

**Seminar on Labour Markets in  
Brazil, China and India**

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**BRAZIL**

**BRAZILIAN LABOR MARKET PERFORMANCE: 1995-2005**  
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# BRAZILIAN LABOR MARKET PERFORMANCE: 1995-2005

## 1. Introduction

The main goal of this paper is to access the driving forces of the recent evolution of labor market outcomes in Brazil. We analyze the period from 1995 to 2005, when relevant changes in labor market performance took place. We show that the major oscillations occurred from 1995 to 1999, suggesting that they might be driven by changes in product market environment and labor market regulations, which occurred, mainly from 1988 to 1994.

The paper is structured in the following way. First we discuss the evolution of the main labor market outcomes, for which we have data available. Next, we describe the behavior of some potential determinants of these outcomes. Finally, we conclude suggesting a plausible explanation about how to link these potential determinants to the recent evolution of Brazilian labor market outcomes.

## 2. Labor Market Outcomes

In order to get a proper idea about the functioning of a labor market, we think that both the quantity and the quality of jobs should be analyzed. The first task is relatively easier since we have measures readily available, such as unemployment rate. This is not the case for quality, which is a multidimensional attribute, and some of these dimensions have no precise measure. We use four proxies for employment quality: legal status (formal or informal job position), industry category (manufacturing versus non-manufacturing), and skill level of the employee (year of schooling). All the data discussed in this section comes from the PNAD survey, which is a household survey conducted by the Brazilian Census Bureau (IBGE)<sup>1</sup>.

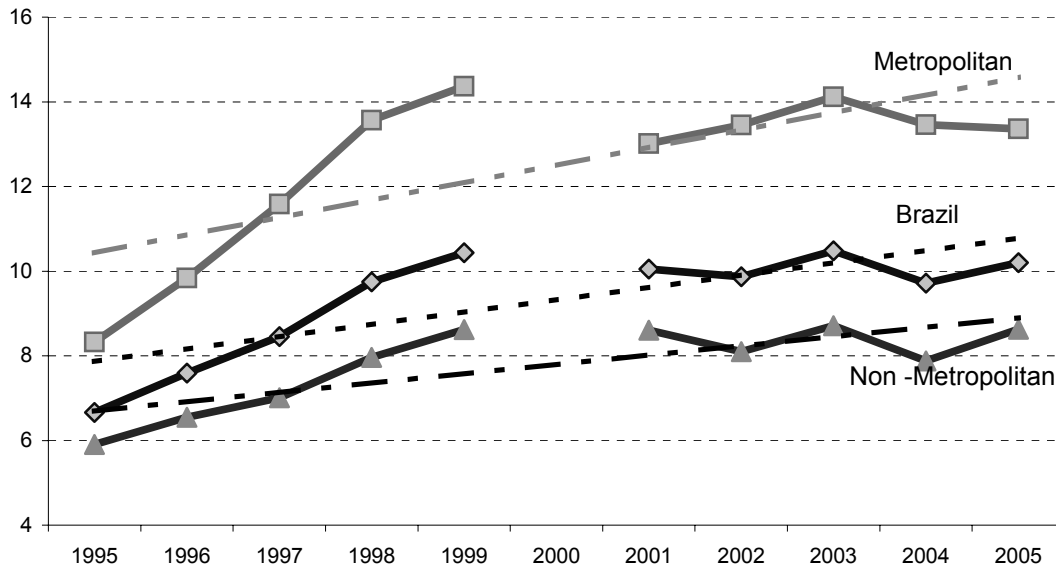
### 2.1 – Unemployment Rate

Figure 1 below summarizes the evolution of the unemployment rate in Brazil. We can see two different patterns in the period. First we see a dramatic rise in unemployment from 1995 to 1999. The rate increases 4 percentage points in four years to over 10%. Then from 2001 to 2005, it oscillates slightly around this number.

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<sup>1</sup> The data is available for every year between 1995 and 2005, except in 2000 when the population census was conducted.

Figure 1: Unemployment Rate (%)



Another interesting feature highlighted by this figure is the even more pronounced unemployment rise shown in metropolitan areas, where unemployment rate rises 6 percentage points from 1995 to 1999.

