

Amadeo, Edward; Gonzaga, Gustavo

Working Paper

Inflation and economic policy reform: Social implications in Brazil

Texto para discussão, No. 324

Provided in Cooperation with:

Departamento de Economia, Pontifícia Universidade Católica do Rio de Janeiro

Suggested Citation: Amadeo, Edward; Gonzaga, Gustavo (1994) : Inflation and economic policy reform: Social implications in Brazil, Texto para discussão, No. 324, Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), Departamento de Economia, Rio de Janeiro

This Version is available at:

<https://hdl.handle.net/10419/186569>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

DEPARTAMENTO DE ECONOMIA
PUC-RIO

TEXTO PARA DISCUSSÃO
N.º 324

**INFLATION AND ECONOMIC POLICY REFORM:
SOCIAL IMPLICATIONS IN BRAZIL¹**

EDWARD AMADEO
GUSTAVO GONZAGA

SETEMBRO 1994

¹ Paper invited to be presented in the 5th annual meeting of the International Forum on Latin American Perspectives, sponsored by the IDB and the OECD Development Centre. We thank Paulo Levy for providing the price dispersion data used in this paper. We also thank Luiz Eduardo Miranda Cruz, Áureo Nilo de Paula Neto e Henrique de La Rocque for able research assistance.

1. Introduction

In Brazil, recurrent stabilization efforts since the mid-1980s have not been successful. Chronic inflation is a societal problem. It is the result of conflictual relations within the state, between private agents and the state, and between private agents themselves. Inflation in Brazil is the effect -- not necessarily the cause -- of these unresolved conflicts. However, to the extent that these conflicts exist and affect the everyday attitude of economic agents, the process of continual acceleration of inflation and the high volatility of inflation give rise to, say, secondary social and economic consequences.

What are the implications of high and volatile inflation? We argue that the instability associated with the increase in price and wage dispersion -- a consequence of the increase in inflation itself and of the expectations derived from the attempts to live with and control it -- have two main social effects. First, it discourages firms to hire workers through formal contracts. Second, it increases income inequality, due to the regressive nature of the inflationary process, and to the fact that better organized groups tend to get better deals in terms of wage adjustments than those prescribed by the official wage policy.

In order to further develop these issues, this paper is organized as follows. The next section presents a big picture of the Brazilian labor market since 1980, stressing at the same time its high capacity of job creation and the bad quality of most of its jobs. We also discuss the evolution of income distribution in that period. Section 3 establishes, both theoretical and empirically, a (negative) link between high inflation (and high inflation variance) and job creation in the formal sector. Section 4 argues that high inflation was one of the main components behind the increase in income inequality in the 1980s. Section 5 discusses the effects of labor market institutions on the attitude of economic agents and the consequences of the latter for job creation in the formal segment of the labor market. The final section concludes.

2. The Brazilian Labor Market since 1980

This section investigates the behavior of the Brazilian market since 1980. Two issues are discussed. We first argue that lack of job creation has not been a problem in Brazil at least for the last 14 years. Rather, the problem seems to be the poor quality of the jobs generated. Second, we present evidence that income inequality in Brazil, one of the highest in the world, has increased in the same period.

Despite the fact that Brazilian GNP growth since 1980 has been very weak, at about 1.1% a year, occupied population grew at a much more rapid pace, at about 3.0% a year (see Amadeo *et al.*, 1994). Total population grew at a rate of 1.9% a year in the same period. In absolute terms, 16.6 million new job positions were created between 1981 and 1990, which suggests that the Brazilian labor market is capable of creating a large number of new jobs even in periods of relative low growth.

The evolution of unemployment and participation rates in Brazil confirms this high capacity of labor absorption. Brazilian unemployment rate is low by international standards. Unemployment rates for the whole economy remained below 5% in every year since 1980, despite the observation of higher rates in some metropolitan regions. Average unemployment in the six main Brazilian metropolitan regions between 1982 and July 1994 was 4.9%, exceeding 6% only twice in that period.

Participation rates, on the other hand, increased from 53.4% in 1981 to 56.7% in 1990, reflecting mostly a growing trend of women participation in the labor market.² This increase, however, could be accommodated without a rise in unemployment rates, which illustrates that the Brazilian labor market is able to create a large number of new job opportunities.

What could explain the fact that an ailing economy such as the Brazilian economy in the 1980s was able to incorporate a growing number of workers? The answer lies on the poor quality

² Saboia (1994) shows that the significant increase in women participation rates for women in the last decade was mostly accounted by those women that had 5 years or more of study. Women with 9 years or more of education, for example, increased their participation rates from 57% in 1979 to 63.9% in 1990. Total women participation rates rose from 33.6% in 1979 to 39.2% in 1990, while men participation rates remained almost constant, around 75%.

of the new jobs created. Most of these new jobs, specially those created in the first years of this decade, are on the informal sector, pay much less than fourteen years ago in real terms, and are located in the tertiary sector, which is historically characterized by low wages, high degree of informality, low unionization, and high turnover rates.

Average real earnings of the economically active population, for instance, declined 14% in the 1980s. This decline, however, was not monotonic. In fact, real earnings fluctuations have been very pronounced since 1980. Average real earnings decreased almost 30% in the recession period from 1981 to 1983, then increased about 80% in the recovery period starting in 1984, reaching a peak in 1986 (the year of the Cruzado Plan), but fell back in 1990 to a level 14% lower than that observed in 1981.

More recent data covering only industrial workers in the State of São Paulo (the most modern sector of the Brazilian economy) show a slight increase in real wages in the first years of the 1990s, but still display significant fluctuations. Average real wages declined 15% during the recession of 1990-92, a trend reversed by a substantial increase (about 30%) between 1992 and 1994.

On the other hand, there is evidence that the informal sector in non-agriculture activities expanded since 1980. The proportion of workers hired without a formal contract (*sem carteira assinada*, without a work card), and therefore not covered by the Brazilian Labor Code (*Consolidação das Leis do Trabalho*, CLT), in non-agriculture activities increased from 20.4% in 1979 to 26.1% in 1990 (see Saboia, 1994).³ The corresponding figure covering the six main metropolitan regions of Brazil shows an increase from 13% in 1982 to 15.5% in 1992.

By contrast, data covering Brazilian non-urban activities show a decrease in the proportion of workers hired under a formal contract (*com carteira assinada*, with a work card) from 55.9% in 1979 to 46.8% in 1990 (see Saboia, 1994). The proportion of workers hired under a formal contract in the main Brazilian metropolitan regions declined from 57% in 1982 to 50.5%

³ Workers hired under a formal contract (under CLT) are entitled to receive social security benefits and are guaranteed by job security policies. The Brazilian Labor Code is more extensively discussed in Section 4.

in 1992.⁴

While the number of occupied people in Brazil rose from 50 to 62 million between 1985 and 1990, the number of formal jobs in Brazil (workers hired under the *CLT*) grew by only 0.1% a year in the same period, and declined 1.6% a year between 1990 and 1993 (see Graph 1).

Labor turnover in the formal sector, on the other hand, is high when compared to other countries, suggesting little worker-firm attachment (and, therefore, little on-the-job training) even in the formal sector of the economy. Approximately 734 thousand workers (3.1% of the formally employed), on average, got a new job each month between 1985 and 1993, while about 722 thousand (3.0% of the formally employed), on average, left their jobs each month during the same period. Most of them (about 80%, on average) were fired.

Another piece of evidence regarding the poor quality of the new jobs created in Brazil in the last fourteen years is given by a sectoral decomposition of employment. The proportion of workers employed in the tertiary sector, for example, increased 6% in the 1980s, from 43 to 49%. In absolute terms, this corresponded to the creation of more than 10 million new jobs in the last decade, a 50% increase with respect to the number of jobs available in 1981. By contrast, the proportion of workers in the secondary sector remained almost constant in the same period, at about 23%. The primary sector, on the other hand, created 0.9 million new job positions, decreasing its share on total occupation from 28 to 22.5%.

More recent evidence covering only Brazilian metropolitan regions in the first years of the 1990s display this same pattern. Data for the metropolitan region of São Paulo, for example, show a 20% increase of new jobs in commerce and services between 1990 and 1993. By contrast, there was a 25% reduction of jobs in the industrial sector in the same period.

Graph 1, based on data collected by the Labor Ministry (law 4923/65), shows the evolution of total formal jobs in Brazil and for three sectors of the economy: industry

⁴ In fact, most of this reduction (about 5%) happened between 1990 and 1992, which might suggest the occurrence of a structural change with respect to the past, perhaps related to the introduction of new measures on trade liberalization and aiming the modernization of the economy. This exposed many Brazilian firms to more competition, most of them located in the metropolitan regions covered by this household survey data.

manufacturing, services and commerce. It reveals that, despite the large increase in the total number of service sector jobs between 1990 and 1993, the number of formal jobs in this sector dropped from around 8.9 million in the beginning of 1990 to 8.5 million in the end of 1993. The total number of commerce sector formal jobs also dropped from 4.0 to 3.7 million workers in the first years of the 1990s. Nonetheless, Graph 1 shows that the number of industrial sector formal jobs dropped even more, from 6.5 to 5.5 million in the same period, indicating that the informalization process has intensified recently.⁵

The fact that most of the new jobs created in Brazil since 1980 came from the services sector is another evidence that most of these jobs are "bad jobs", as we illustrate below. Amadeo *et al.* (1994b) show that approximately 60% of workers employed in the services sector in 1989-90 have 4 years or less of education. By contrast, the proportion of workers with 4 years or less of study in the industrial sector is around 40%, while for the whole economy is near 50%.

