



Employment and Inequality of Outcomes in Brazil

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Abstract

After a couple of decades with very volatile macroeconomic conditions and high levels of inequality, growth in the new century in Brazil has been able to generate jobs at an increasing rate. This has led to a decline in unemployment and in informality, despite an increasing labour force participation rate. The increasing human capital accumulation, coupled with the amplification of conditional cash transfer programs, like *Bolsa-Familia*, has led to a steady fall in inequality, for the first time in decades. This evidence suggests that, after a period of adjustment to the trade liberalization and privatization reforms, Brazil has found a stable path of development. In order to continue in this positive path, despite the recent global economic crisis, Brazil has to continue expanding the education of its workforce, improve the *Bolsa-Familia* program, so that the recipients can find a way out of poverty through participation in the labour market, and promote institutional reforms to speed up the process of creating new firms, reduce the tax burden levied on the small formal firms and speed up the labour market reforms to make the hiring of formal employees less expensive in Brazil.

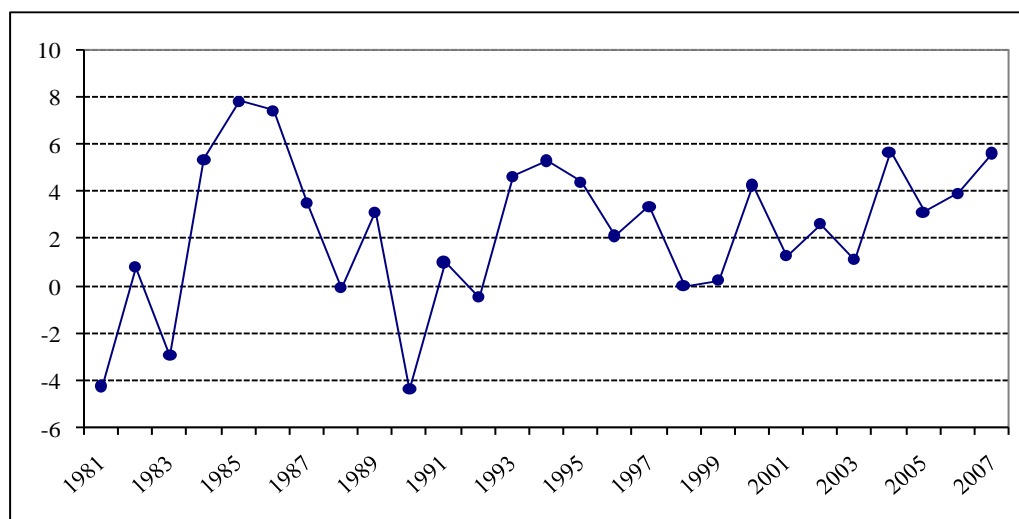
1. Growth patterns and labour market outcomes

What is the relationship between economic growth and labour market performance? The answer to this question involves different aspects. Not only is quantity of jobs created important, but also - and equally significant - their quality. A country that exhibits growth with job creation predominantly in informal sector is surely in a worst situation than a country that experiences the same growth process but creating mostly formal jobs. Even if the proportion of informal jobs is small, some specific population groups (women, rural population, low skilled workers etc.) can be overrepresented. Therefore, the task of understanding the impacts of growth patterns on employment should consider informality as well. In this section, we will present some stylized facts concerning growth and labour market performance in order to better understand the relationship between these phenomena in the Brazilian case.

In the last 25 years, Brazil has experienced a profusion of economic transformations. In terms of economic growth (Figure 1.1), the second half of the eighties and the early nineties were marked by unsuccessful heterodox economic plans that try to reduce inflation rates¹. One of the collateral effects of these plans was the reduction of GDP growth rates. In 1992, for instance GDP fell 4%. It was only after 1994 that the country was successful in fighting hyperinflation and after that inflation rates stabilize in relatively small levels (around 8% per year) with the well succeed *Plano Real*. The stabilization process can be seen as the seed that allowed recovery of economic growth in Brazil some years later. However, between 1994 and 1999, economic growth exhibited a spasmodic behavior. The Brazilian fixed exchange rate regime did not accommodate the profusion of shocks in the second half of the nineties (Mexico crisis in 1995, Asian crisis in 1997 and Russian crisis in 1998). In 1999, Brazilian currency suffered a speculative attack and after that Central Bank left the exchange rate to float. In first years of new century, Brazil implemented an inflation target regime to handle with monetary policy and started to control public budget deficits. So, after a long period of economic stagnation, GDP growth rates started to rise at a sustainable path since 2004, reaching 6% in 2007.

Figure 1.1. GDP growth rates, 1985-2007

(in percentage)



Source: IPEADATA.

1. Plano Cruzado, in 1986; Plano Cruzado II, also in 1986; Plano Bresser, in 1987; Plano Verão in 1989; Plano Collor I, in 1991 and, finally, Plano Collor II in 1992.

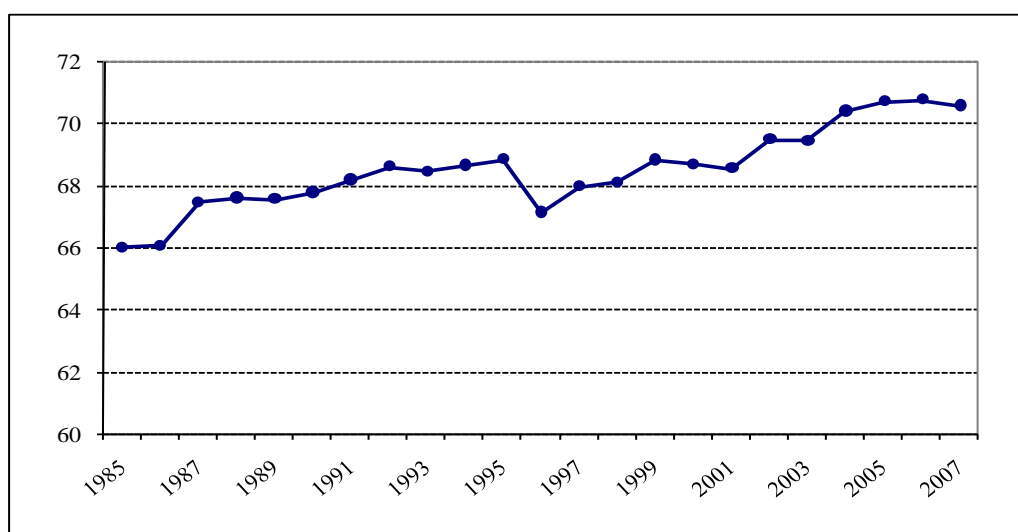
Beyond the macroeconomic aspects discussed above, another important economic process that occurred in Brazil since the end of the eighties and affected labour market was trade liberalization. Menezes-Filho and Mundler (2007) analyzes the labour reallocation in response to this liberalization. They show that Brazil cuts substantially its tariffs, from 63% in 1986 to 15% in 1994. On the other hand, the share of displaced workers with no reallocation for four years rises from 13% to 22% in the same period. The authors argue that “labour is flowing away from comparative-advantage sectors and from exporters because their productivity increases faster than their production so that output shifts to more productive firms while labour does not” (Menezes-Filho and Mundler, 2007). The workers of comparative advantage sectors have flown mainly into informal or self-employment sector. So, as the authors conclude, “comparative-advantage industries and exporters impede, rather than foster, the formal-sector labour reallocations needed to absorb workers after trade-induced displacements”.

The results above shed light in the importance of a deep understanding of the consequences of openness and growth in labour market. In order to shed light over this question, it is necessary to analyze how the labour market as a whole evolved during the period 1985-2007 in Brazil. The importance of studying Brazilian labour market since the middle of the eighties is related to the fact that the first movements in direction of a more opened economy in Brazil begun in 1988 and were widened after 1991. In this section, the following indicators are discussed: labour force participation rate, unemployment rate, job creation, job destruction and composition of labour force.

Figure 1.2 presents labour force participation rate since 1985 in Brazil for people between 15 and 65 years old. Although it shows an unexpected drop in the rate in 1996, it exhibits a sustainable growth over the period, reaching 70.6% in 2007 (similar to the OECD average). This figure demonstrates that the profusion of economic phenomena listed above did not affect the evolution of participation rates, at least at the aggregated level.

Figure 1.2. **Labour force participation rate, 1985-2007**

(in percentage)



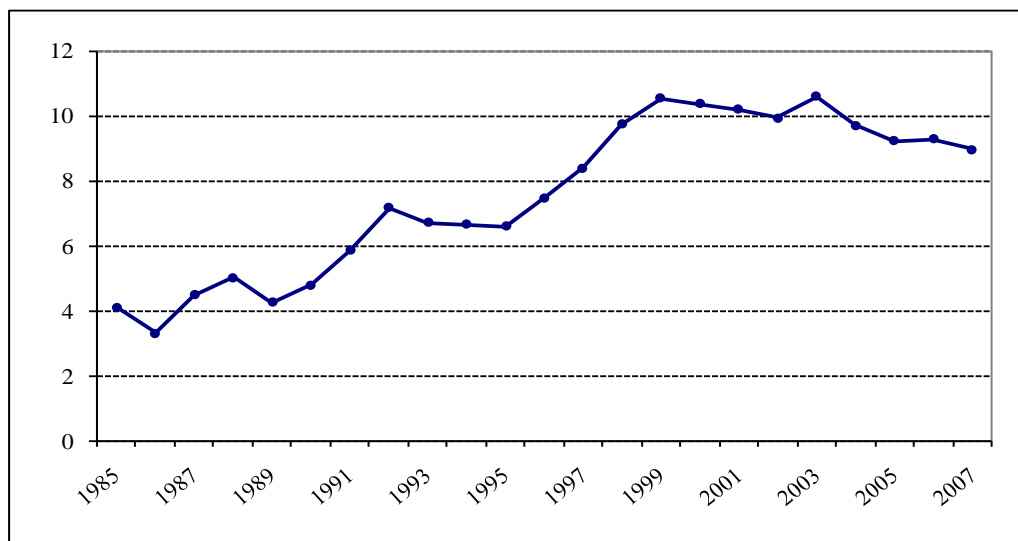
Source: Pesquisa Nacional por Amostra de Domicílios, 1985-2007.

If the numbers of participation rate demonstrate that on the supply side there was a continuous movement into the labour market, the figure concerning unemployment shows that this movement did not find a correspondence in the demand side of the labour market. Since 1985, there was an almost uninterrupted increase in unemployment in Brazil, from 4.0% in 1985 to 10.5% in 2004. It is clear that the spasmodic GDP growth process contributed to this unemployment path. In fact, labour demand did not grow at a quickly enough path to absorb the labour supply inflow. It is only after 2004, when GDP growth recovered a sustainable path that unemployment rates started to fall in a consistent way, although in 2007 it reached 9%, a high rate for Brazilian historical profile. Data from metropolitan regions for 2008 (*Pesquisa Mensal*

de Emprego), although using a slightly different methodology, indicates that unemployment continued to fall between 2007 and 2008, at least until September, when it starts to rise, reflecting the world crisis.

Figure 1.3. **Unemployment rate, 1985-2007**

(in percentage)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

In fact, the recent fall in unemployment rates and recovery in growth is consistent with the results of Menezes-Filho and Scorzafave (2007). Table 1.1 shows that between 1985 and 1989, both GDP and employment have grown about 11% over the period. However, between 1989 and 2000, while employment increased only 15%, GDP rose 24.4%. Finally, in the period 2000-2004 jobs were created at 50% faster rate than GDP growth. Although different sub periods do not exhibit the same patterns, in the period as a whole both variables have a similar variation.

Table 1.1. **Real GDP and employment growth, 1985-2004**

	Employment	GDP	Employment/GDP
1985-1989	11.6	10.6	1.09
1989-2000	15.5	24.4	0.63
2000-2004	20.4	13.7	1.49
1985-2004	55.1	56.5	0.98

Source: Menezes-Filho and Scorzafave (2007).

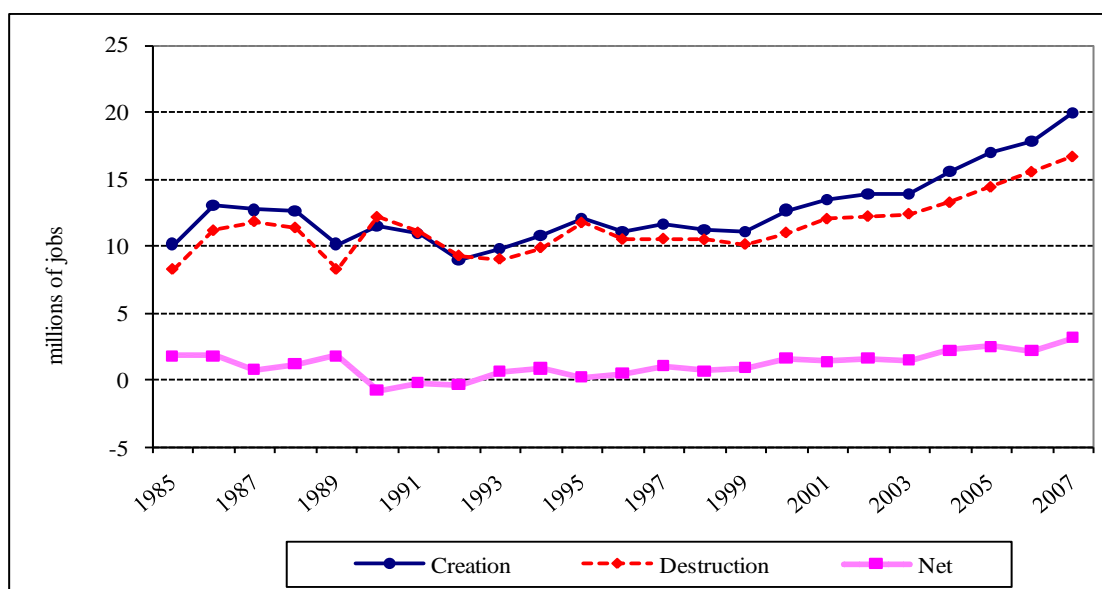
Menezes-Filho and Scorzafave (2007) also estimated the GDP-employment elasticity. In other words, how much employment changes in response to a 1% variation in GDP.² They found that short run elasticity's were small. For example, in the period as a whole, it was 0.171. That is, a 10% GDP growth leads to a job

2. The authors have used a panel data for Brazilian states and have adopted a lagged dependent variable model: $L_{it} = \alpha_i + \beta GDP_{it} + \theta L_{it-1} + u_{it}$, where L is employment and u is a random error. In this specification, the presence of the lagged dependent variable introduces a difference between short run elasticity, β , and long run elasticity, $\beta/(1-\theta)$. This happens because a 1% growth in GDP today affects employment at present but also in the future. The higher θ , the more pronounced it will be long run effect of growth over employment.

growth of 1.7% in the same year. However, the long run impacts were much higher. In the period 1985-1998, the long run elasticity was 1.451 and increased to 2.444 since 1999. So, the growth in employment is explained by the accumulation of GDP impacts along the time. And since 1999, economic conditions are adequate to transform GDP growth in new jobs at a more accelerated path, so that a 1% GDP growth provokes an increase of 2.4% in employment generation. Some facts can explain this transformation: the consolidation of economic stabilization, with budget surplus and inflation rates converging to low levels and the adoption of a floating exchange rate that allowed a strong increase in exports since 2000 contributing to employment generation.