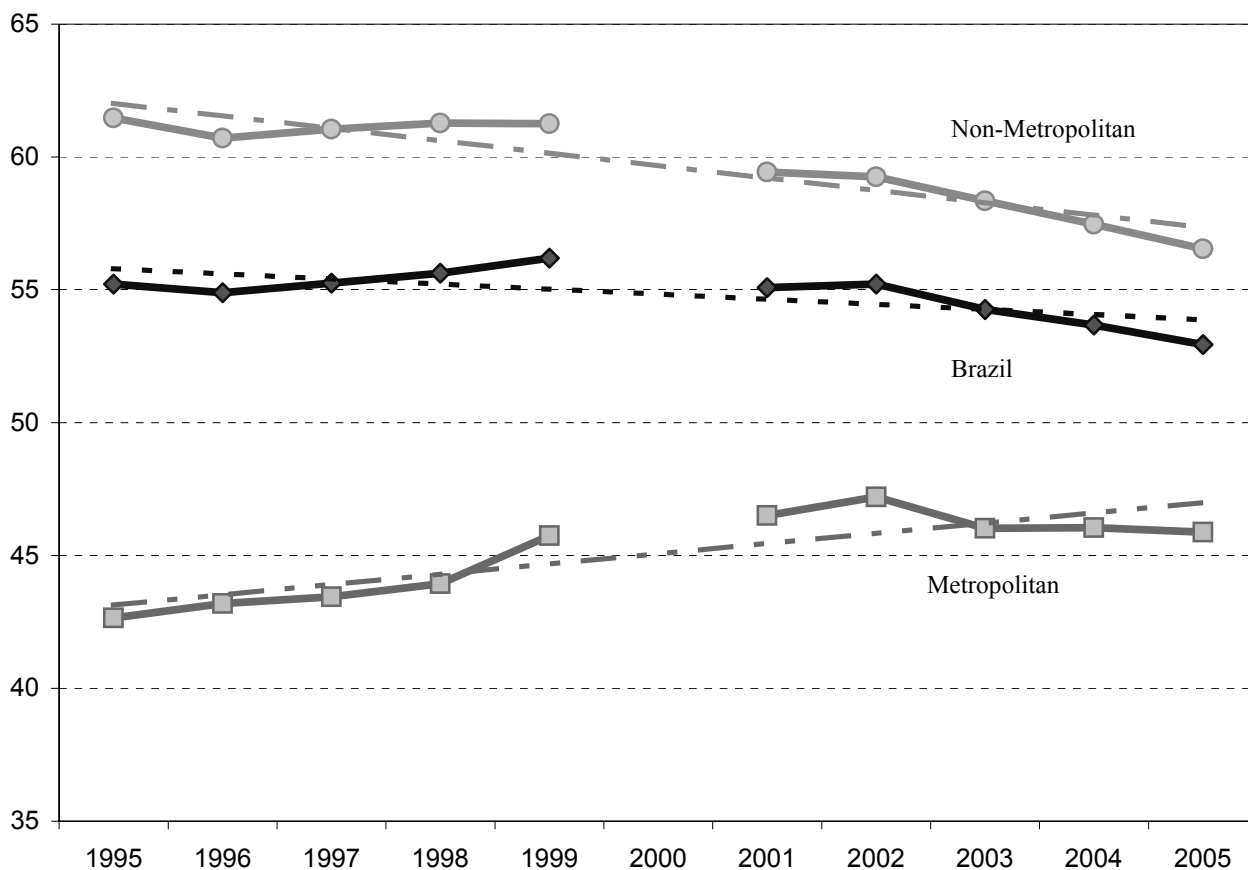
## 2.2 – Informality Rate

The first proxy of employment quality to be analyzed is the legal status of job positions. PNAD identifies whether the employee have signed a legal contract which guarantees mandatory benefits, such as paid vacations, firing compensation, among others. Therefore we classify those jobs as formal while the other jobs where there is no legal contract are classified as informal. We assume that formal jobs tend to have higher quality due to the benefits associated to them.

The overall informality rate is relatively stable just above 50% along the period analyzed here. However the regional heterogeneity is very clear once more, as shown in figure 2. While a positive trend is shown for the metropolitan area, the opposite is shown in non-metropolitan areas.