Moreover, about 38% of employees in the services sector in 1989-90 have a formal contract (are hired under *CLT*). The corresponding figure in the industrial sector is around 85%. Most of these service sector jobs display low tenure: 47% of employees have less than one year of job experience at the firm. In the industrial sector, the proportion is 31%.

Even among formal workers (hired under *CLT*), turnover rates are much higher in the service sector. In the commerce sector, for example, approximately 4.3% of formally employed workers, on average, got a new job each month between 1989 and 1993, while 3.9% of them, on average, lost their jobs in the same period. The corresponding figures in the industrial sector are 3.2% and 3.4%, respectively.

The tertiary sector is also characterized by low unionization rates. Amadeo and Camargo (1993) show that the proportion of workers that belonged to a union in 1986 was 29.1% in the manufacturing sector, compared to 5.6% in the service sector and 14.4% in commerce.

⁵ Note that the time series pattern of formal jobs in the services and commerce sectors look more smooth than in the industrial sector. This is only illustrating that net employment changes at the sectoral level have not been large, hiding, however, an intense labor reallocation measured by gross job changes (number of workers hired and fired) at the firm level in these sectors, as we show below.

In sum, the typical service sector job in Brazil is held by the relatively unskilled, does not provide a formal contract, is not unionized, and has a short tenure.

Finally, we present some evidence that income inequality in Brazil, one of the worst in the world, deteriorated in the last decade. Amadeo *et al.* (1994a) show that the income ratio of the richest 10% against the poorest 40% in Brazil is around 6, while for other countries with population over 5 million and good quality data this ratio is below 3.5. In fact, Cardoso *et al.* (1993) argue that Brazil has one of the most unequal income distributions in the world, worse than any other country with similar income per capita levels.

Moreover, income inequality in Brazil only differs from the pattern observed in other countries when we look at the top of the distribution: income distribution among the 80% poorest is similar to the available international evidence. However, income distribution becomes very unequal when comparisons are made between the 80% poorest and the 20% richest (see Amadeo *et al.*, 1994a).

The rise in income inequality is illustrated by the time series behavior of the national Gini coefficient in the 1980s, which increased from 0.564 in 1981 to 0.602 in 1990, after reaching a peak of 0.630 in 1989 (see Saboia, 1994). Barros and Mendonça (1994) present additional evidence that Brazilian income distribution worsened in the 1980s. They show that all tenths of the distribution lost income in the 1980s, but the poorest were the most affected. While average income declined by 1.5% a year, on average, between 1980 and 1990, the mean income of the 10% poorest decreased by 5.1% a year, on average, in the same period. The 1% richest, on the other hand, increased their income share from 12.1% in 1981 to 13.9% in 1990.

Data for the more recent period, covering only the Brazilian main metropolitan regions, show a drop in inequality measures in the first year and a half of the current decade. The Gini coefficient in these regions was 0.558 in mid-1991, after reaching a peak of 0.600 in mid-1989.

Most authors agree that income inequality in Brazil is mostly explained by unequal access to education, with the labor market acting as a mere vehicle through which education disparity manifests itself (see, for example, Amadeo *et al.*, 1994a). However, in Section 4, we argue that

the deterioration of income inequality in the 1980s is also explained by other factors, such as high inflation and macroeconomic instability.

3. Inflation and Job Creation

In this section, we argue that the high and unpredictable rates of inflation observed in Brazil have been a main source of macroeconomic instability and uncertainty throughout the 1980s and the first years of the current decade. This uncertain environment discouraged firms in the formal sector to engage in long-term attachments to their workers. The result has been little training, low productivity, and high labor turnover.

Graph 2 depicts the evolution of monthly inflation rates in Brazil since 1985. The average monthly inflation rate between 1985 and July 1994 was 19.8%, but it fluctuated from almost 0% in the first months after the Cruzado Plan in 1986 to more than 80% in the months preceding the launching of the Collor Plan in 1990.

The Brazilian economy has experienced six major stabilization plans in the last ten years. Most of them froze prices and wages, five of them replaced the national currency, all of them succeeded in bringing inflation down temporarily, but then failed to control inflation on a more permanent basis (the most successful kept inflation low for 8 months, only).

In fact, as Graph 2 shows, each and every plan since the Cruzado Plan in 1986 (with the exception of the Collor Plan in 1990) brought inflation down but to a higher level and for a shorter period of time than the previous plan was able to obtain. Lack of credibility on the government, specially after the first failed stabilization attempt, inconsistency of fiscal and monetary policies, and unrealistic wage policies and de-indexation schemes were the main reasons behind this series of failures.

A typical pattern of inflation in Brazil since 1986 has been like follows. Government fiscal imbalances, a passive monetary policy and a sophisticated system of wage indexation cause inflation to gradually accelerate from an already high monthly level. Price increases get to a level close to one that the society is not able to tolerate without bringing social tensions to an

insupportable level. Economic agents anticipate that the government will adopt a new stabilization plan. As they fear wage and price freezing, they try to increase their relative prices. As everyone acts the same way, inflation accelerates.

The government, rushed by the events, launches a new plan. Inflation is reduced, but relative prices are still distorted, since this process is usually harmful to the government finances. Moreover, the government lacks credibility, since agents realize that structural changes have not been implemented. After a period of formal de-indexation, indexation re-starts, inflation gradually accelerates, and the process starts all over again (for a more complete discussion on stabilization plans in Brazil, see Abreu and Carneiro, 1994).

Perhaps, the main social cost of these attempts to halt inflation is represented by the increase in the variance of inflation. A high inflation variance, coupled with a staggering pattern of intertemporal price and wage adjustment, produces a larger relative price dispersion. It also affects the wage bargaining process, since unions, incapable of correctly predicting future inflation paths, rationally tend to incorporate a risk premium in their nominal wage demands, leading to a price-wage spiral. A larger variance of inflation, therefore, represents a higher degree of uncertainty in the economy.⁶

Non-synchronization of wage adjustments is another source of uncertainty. Unions are organized at the regional and occupational level and each category bargains a collective agreement with firms once a year in a pre-determined month of the year. In a high inflation country like Brazil, non-synchronization of collective bargaining makes the task of forming expectations about the future course of relative wages and inflation very difficult. Since transaction costs do not allow for more frequent wage bargaining between unions and firms, there is an incentive to overshoot wage demands, contributing to more inflation and higher wage dispersion. Higher wage dispersion is also a consequence of the differential degrees of bargaining power of distinct worker categories.

⁶ Fischer (1991) argues about the likely positive effect of inflation on uncertainty, via an increase in inflation variability. He also suggests that an increase in uncertainty is likely to reduce economic growth, and presents cross-country evidence of the negative effect of inflation level on growth.

The same argument can be applied to explain why a higher level of inflation would lead to higher price dispersion. The frequency of price adjustment tends to increase when inflation accelerates, but some firms are not able to adjust prices as frequently as others, due to the existence of price controls or differential menu costs, for example.⁷

We measure price dispersion by the standard deviation of monthly price increases of 320 sub-items which compose the Cost of Living Index in São Paulo (*FIPE-SP*). We then test whether higher inflation leads to higher price dispersion. In fact, Graph 3 confirms the existence of a positive relationship between inflation and price dispersion (12-month moving averages) in Brazil. The only exception is between 1991 and 1993, when inflation accelerated without any increase in price dispersion.

Graph 4 plots inflation against wage dispersion (12-month moving averages), as measured by the coefficient of variation of real wages in 18 sectors of the manufacturing industry. It also finds a positive relationship between these two variables.

How does this uncertainty (measured by wage and price dispersion) affect the labor market? We argue that it affects the labor market through lower formal job creation.

First, we argue that, despite the high degree of flexibility of the Brazilian labor market when compared to most European countries, costs of adjusting employment in the formal sector are not zero. There are two main direct (institutional) costs of firing in Brazil. The first was introduced in 1966 and consists of a fine paid by the firm to workers in case of non-justified dismissals. The fine corresponds to 40% of the amount deposited in a capitalization fund in the name of the worker fired, the *FGTS, Fundo de Garantia por Tempo de Serviço*.⁸ Since the fine increases, in absolute terms, with the amount deposited in this capitalization fund, it increases with

⁷ See Benabou (1988) for a theoretical model that would imply a positive relationship between inflation and price dispersion. Lach and Tsiddon (1992) provide empirical evidence.

⁸ *FGTS, Fundo de Garantia por Tempo de Serviço*, is a capitalization fund also created in 1966. Each month, firms hiring workers through a formal contract deposit 8% of the nominal wage value of each worker in a bank account opened in his/her name. Each account pays 3% interest a year plus inflation adjustment and can be withdrawn (by the worker) only in case of non-justified dismissal, retirement, or housing purchase. Fund's resources were mainly used to finance housing construction. The fine for non-justified dismissal was originally set at 10%. The 1988 Constitution determined its increase to 40%.

the time of employment the worker has in a given firm.

The second most important cost of firing formal workers is the law requirement of a one-month advance notice the firm has to give to its workers in case of firing. During this period, the worker can take 2 hours a day off to look for another job. Since the firm knows that productivity goes down significantly in this month, it usually fires the worker and pays him/her an extra monthly wage.⁹

Amadeo et al. (1993) estimate that the direct institutional cost for a firm that fires without justification a worker with 1 year of employment in the firm and pays him an extra wage as advance notice corresponds to 1.38 monthly wages. If the worker is in the firm for 5 or 10 years, the cost corresponds, respectively, to 2.15 or 4.84 monthly wages.

Costs of hiring, on the other hand, are driven mostly by technological reasons. Among them, the most important is the cost of training new personnel.