The process of job creation and destruction in the formal sector of the labour market also allows to better understand the evolution of the Brazilian labour market. Figure 1.4 shows that between 1985 and 1999, the formal sector created roughly 11 million of jobs per year and destroyed about 10.3 million, resulting in a net creation of 700,000 jobs in the period. Since 2000, there has been a continuous growth in both job creation and destruction, reaching 20 million and 16.5 million respectively. This process resulted in a raising net creation from 1 million jobs in 1999 to 3.5 million in 2007. Note that timing of this movement coincides with falling unemployment rates. Comparing figures 1.3 and 1.4, it seems that the jobs created in formal sector are being occupied, at least partly, by unemployed people.

Figure 1.4. **Job creation and destruction, 1985-2007**



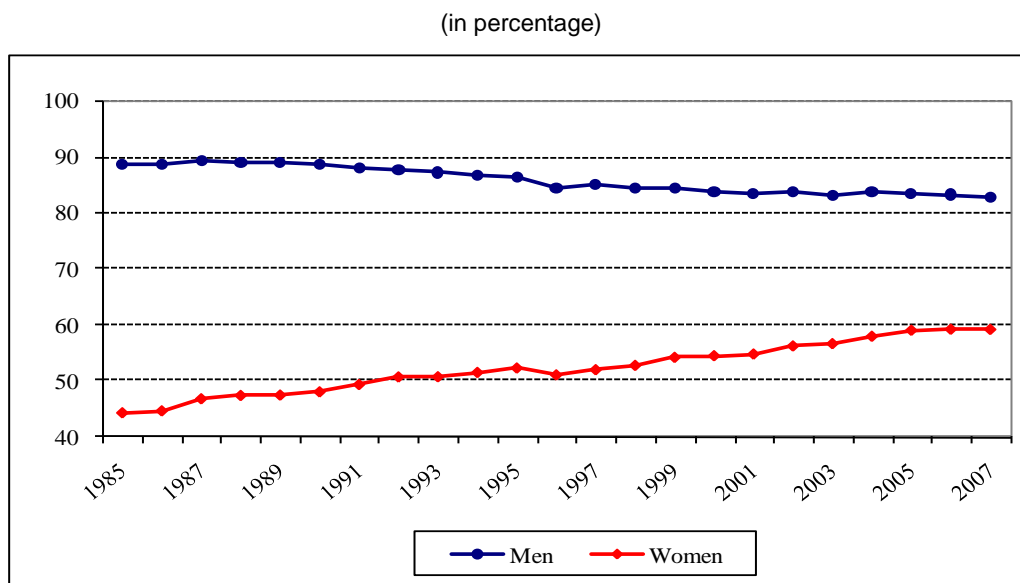
Source: Relação Anual de Informações Sociais (RAIS), 1985-2007.

These results allow to conclude that trade reform of the early nineties in Brazil did not translate immediately into job creation. There is a considerable time span between the reform and the recovery of job creation and the fall in unemployment. Some authors argue that Brazilian economy suffered from a “productivity shock” that raised unemployment in a first moment, when firms had to adjust costs in order to gain competitiveness, but allowed the recovery of output growth and job creation in a more robust way some years later.

Although this overview shows interesting stylized facts about Brazilian economy and, particularly, its labour market, it is clearly insufficient to a better understanding of all consequences of economic transformations in Brazilian economy in the last 25 years. Different groups can be affected in a different way. So, it is important to understand the behaviour of different groups in the labour market. For instance, the unemployment rate could be falling more among college educated people than among illiterates. In order to answer these questions some statistics disaggregated by age, education, gender and activity are presented.

The results of labour force participation rate disaggregated by gender shows that men and women's participation evolved in different ways. While men exhibited a fall in participation from 90% in 1985 to about 83% since 2000 (and stayed around that level afterwards), women have been continuously increasing their engagement into the labour market. From a rate of 44% in 1985, their participation reached 59% in 2007 (just 2 percentage points below the OECD average). Scorzafave and Menezes-Filho (2001) shows that this process is generalized, occurring among more educated women, but also amongst the less qualified. Another interesting result is that a large part of this growth is due to new generations of women that are more engaged in the labour market than their mothers. Both household heads and spouses entered the labour market, but women with children did not show the same growth in participation, because they do not have access to child care, since they are predominantly poor.

Figure 1.5. Labour force participation rate by sex, 1985-2007

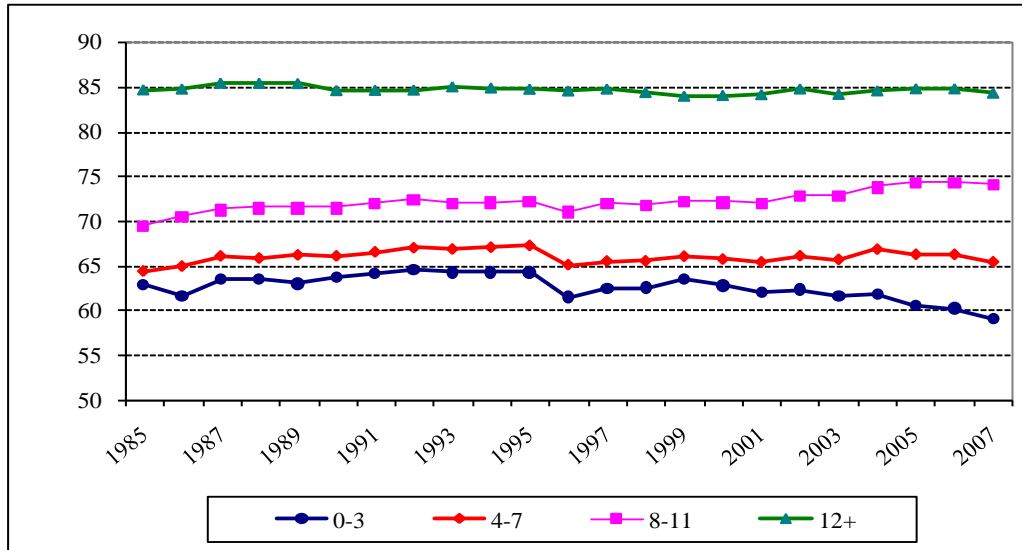


Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

In order to show the evolution of participation rate by educational groups, the sample is split into four groups: up to 3 years of schooling; 4 to 7 years; 8 to 11 and 12 or more years. There are significant differences among educational categories, with the less educated having the smaller participation rates. On the other hand, people with at least one year of college exhibits 85% of participation. Another interesting aspect of this figure is the evolution over time. While for the most educated and for those with 4 to 7 years of schooling the participation rates are pretty stable, the two other groups show distinctive profiles. The less educated are suffering a fall in participation rate since 1999, while those with 8 to 11 years of schooling are engaging more in the labour market, with rates having increased 5 percentage points since 1985.

Figure. 1.6. **Labour force participation rate by education, 1985-2007**

(in percentage by years of schooling)

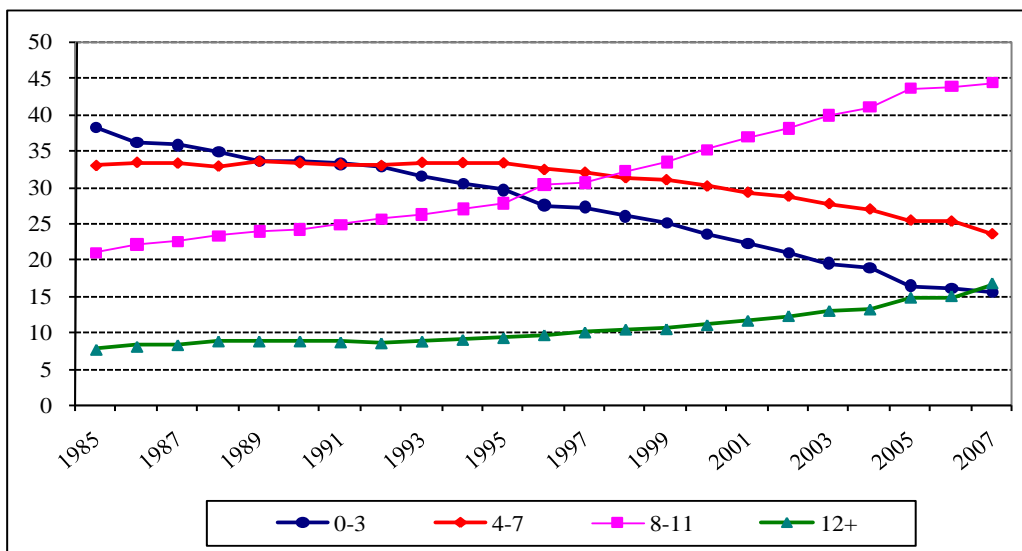


Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

Figure 1.7 shows that the educational composition of labour force in Brazil has been changing quickly. In 1985, those with up to 3 years of schooling were the larger group in the labour market and people with 8 to 11 years of schooling were only the third largest. However, over the last 20 years there has been an inversion of these numbers and in 2007 those with 8-11 years of schooling represent more than 44% of Brazilian labour force. The rising participation rate of this group and the growing number of people belonging to it explains the huge rise in unemployment rate among this group over the nineties. These facts suggest that supply side is also very important to understand the dynamics of labour market in Brazilian case. Finally, a positive aspect is the continuous growth in the proportion of labour force with at least 12 years of schooling, although still less than 20% of the labour force had this schooling level in 2007.

Figure.1.7. **Labour force composition by education, 1985-2007**

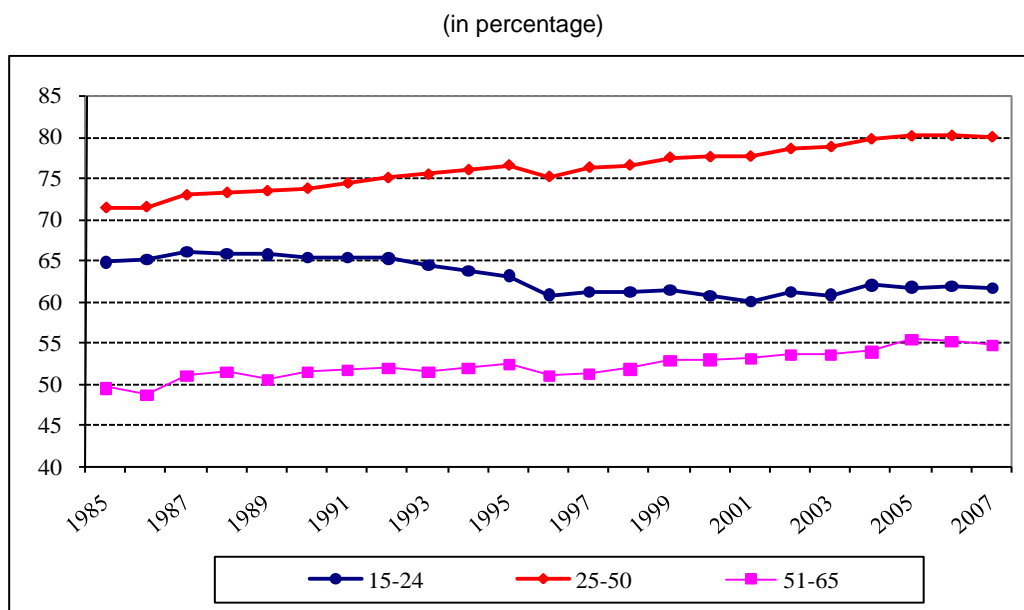
(in percentage by years of schooling)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007

Concerning the figures of participation rates for different age groups, again, there are different patterns across groups. While prime age people had a continuous growth in participation rates, reaching 80% in 2007, young people's rates decreased between 1985 and 1996 and after that, stabilized around 60%. One explanation for this is the increasing number of young people who now spend more years at school, delaying their entrance into the labour market.

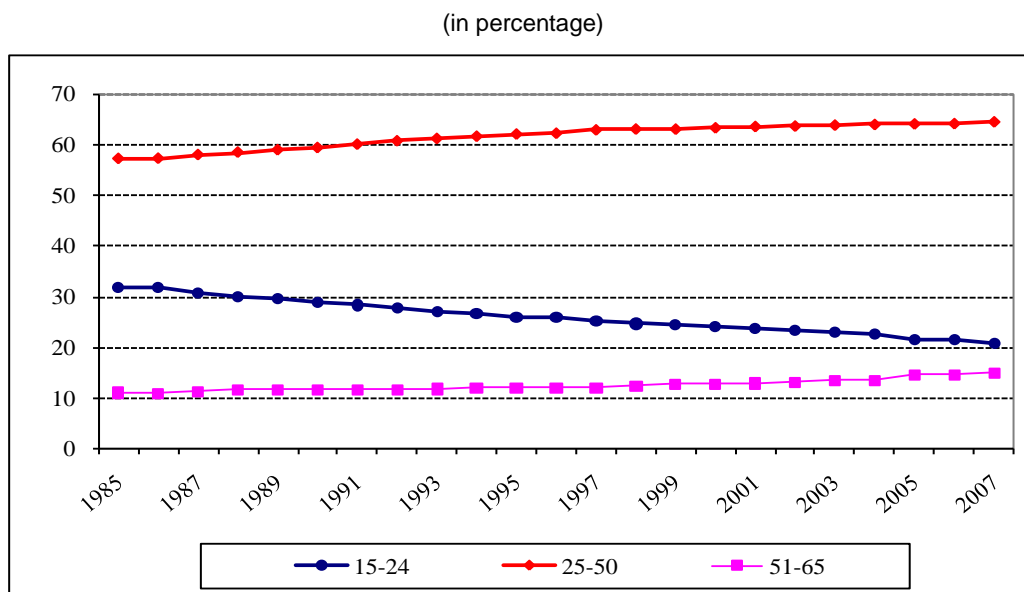
Figure 1.8. **Labour force participation rate by age, 1985-2007**



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

This movement among young people is confirmed when analyzing the composition of the labour force according to age groups. While the proportion of young people has fallen over the period, reaching 20% in 2007, the other groups increased their participation. Demographic factors, as the ageing of Brazilian population, explain part of this evolution, but the higher attachment of young people to school is also important.