### 2.3 – Share of Manufacturing Jobs

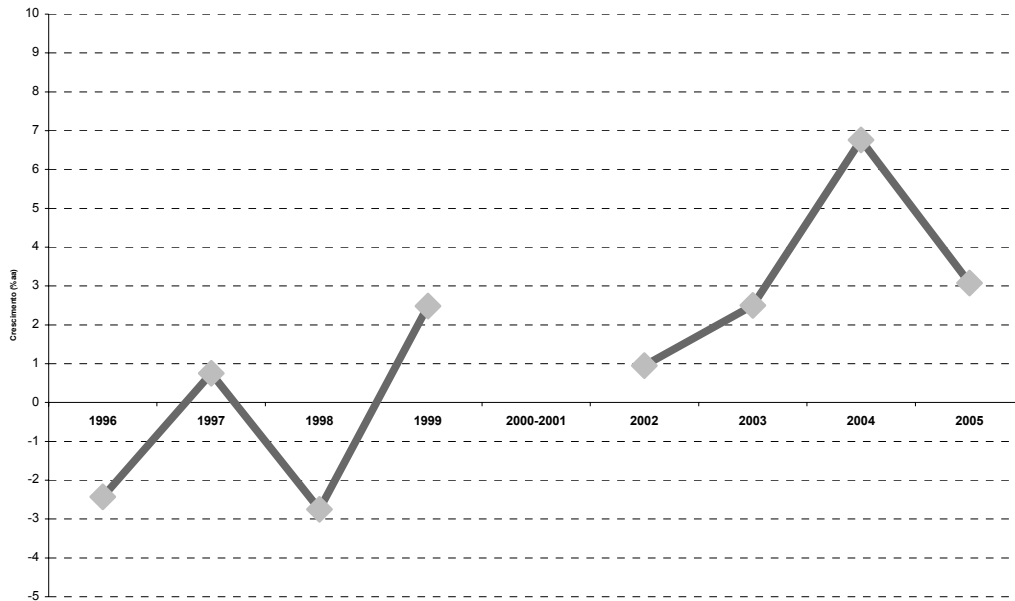
Figure 2: Informality Rate



Another proxy for employment quality relies on the information about industry category of the firm. It is well known that firms in the manufacturing industry are associated to lower turnover rates and higher human capital accumulation.

According to figure 3 manufacturing employment growth rates are particular low from 1996 to 1999, and higher from 2002 to 2005.

**Figure 3: Manufacturing Employment - Annual Growth Rate**

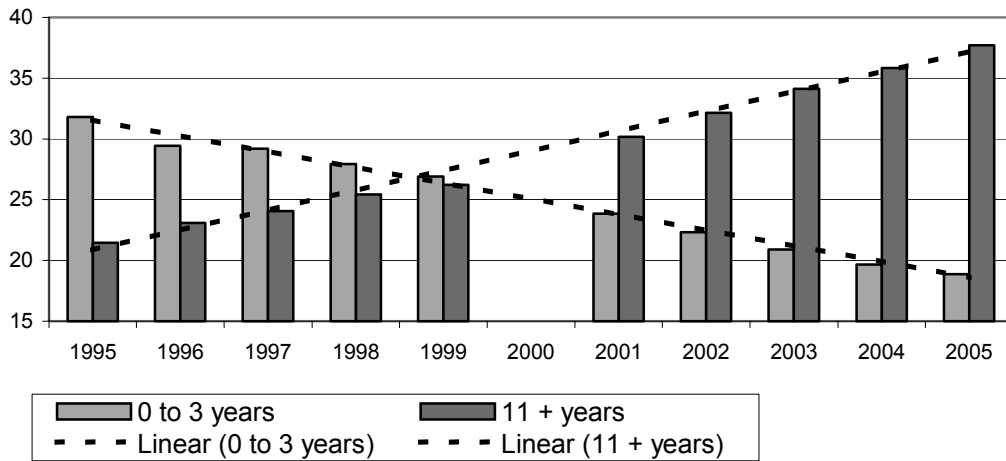


#### 2.4 – *Share of Skilled Workers*

Information on worker schooling level can also be used to access job quality. Assuming that lower levels are associated to “dead end” positions and tedious tasks, we should consider that jobs occupied by skilled workers are associated to higher quality than those occupied by unskilled workers.

Figure 4 reveals a remarkable change in the skill composition of employed workers along the period analyzed. The share of workers who (at least) completed high school almost doubled, at the expense fundamentally of those with no education or just the very basic.