Theoretically, an intertemporal profit-maximizing firm, in the presence of non-zero costs of hiring and firing, will hire less workers in an unstable environment than in a stable one, since in an unstable economy, target employment levels fluctuate much more. Since the firm would choose not to incur in costs of hiring and firing the same worker in two consecutive periods, it just opts not to hire this worker. Therefore, its optimal strategy is to avoid formal contracts, to prefer hiring temporary workers when it can, and not to invest in improving its labor force quality. Empirically, this would imply the observation of less job creation in the formal sector in unstable periods.

Of course, we should not ignore the role played by the traditional variables affecting labor demand, like wages, own product demand, and technological improvements. The argument here is one of a partial correlation. *Coeteris paribus*, an increase in uncertainty should decrease formal

⁹ A third institutional component of firing costs in Brazil, overlooked by most labor market analysts, is that job separation times are the best occasions for a worker to sue his/her firm for any unpaid benefits that he/she was entitled to receive in the period he/she was still working for the firm. Since the Brazilian Labor Code (*Consolidação das Leis do Trabalho, CLT*) determines that any unresolved dispute between firms and workers should be sent to Labor Courts, final decisions are usually slow and expensive, constituting in an important additional turnover cost.

job creation.

Graph 5 plots the evolution of wage dispersion and the number of workers hired (12-month moving averages) in the formal sector between 1985 and 1993. With the exception of the period 1990-91, the two variables look negatively correlated, *i.e.* firms hire more formal workers in times of low wage dispersion.¹⁰ Apparently, however, there is no correlation between our price dispersion index and the number of workers hired.

Graph 6 compares wage dispersion and total employment in the formal sector (12-month moving averages). The Graph shows some evidence of a negative relationship between the two variables, with exception of the period from 1989 to 1991.

A more rigorous analysis could be carried out via an estimation of a dynamic labor demand equation, and a test of the significance of adding our price and wage dispersion measures as explanatory variables. This should be done using firm level data in future work.

4. Inflation, Wage Policy and Income Inequality

Cardoso *et al.* (1993) show that there is a significant positive relation between the inflation rate and several measures of income inequality in Brazil using data from 1980 to 1991. They find that variations in inflation and unemployment explain more than 30% of the variation in income inequality in 5 large Brazilian metropolitan areas. They note that their findings still underestimate the total effect of inflation on earnings inequality, since the data compares earnings in the beginning of each month, therefore ignoring the differential effect of the inflationary tax on the different groups in the society. In fact, the inflationary tax is felt more intensely on the lower bottom of the income distribution, since the lower one's earnings, the lower the probability that he is able to open a interest-paying current account at the bank.

Before presenting some new evidence on the relationship between inflation and income inequality, it is useful to describe two characteristics of the Brazilian labor market that help in

¹⁰ 1990 was a very exceptional year in Brazil, characterized by a freeze in monetary assets over US\$ 1,000 of every Brazilian citizen, determined by the Collor Plan.

understanding how inflation may be an important factor in the explanation of the rise in income inequality in Brazil during the 1980s. Both explain the wide use of the official wage policy in wage negotiations between workers and private firms, specially during the military period from 1964 to 1985 (see Gonzaga, 1988).

The first characteristic concerns the format of Brazilian Labor Laws. The Brazilian Labor Code (*Consolidação das Leis do Trabalho, CLT*) dates from 1943, an authoritarian period of strong fascist influence in Brazilian politics (see Amadeo and Camargo, 1993). The *CLT* had, from the start, a corporatist and paternalistic design, which basically left to the State the task of intervening to mediate labor-capital conflicts.¹¹

The second important feature of the Brazilian labor market for our analysis is the development of a sophisticated indexation system that emerged in response to the frequency of high rates of inflation, under the same paternalistic inspiration that permeates labor-capital relationship in Brazil. The official wage policy was introduced in 1965, after the military coup. According to one of its formulators, it intended to replace labor-capital conflicts by a simple arithmetical formula.

Government wage policy changed more than 15 times since its introduction. Most of the modifications concerned the frequency of automatic wage adjustment (which varied from yearly adjustments during the whole period before 1979, to monthly adjustments), and the percentage of inflation to be incorporated to wages.

Throughout the period, unions always fought for more frequent adjustments. Inflation acceleration, however, made the system incapable of protecting real wages. Nominal wage increases were, in general, eventually eroded by inflation acceleration.

The official wage policy was particularly important for all categories before 1985 (see Gonzaga, 1988). Since then, it has increasingly been converted into a "floor" of wage adjustment,

¹¹ The *CLT* was significantly changed only twice since its creation: in 1964 and in 1988. In 1964, after the military coup, the military government reduced the right to strike and amplified the scope of intervention in collective agreements. In 1988, a new Constitution was implemented, introducing a chapter on social rights, and amplifying the right to strike.

usually followed by those groups with less bargaining power. It was also frequently used to adjust the minimum wage value.

Therefore, we make the argument that, specially after 1985 with the rise in union activism in Brazil, some workers became more effective than others in obtaining wage increases above the level determined by the official wage policy. Since this implies that some workers are more protected from inflation than others, inflation acceleration should increase wage inequality, specially after 1985.

Graphs 7 and 8 display the evolution of inflation and earnings differentials since November 1982. Graph 7 plots inflation and the ratio between average wages in the industrial sector of São Paulo (*FIESP*), the most modern sector of the Brazilian economy, and the minimum wage, taking this ratio in November 1982, the first month, to be equal to 100.¹²

Although there is substantial variation in the two series, they seem to move together throughout the period, again with the exception of 1990. This provides some support to the hypothesis that the more organized workers were able to obtain a better protection from high inflation than those workers that earn the minimum wage (or fixed multiples of it).

Graph 8 is very similar to Graph 7. It uses the ratio between the earnings of formal workers and the minimum wage as the wage differential variable, using the base November 1982 equal to 100. It shows that those employees hired with a work card, supposedly those with more bargaining power, could increase their wages in terms of minimum wages whenever inflation accelerated.

In sum, although more frequent data on earnings differentials than monthly data, which would allow us to measure the total impact of the inflationary tax on income inequality, are not available, there is some evidence that the most organized groups in the society were more able to incorporate price increases in their wage adjustments than other groups. Therefore, those groups seem to have felt less intensely the effects of high inflation rates in Brazil, which contributed to

¹² A number of 130 on the vertical axis, for example, means that the differential between *FIESP* wages and the minimum wage is 30% larger than it was in november of 1982.

the increase in income inequality observed in the 1980s.

5. Institutions and its Effects on Employment Quality¹³

We have emphasized that the main problem in Brazil is not job creation but the low quality of the jobs created. In this section, we look at the way in which labor regulations affect the attitudes of individual workers and employers and, in turn, the way in which these attitudes affect the workings of the labor market. In particular, we are interested in the role of the interaction between agents' attitudes and certain characteristics of the Brazilian labor market, such as high rates of informal job creation and labor turnover.

As part of a state corporatist strategy, the Brazilian Labor Code was based on the notion that the law should protect workers from undue exploitation of employers. The counterpart of such approach is that if the law protects the workers, the latter do not need to negotiate better working conditions or wages. The objective of this strategy is to avoid capital-labor conflicts by reducing the level of direct negotiation between workers and employers. In such scheme, both the Labor Code and the Labor Courts play a very prominent role.

However, laws are rigid and do not respond to environmental changes whereas negotiations provide -- at least in principle -- room for flexibility. The usual attitude of unions and employers in a system in which the law establishing wage adjustments and working conditions is very detailed and encompassing is to appeal to the Labor Justice each time one of the parts is not willing to negotiate.

Take, for example, the way workers, employers and Labor Courts behave when a worker is fired in Brazil. On the one hand, the worker has no costs if he sues the employer for unlawful practices during the contract, except the cost to attend the hearings¹⁴. This means that, anytime the worker is fired, he has a strong incentive to sue the employer. He does not lose anything by doing so, and has a possibility of winning the sue. So, employed workers tend not to complain

¹³ This section draws on Amadeo *et al.* (1994c).

¹⁴ In general, labor lawyers charge fees proportional to the value of the lawsuit, contingent on a favorable decision to the worker.

about unlawful practices in fear of being fired, but are very active in the Labor Courts after they are fired for any reason.

Employers, on the other hand, tend to appeal from the decisions of the Board of Conciliation and Judgement, since they perceive the system as one that favors workers, at this level. As the system is quite paternalistic, it is not surprising that common knowledge in the Labor Courts agrees with this perception.

The final result is an extremely congested Labor Justice, with millions of demands per year (see, for instance, Pastore and Zylberstajn, 1988), which ends up impairing workers rights, as the final judgement can take years to be pronounced. On the other hand, it generates distrustful employer/workers relations, with employers always afraid of being sued in the Labor Justice, and very little incentive to cooperation at the firm level.

Although these considerations imply rigidity in the work standards dimension and very untrustful capital labor relations, the current regulations tend to generate incentives for very flexible real wages and employment relations. This is so for two reasons. First, because the costs of firing in Brazil are purely pecuniary. There is no really important non-pecuniary limitation for a firm to fire a worker. Second, because the current system -- in which, if the worker is fired without a justified reason, he has the right to withdraw his capitalization fund (*FGTS*) and the firm has to pay a fee of 40% of the fund, as described in Section 2 -- provides an incentive for very short-lived individual labor contracts.