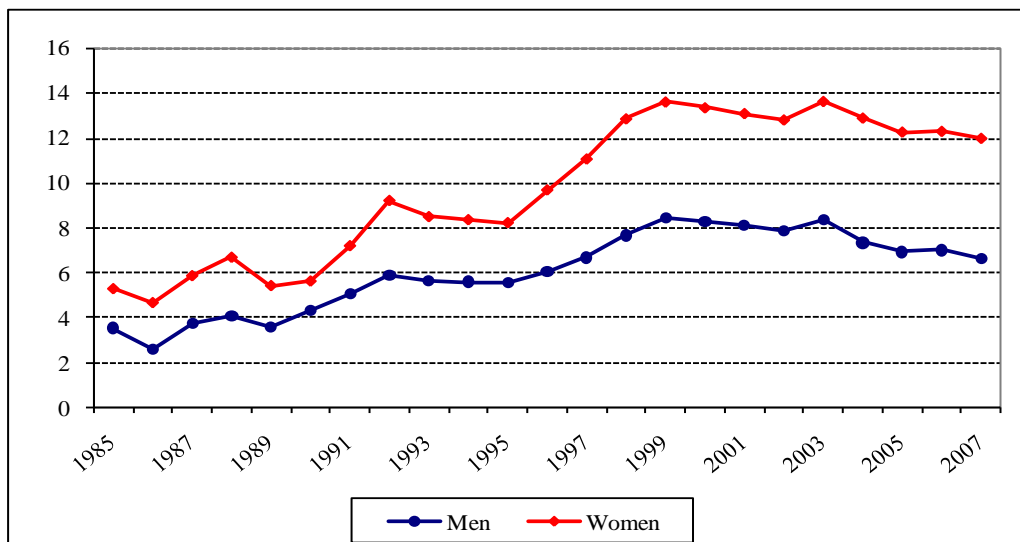
Figure 1.9. **Labour force composition by age, 1985-2007**



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

The figures of unemployment disaggregated by gender shows that women were more affected by the unemployment growth than men. Although women have always exhibited higher unemployment rates than men, the difference between the groups started to rise just after 1990. This is evidence that the openness process of Brazilian economy affected men and women in different ways. Even in recent years, when unemployment has decreased, the difference between men and women remains at more than 5 percentage points.

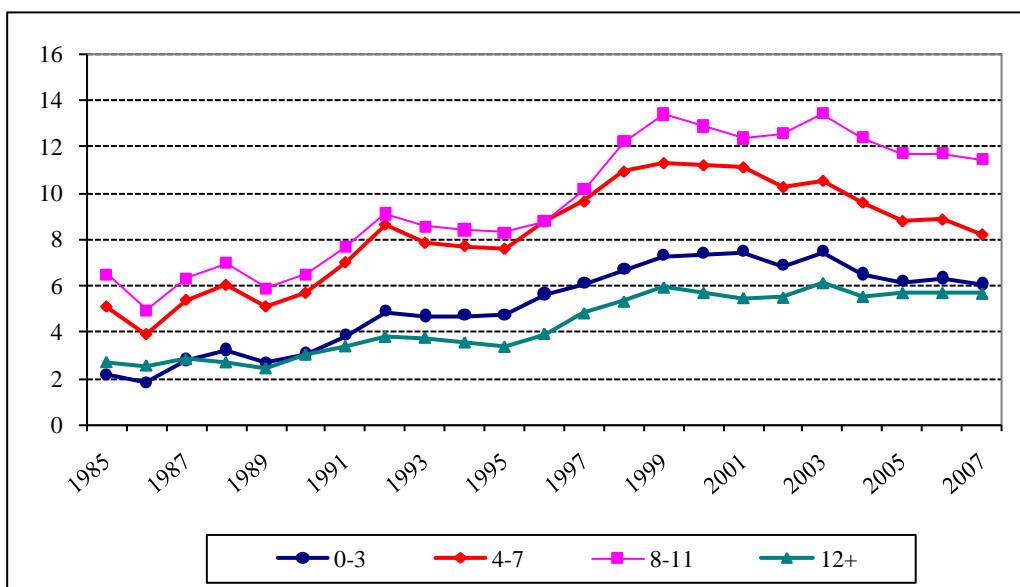
Figure 1.10. **Unemployment rate by gender, 1985-2007**
(in percentage)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

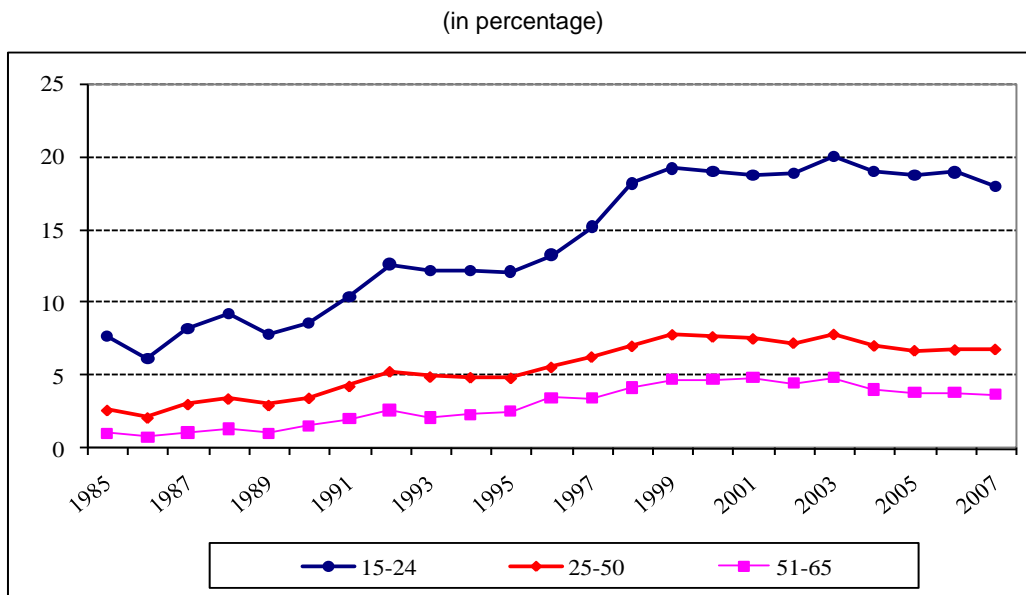
The evolution of unemployment by education shows that all groups experienced a rise in unemployment. However, there are some disparities in profiles. The most affected groups were those with 4 to 11 years of schooling, exactly the biggest group. This provides some evidence that technological change and trade reforms affected this group adversely.

Figure 1.11. **Unemployment rate by education, 1985-2007**
(in percentage by years of schooling)



Analyzing the evolution of unemployment by age groups, a preoccupant fact is that young people are the most affected and after 1995 there is a strong growth in unemployment among them, reaching 20% in 1999 and maintaining this level since then. Another important aspect is that this age group is not benefiting from the recent drop in unemployment rates in Brazil. So, this group should be looked with attention.

Figure 1.12. Unemployment rate by age, 1985-2007



The process of technological transformation and trade reforms has also affected activity sectors (industry, services, agriculture) in different ways. In the next figures, job creation and destruction in these three sectors of economic activity are presented. Industry has destroyed employment just after the trade reform of the early nineties. Between 1990 and 1992, more than 1.5 million industrial jobs were destroyed in Brazil. On the other hand, agriculture was less affected in this period, creating more than 0.5 million jobs. These years were not positive for services either with the sector losing more than 0.15 million jobs.

Figure 1.13. Job creation and destruction in agriculture. 1985-2007

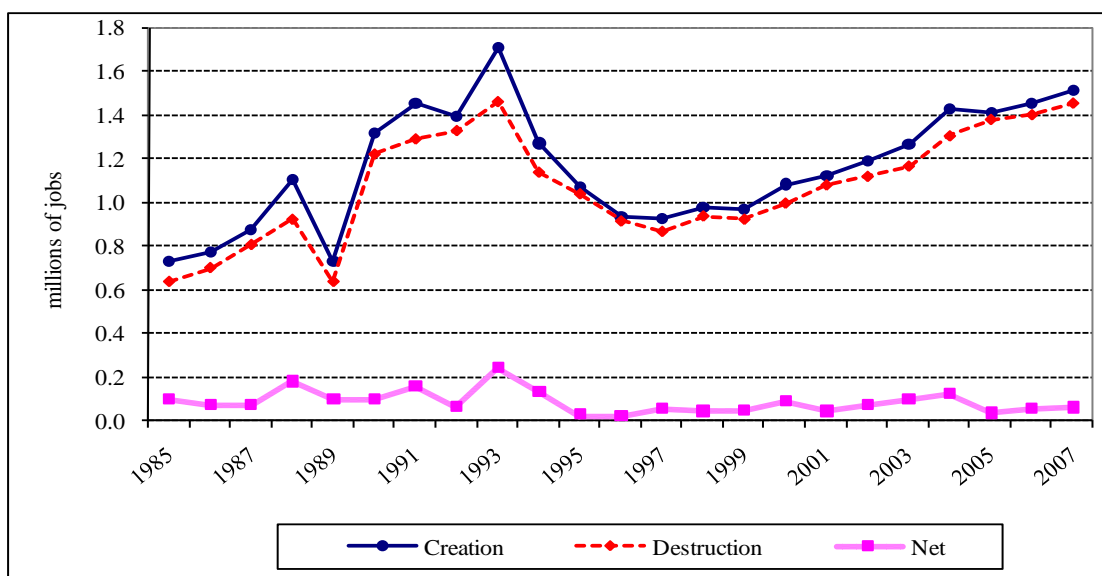
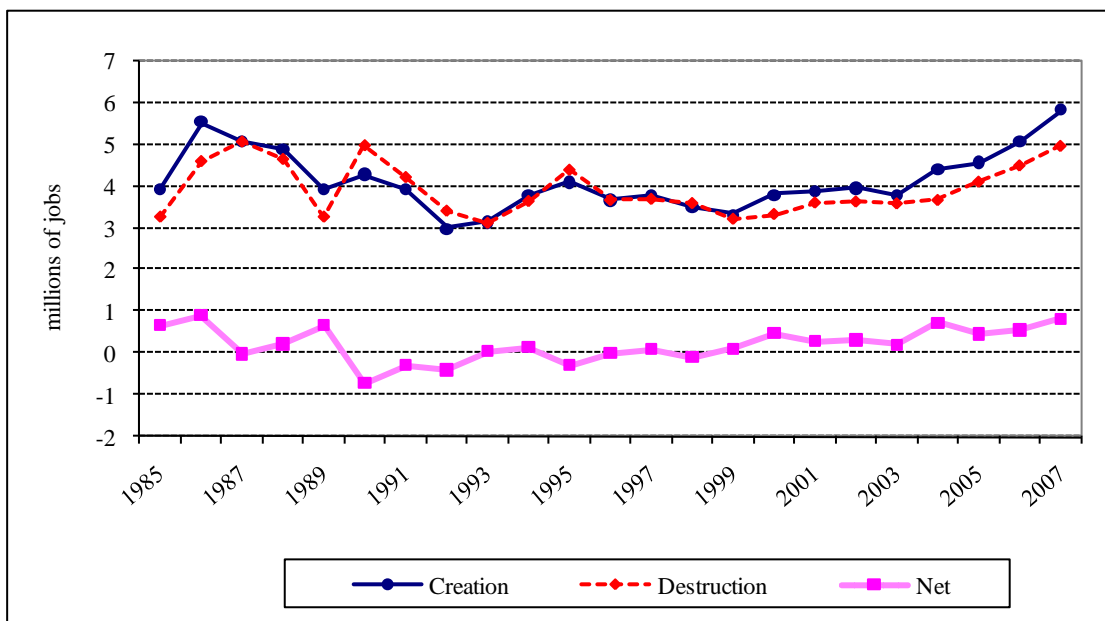
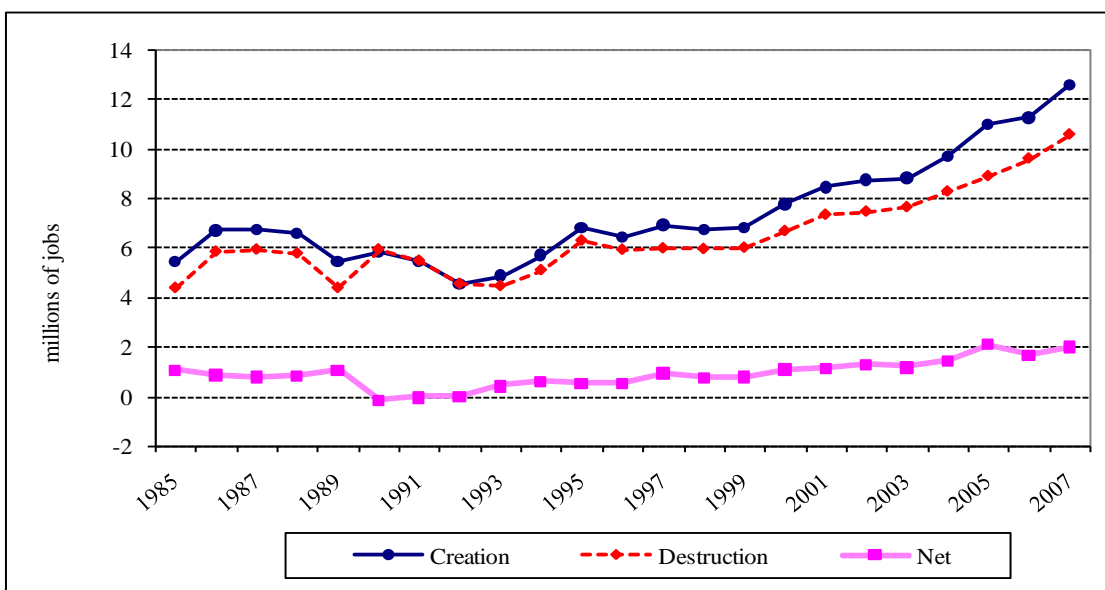


Figure 1.14. Job creation and destruction in industry, 1985-2007



Source: Relação Anual de Informações Sociais (RAIS), 1985-2007.