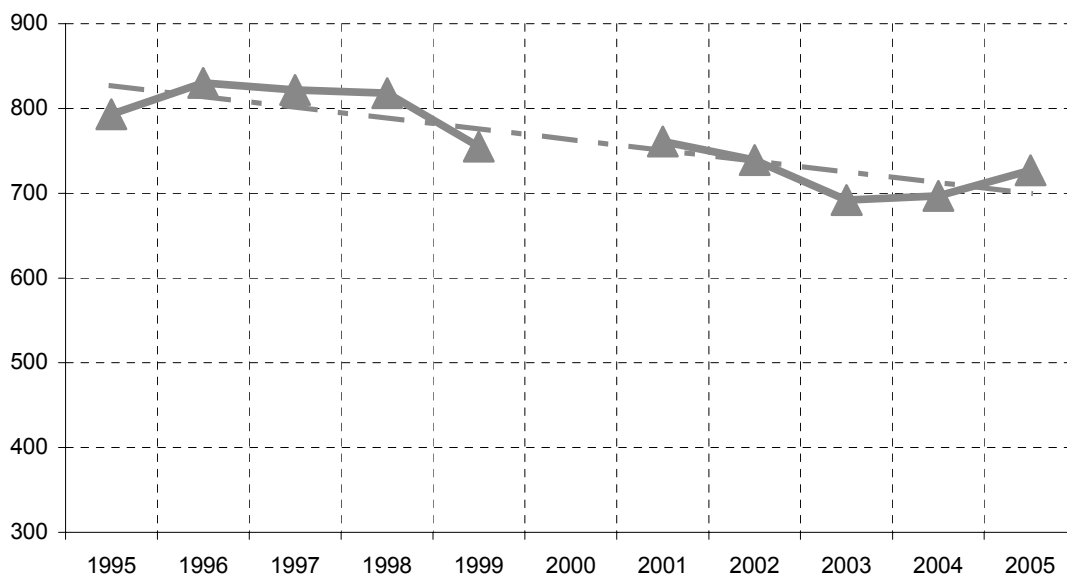
**Figure 4: Employment Share by Schooling Level**



### 2.5 – Earnings

The dimension represented by earnings is the most stable among all the ones discussed here. In particular the period from 1995 to 1999, is represented by a flat curve in figure 5. Perhaps the more relevant information coming out of this figure is that the average level for the 2001-2005 period is relatively lower than the one for 1995-1999.

**Figure 5: Average Labor Earnings**



## 2.6 – Summary on the evolution of labor market outcomes

Overall we may say that most of labor market outcomes deteriorated in the period 1995-1999, especially in metropolitan areas. For the period of 2001-2005 it is fair to say that the outcomes were at least stable, if not improve.

### 1- Determinants of Labor Market Performance: Overview

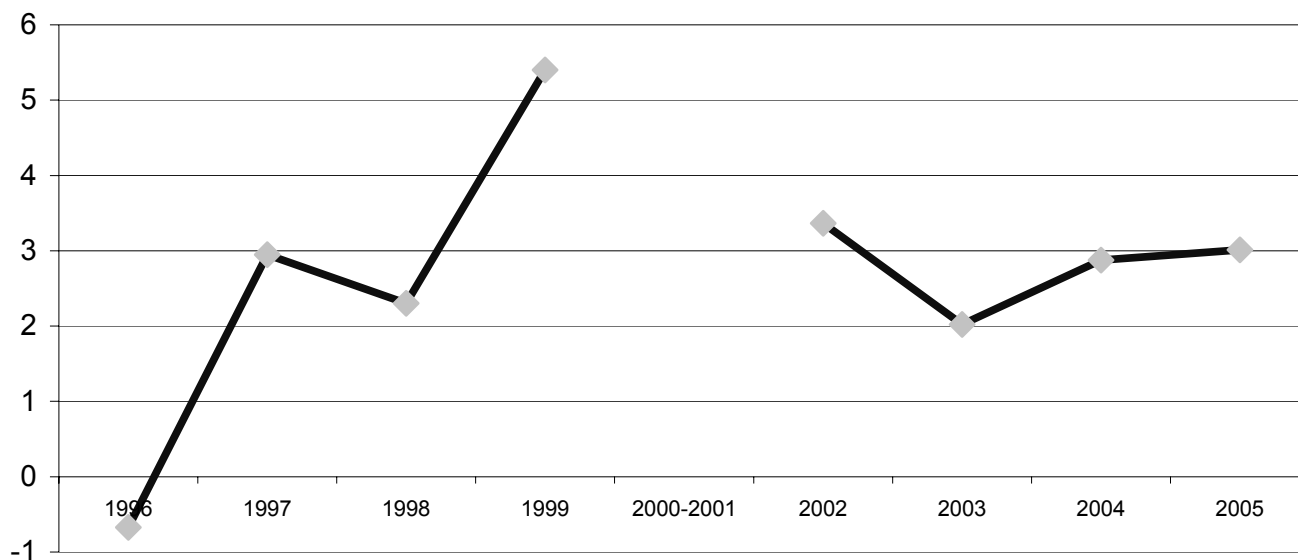
#### 3.1 – Labor Force Quantity and Quality

The evolution of employment quantity may be affected by the supply of workers.

