% of the labor force should be collected.

III. TRENDS IN THE INCOME DISTRIBUTION

21. Few of the participants in the recent debate on Brazilian income distribution have fully recognized the extent of the serious empirical problems involved in using the data upon which most arguments have been based. These problems are of several types. Brazil does not possess data on the distribution of earnings of full-time employees. The data from the Ministry of Labor survey which have been utilized in the controversy, in fact suffer from a variety of deficiencies. The data include part-time employees who have left employment during the enquiry month and those that have been employed in more than one enterprise. Furthermore, these data only refer to employees in the "formal" sector. The bias imparted by the first set of characteristics is to increase the proportion of low earnings recipients in the distribution. The exclusion of employees in the "informal" sector (domestic outworkers and casual construction workers, for example) probably has the reverse effect. When measuring inter-temporal trends in the distribution, such sources of bias would be unimportant if there was some degree of constancy in the incidence of part-time employment, in the rate of labor turnover, in the share of "informal" sector employees in total wage labor employment and in the ratio between mean earnings in the "formal" and "informal" sectors. This is a demanding set of assumptions and conclusions based on the imperfect Ministry of Labor data need to be judged in the light of these deficiencies. Leaving such issues aside, the Gini coefficient measures of dispersion, calculated using the

**Table 9: EMPLOYMENT GROWTH IN MANUFACTURING, CIVIL CONSTRUCTION,
PUBLIC UTILITIES AND EXTRACTIVE INDUSTRIES, 1966-73**

	Total Industry	Extractive Industries	Manufacturing	Public Utilities and Others	Construction
1966	2,153,721	47,527	1,676,582	135,900	293,712
1967	2,365,569	71,022	1,755,775	178,032	360,740
1968	2,628,252	89,742	1,969,626	126,061	442,823
1969	3,116,039	95,872	2,325,174	117,011	577,982
1970	3,280,716	103,845	2,381,690	148,691	646,490
1971	3,391,486	110,578	2,466,946	160,878	653,084
1972	3,770,472	104,443	2,669,951	176,807	819,271
1973	4,291,556	124,096	3,087,618	191,217	888,625
<u>% Change in Employment</u>					
1966-67	+9.8	+49.4	+4.7	+31.0	+22.8
1967-68	+11.1	+26.4	+12.2	-29.2	+22.8
1968-69	+18.6	+6.7	+18.1	-7.2	+30.5
1969-70	+5.3	+8.3	+2.4	+27.1	+11.9
1970-71	+3.4	+6.5	+3.6	+8.2	+1.0
1971-72	+11.2	-5.5	+8.2	+9.9	+25.5
1972-73	+13.8	+18.8	+15.6	+8.2	+8.5
1966/67-					
1972/73	+78.4	+92.8	+67.7	+17.2	+161.0

Source: Boletim do SEPT.

Table 10: EMPLOYMENT GROWTH IN COMMERCE AND SERVICES, 1966-73

	Total Commerce and Services	Commerce	Finance, Banking & Insurance	Transport	Communications	Services	Public Services
1966	1,297,763	531,544	199,831	189,618	42,188	173,916	160,669
1967	1,485,598	586,376	228,225	202,452	46,454	235,088	167,079
1968	1,788,571	652,760	257,507	270,327	54,651	299,803	253,523
1969	2,190,155	794,875	271,542	316,109	70,927	343,648	393,05
1970	2,449,192	858,166	277,200	344,569	76,320	396,792	496,145
1971	2,677,870	917,566	282,631	362,589	66,072	459,020	589,992
1972	3,105,346	1,038,806	331,031	401,752	87,426	543,325	703,006
1973	3,322,631	1,053,610	342,726	422,298	143,765	781,315	578,91
<u>% Change in Employment</u>							
1966-67	+ 14.5	+10.3	+14.2	+ 17.3	+ 10.1	+ 35.2	+ 4.0
1967-68	+ 20.4	+11.3	+12.8	+ 21.5	+ 17.7	+ 27.5	+ 51.7
1968-69	+ 22.5	+21.8	+ 5.5	+ 16.9	+ 29.8	+ 14.6	+ 55.0
1969-70	+ 11.8	+ 8.0	+ 2.1	+ 9.0	+ 7.6	+ 15.5	+ 26.2
1970-71	+ 9.3	+ 6.9	+ 2.0	+ 5.2	- 13.4	+ 15.7	+ 18.9
1971-72	+ 16.0	+13.2	+17.1	+ 10.8	+ 32.3	+ 18.4	+ 19.2
1972-73	+ 7.0	+ 1.4	+ 3.5	+ 5.1	+ 64.4	+ 43.8	- 17.0
1966/67- 1972/73	+130.9	+87.2	+57.4	+100.0	+160.8	+223.9	+291.9

Source: Boletim do SEPT.