Figure 1.15. Job creation and destruction in services, 1985-2007



Source: Relação Anual de Informações Sociais (RAIS), 1985-2007.

These figures clearly point to a very difficult situation for workers in the early nineties. Although the trade reform can be partially responsible for these facts, this period is marked by a recession and by a failed inflation stabilization plan (*Plano Collor*) that contributed to increase the uncertainty in Brazilian economy. The period 1993-1999 is marked by the stagnation in formal industrial employment, with enterprises reducing costs and eliminating jobs in order to fight for the Brazilian markets, opened by the tariff reduction after 1990. This process was long and painful for many industrial sectors that were protected against competition until 1990 and in two or three years have to revolutionize their production practices to survive. But not all industrial sectors were successful in this task. Textile industry, for example, exhibits a

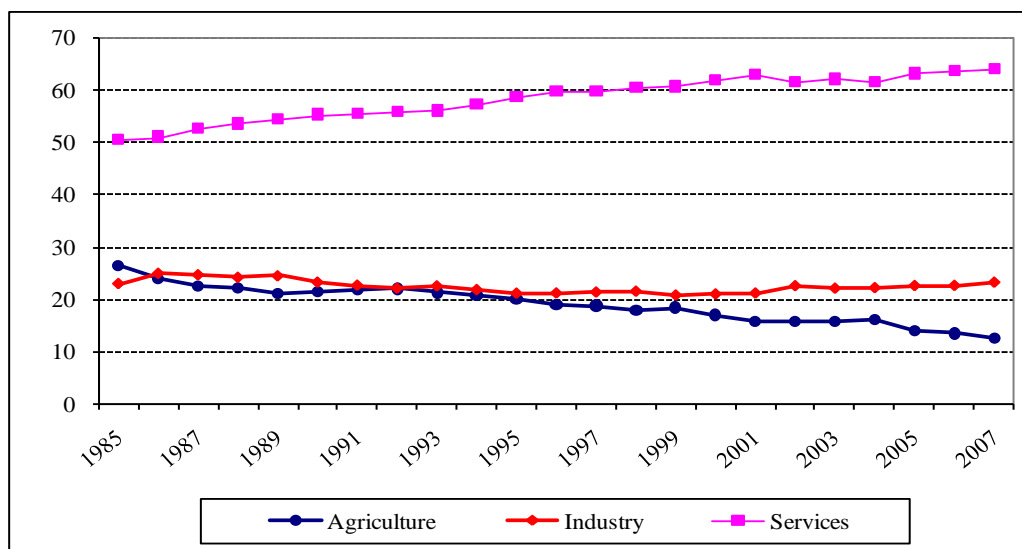
drastic decrease in the mid-1990's eliminating more than 220,000 jobs between 1990 and 1998 (27% of the existing jobs in 1990).

The positive aspect of this process can be seen after 1999. With a stable macroeconomic situation (inflation under control, floating exchange rate, inflation target, budget surplus), Brazil could, finally, benefit from the openness process. After 1999, job creation raised gradually, including the industrial sector, but mainly in services. Therefore, trade reform can be seen as a necessary condition to the recovery of employment in recent years in Brazil.

To end this overview of Brazilian labour market, the composition of the labour force by sector of economic activity is presented in Figure 1.16. In the last 25 years, services have gained weight in Brazilian labour market, reaching more than 60% of the labour force in 2007. On the other hand, agriculture has continuously lost jobs, although the agriculture production in Brazil has increased in the period.³ In this sector it is clear the effect of productivity gains that arise after trade openness process together with credit policy and investments in research in agricultural products. All these factors have allowed an increase in productivity.

Figure 1.16. **Labour force composition by activity sector, 1985-2007**

(in percentage)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

2. Quantity versus quality of labour

The previous section gave an overview of the last 20 years trends of Brazilian labour market, showing that different socioeconomic groups had very different behavior in terms of unemployment and labour force participation. Another important indicator, however, has been ignored up to now. In Brazil, informality is a very important aspect of labour market, as about 50% of workers belong to this sector. Therefore, this section will characterize informality in Brazil to understand which factors explain the persistence of informal employment. Moreover, the role of different public policies and institutional aspects that can be responsible for this high informality rate will be discussed.

3. In 1985/1986, Brazil produced 58.1 million tons of crop grains, while in 2006/2007, it produced 133 million tons.

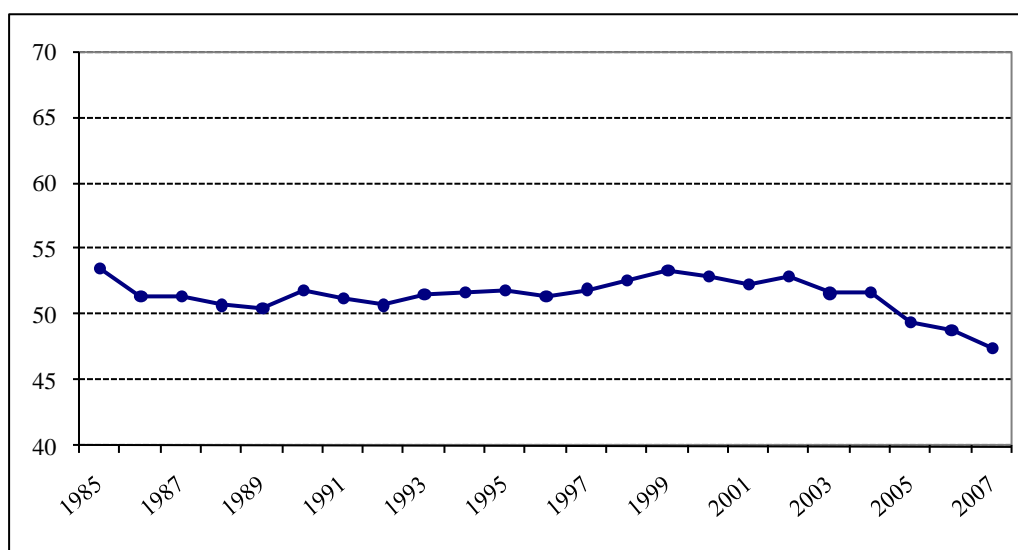
Figure 2.1 presents the evolution of informality rate in Brazil since 1985. A worker is defined as informal if he works without a registered labour card, an instrument that documents the employer-employee relationship.

After falling in the eighties, informality started to increase in the nineties, mainly after 1996, reaching its maximum value in 1999 (53.4%). Since then, there is a reversal process that became stronger after 2002, when informality rate dropped 4 percentage points, reaching 47.5% of workers in 2007 (about 39 million workers).

It is interesting to note that in 1988 Brazil adopted a new Constitution that revised most labour regulations. Among the measures related to the labour market, it reduced the maximum working hours per week from 48 to 44 hours and increased the overtime premium from 20% to 50%. The new Constitution also modified the mandatory individual saving accounts system (*Fundo de Garantia por Tempo de Serviço- FGTS*) created in 1966. Prior to the reforms, the law required employers to deposit 8 percent of employees' wages in a worker-owned account. In case of separation, workers could withdraw the accumulated funds (plus the interest rate). In addition, if a firm initiated a separation it had to pay a penalty equivalent to 10 percent of the amount accumulated in the account. As part of the 1988 reform, this penalty was increased to 40 percent, raising considerably the cost of dismissing a worker" (Djankov and Ramalho, forthcoming). It is interesting to note that the inspection of Figure 2.1 do not indicate any strong adverse effect of this changes on informality in Brazil. In fact, this confirms the result of Barros and Corseuil (2004), which do not find effects of new Brazilian Constitution on the informal sector.

Figure 2.1. **Informality rate, 1985-2007**

(in percentage)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

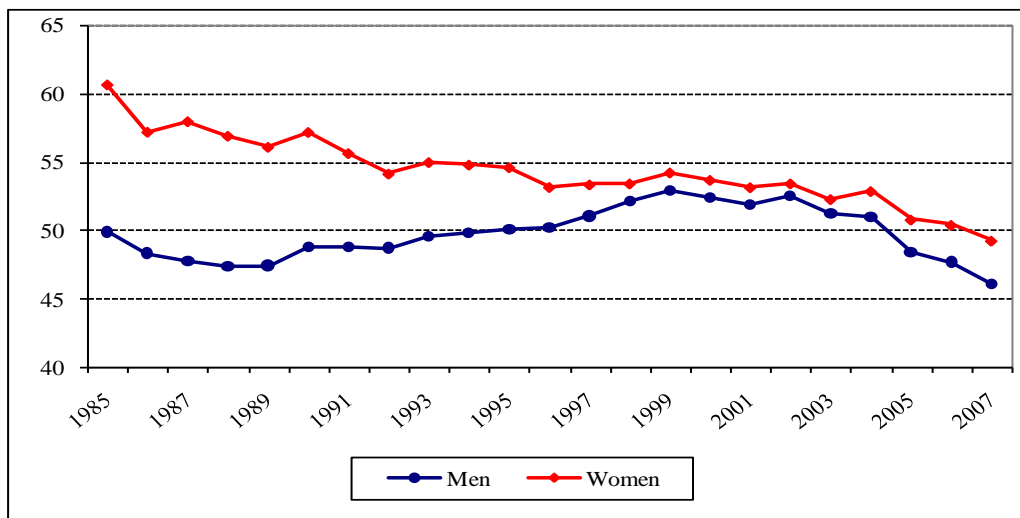
The aggregate informality rate masks different paths of different groups of workers. Therefore, for a complete understanding of the most affected groups by informality in the labour market, one needs to describe the informality rates by sex, education groups, age groups and sector of activity. In terms of gender, women are overrepresented in informal sector in Brazil. Moreover, while for men informality rose in the nineties and fell since then, for women there has been a continuous fall of about 10 percentage points between 1985 and 2007. The result of these different paths is that since 1998 male and female informality rates are similar.

These figures confirm that the growth recovery in Brazil contributed to decreasing informality, although it is still very high. So, as seen in the previous section, the growth process generated employments, reducing unemployment rates. But, equally important, recovery of growth generated jobs in the formal sector, a very

positive aspect of the Brazilian recent evolution of its labour market. The equal incidence of informality among men and women in recent years is also a positive aspect as women are not being segregated to bad quality jobs.

Figure 2.2. **Informality rate by gender, 1985-2007**

(in percentage)

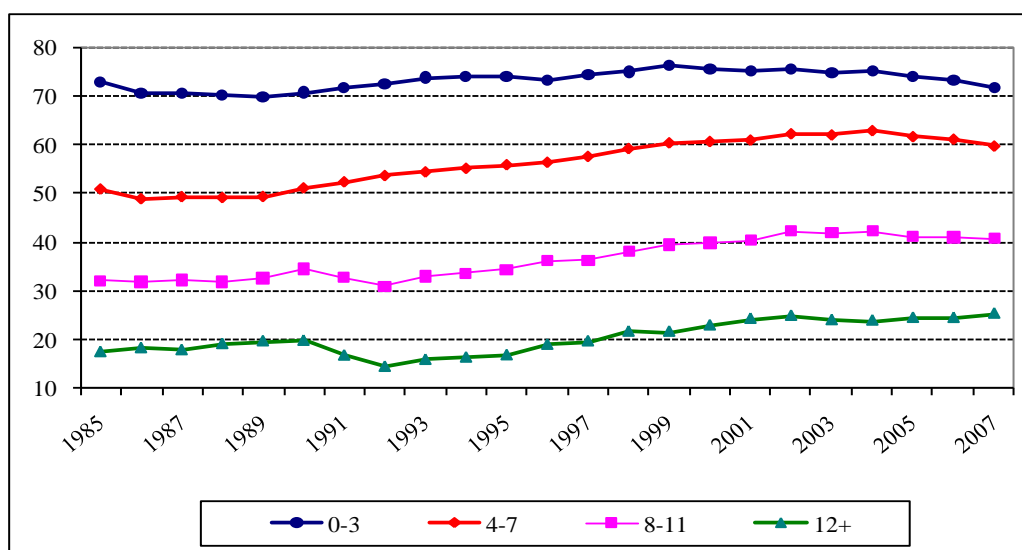


Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

Informality patterns by educational groups are very different. There is a negative relationship between schooling and informality rate: the most educated exhibit the lowest informality rate, as expected. People with up to 3 years of schooling, on the other hand, have informality rates above 70% and this has not changed much in 25 years. Another interesting aspect is that those in the intermediate education groups (4-7 and 8-11 years of schooling) have experienced an increase in informality, of about 10 percentage points between 1985 and 2007. This evolution can be explained by two factors: the fast increase in the supply of intermediate levels of education and the slower rates of job creating for this group, reflecting, in part, the consequences of openness of Brazilian economy in the 1990s.

Figure 2.3. **Informality rate by education, 1985-2007**

(in percentage by years of schooling)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

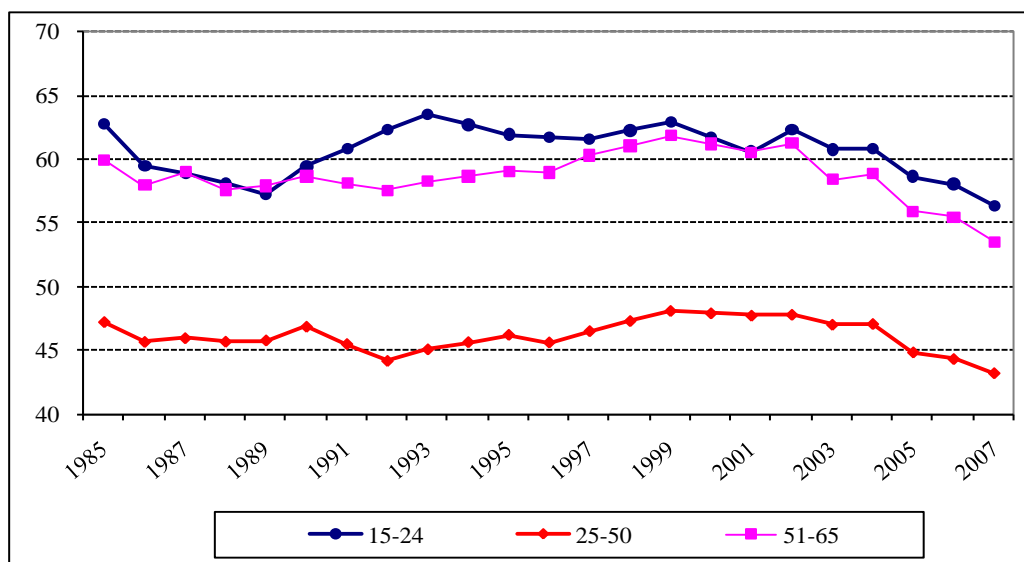
Another important aspect of informality is its differential incidence according to age groups. Figure 2.4 shows that people with 25-50 years of age exhibit an informality rate about 13 percentage points lower than other groups. However, even for this age group incidence is very high (45%) and has varied only slightly over the period. On the other hand, young people perceived a higher and more volatile informality incidence, with an informality rate above 60% between 1991 and 2004. While prime-age workers have a higher probability of achieving good jobs, the Brazilian labour market does not provide such jobs in a sufficient volume to incorporate all age groups. These facts show that the situation of young people into the labour market should be given more attention by public policies, like improving their skills, not only in school but also on-the-job training. Fiscal incentives could be given to employers to compensate them for training young people, a policy that is expected to improve formality rates among Brazilian young people.