If a worker is never fired, he will never receive the fine and will only draw his *FGTS* when he retires. For unskilled workers, in jobs without clear promotion opportunities, being fired means an immediate income inflow which can be substantial, depending on how long they have held their jobs. This revenue would, otherwise, only become available to him on retirement. Obviously, the incentive to get fired is higher the smaller is the rate of unemployment, since the probability of quickly getting another job increases in this case. For these workers, the optimal strategy is to do on-the-job search and seek to get fired, reducing the amount of effort dedicated to the current job and, consequently, reducing productivity.

As short-term work relations are the optimal strategy for the worker, for the employer the best strategy is to get the most out of the worker in this short period of time and never invest in the worker in the long run. This is so because the probability of losing the investment in workers through training and qualification is very high. Thus, the optimal strategy for the firm is to provide the minimal amount of training to unskilled workers and to exploit them as much as possible.

Under these circumstances, worker-firm relationships are expected to be of short duration. Firms have no interest in providing training for workers, while workers are not involved with the firms objectives. The employment relation is very flexible, but there is very little room for labor productivity growth through training and learning on the job.

Table 1 shows turnover rate of the Brazilian formal sector workers during the period 1985/1993. The turnover rate is calculated as the minimum between admissions and dismissals, divided by the total labor force. The table shows the monthly average turnover rate and the annual labor turnover rate for the periods for which data are available.

Table 1: Labor Turnover Rates
Brazilian Formal Labor Market
1985/1993

year	labor turnover monthly average	labor turnover annual
1985	3.80	n.a.**
1986	3.67	n.a.
1987	3.72	n.a.
1988	3.80	n.a.
1989	3.49	39.66
1990	3.26	38.20
1991	2.69	35.75
1992	2.26	28.05
1993*	2.73	32.81

Source: Ministry of Labor - Law 4923

* Period January-October, 1993

** n.a. - not available

The data should be read as follows. In 1985, on a monthly basis, 2.8% of the jobs of all Brazilian legally registered firms with more than five employees changed hands. On an annual basis, in 1989, 39.66% of the jobs changed its workers. Although the period of time is very short to more elaborated statistical inferences, the turnover rates showed in the table are strikingly high. On the one hand, it shows a high *employment flexibility* in the Brazilian labor market. On the other, it suggests that, with such high turnover rates, training and on-the-job learning should not be very common in the Brazilian formal labor market.

Another important institution to be discussed is the unemployment insurance program. This program functions more like a monetary transfer program to formal unemployed workers than like the traditional OECD unemployment programs, which link the right to receive the benefit to some specific duties, like not to refuse a job offered by the government employment service, or to being available for re-training. Actually, the fact that it functions like a monetary transfer program to unemployed formal sector workers creates an incentive for workers and firms to turn signed labor contract jobs into temporary (during the four months the benefit is received by the worker) non-signed (informal) labor contract jobs.

During the four months the worker receives the benefit, the unemployment board has no control over the activities of the recipients. Thus, if the worker finds an informal job within these four months, the benefit will not be discontinued. If the new job is a signed contract job, the unemployment board could, in principle, find out that he is not unemployed and cut the benefit, although, in practice, that never happens. For the employer, on the other hand, it is always less expensive to have a non-signed contract worker.

Thus, a coalition can be formed between workers and employers to informalize the labor force. If the contract is discontinued for four months, but the worker maintains his job position, he will keep his wage and receive the unemployment benefit. Actually, the agreement could include the drawing of the capitalization fund by the worker and the employer could negotiate the informal repayment of the 40% fine of the FGTS to him. Thus, both employers and workers may have a financial gain, at the expense of the State.

This conjecture helps to explain, at least in part, the fact that the introduction of an unemployment insurance program in Brazil did not result in a tendency to increase the rate of unemployment or to reduce the percentage of workers with a non-signed contract job, as theoretical models would anticipate. These models predict that unemployment insurance benefits would increase the rate of unemployment or the percentage of workers with a non-signed contract job for at least two reasons: because it would reduce the "utility" of work and thus induce leisure, or because, as the worker receives the benefit, he can refuse other employment opportunities in the informal market.

Graph 9 shows the evolution of the rate of unemployment (vertical axis) versus the evolution of the percentage of workers without a signed contract (horizontal axis) between May 1982 and October 1993. These are monthly household surveys data (*Pesquisa Mensal de Emprego - IBGE*) for the six largest Brazilian metropolitan regions. As Graphs 3 to 8, each point represents 12-month moving averages of the rate of unemployment and the percentage of workers without a signed contract, for a given period. The slope of this curve shows the relative behavior of these two variables. The steeper the slope, the more the unemployment rate is the labor market adjustment variable, as compared to the percentage of workers without signed contracts.

Points 1 and 2 correspond to the strong recession of the beginning of the eighties (1982/1984). Points 3 through 8 account for the years 1985/1990, which is a period of rapid economic growth (1985/1986) and of relatively slow growth (1987/1989). Finally, points 9 through 11 represent the recession period of the beginning of the nineties.

As seen in the figure, there is a clear change in the reaction of the Brazilian labor market in the two recession periods (points 1,2 and 3 as compared to points 9,10 and 11). While in the first recession, the rate of unemployment was the main labor market adjustment variable, in the second the percentage of workers without signed contracts took its place as the main labor market adjustment variable. Thus, the role of unemployment as the adjustment variable becomes smaller after the introduction of the unemployment insurance program.

Although this behavior can not be entirely credited to the unemployment insurance system,

the fact that the unemployment rate became a less important labor market adjustment variable after the creation of the unemployment insurance program is quite unexpected. Thus, one possible implication of these data is that the Brazilian unemployment insurance system created incentives for an increase in the number of informal labor contracts relative to formal labor contracts.

Summing up this section, we argued that the individual labor contract is a very important instrument of the Brazilian labor relations system. The paternalistic nature of the regulations of the individual contract and the importance of the Labor Courts in Brazil generate rigidities on work standard practices, but the lack of non-pecuniary restrictions and the relatively small costs of dismissal, combined with institutions which generate important incentives for worker-firm relations of short duration, discriminate against human capital investment on-the-job training and labor productivity growth. All this implies a flexible employment relation, as opposed to the rigidities observed in the labor contract itself. Finally, the unemployment insurance program creates incentives to the transformation of signed contract jobs into non-signed contract jobs, inducing the growth of the informal segment of the labor market in Brazil.

6. Conclusions

In this paper we start by arguing that the main employment problem in Brazil is not job creation but rather the low quality of the jobs created. In a sense, the Brazilian labor market is very flexible since the costs of hiring and firing are not particularly high. As a result of the uncertainty associated with the recurrent failures to reduce inflation, firms do not have the incentives to establish long term relations with workers, on the one hand, and on the other, have incentives to establish informal labor contracts. Labor market institutions -- the role of the labor courts, the firing procedures and the unemployment insurance system -- are also conducive to wage and employment flexibility.

Hence, in a sense, the problem in Brazil is neither rigidity in the traditional sense nor sluggish job creation. On the contrary, the problem is too much flexibility as a result of the characteristics of the long inflationary process and the relationship between institutions and the

attitudes of economic agents.

As a result, contracts in the formal sector of the Brazilian economy are short lived, turnover rates are very high and the size of the informal segment of the market is large and growing.

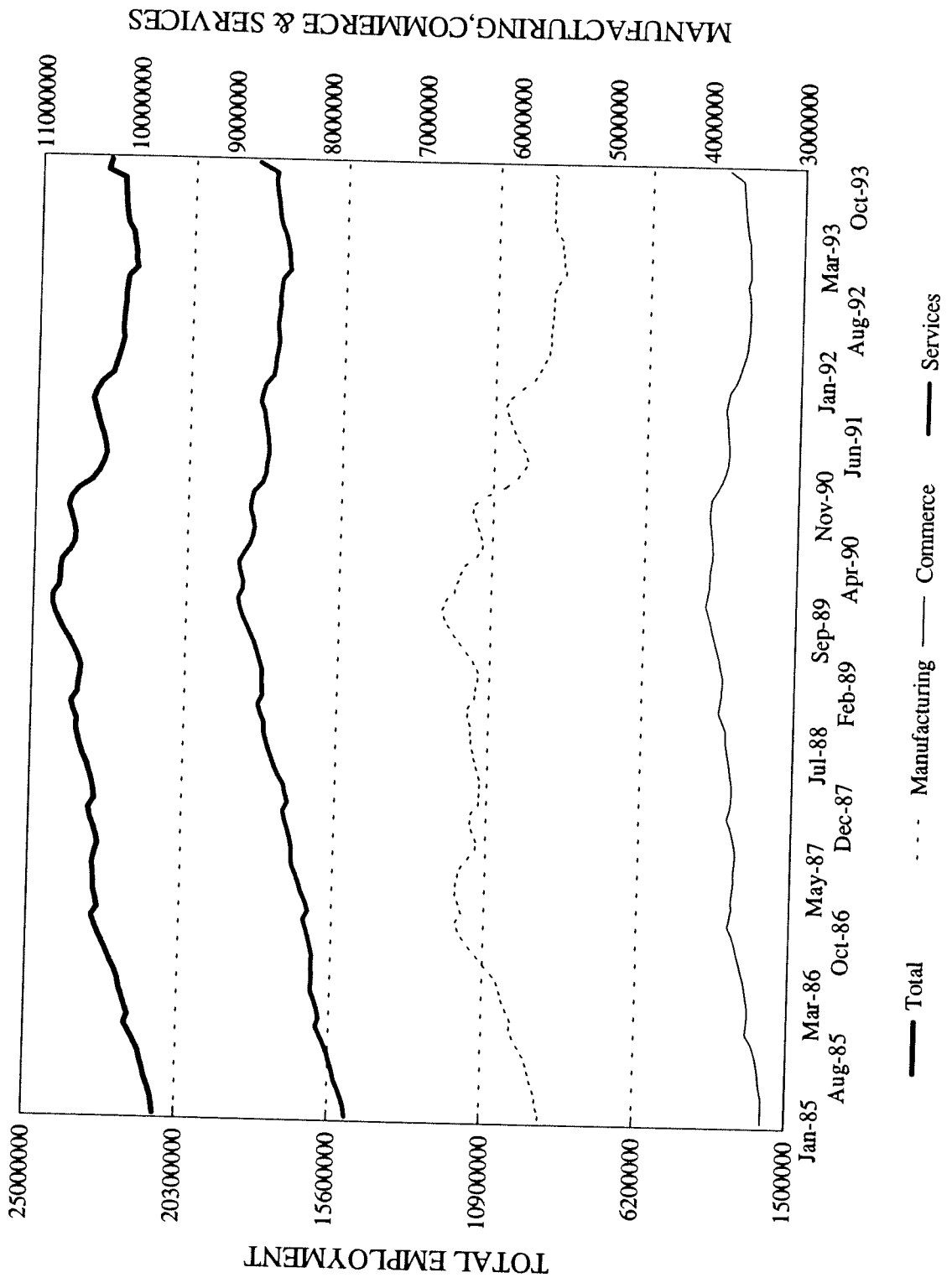
Stabilizing the economy is certainly a necessary condition for enhancing the conditions for better labor market performance. But the stabilization process itself is not independent from the workings of the labor market in Brazil. The process of wage formation is too segmented and staggered over time, which -- given pervasive uncertainty -- creates an incentive to the overshooting of wage demands. In a relatively closed and very oligopolistic economy, the result of wage pressures is the acceleration of inflation.