Ministry of Labor data, are presented in Tables 11 and 12. They show that, from 1969 to 1973, there was a continuing trend towards increasing inequality in both the industrial sector and in commerce and services.

22. A second problem concerns the measurement of trends in real income in the bottom 40% of the income distribution. This segment contains more or less the bottom 60% of the rural income distribution and the bottom 20% of the urban distribution. As has been seen, the Ministry of Labor survey excludes the urban poor. The Family Expenditure Survey (PNAD), while it presents data on money income in the whole of the distribution and includes information on the existence of non-monetary income, makes no attempt to quantify or put a monetary value to the non-monetary component. In addition, the series for the period 1967-69 is probably not strictly comparable with that for 1972-73. The data on trends in agricultural wages certainly show a rise in real wages in recent years, but it is questionable how far this can be extrapolated to all members of the rural labor force. Nevertheless, it can in general, be concluded that both urban and rural poor have benefitted in absolute terms from the recent rapid growth in employment. The Demographic Census of 1960 and 1970 are prone to the same criticism as the other sources available. The census only measures money income, and the fact that the monetary income of the bottom 40% increased faster than that of the next 30% in the distribution (urban employees in the "formal" sector) does not necessarily imply a relative improvement in the conditions of the poorest during the decade. This measured improvement in the position of the bottom 40%, who are largely in the agricultural sector, relative to the urban working class (though not relative to the mean of the distribution) may only be indicative of the increasing importance of money income. In conclusion, at least until the early 1970's, it is unlikely that the real incomes of the rural poor and of employees and the self-employed in the "informal" urban sector diverged significantly from trends in the real urban minimum wage.

23. The essentially "static" measures of inequality which are used, entirely fail to pick up the possible life-cycle trends in income. In the context of the recent rapid growth of employment, this point is of particular importance, since life-cycle earnings may be less unequally distributed than earnings measured at a point in time since the ranks of the low paid would be swollen by rapid employment growth.

24. As of November 1974, the Geisel Government introduced important modifications in the formula used to compute arbitrated wage agreements. This must be seen as part of the Government's declared policy of reversing the unfavorable trends in the distribution of income. The two major modifications to the formula are: (1) the base component of the formula is to be computed by restoring the average value of the real wage in the previous 12 months, attenuating the depressive tendencies

Table 11: GINI COEFFICIENT MEASURE OF THE DISPERSION OF EARNINGS IN THE INDUSTRIAL SECTOR, 1965-73

	(1)	(2)	(3)
1965	.305	-	-
1966	.361	.364	-
1967	-	.365	-
1968	-	.370	-
1969	-	-	.407
1970	-	-	.421
1971	-	-	.422
1972	-	-	.438
1973	-	-	.459

Sources and Notes:

- (1) 1965 and 1966, data from Boletim do SEPT. For comparison, sectors entitled urban industry, extractive industries and agriculture were excluded for 1965, while the civil construction sector was included in 1966 and petroleum excluded.
- (2) and (3) 1966-67, data from Boletim do SEPT. The industrial sector includes all the sectors in the manufacturing sector plus civil construction, electric energy, and vegetable and mineral extraction. Columns (2) and (3) are not comparable.

Table 12: GINI COEFFICIENT MEASURE OF THE DISPERSION OF
EARNINGS IN COMMERCE AND SERVICES IN URBAN AREAS
(1965-73)

	(1)	(2)	(3)
1965	.349	-	-
1966	.380	.387	-
1967	-	.394	-
1968	-	.409	-
1969	-	-	.450
1970	-	-	.469
1971	-	-	.475
1972	-	-	.513
1973	-	-	.502

Sources and Notes:

- (1) 1965 and 1966, data from Boletim do SEPT, covers 22 sectors in commerce and services.
- (2) and (3), data from Boletim do SEPT, covers data from 29 sectors in each year. Columns (2) and (3) are not comparable due to change in the timing of minimum wage increases in 1969.