Concerning older workers, Brazil has a particularity. In the recent past, many people started retiring from formal labour market very early (before 50 years old), but continued to work to complement household income. Almost all of them work in informal jobs, since they do not have incentive to pay for social security system because they are already formally retired and receiving benefits. Although recent social security reforms (1998 and 2003) rose the minimum ages for retirement, the stock of early retired workers is still high. For example, Mello *et al.* (2006) found that in 2004, 28% of the retired were still working.

Cunningham *et al.* (2008) shows that in Brazil, very few young workers are self-employed, but this fraction rises with age, according to an inverted-U relationship. On the other hand, informality decreases with age. This age-informality profile suggests that informal salaried work is a point of entry to the labour market for many of the young, and, as they accumulate experience or simply queue, they are eventually able to find a job in the formal sector or fulfill a desire to become self-employed. Informal salaried employment is also an option for many older workers who lack the skills or capital to become self-employed or to get a formal salaried job, or who opt out of informality because they will never accumulate enough years to secure a meaningful pension. The fact that participation in self-employment rises with age is similar to what happens in the United States, and may also be explained by voluntary entry delayed by credit or human capital constraints.”(Perry *et al.* 2007).

Figure 2.4. **Informality rate by age, 1985-2007**

(in percentage)



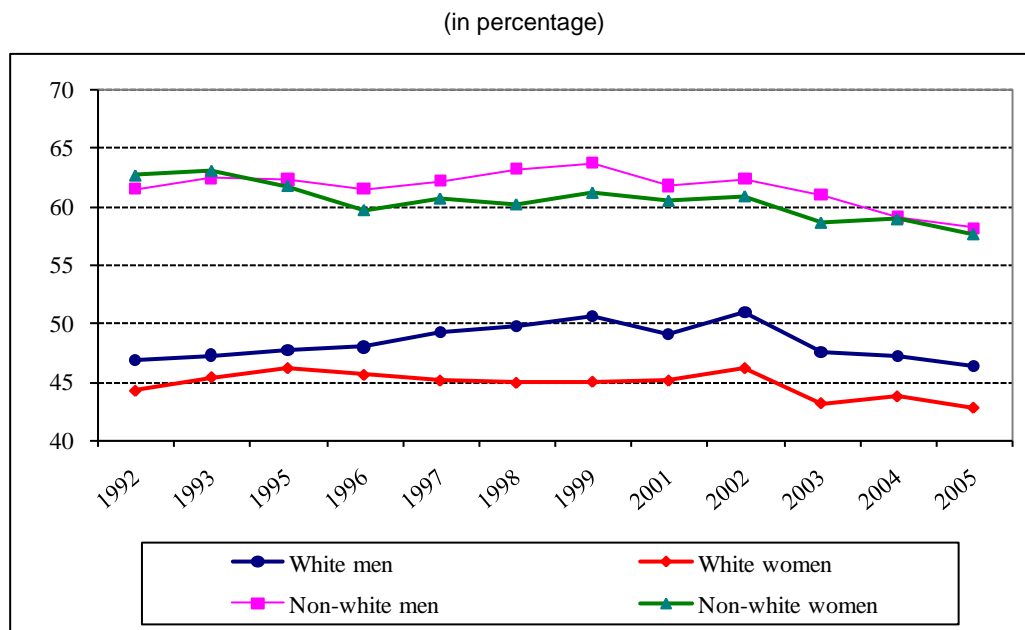
Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

It is interesting to note that there are also significant differences in informality rates between regions. PNAD data for 2007 indicates that while Southeast and South, the most developed regions of the country, face informality rates of 38.4% and 41.8% respectively, the poorest region (Northeast) has the highest informality rate (67.9%). So, there is an inverse relationship between socio-economic development and

informality rates in Brazil. Two of the main causes for this difference are the differential enforcement of labour regulations across regions and the composition in terms of activity. The governmental institutions (police, judiciary) are more consolidated in South-Southeast than in Northeast and this aspect seems to have an important weight in explaining such differences.⁴ Moreover, agriculture is more common in the Northeast and informality rates are higher in this sector (see below).

ILO (2006) assesses the differences between white and non-white workers concerning informality. Using data from PNAD and adopting a slightly different sample (people with 10 years old or more), ILO (2006) finds that non-white people have a higher informality rate if compared to white workers, but that the behavior of white men and white women are very similar. After 2002, all groups are showing a decrease in informality. However, the most important fall in informality occurs among non-white women (5 percentage points). The positive aspect is that the gap between white and non-white is decreasing, but maybe not as fast as desired.

Figure 2.5. **Informality rate by race and gender, 1992-2005**



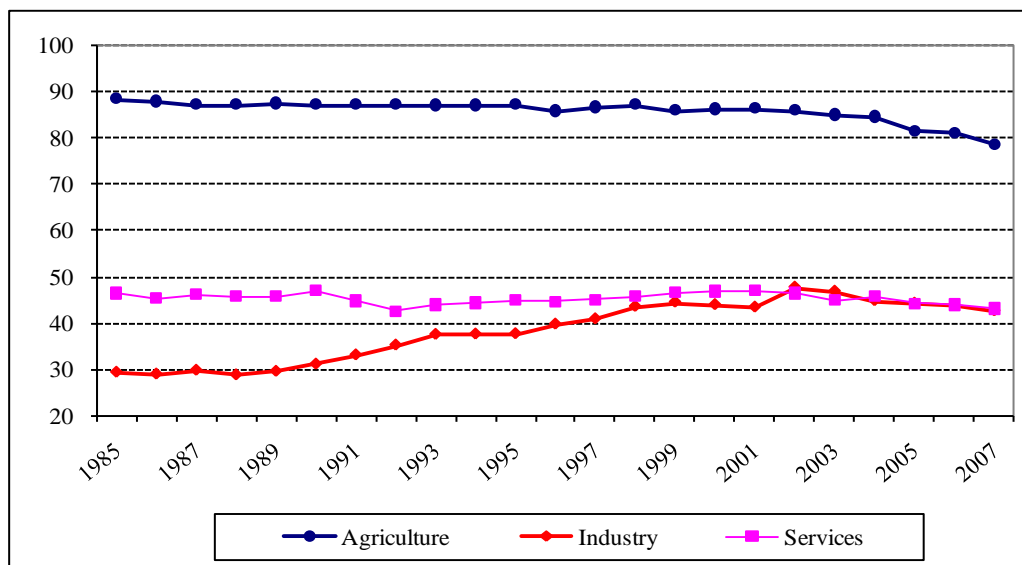
Source: International Labour Organization (ILO) from PNAD data, 1992-2005.

Finally, there are significant differences in informality depending on the activity sector. Agriculture presents a very high informality rate and only recently it experienced a small drop (from 90% in 1985 to 80% in 2007). Another aspect that calls attention is the informality profile of the industrial sector. While in the eighties informality was pretty stable around 30%, in the nineties it rose continuously, reaching 50% in 2002. So, it is clear that industry sector workers were those that suffered the highest burden of the rising informality in the nineties in Brazil.

4. Although there are significant differences in educational level of labour force (worst in Northeast) that also explain part of this differential.

Figure 2.6. **Informality rate by activity sector, 1985-2007**

(in percentage)



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

At least part of this phenomenon can be explained by “*terceirização*”, a policy whereby, in order to reduce costs, employers fired workers not directly related to production (in cleanliness activities, security, etc...) and bought the same services from specialized firms. In many cases, however, these firms do not formalize the labour relation. There are some examples of workers that were fired by their employer and immediately afterwards were contracted by a cleanliness firm, now as an informal worker.

Among the workers that were self-employed, 83% were also informal (did not have a social security number) in 2007. Hence, 33% of all informal workers were self-employed and 43% were employees that did not contribute to social security, the residual categories being formed of workers without any income, the one that worked to construct their own house or were working in exchange for food (24%). In Brazil, only 15% of all informal workers worked less than 20 hours in the reference week, but around 91% of all part-time workers were informal.

2.1 What explains informality according to the literature?

In this section, results from the literature concerning two different aspects of informality are presented. First, some evidence about the relationship between rigidity of labour regulations and informality is shown. After that, the evidence regarding informality and its causes in a more general way as well as some of the consequences of informality are presented.

2.1.1 Labour regulation and informality

One of the most propagated causes of informality is the existence of rigid labour regulations. Even if this issue is far away from being consensual, the debate concerning Latin American countries is briefly presented here.

Kaplan (forthcoming) argues that “there is considerable evidence that rigid labour regulations may prevent labour markets from operating efficiently”. For example, Heckman and Pagés (2000) find that job security legislation in Latin America reduces employment and increases inequality. Ahsan and Pagés (forthcoming) find that employment protection reduces employment in the formal sector without benefiting workers. Djankov and Ramalho (forthcoming) survey the recent literature concerning the effects of labour regulation in developing countries and conclude that “developing countries with rigid labour regulation tend to have larger informal sectors and higher unemployment, especially among young workers”

(Djankov and Ramalho, forthcoming). Heckman and Pagés (2004) concludes that “job security regulations have a substantial impact on the distribution of employment and on turnover rates. The most adverse impact of regulation is on youth, marginal workers, and unskilled workers. Insiders and entrenched workers gain from regulation but outsiders suffer. As a consequence, job security regulations promote inequality among demographic groups.” Kugler and Kugler (2003) conclude that higher payroll rates in Colombia are associated with less formal manufacturing employment.

There is another channel linking rigid labour regulations and labour market performance. A very recent literature tries to relate labour market flexibility, openness and employment. For example, Freund and Bolaky (2008), Chang *et al.* (forthcoming), Cunat and Melitz (2007) and Helpman and Itskhoki (2007) show that with more rigid labour regulation, economies do not benefit from trade openness and can forego large employment opportunities.

Contesting the argument that labour regulation causes the rise in informality, Kucera and Roncolato (2008) have assembled evidence showing that the relationship between labour regulation and informality is not so strong as some articles conclude. For example, they contest the conclusion of Bosch *et al.* (2007), arguing that the econometric results of the paper do not support the causality between rising labour costs and informality⁵. After showing ambiguous evidence concerning this relationship, the authors warn against policies that weaken labour regulations. But Kucera and Roncolato (2008) consider that “social protection policies can indeed have unintended negative consequences. For example, if workers’ and employers’ contributions to social protection schemes are too high, both parties have an incentive to keep their relationship off the books, whether within or outside of formal establishments”.

2.1.2 Brazilian evidence regarding informality and its causes

Some literature evidence regarding informality in Brazil is presented in that section. Ulyssea (2006a) shows that the structural transformation of Brazilian economy – the gradual growth of the service sector in GDP and labour shares – explains about 25% of the informality rise along the nineties in Brazil. Using regression techniques, Tannuri-Pianto and Pianto (2002) show that the probability of being in the informal sector is negatively associated with schooling and has a U shape with relation to age, reinforcing the results showed above. According to them, women, white people, urban workers and employees of big firms are less likely to be in informality.

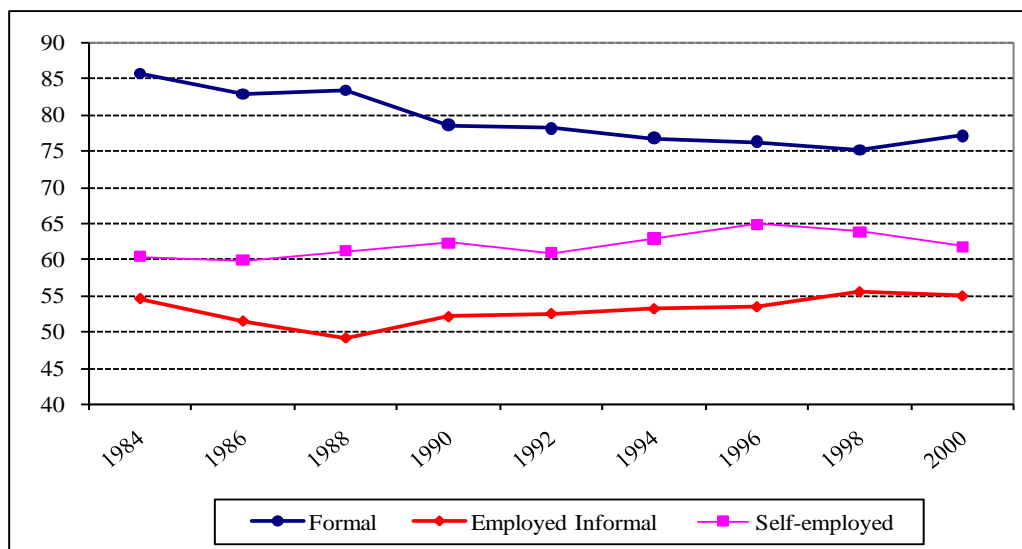
Bosch *et al.* (2007) investigates what factor causes the rising in informality in Brazil in the 1990s and conclude that “trade liberalization played a relatively small part in this increase”, but find “suggestive evidence that several dimensions of the Constitutional reform, in particular, regulations relating to firing costs, overtime, and union power, explained much more”. Both effects work mostly through the reduction in hiring rates, rather than separation rates that have been investigated in the literature to date. Overall, the findings confirm the importance of labour legislation to firms’ decisions to create new formal sector jobs in Brazil

Ulyssea (2006a) also presents some results that confirm that in general, informal sector contains the bad quality jobs. Amadeo *et al.* (2000), for example, shows that job turnover is more than three times higher among informal workers than among formal ones. Figure 2.7, which is based on Curi and Menezes Filho (2004), shows that the time duration of an informal job is much smaller than that of a formal one. On average, about 77% of workers that were in the formal sector in 2000 remained in that sector one year later, while among the informal sector workers, this share was between 55% (employed informal) and 62% (self-employed). Another important aspect is that the rate of permanence in formal sector one year later exhibits a continuous fall in the period, while exit from the informal sector and from self-employment has become more common.