However we can see in figure 6 that the average labor force growth rate from 1996 to 1999 is less than 3%, as the average from 2002-2005. In fact the two average numbers are quite similar, in contrast with the higher rates registered for unemployment in the second sub-period. This evidence suggests that supply has not driven the evolution of unemployment rate. Another evidence reinforcing this claim is provided by the labor force growth rate in non metropolitan areas, which has increased vigorously, not affecting unemployment, specially in the most recent period (2001-2005).

An analogue exercise can be implemented comparing the evolution of the employment quality with the labor force quality. Again we conclude that supply has not played a key role. Although access to education has improved a lot in the period analyzed, it was concentrated in the basic level, whose share

**Figure 6: Labor Force Growth Rate**



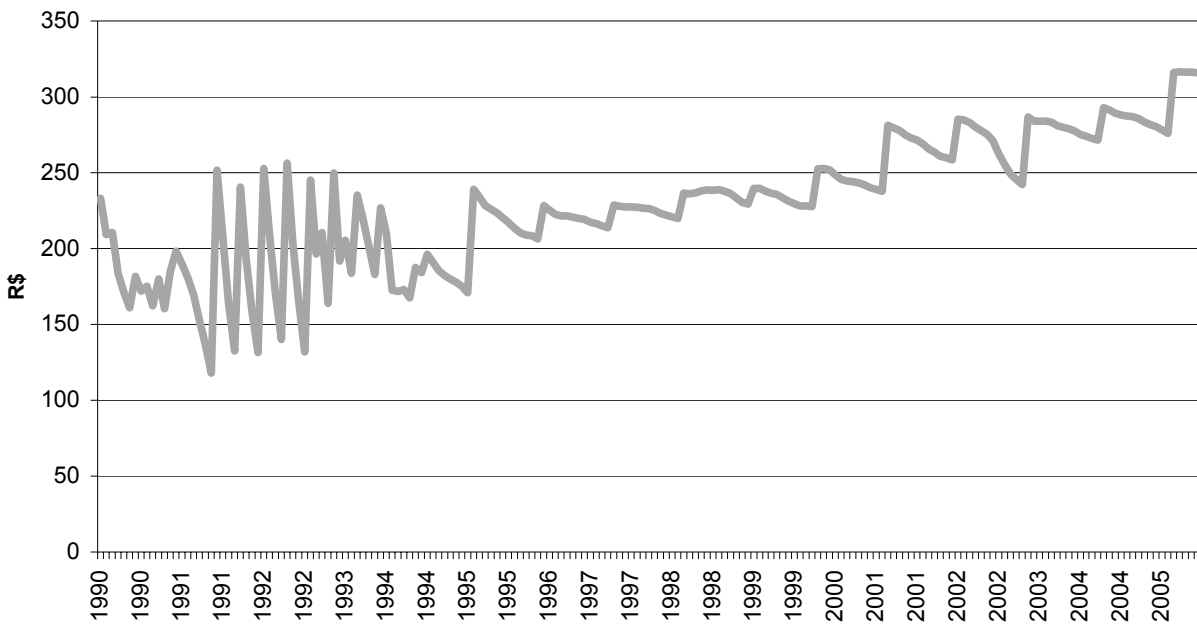
among employed workers was shown to have decreased significantly.

#### 3.2 – Labor Market Institutions and Regulations

There are two major changes in the institutional and regulatory environment related to labor market. The first is related to payroll taxes and contributions, which has increased substantially. For instance, in the industrial sector the ratio of these taxes and contributions over total income increased from 43% in 1986 to 57% in 1995. The second major change is concerned to minimum wage and is illustrated by figure 7.

Basically the value of this wage floor, in real terms, has been rising according to a monotonic and steep trend. We can see that the minimum wage value in 2005 is roughly 50% higher than it's average

**Figure 7: Minimum Wage**



value from 1990 to 1995.