Stabilization, thus, is a necessary but not sufficient condition for better labor market performance. Changing labor market institutions also seems to be an important factor in enhancing labor market conditions. The introduction of collective bargaining, the reduction in the importance of the Labor Courts, changes in the firing procedures, and greater control over workers benefiting from the unemployment insurance are examples of changes which could be introduced to improve the functioning of the Brazilian labor market.

References

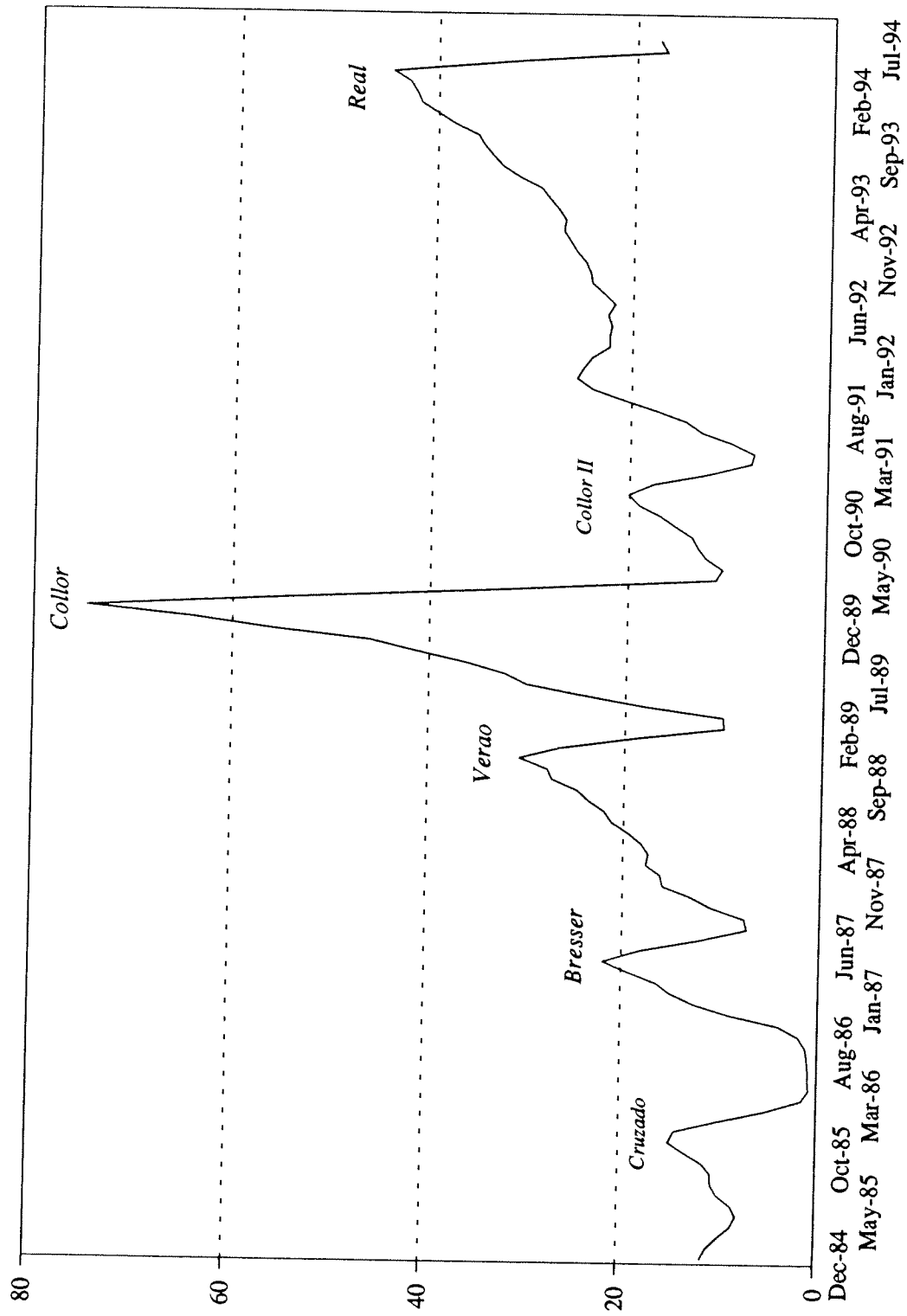
- Abreu, M. and Carneiro, D. (1994), "*50 Anos de Política Econômica no Brasil, 1944-1994*", mimeo, Department of Economics, PUC-Rio.
- Amadeo, E., Barros, R., Camargo, J.M., Mendonça, R., Pero, V., and Urani, A. (1993), "Human Resources in The Adjustment Process", Discussion Paper Nº 317, DIPES/IPEA.
- Amadeo, E. and Camargo, J.M. (1993), "Labour Legislation and Institutional Aspects of the Brazilian Labour Market", *Labour*, Spring, 7:157-180.
- Amadeo, E., Barros, R., Camargo, J.M., Gonzaga, G. and Mendonça, R. (1994a), "*A Natureza e o Funcionamento do Mercado de Trabalho Brasileiro desde 1980*", Série Seminários nº 11/94, DIPES/IPEA.
- Amadeo, E. , Pero, V. and Scandiuzzi, J.C. (1994b), "*Terceirização e Sub-Optimalidade dos Investimentos em Capital Humano*", mimeo, Department of Economics, PUC-Rio.
- Amadeo, E., Barros, R., Camargo, J.M. and Mendonça, R., (1994c). "Institutions, the Labor Market and the Informal Sector in Brazil", mimeo, Department of Economics, PUC-Rio.
- Barros, R. and Mendonça, R. (1994), "The Evolution of Welfare, Poverty and Inequality in Brazil over the Last Three Decades: 1960-1990", Série Seminários nº 8/94, DIPES/IPEA.
- Benabou, R. (1988), "Search, Price Setting and Inflation", *Review of Economic Studies*, 55: 353-376.
- Cardoso, E., Barros, R. and Urani, A. (1993), "Inflation and Unemployment as Determinants of Inequality in Brazil: the 1980s", *Texto para Discussão nº 298*, IPEA.
- Fischer, S. (1991), "Growth, Macroeconomics, and Development", *NBER Macroeconomics Annual*, 1991.
- Gonzaga, G. (1988), "*Efetividade da Política Salarial no Brasil: 1964-1985*", Unpublished MA Dissertation, PUC-Rio.
- Lach, S. and Tsiddon, D. (1992), "The Behavior of Prices and Inflation: An Empirical Analysis of Disaggregated Data", *Journal of Political Economy*, 100: 349-389.
- Pastore, J. and Zylberstajn, H. (1988), *A Administração do Conflito Trabalhista no Brasil*, IPE/USP
- Saboia, J. (1994), "*Trabalho e Renda no Brasil na Década de 80*", Discussion Paper nº 314, IEI/UFRJ.