5. See Kucera and Roncolato (2008) for a summary of empirical findings relating labour regulations and informal employment.

Figure 2.7. Share of workers that remain in the sector, 1984-2000

(in percentage)



Source: Curi and Menezes Filho (2004).

Some recent studies challenge the view that informal sector provide only bad quality jobs while all good jobs belong to formal sector. Perry *et. al* (2007) argues that in Latin America “informal sector can generally be thought of as comprising two large groups who differ significantly in both their motivations and their relative levels of job satisfaction. The first is composed of independent workers—the self-employed or those owning micro firms, who report being as well-off as they would be in formal jobs. As a consequence, the majority of them are not looking for formal jobs. Most of these informal workers appear to choose their occupations according to their individual needs (especially their desire for flexibility and autonomy) and abilities (their comparative advantage in terms of entrepreneurship). According to the authors, there is another branch of informal workers, called informal salaried workers. This sector comprises “domestic employees, unpaid family workers, micro firm workers, and those who work in larger firms under informal labour arrangements” (Perry *et. al*, 2007). Kucera and Roncolato (2008) also presents a body of evidence indicating that at least a fraction of informal workers are voluntary ones, in the sense that they are not segregated into this sector, but that they choose to belong to this branch of the labour market.

What are the main obstacles to formal employment in Brazil? There is a literature that tries to address this question, focusing on the role of institutions on the evolution and main characteristics of informality. Scandiuzzi (1999) assumes that formal firms respect minimum wage legislation and informal firms do not. The author points to a negative relationship between informality and probability of punishment of informal firms. Loyaza (1996) concludes that “the size of the informal sector is found to depend positively on tax burden and labour-market restrictions, and negatively on a proxy for the quality of government institutions”.

Ulysea (2006a) also argues that there is a consensus in Brazilian literature that contractual rigidity and heavy payroll taxes are the main reasons for the high informality in Brazil (Barros, 1993; Amadeo and Camargo, 1996). Ulysea (2008) develops a theoretical model that “incorporates the main trade-offs faced by workers and firms when deciding in which sector they will operate. Simulations show that increasing unemployment benefits and reducing payroll taxes generate positive, though small, effects on labour market indicators. However, intensifying government auditing implies a substantial reduction of informality rates, but it also causes unemployment to increase and the deterioration of other important indicators in the Brazilian labour market”.

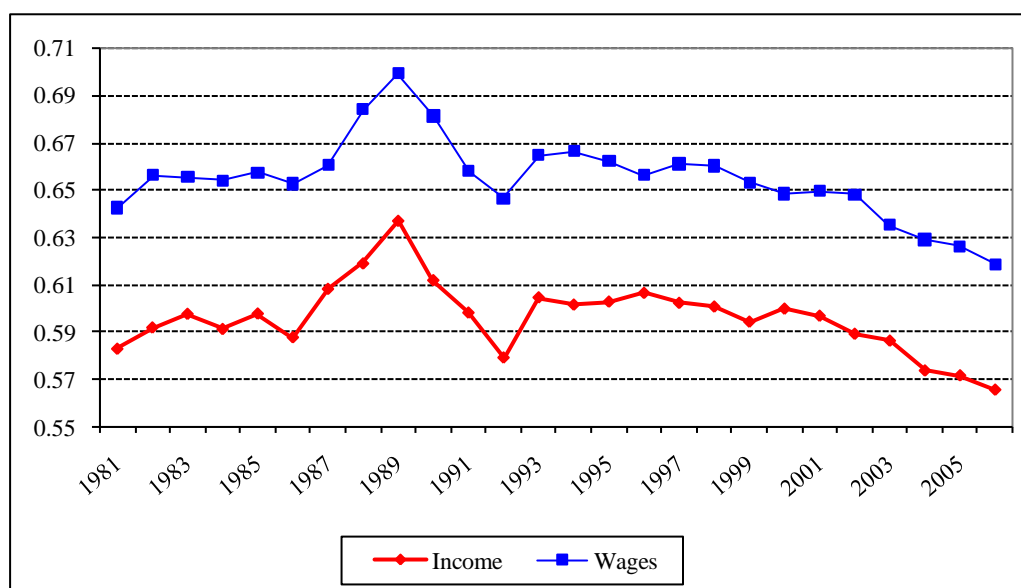
Ulyssea and Reis (2005) simulates the effect of reducing payroll rates relying over formal salary workers on informality rates. If the payroll rate fell from 27.5% to 10%, the informality would have decreased just 5 percentage points According to Bosch *et al.* (2007), between 1983 and 2002 there was a modest contribution of trade variables (3 percentage points or 21% of the reduction in formality), but a large impact of the constitutional changes (13 percentage points or 76% of the reduction in formality). The net effect of the Constitution was so large precisely because it reduced job creation.

Finally, Perry *et al* (2007) also identify the worker characteristics more related with informal employment: small firms, low educational level, industry sector (construction, agriculture, retail, and transport), job tenure (less than one year) and women’s household status (married women with children). But they point out that there is substantial heterogeneity within these groups and conclude that in Brazil the cause for job segmentation for those groups of informal workers who report being involuntary is the high labour costs. Perry *et al* (2007) also argues that “after the constitutional reform in Brazil the flows from informal to formal salaried employment became significantly lower than the flows in the reverse direction - even in boom times—suggesting a significant degree of market segmentation”.

3. Labour markets and their impact on income inequality

The aim of this section is to examine to what extent the change in employment patterns are related to the decline in inequality. The results concerning poverty levels are also briefly commented. Figure 3.1 describes the behaviour of inequality in the last 25 years, both in terms of per capita household income and in terms of labour market earnings. While inequality remained roughly constant between 1981 and 2001 (in spite of cyclical variations) one can notice a very clear downward trend in both measures of inequality since 2001.

Figure 3.1. Gini Index, total household income and wages, 1981-2006



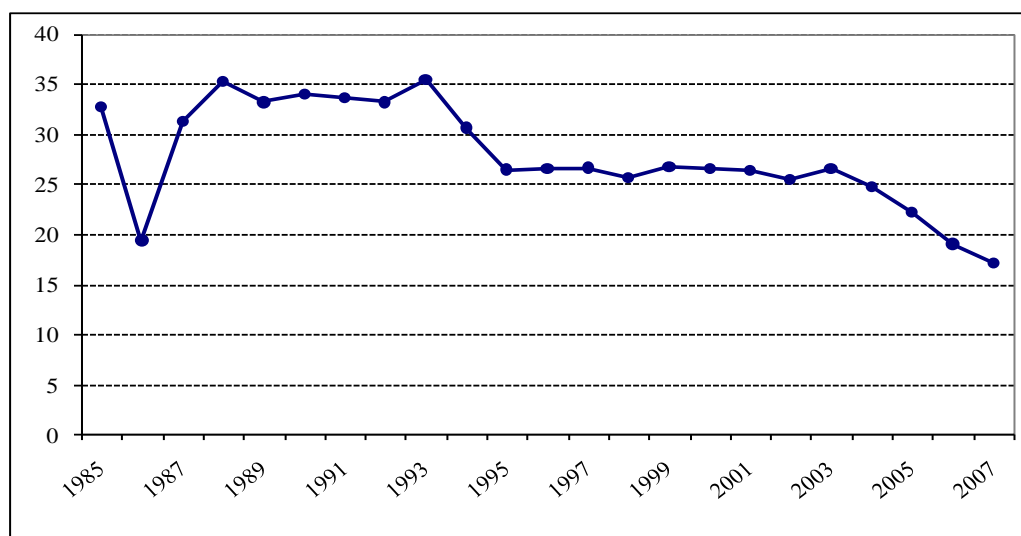
Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1985-2007.

With respect to poverty, the numbers are pretty different. Figure 3.2 shows an important decline in the poverty rate between 1985, when about 33% of households were defined as poor, and 2007, when the proportion of poor declined to about 17% (corresponding to 41 million of poor people)⁶. Firstly, there is a marked decline in poverty during the first inflation stabilization plan (Cruzado, 1986), which stabilized inflation and increased wages. Poverty returned to higher levels, however, when this plan failed. Between 1988 and 1993, as well as between 1995 and 2003, poverty rates remained stable. The other two periods of

6. The headcount ratio was used as the poverty measure in this study.

marked poverty reduction were between 1993 and 1995, when another (this time successful) stabilization plan was implemented (Real, 1994), and between 2003 and 2007, when the conditional cash transfer programs, together with a booming labour market and real increases in the minimum wages helped to reduce poverty significantly.

Figure 3.2. **Percentage of poor households, 1985-2007**



Source: IPEADATA.

Despite the fact that since 2000 both informality and poverty declined at the same time, the magnitudes of the changes are quite different. Therefore, it seems unlikely that informality reduction is causing poverty reduction in recent years in Brazil. In effect, Machado and Ribas (2008) show that occupations in the informal sector contribute more to poverty reduction than occupations in the formal sector. According to the authors, only 14 per cent of the unemployed experienced upward mobility as a result of finding a formal employment whereas informal jobs accounted for 37 per cent of the upward mobility experienced by the unemployed. This suggests that the formal sector has not helped people to escape poverty as much as the informal sector

There is an intense debate about the causes of the very high level of the Brazilian income inequality. Since the early seventies, many authors have tried to tackle this problem. Different researchers have focused on different explanations for this phenomenon. For instance, Henriques (2001) discusses the role of labour market discrimination, Camargo and Neri (1999) and Hoffmann (1995) examine the influence of inflation, Bonelli and Ramos (1995) study the impact of economic cycles and Scorzafave and Menezes-Filho (2005) discuss the role of increasing female labour force participation. Finally, some researchers have emphasized the access to land and capital property and the government policies (minimum wages, for example) as predictors of Brazilian inequality. For example, Firpo and Reis (2006) find that the evolution of the minimum wages contributed with 36% of the inequality fall, measured by the Gini index between 2001 and 2005. However, they point that although real increases of minimum wages have contributed to diminish wage inequality since 1990, it is expected that the continuity of this kind of policy loose efficiency in order to decrease inequality and poverty in Brazil.

Although researchers have examined a variety of dimensions of inequality, one of the central aspects with respect to inequality in Brazil is the role of education. The majority of Brazilian economists nowadays agree that education is the main factor behind income inequality in Brazil, because schooling inequality generates productivity differences between individuals that last over the life cycle and because returns to education are still very high in Brazil. Menezes-Filho (2001), for example, argues that education explains about 26% of Brazilian household income inequality and about 40% of earnings inequality. Reis and Barros (1991) also find that education explains about 40% of wage inequality in Brazil.

There is also evidence that this relationship is not spurious. For instance, Lam and Schoeni (1993) use PNAD data and include father schooling, mother schooling, father-in-law schooling and mother-in-law schooling as additional variables in a wage equation, in order to capture the influence of familiar wealth, labour market opportunities and non-observable abilities in the relationship between education and wages. The inclusion of all these variables makes education returns fall from 16% to 11% per additional year of schooling. The authors conclude that the familiar background bias is modest and not necessarily reflects returns to familiar connections.

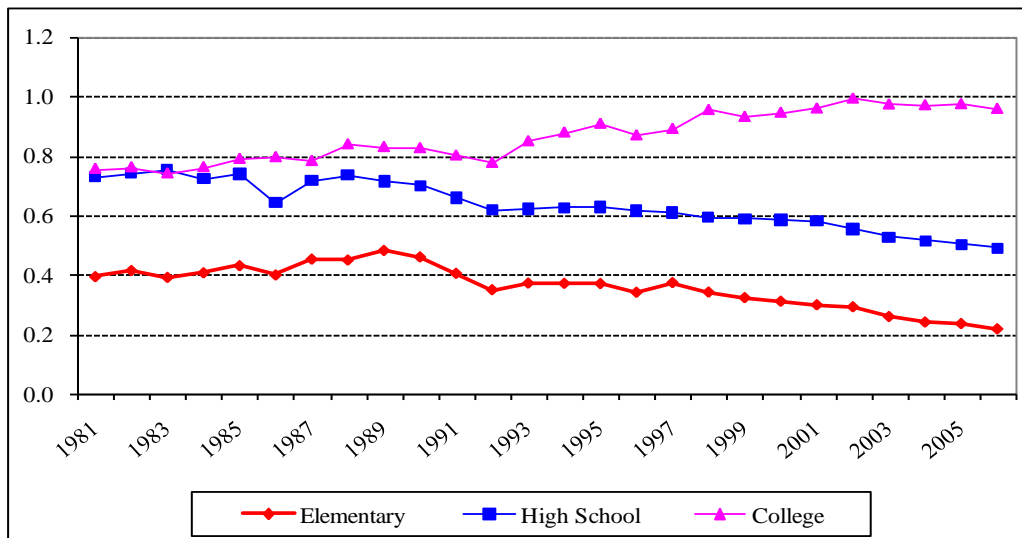
In terms of the changes in inequality since 2001, research has been focusing on two sources: public transfers and labour market transformations. Concerning public transfers, there are many studies seeking to understand the impact of *Bolsa-Família*, the Brazilian conditional cash-transfer program, on inequality. For example, Soares *et al.* (2007) argue that *Bolsa-Família* explains about 21 per cent of the fall in the Brazilian Gini index between 1995 and 2004. Hoffmann (2006) calculates the contribution of *Bolsa-Família* to the recent fall in inequality to be in the range of 28%. Barros *et al.* (2006) argue that about a third of the fall in inequality is due to the public transfers.

Ferreira (2006) shows that labour income was responsible for about 85% of total family income in 1985 and for 77% in 2001. On the other hand, income from retirement comprised 10% of family income in 1985 and to 18% in 2001. Despite losing some of its importance, wages are still by far the most important component of family income. It is natural, therefore, that any transformations in the labour market will impact household per capita income. Some evidence on how different aspects of the labour market affected the behavior of inequality in Brazil is presented below. Wajnman *et al.* (2006) concludes that demographic factors, as the changing composition of families by sex and age have very little importance in explaining the recent fall in Brazilian inequality. Ramos (2006) shows that between 1995 and 2005 education was the most important element that explains the falling wage inequality in Brazil. The author identifies a reduction in educational inequality among workers and also an expressive drop in education returns. These two movements are very important to understand the recent dynamics of inequality. Tavares and Menezes-Filho (2007) also reach the same conclusion, that is, the fall in the returns to education is the main factor explaining the reduction of inequality in Brazil.