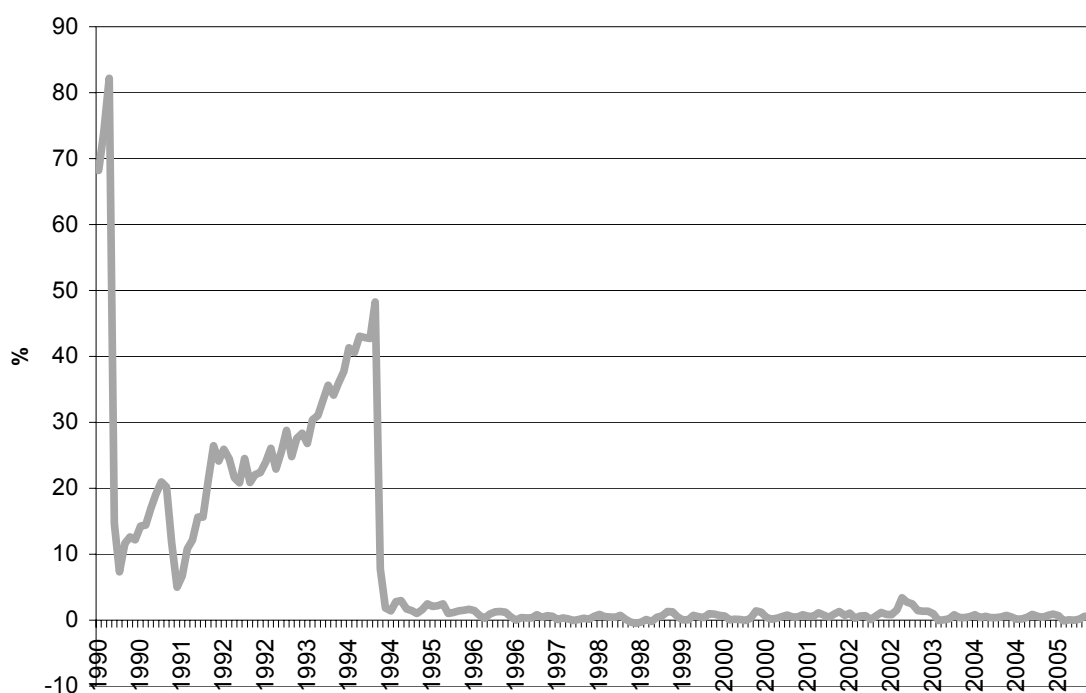
So, basically in the period analyzed here, employers face rising pressures on labor costs, originated by changes in the institutional and regulatory environment.

### **3.3 – Product Market Environment**

The product market environment was also affected by two major changes that may have important impacts on labor market outcomes. One of these changes is illustrated by figure 8. One can see a clear structural break in price evolutions in 1994. From 1995 onwards Brazil has experienced price stabilization, which is a striking different scenario from the one for the pre-1994 period. We believe that this has an important implication for labor market, through wage flexibility. In the pre-1994 period real wages were fairly flexible, despite nominal wage downwards rigidity, due to high inflation. From 1995 onwards employers can't rely on inflation anymore to lower wages in real terms.

The other change that should be mentioned is related to international trade. From 1989 to 1994 Brazil has lowered considerably the degree of protection imposed on imported products. The average import tariff dropped from 22,5% to 12,7% during this period. This means that local firms producing tradable goods are exposed to fierce competition from 1995 onwards.

**Figure 8: Monthly Inflation Rate**



### Interpreting the facts

In what follows we will suggest a plausible interpretation on the mechanism describing how the determinants described in section 3 affected labor market outcomes driven the evolution presented in section 2.

In our view the labor market performance reflects the inconsistency between the opening of the economy on the one side, and the labor legislation related to the 1988 Constitution, the monetary stabilization, and the rise in the tax burden on the other. While the first measure increase the competition pressuring firms for adjustments, all the others make such adjustments more difficult, reducing the degree

of flexibility in the labor cost margin. Two effects of this inconsistency are the rise in informality and a higher unemployment rate, concentrated during the adjustment period.

There is a need for institutional changes that allow companies, during adjustment periods, to compete in international markets with equal conditions, while also ensuring that workers have adequate protection.

As a final remark we speculate that non-metropolitan areas were not as severely hit as the metropolitan ones due to some favorable shocks, such as tax incentives in these areas and higher commodity prices favoring the agribusiness, which is concentrated in the non-metropolitan region.