FORMAL JOBS IN BRAZIL (1985-1993)

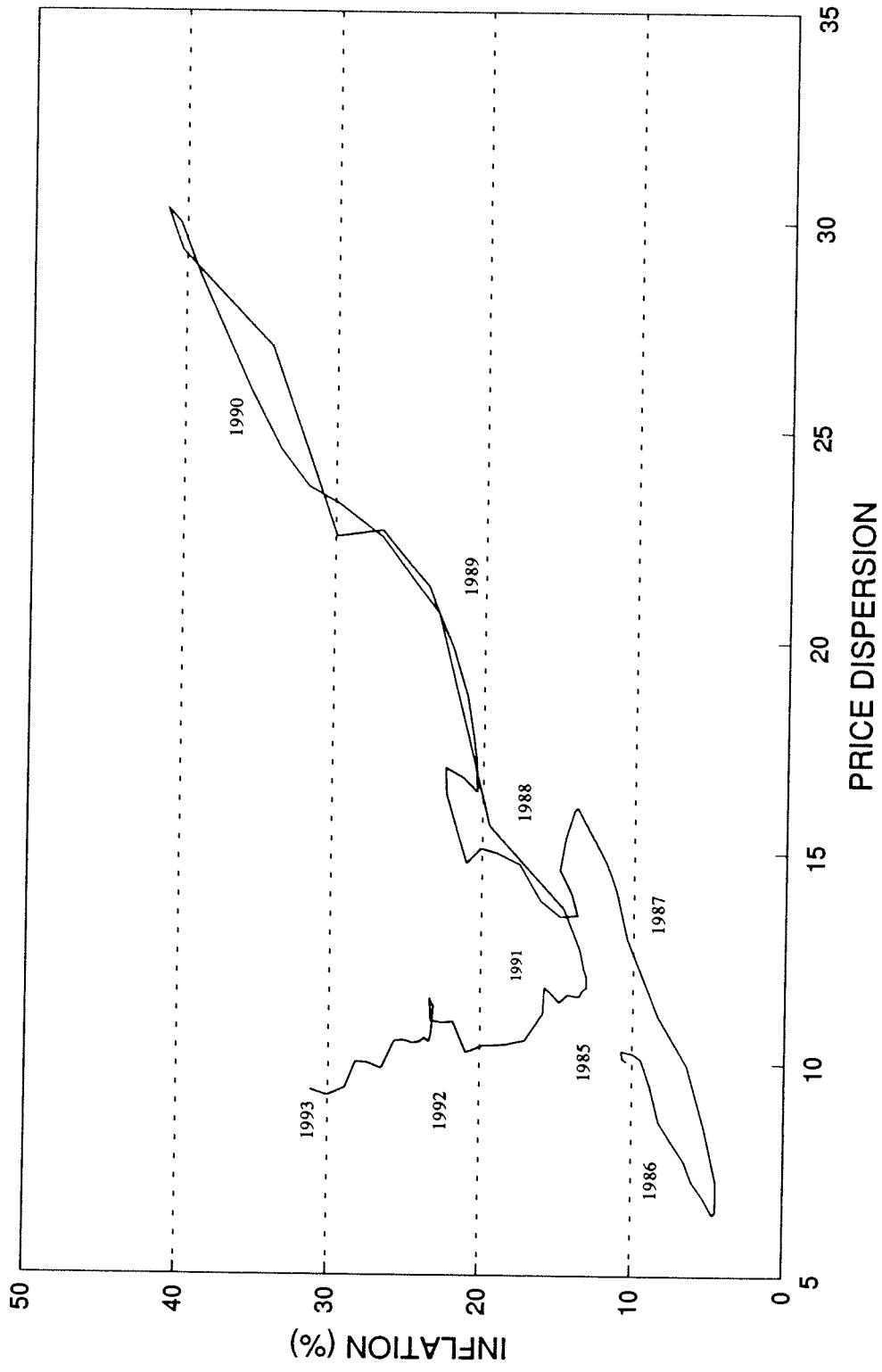


Inflation Rate

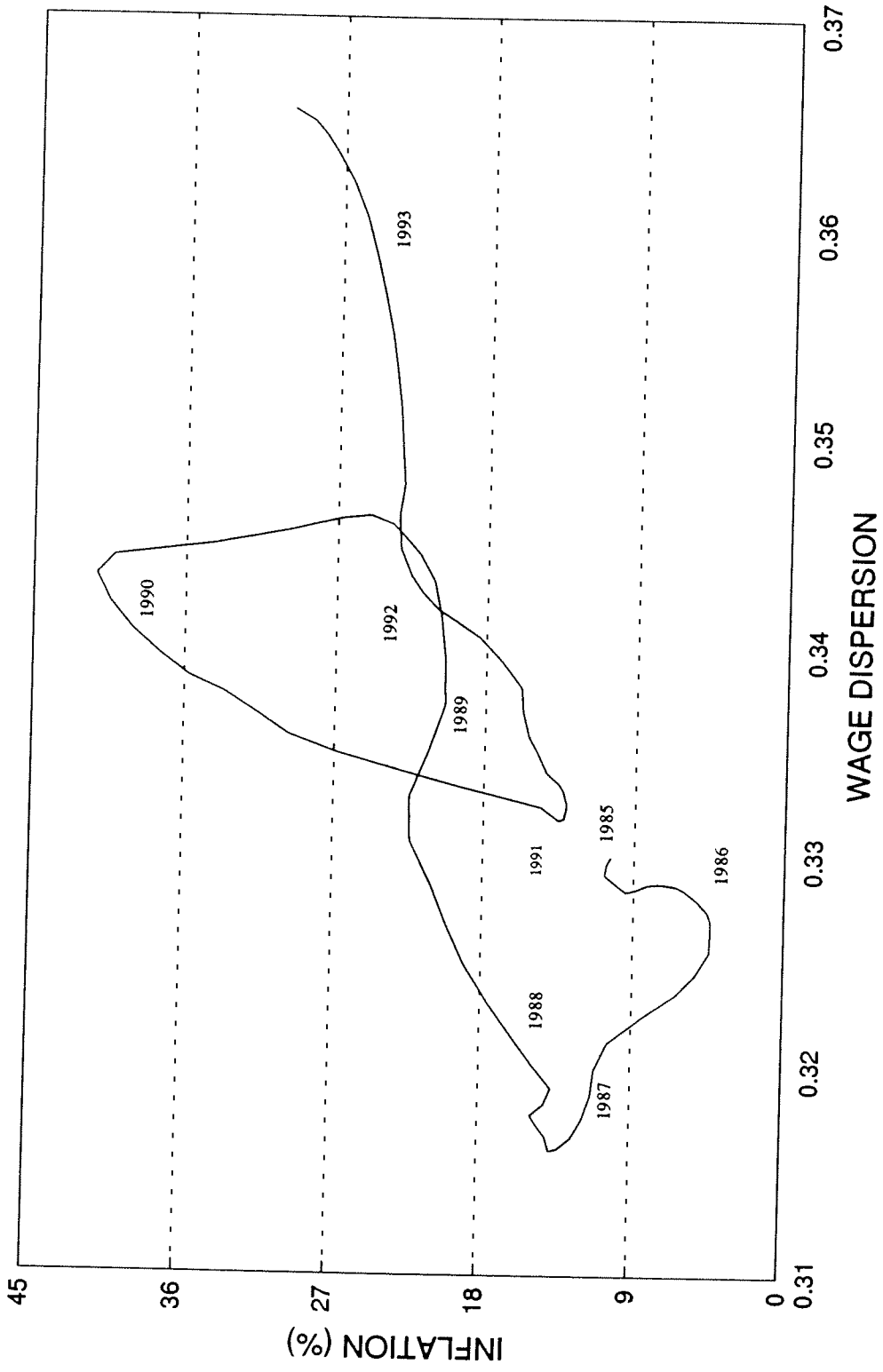
(3-month moving average) - %



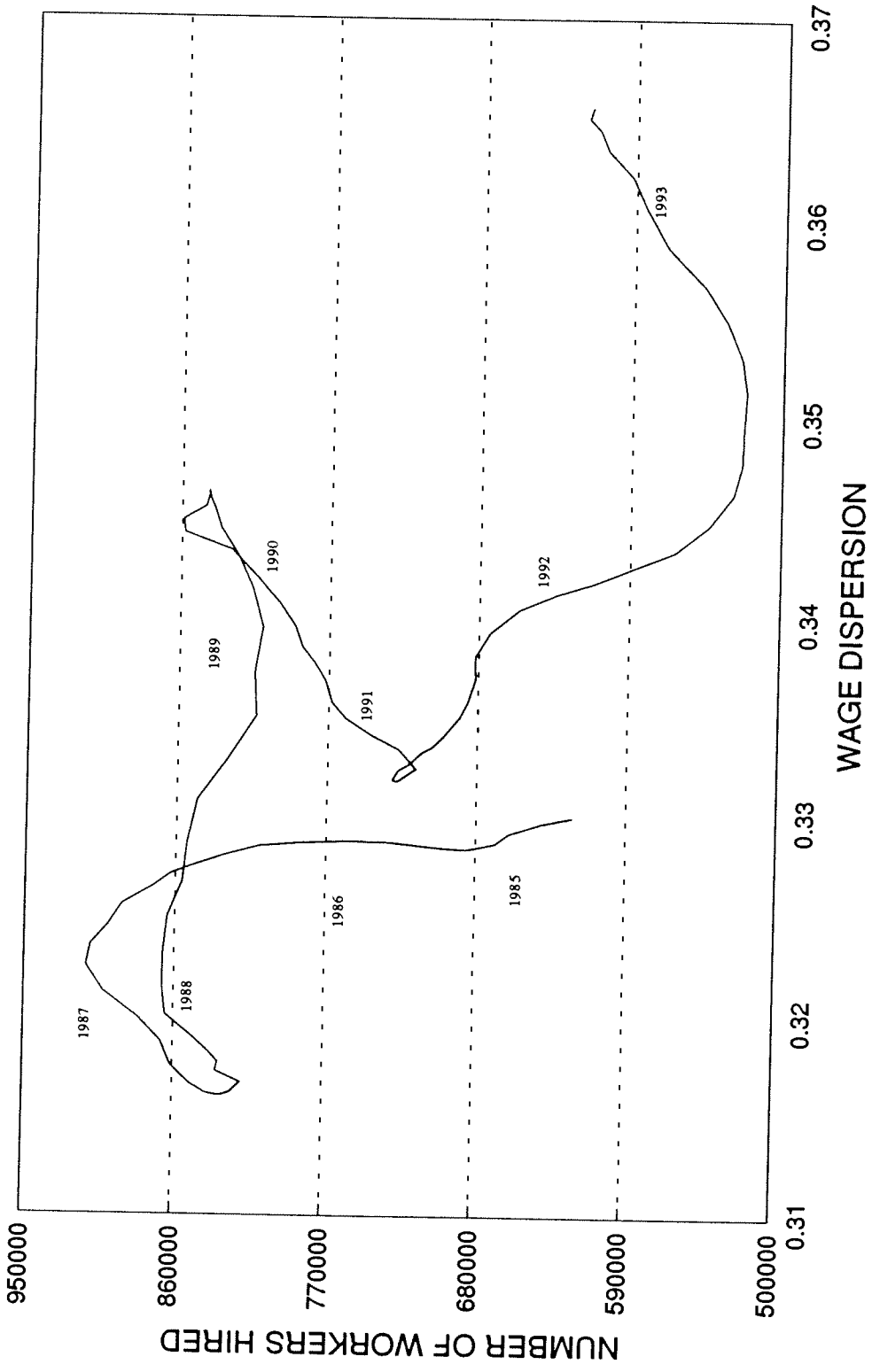
Inflation and Price Dispersion (12-month moving average)