imparted by the previous practice of averaging over 24 months; (ii) the productivity growth component or to quote, as stated by Law 6147 November 20, 1974), "the coefficient corresponding to workers' participation in the increase in productivity", is to be made multiplicative rather than additive. While the phrasing is ambiguous as to whether the aim is to increase, lower or maintain constant the share of worker's wages in value added, the aim of the policy appears to be to keep the money wages of manual workers rising at least as fast as the cost-of-living. This is consistent with the Government's declared goal of reversing the trend towards increasing inequality. This strategy also was evident in the announcement of a 10% wage bonus payable in December 1974, and in subsequent wage awards. Although there has been a change in the wage formula to be applied to arbitrated wage settlements, the individual components which go to make it up are no longer to be published; instead the authorities are to publish a "salary re-adjustment factor"

25. The minimum wage increase for the Center-South decreed on May 1, 1975 was a 41.4% rise in nominal terms on the May 1974 value, which when compared with the FGV cost-of-living index for May 1974-May 1975 (+25.4%) and that of DIESSE (+26.5%), was a clear demonstration of the Government's Policy. Taking into account the 10% bonus given in December 1974 (which took the form of an advance on the May 1975 rise), the real minimum in 1975 stood 6.5% higher than in 1974 (a year in which there was a very sharp decline of 8.1%). The nominal increase of 44% granted in May 1976 also implies a rise in real terms.

26. It is not yet clear what the effect of continuing rises in the real minimum wages will be on the personal and functional distribution of income and on other economic variables such as the rate of inflation. It appears that one objective of government policy is to reduce income differentials among wage earners by increasing minimum wages more rapidly than other wage rates. This can be seen from the fact that the readjustment coefficient for arbitrated wage rates (i.e., for workers receiving between 2 and 5 minimum wages) was lower during 1975, at between 35 and 39%, than the minimum wage adjustment. The Government also attempted to limit the wage increases of top executives during 1975 to flat rate 30% of the value of 30 minimum wages. However, no statutory authority was established to monitor the increases in either monetary or non-monetary income accruing to top wage-earners.

27. There is reason to believe that it will not be easy to compress earnings differentials. First, as explained above, the average figures decreed for dissidios coletivos may well not be operative, since individual workers with particular skills in short supply may be in a position to maintain and even increase their earnings differentials as compared with the minimum wage. Second, such evidence as is available on the recent evolution of top salaries tends to suggest either that there has been little implementation of government policy or that more generous fringe benefits have been the response to restrictions on increases in

monetary income. The only available quantitative evidence on the effect of the change in minimum wage policy indicates that between 1974 and 1975, salaries in the lowest range increased by 5.45% in real terms; the percentage increases for the next four salary groups in ascending order were: 2.27%, 6.67% and 22.5% (excluding "fringe benefits"). Thus, the more generous wages policy at lower levels was accompanied, to a large extent, by a tendency towards increasing differentiation throughout the earning structure, particularly at the highest levels.

28. Because of the diversity of work relations in the informal sector it is not clear how the more generous minimum wage policy will affect the 5.5 million employees and the 4 million self-employed in the "informal" urban sector who are beyond the reach of compulsory minimum wage legislation. There would certainly be some "trickle down" effect, but any attempt to push the minimum wage substantially ahead of cost-of-living increases is unlikely to be fully implemented in this sector. The self-employed category is also extremely diverse, but a majority of all self-employed workers earn less than the minimum wage. Even though this group is not directly affected by official wages policy, their incomes are probably fairly closely related to movements in the urban minimum.

29. It has been suggested that the squeeze in the urban minimum wage between 1964 and 1974 had a beneficial effect on employment in both rural and urban sectors and that a rise in the urban minimum might reduce employment growth and be detrimental to the interests of the "poorest" sections of the community. However, it seems equally reasonable to argue that a rise in wages and in the share of labor in urban value added is not only consistent with further rapid employment growth in the "formal" sector (provided the rate of accumulation can be maintained), but will tend to raise incomes and employment in the "informal" sector as well.

IV. PIS (SOCIAL INTEGRATION PROGRAM) AND THE FOURTEENTH SALARY

30. PIS (Social Integration Program) was designed as a mechanism for supplementing the monetary income of urban employees in the enterprise or "formal" sector. A similar fund exists for public sector employees known as PASEP, and on July 1, 1976, they were unified as PIS/PASEP. The receipts of PIS come from enterprise contributions of two kinds: the first is a fraction of the value of total enterprise sales (fixed at 0.50% from 1974 onwards) and the second comes from a transfer of 5% of the corporate income tax burden. The resources for PASEP come from a transfer of 2% of the receipts accruing to each level of government, avoiding the double counting problem involved in intra-government transfers. The Fund distributes these receipts (cotas) annually to employees in the form of individual shareholdings: half of the available resources are distributed according to the employee's age and half on a strictly earnings related basis. These shares can only be cashed in one of the