Figure 1.7 above showed that the labour supply of the more educated is increasing rapidly in Brazil. This explains the drop in the returns to education, as documented by Figure 3.3, especially for those with intermediate levels of education (elementary and high school)⁷ whose supply has been increasing at a faster rate. Returns to college education (college) were increasing in Brazil until 2002, despite an increase in the share of population with that education level, which means that demand for this level of skill was rising, most probably due to skill biased technological change.

7. Elementary corresponds to 5 to 8 to years of schooling, High School to 9 to 11 and College to more than 12 years of schooling.

Figure 3.3. Education wage differentials, 1981-2006



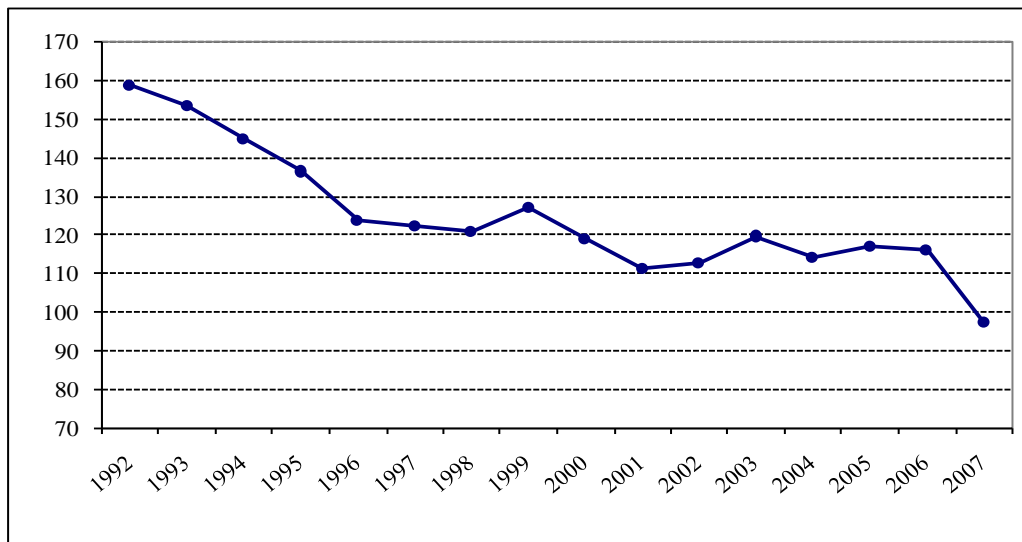
Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1981-2006.

In order to study the effect of discrimination in Brazilian labour market, Soares *et al.* (2006) examine the evolution of educational and earnings differentials between white and non-white workers in Brazil. The authors show that the educational gap between these groups is being reduced over time and that this fact is contributing to the reduction of the racial wage gap. The authors also find a reduction of discrimination in the Brazilian labour market, which also explains part of the fall of the wage gap.

One of the aims of this section is to investigate the relationship between informality and inequality in the Brazilian case. In general, the literature does not find an important role for informality in the process of inequality generation. A classical study for Brazil regarding this issue is Barros and Mendonça (1995). They try to disentangle the various sources explaining wage inequality in Brazil. Concerning the role of labour market segmentation (formal versus informal), they found that if the wage differentials between formal and informal workers were eliminated, *ceteris paribus*, wage inequality in Brazil would be reduced in 7%. The authors find that educational differentials are the most important factor behind wage inequality in Brazil.

More recently, other papers have also investigated the relationship between informality and inequality. The impact of labour market segmentation and in particular the formal-informal segmentation is studied by Ulyssea (2006b) and by Barros *et al* (2006). Using decomposition techniques, Ulyssea (2006b) concludes that although informality rates are decreasing in Brazil, the earnings differentials among the two sectors are increasing and this fact is contributing to attenuate the inequality fall in Brazil. Barros *et al* (2006) also reach the same conclusions using a different decomposition technique. Machado *et al.* (2006) examine the impact of the formal-informal segmentation using quantile regressions and show that between 2002 and 2005 there is an increase in the controlled wage gap between formal and informal workers for those below the income median and a decline above the median, which contributes to an increase in inequality in the period. Figure 3.4 below describes the behavior of the formal/informal wage differential in Brazil over time, showing that it declined steadily until 2001, but has remained stable or even slightly increasing in the last 5 years. In 2007, there is a large drop in the differential. One possible explanation for this result is that, with the process of continuing growth, many low-paid informal workers were entering formal occupations, which contributes both to the increase in mean wages in the informal sector, and to the decrease in wages in the formal jobs, due to selection.

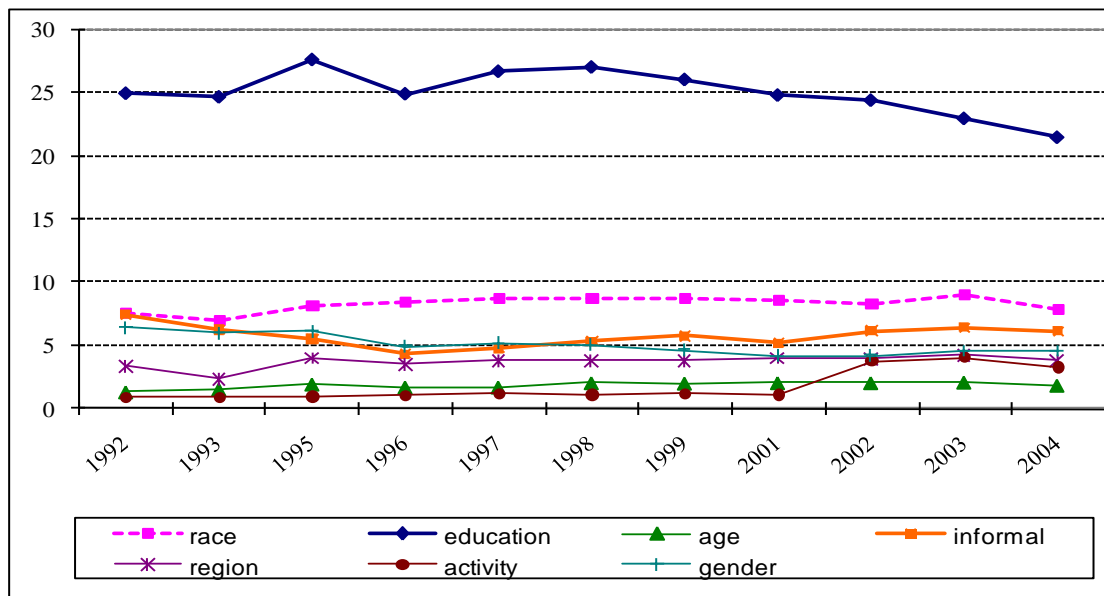
Figure 3.4. **Formal-informal wage ratio, 1992-2007**



Source: Pesquisa Nacional por Amostra de Domicílios (PNAD), 1992-2007.

Lemos and Scorzafave (2006) also implement inequality decomposition by population sub-groups (Shorrocks, 1980). Using data from PNAD, covering the period 1992-2004, figure 3.5 below presents the results in terms of the contribution of each group of characteristics to labour income inequality, measured by the Theil-T.⁸

Figure 3.5. **Theil-T decomposition, 1992-2004**



Source: Lemos and Scorzafave (2006).

Education is, undoubtedly, the most important factor explaining income inequality in Brazil, contributing to about 25% of inequality, according to the Theil-T. It is important to note, however, that the role of education is declining since 1998. If the wage differentials between formal and informal workers were eliminated, on the other hand, inequality would have dropped only by about 6%. In sum, the evidence

8. Results for the Theil-L and GE(-1) are very similar. For details concerning these indexes, see Litchfield (1999).

presented so far make it clear that informality has only a marginal impact on inequality, both in terms of its high historical level and in terms of its recent decline.

4. Policy responses towards more and better jobs

This section will focus on the investigation of the role for social programs and for active labour market policies to reduce inequalities in Brazil. It will also speculate about the possible impact of the recent financial crisis on the Brazilian labour market and the perspectives for the next two years in terms of policies that could mitigate the impact of the crisis.

Lima and Scorzafave (2008) provide a detailed analysis of the recent evolution (1993-2005) of Brazilian household income inequality. The authors assess the contribution of different income sources to inequality, particularly the role of different governmental transfer programs (*Bolsa-Família*, *BPC* and *PETI*). Before talking about the results it is interesting to describe in more details the design of these three programs.

Bolsa-Família: Operating since September, 2004 in Brazil, *Bolsa-Família* is a conditional cash transfer (CCT) program that encompassed all already existing social programs (*Bolsa Escola*, *Bolsa Alimentação*, *Auxílio Gás* and *Cartão Alimentação*). The program has the following design: very poor families, with household *per capita* income lower than BRL 50 per month in 2004 (about USD 20) receive BRL 50 per month. Families with per capita income between BRL 50 and BRL 100 per month receive BRL 15 per child, up to 3 children. Therefore, each family can receive BRL 15 and BRL 95. The conditionalities are as follows: children between 6 and 15 years old have to attend school and be vaccinated. Pregnant women have to do all the pre-natal exams. In 2004, 3.6 million families received the *Bolsa-Família* transfers, while in 2008 this number rose to 11 million.

Benefício de Prestação Continuada (BPC): it is a minimum wage benefit (BRL 260 in 2004) received by people with 65 or more years and disabled people with per capita family income of one quarter of the minimum wage. BPC started in 1996 and cannot be (officially) received together with other social programs, as *Bolsa-Família*. By the end of 1996 the program had 350,000 beneficiaries and in 2005 around 2.7 million people received the transfers.

Programa de Erradicação do Trabalho Infantil (PETI): the aim of this program is to eliminate child labour in Brazil. The program covers children between 7 and 15 years old with per capita income below half minimum wage. The benefit varies between BRL 20 and BRL 40 per child, depending on the city size. In 2006, PETI was incorporated into the *Bolsa-Família* program. In 1996, when it was created, the program helped around 3,000 children and by 2005, around 900,000 children received the benefits.

The results of Lima and Scorzafave (2008) decompositions show that private sector wages are the most important factor driving inequality changes in Brazil and that social transfer programs have a positive but small effect on the recent reduction of inequality. On the other hand, the dynamics of retirement rents and public sector wages contributed to attenuate the recent fall in inequality in Brazil. In terms of the individual social programs, *Bolsa-Família* contributes more to decreasing inequality than BPC. PETI has a negligible effect into inequality. Hoffmann (2005) and Ferreira (2006) also show that retirement income has been contributing to increase inequality in Brazil.

Hoffman (2006) argues that only a fifth of the overall reduction in inequality between 2001 and 2005 is due to the conditional transfer programs (*Bolsa-Família*, BPC). In the poorest regions, like the Northeast for example, the programs are responsible for about 46% of the reduction in the Gini coefficient between 1998 and 2005 and 87% in the period between 2002 and 2004. Barros *et al.* (2006) argue that the main factor behind the effect of the social programs on inequality is the increase in their coverage between 2001 and 2005, especially in the case of *Bolsa-Família*.

It is also interesting to investigate some possible consequences of the design of these social programs for the labour market. Although it consists of a conditional cash transfer program, *Bolsa-Família* does not condition the benefit payment on the engagement into the labour market of the household head. In theory, the benefit can increase the reservation wages of the head and provoke a fall in labour supply. Ferro and

Nicolella (2007) and Mattos *et al.* (2008) investigate empirically this issue and both conclude that *Bolsa-Família* does not have an adverse impact on labour supply.

4.1 International economic crisis: what's happening with Brazilian labour market and what can be done?

The recent international financial crisis has had an important impact on the Brazilian labour market. Until September 2008, the Brazilian economy was growing steadily, generating new jobs at an increasing rate, especially in the formal sector, with important reductions in unemployment. Despite the fact that the Brazilian financial sector did not suffer from the problems that gave rise to the crisis in the United States and Europe, it wasn't long before the crisis affected the Brazilian economy. The main channels through which the international crisis has affected Brazil are:

- a) the reduction in the commodities prices, which are responsible for a big share of Brazilian exports;
- b) the lack of credit, as many firms could not roll over their foreign debts, since the international banks were much more risk averse. These firms started to compete for the few lines of credit available internally. Therefore, interest rates rose for most credit lines. In particular, consumer credit, which was growing at the rate of 20% per year since 2005, was all but interrupted, with a big impact on car sales.
- c) Brazilian banks also have become more risk-averse even with respect to inter-bank loans, which threw the smaller banks into trouble.

By the end of 2008, unemployment rate started to rise again, from 6.8% in December to 8.2% in January 2009. In many sectors, workers started to trade off wage reductions for employment maintenance with their employers. Many firms decided to give paid holidays to their employees, reduced their working week and reduced wages, expecting a quick reversal of their fortunes. As this did not happen, however, some firms started to dismiss their workers and unemployment started to rise again. Between December 2008 and February 2009 about 800,000 workers lost their formal jobs.

What can be expected in terms of employment and working conditions in the next two years as a result of the international crisis? It is not easy to answer this question, as the degree of uncertainty with respect to the magnitude and length of the crisis still is very high. It is clear that Brazil is in much better conditions to face this crisis than in previous occasions, due to the sound good macroeconomic policies that were implemented in the recent past. Despite this fact, in the last quarter of 2008, GDP fell about 3.6% with respect to the previous quarter and some analysts predict a growth rate close to zero for 2009. It is highly possible, therefore, that the Brazilian labour market will suffer the effects of the crisis pretty soon. Despite the uncertainty associated with this crisis, it is possible to point out some of the most obvious consequences of the recession in the short run performance of the Brazilian labour market:

- a) a continuous rise of the unemployment rate: given that the level of investments fell dramatically since the last quarter of 2008, and that firms still do not envisage a recovery in the demand for their products, it is highly possible that the Brazilian economy will not be able to generate enough jobs to absorb the millions of new workers that arrive in the labour each year, plus the ones that re-enter the market every year.
- b) an increase in informality: given that the majority of lost jobs are in the formal sector, transitions from informal to formal jobs are becoming more difficult, which should increase the rate of permanence in the informal sector and decrease the rate of transitions from the informal to the formal sector or to unemployment.

Which economic policies could be adopted in this context to alleviate the effects of the economic crisis on the labour market?