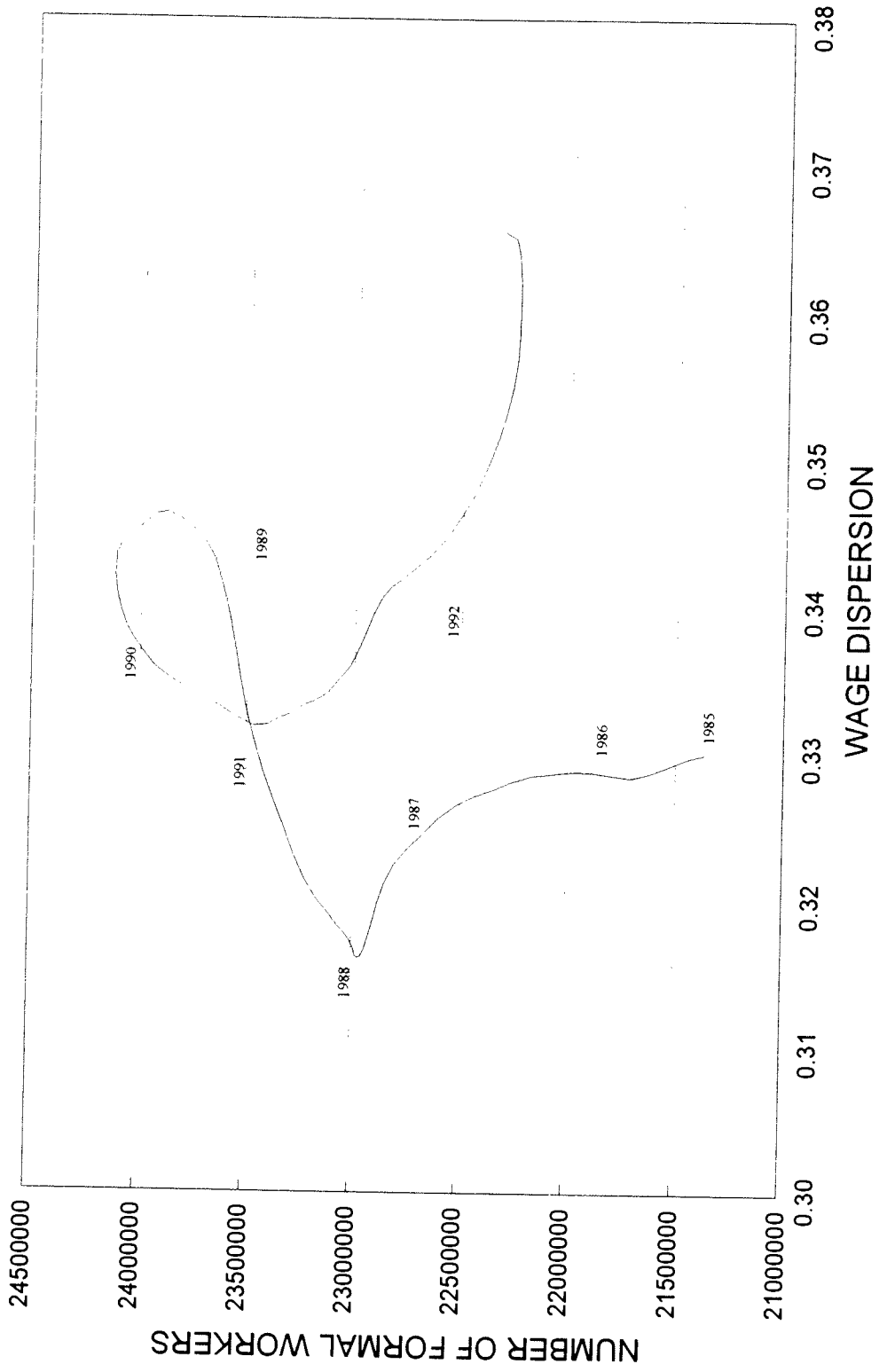
INFLATION AND WAGE DISPERSION (12-MONTH MOVING AVERAGE)



HIRING AND WAGE DISPERSION (12-MONTH MOVING AVERAGE)

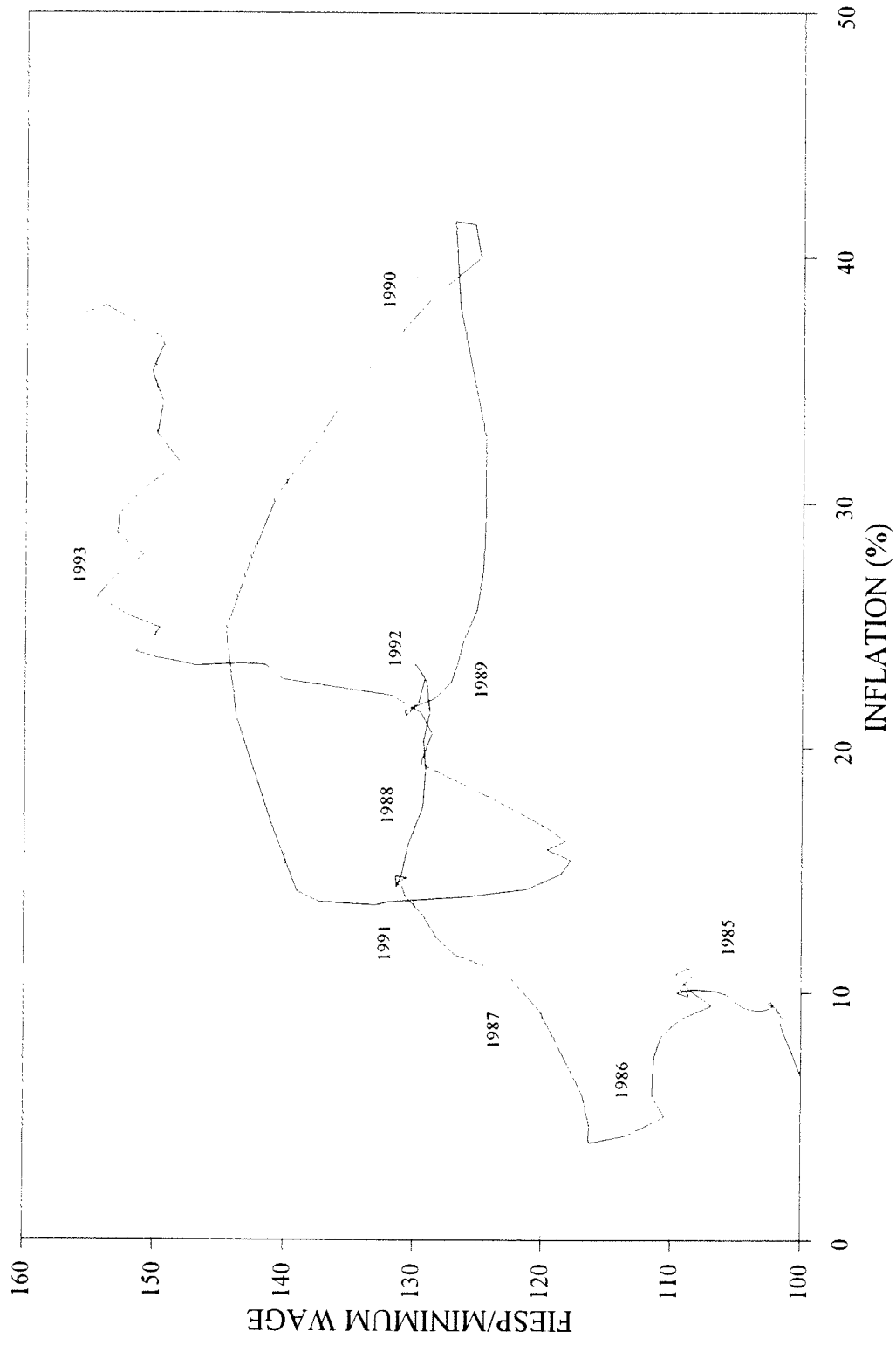


FORMAL EMPLOYMENT AND WAGE DISPERSION (12-MONTH MOVING AVERAGE)