- Tax reforms: Brazil is one of the countries with the most complex tax systems in the world. There are more than 60 different types of taxes, which increase dramatically the transaction costs and the rate of inefficiency of firms, workers and consumers, which have to spend an enormous amount of time understanding the system and devising ways to pay lower taxes. Brazilian firms spend on average 2600 hours per year to pay taxes, the highest rate in the world (World Bank, 2009). Despite new initiatives aiming at simplifying the tax system to small firms (*Lei do SIMPLES*), there are still many distortions in the Brazilian tax system.
- Labour costs: it is very expensive to hire workers in the formal sector. Firms have to pay up to 80% of the value of monthly wages as additional labour costs. In order to fire workers, in case of necessity, firms have to pay fines equivalent to 40% of all the forced savings accumulated in the job (FGTS). This system provides incentives for formal workers to change jobs often and disincentives for firms to keep workers for a long time. In Brazil, firms only hire formal workers if they are absolute sure that demand will rise continuously for a long time. This system has to be changed in order to increase labour market flexibility.
- Judicial system: according to the World Bank (2002 in Meneghin and Bugarin, 2008), every year 2 million labour litigations are initiated in the judicial system and the average length of each litigation is 31 months. The most common result of these litigations is that workers and firms share the value in dispute: workers receive on average 40% of the total value. Employers, therefore, have incentives not to pay the full value of workers' rights, since they know they will have to pay more after the litigation comes to an end (Meneghin and Bugarin, 2008). It is necessary, therefore, to speed up and rationalize the Brazilian labour judicial system, so that more formal jobs can be generated.
- Cost of doing business: Brazil appears in the 125th position among 181 countries in the World Bank (2009) report that evaluates the costs of doing business in each country. Brazil is one of the countries with the stringent regulations for business start-up, requiring 18 different procedures. Moreover, it takes on average 152 days to close a firm in Brazil. It is therefore necessary to simplify all the procedures necessary to open and close firms, and to reduce significantly the bureaucracy in the Brazilian public sector.
- Increase the length of the unemployment benefit: Nowadays the unemployment insurance program stipulates that payments in case of unemployment only last for 3 to 5 months, depending on the worker's previous contributions to the social security system. The number of payments should be increased to cover the expected duration of the financial crisis and avoid that children drop out from school and start to work in order to replace the temporary fall in family income.
- Expand coverage and amount of the *Bolsa-Família* program: in the context of a financial crisis, it would be necessary to expand the coverage of a program that has been very well evaluated, both in terms of targeting and in terms of its effect on poverty and inequality. This is necessary to keep family income above a minimum value necessary for food expenditure in case the head becomes unemployed in the poorest regions and to avoid that children drop out from school and start to work in order to replace the temporary fall in family income

5. Conclusions

Based on evidence assembled thus far, what are the policy lessons that can be used to generate more and better jobs? After a couple of decades with very volatile macroeconomic conditions and high levels of inequality, growth in the new century in Brazil has been able to generate jobs at an increasing rate. This has led to a decline in unemployment and in informality, despite an increasing labour force participation rate. Moreover, the increasing level of human capital accumulation, coupled with the amplification of the conditional cash transfer programs, like *Bolsa-Família*, has led to a steady fall in inequality, for the first time in decades. This evidence suggests that after a period of adjustment to the trade liberalization and privatization reforms, Brazil has found a stable path of development.

In order to continue in this path, despite the recent global economic crisis, Brazil has to continue expanding the education of its workforce, increasing the transitions from high school to college education. Moreover, it has to improve the *Bolsa-Familia* program, so that the 11 million families that benefit from it in Brazil can find a way out of poverty in the long run and start participating more effectively in the labour market.

In order to decrease informality, it is necessary to promote institutional reforms to speed up the process of creating new firms, to reduce the tax burden levied on the small formal firms, to simplify the tax and the labour judiciary system and to implement the labour market reforms so that the hiring and firing of formal employees becomes less expensive in Brazil.

REFERENCES

- Ahsan, A. and Pagés, C. (forthcoming). “Are all labour regulations equal? Evidence from Indian manufacturing.” *Journal of Comparative Economics*.
- Amadeo, E. and Camargo, J. (1996), “Instituições e o mercado de trabalho no Brasil”. In: Camargo, J. (org). *Flexibilidade no Mercado de Trabalho no Brasil*. Fundação Getúlio Vargas, Rio de Janeiro.
- Amadeo, E.; Gill, I.; Neri, M. (2000) “Brazil: the pressure points in labour legislation”. *Ensaio Econômicos EPGE*.
- Barros, R. (1993), “The Informal Labour Market in Brazil”, *mimeo*.
- Barros, R.; Carvalho, M.; Franco, S. (2006), “O papel das transferências públicas na queda recente da desigualdade de renda brasileira”. In: Barros, R.; Foguel, M.; Ulyssea, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Barros, R. and Corseuil, C. (2004), “The Impact of Regulations on Brazilian Labour Market Performance”, in: Heckman, J.; Pagés, C. “Law and Employment: Lessons from Latin American and the Caribbean”.
- Barros, R; Mendonça, R. (1995), “Os determinantes da desigualdade no Brasil”, IPEA Discussion Paper, n. 377.
- Bonelli, R. and Ramos, L. (1995) “Distribuição de Renda no Brasil: Avaliação das Tendências de Longo Prazo e Mudanças na Desigualdade desde Meados dos Anos 70”, *Revista Brasileira de Economia*, vol. 49, pp. 353-73.
- Bosch, M.; Goni, E., Maloney, W. (2007). “The determinants of rising informality in Brazil: Evidence from gross worker flows. IZA Discussion Paper 2970.
- Camargo, J. and Néri, M. (1999) “Distributive Effects of the Brazilian Structural Reforms”, *Anais do XXVII Encontro Nacional de Economia*, pp. 1845-1868.
- Chang, R., Kaltani, L.; Loayza, N. (forthcoming), “Openness can be good for growth: The role of policy complementarities”, *Journal of Development Economics*.
- Cunat, A.; Melitz, M. (2007), “Volatility, labour market flexibility, and the patterns of comparative advantage”, NBER Working Paper 13062. National Bureau for Economic Research, Cambridge, MA.
- Cunningham, W.; McGinnis, L.; Verdú, R.; Tesliuc, C.; Verner, D. (2008), “Youth at Risk in Latin America and the Caribbean: Understanding the Causes, Realizing the Potential”, The World Bank: Washington, DC.
- Curi, A. and Menezes-Filho, N. (2004), “Os Determinantes das Transições Ocupacionais no Mercado de Trabalho Brasileiro”. In: *Anais do XXXII Encontro Nacional de Economia*.

- Djankov, S.; Ramalho, R. (forthcoming), “Employment laws in developing countries”, *Journal of Comparative Economics*.
- Ferreira, C. (2006), “Aposentadorias e Distribuição da Renda no Brasil: uma nota sobre o período 1981 a 2001”, *Revista Brasileira de Economia*, v. 60, n. 3, p. 247-260.
- Ferro, A. and Nicolella, A. (2007), “The impact of conditional cash transfer programs on household work decisions in Brazil” FEA-RP Working Paper Series.
- Firpo, S. and Reis, M. (2006), “O salário mínimo e a queda recente da desigualdade no Brasil”. In: Barros, R.; Foguel, M.; Ulyseia, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Freund, C.; Bolaky, B. (2008), “Trade, regulations, and income”, *Journal of Development Economics*, v.87, n.2, p. 309–321.
- Heckman, J. and Pagés, C. (2004), “Law and Employment: Lessons from Latin America and the Caribbean”. University of Chicago Press, Chicago.
- Heckman, J. and Pagés, C. (2000), “The cost of job security regulation: Evidence from Latin American labour markets”, *Economía*, v.1, n.1, p.109–154.
- Helpman, E., Itzhoki, O. (2007), “Labour market rigidities, trade and unemployment”, NBER Working Paper 13365. National Bureau for Economic Research, Cambridge, MA.
- Henriques, R. (2001), “Desigualdade Racial no Brasil: Evolução das Condições de Vida na Década de 90”, IPEA Texto para Discussão, no. 807.
- Hoffmann, R. (2006), “Transferências de renda e redução da desigualdade no Brasil e em cinco regiões entre 1997 e 2005”. In: Barros, R.; Foguel, M.; Ulyseia, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Hoffmann, R. (2005), “As transferências não são a causa principal da redução da desigualdade, Econômica, Rio de Janeiro, v. 7, n. 2, p. 335-341, 2005.
- Hoffmann, R. (1995), “A Desigualdade e Pobreza no Brasil no Período 1979-90”, *Revista Brasileira de Economia*, vol.49, pp.277-94.
- ILO (2006), “Trabalho decente e desigualdade racial no Brasil”, International Labour Organization, *mimeo*.
- Kaplan, D. (forthcoming), “Job creation and labour reform in Latin America”, *Journal of Comparative Economics*.
- Kucera, D.; Roncolato, L. (2008) “Informal employment: Two contested policy issues”, *International Labour Review*, v.147, n.4, p. 321-348.
- Kugler, A., and M. Kugler (2003), “The Labour Market Effects of Payroll Taxes in a Middle-Income Country: Evidence from Colombia”, IZA Discussion Paper 852, Institute for the Study of Labour, Bonn, Germany.
- Lam, D. and Schoeni, R. (1993), “Effects of Family Background on Earning and Returns to Schooling: Evidence from Brazil”, *Journal of Political Economy*, vol. 101, p.711-738.
- Lemos, R. and Scorzafeve, L. (2006), “Decomposição da desigualdade da renda do trabalho no Brasil: 1992-2004”, *mimeo*.

- Lima, E. and Scorzaface, L. (2008) “Análise da Evolução da Desigualdade de Renda no Brasil Segundo Fontes de Rendimento - 1981 a 2004”, *mimeo*.
- Litchfield, J. Inequality: Methods and Tools. *mimeo*, 1999.
- Loyaza, N. (1996) “The Economics of Informal Sector: A Simple Model and Some Empirical Evidence from Latin America”, *Carnegie Rochester Series in Public Economics*, v.45, p.129-162.
- Machado, A.; Oliveira, A.; Antigo, M. (2006), “Evolução recente do diferencial de rendimentos entre setor formal e informal no Brasil (1999 a 2005): evidências a partir de regressões quantílicas”. In: Barros, R.; Foguel, M.; Ulyseia, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Machado, A. and Ribas, R. (2008), “Where Are the Jobs that Take People Out of Poverty in Brazil?”, *One Pager*, n. 61, International Poverty Centre, Brasília, Brazil.
- Mattos, E.; Marques, F.; Maia, S. (2008) “Oferta de trabalho e transferências: evidências do efeito das condições impostas pelo programa Bolsa-Família”. In: XXXVI Anais da ANPEC.
- Meneghin, F.; Bugarin, M. (2008), “A informalidade no mercado de trabalho e o impacto das instituições: uma análise sob a ótica da teoria dos jogos”, *Economia Aplicada*, v. 12, n. 3, p. 341-363.
- Menezes-Filho, N. and Mundler, M. (2007), “Labour Reallocation in Response to Trade Reform”, *mimeo*.
- Menezes-Filho, N.; Scorzaface, L. (2007), “Oferta e Demanda por Trabalho no Brasil”, *mimeo*.
- Menezes-Filho, N. (2001) “Educação e Desigualdade”. In: Menezes-Filho, N. and Lisboa, M.. (Org.). *Microeconomia e Sociedade no Brasil*. 1 ed. Rio de Janeiro: Contra Capa, 2001, v. 1, p. 13-50.
- Perry, G.; Maloney, W.; Arias, O.; Fajnzylber, P.; Mason, A.; Saavedra-Chanduvi, J. (2007), “Informality: Exit and exclusion”. Washington, DC, World Bank.
- Ramos (2006) “Desigualdade de rendimentos do trabalho no Brasil, de 1995 a 2005”, In: Barros, R.; Foguel, M.; Ulyseia, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Reis, J. e Barros, R. (1991) “Wage Inequality and the Distribution of Education”, *Journal of Development Economics*, vol. 36, pp.117-143.
- Scandiuzzi, J. (1999) “Desemprego, informalidade e política salarial no mercado de trabalho brasileiro”. PhD. Thesis, PUC-Rio.
- Scorzaface, L. and Menezes-Filho, N. (2005) “Impacto da participação das mulheres na evolução da distribuição de renda do trabalho no Brasil”. *Pesquisa e Planejamento Econômico*, Rio de Janeiro, v. 35, n. 2, p. 245-266.
- Scorzaface, L.; Menezes-Filho, N. (2001) “Participação Feminina no Mercado de Trabalho Brasileiro: Evolução e Determinantes”. *Pesquisa e Planejamento Econômico*, v.31, n.3, p.441-478.
- Shorrocks, A. (1980), “The class of additively decomposable inequality measures”, *Econometrica*, New York, v. 52, p. 1369-1385.
- Soares, S.; Osório, R.; Soares, F.; Medeiros, M. and Zepeda, E. (2007), “Conditional Cash Transfers in Brazil, Chile and Mexico: Impacts upon Inequality”, *Working Papers 35, International Poverty Centre*.

- Soares, S.; Fontoura, N.; Pinheiro, L. (2006) “Tendências Recentes na Escolaridade e no Rendimento de Negros e de Brancos”. In: Barros, R.; Foguel, M.; Ulyssea, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Tannuri-Pianto, M. and Pianto, D. (2002). “Informal Employment in Brazil - A Choice at the Top and Segmentation at the Bottom: A Quantile Regression Approach”. *XXIV Encontro Brasileiro de Econometria*.
- Tavares, P. and Menezes-Filho, N. (2007) “O papel do capital humano na desigualdade de salários no Brasil no período 1981 a 2006”. Dissertação de Mestrado, FEA-USP, 2007.
- Ulyssea, G. (2008), “Instituições e a Informalidade no Mercado de Trabalho”, *Estudos Econômicos*, v.38, n.3, p. 525-556.
- Ulyssea, G. (2006a), “Informalidade no mercado de trabalho brasileiro: uma resenha da literatura”, *Revista de Economia Política*, v.26, n.4, p. 596-618.
- Ulyssea, G. (2006b) “Segmentação no mercado de trabalho e desigualdade de rendimentos no Brasil: uma análise empírica”. In: Barros, R.; Foguel, M.; Ulyssea, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.
- Ulyssea, G. and Reis, M. (2005), “Imposto sobre Trabalho e seu Impacto nos Mercados de Trabalho Formal e Informal”, *Anais do XXXVIII Encontro Nacional de Economia*, Natal, Brasil.
- Wajnman, S.; Turra, C.; Agostinho, C. (2006) “Estrutura Domiciliar e Distribuição da Renda Familiar no Brasil”, In: Barros, R.; Foguel, M.; Ulyssea, G. (orgs.), “Sobre a recente queda da desigualdade de renda no Brasil”. Brasília: IPEA.