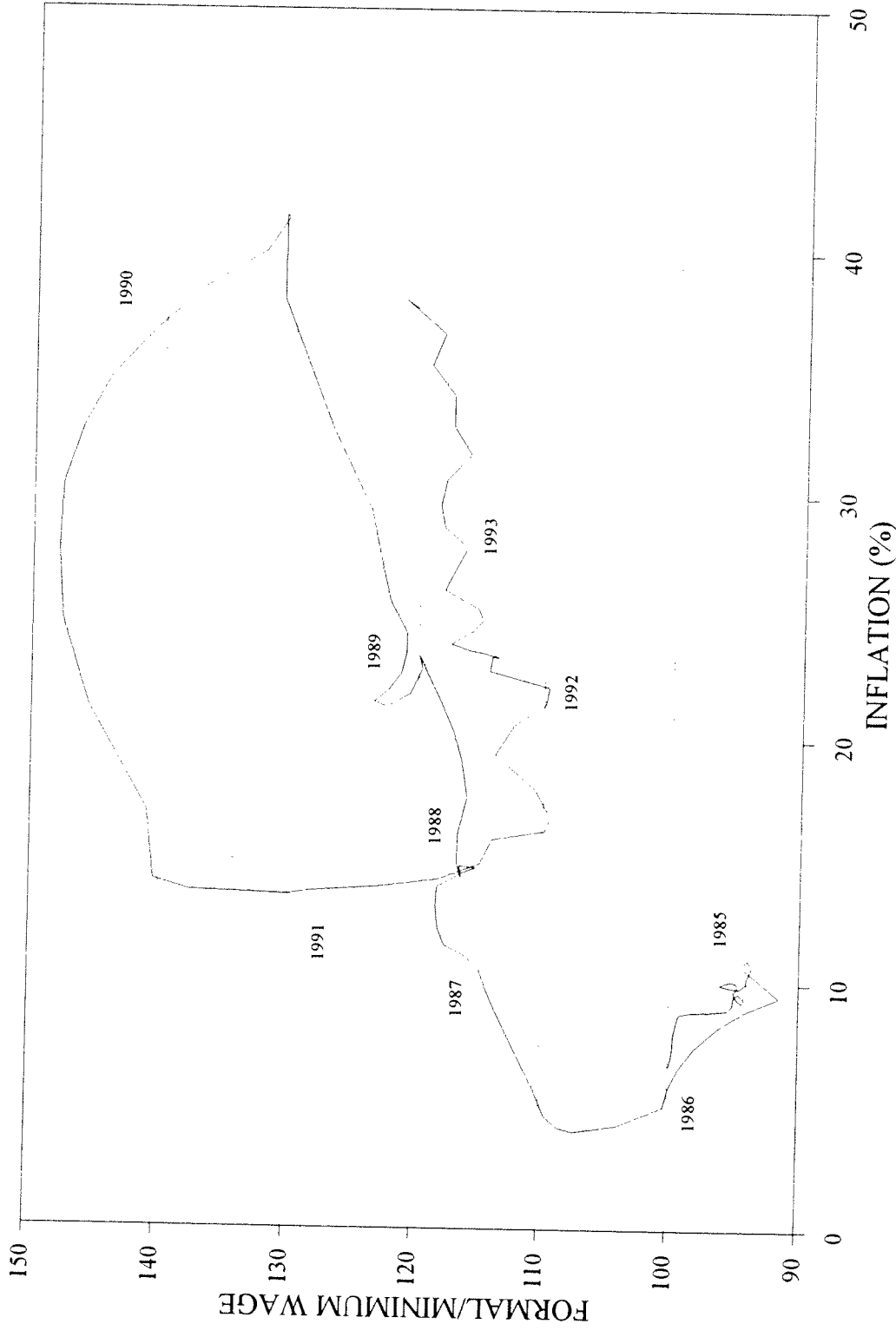
GRAPH 6

WAGE DIFFERENTIALS AND INFLATION



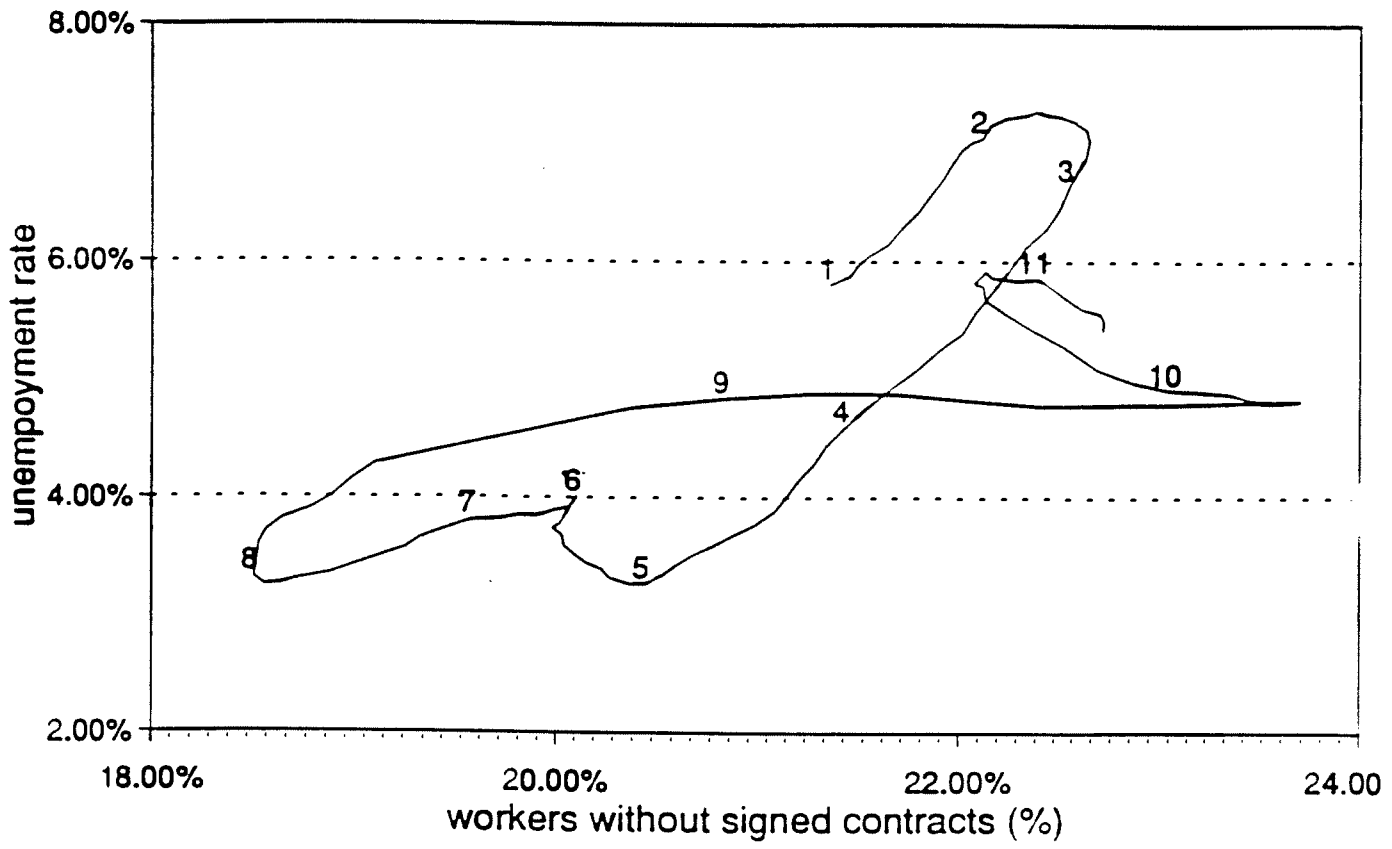
GRAPH 7

WAGE DIFFERENTIALS AND INFLATION



GRAPH 8

GRAPH 9



Texto para Discussão:

304. Carneiro, D. D.; Garcia, M. G. P. "Capital flows and monetary control under a domestic currency substitution regime: The recent Brazilian experience"
305. Abreu, M.P. "A dívida pública externa brasileira em francos franceses," 1888-1956"
306. Abreu, M.P. "The political economy of protectionism in Argentina and Brazil, 1880-1930"
307. Carneiro, D.D.; Werneck, R.L.F.; Garcia, M.G.P. "Strengthening the financial sector in the Brazilian economy"
308. Bonomo, M.; Garcia, R. "Disappointment aversion as a solution to the equity premium and the risk-free rate puzzles"
309. Gonzaga, Gustavo M. "Assymmetric employment cycles at the firm level: a dynamic labor demand model and some empirical evidence"
310. Amadeo, E. J. "An Economist's political view of democratization in Brazil"
311. Abreu, M. P. "O Brasil na Rodada Uruguai do GATT: 1982-1993"
312. Amadeo, E. J. "Distributive and welfare effects of inflation and stabilization"
313. Bonomo, M. "Optimal two-sided and suboptimal one-sided state-dependent pricing rules"
314. Carneiro, D.D. "Adaptação inflacionária, política monetária e estabilização"
315. Amadeo, E.J. ; Camargo, J.M. "Institutions and the labor market in Brazil"
316. Amadeo, E.J. ; Villela, A. "Crescimento da produtividade e geração de empregos na indústria brasileira"
317. Mello, M. F. "Privatização e ajuste fiscal no Brasil" .
318. La Rocque, E.C. ; Garcia, M.G.P. "O mercado futuro de taxas de juros no Brasil: especificidades teóricas e empíricas do mercado de DI-futuro".
319. Almeida, H. ; Camargo, J.M. "Human capital investment and poverty".
320. Camargo, J.M ; Barros, R. P. de "Porca Miséria II . As causas da pobreza no Brasil".
321. Amadeo, E.J. "Negociações coletivas e desempenho do mercado de trabalho".
agosto 1994
322. Amadeo, E.J.; Scanduzzi, J.C.; Pero, V. "Ajuste empresarial, empregos e terceirização"
setembro 1994
323. Garcia, M.G.P. "Política Monetária, Depósitos Compulsórios e Inflação", setembro 1994