Labor Markets and Monetary Policy—Some Comments in Light of the Brazilian Experience

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I. Introduction

Good morning. It is a great pleasure for me to attend this symposium. I would like to express my gratitude to the president of the Federal Reserve Bank of Kansas City, Ms. George, for inviting me to speak at this panel.

The sessions yesterday and earlier this morning largely focused on the effects of the global financial crisis on the labor market and their implications for monetary policy in advanced economies. I will discuss labor market developments in an emerging market economy perspective and highlight some links between the challenges we are facing in Brazil and some of the concerns that were previously discussed in this symposium.

I will begin by briefly discussing the outlines of economic developments in Brazil over the past two decades and how they have affected the labor market. Second, I will address the demographic transition under way in the country and its impacts on the labor force. Finally, I will discuss the role of monetary policy in this context of structural shifts in the labor market.

II. The Brazilian Economy and Labor Market over the Past Two Decades

The Brazilian economy has undergone important macro and microeconomic reforms over the past two decades.[1] Prices were stabilized, the economy was opened up to foreign trade and investment, and a macroeconomic policy framework based on inflation targeting, floating exchange rates and fiscal responsibility was established. After decades of vulnerability to external shocks, Brazil built up a robust foreign liquidity buffer as the result of a policy of foreign reserve accumulation.

Microeconomic reforms were implemented, such as, for example, new bankruptcy legislation and credit market reforms including the creation of new credit instruments and reduction of legal risks.

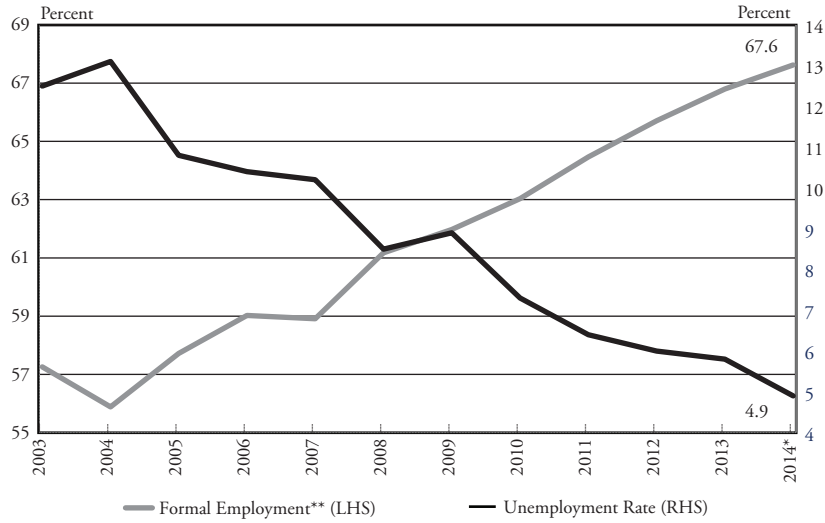
Brazil has also made considerable progress in reducing poverty and inequality over the last decade. Targeted anti-poverty programs have been implemented, along with policies that increased purchasing power of the minimum wage in real terms and expanded the social safety net.

Thus, over the past decade Brazil experienced economic growth with decreasing inequality. About one-fifth of the population, or 40 million people, joined the middle class in the period.[2] The numbers can be seen in Chart 1. That trend increased the demand for housing and services,[3] especially those that are relatively intensive in low-skilled labor.[4] Nontradables also benefited from exchange rate appreciation due to increasing commodity prices and high global liquidity during this period.

Access to education has also improved substantially. Investment in education has fuelled a relatively fast expansion in mean years of schooling.[5]

The interaction between these labor supply and demand trends have resulted in a tighter labor market for low-skilled workers, although certain specialized skills and professionals have remained relatively scarce.[6]

Chart 1
Labor Market Improved Over Past Decade



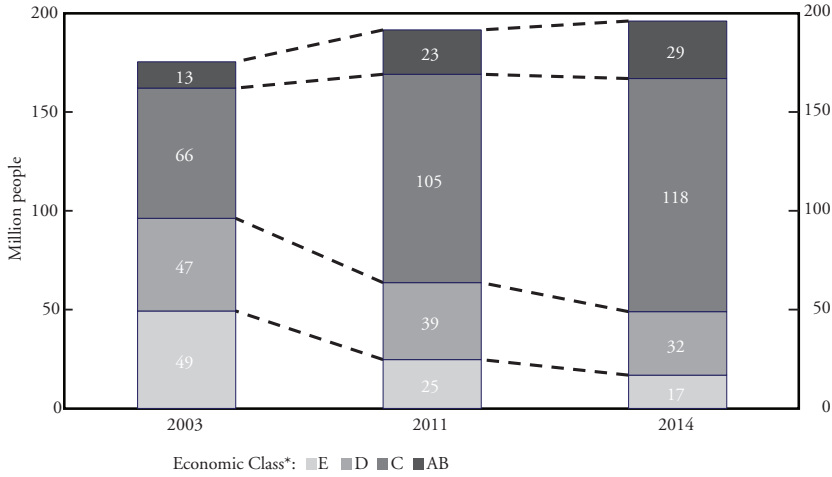
* In April (last complete data available). Each observation refers to the same month to avoid seasonality for comparability.
** Formal Employment / Total Employment. The formal employment includes formal employees in the private and public sectors and formal employers in the private sector.
Source: IBGE (PME).

As a consequence, the unemployment rate has roughly halved during this period. The downward trend was briefly interrupted at the height of the global financial crisis in 2009, but soon resumed, so that unemployment is currently at historic lows. This trend was accompanied by an increase in the share of formal jobs, at the expense of informal jobs.[7] Chart 2 displays both these developments.

The fall in unemployment has been particularly strong for low-skilled workers, as can be seen in Chart 3.[8] With the strong demand for labor in the services sector combined with improvements in labor force qualification, the share of unemployed workers who are low-skilled nearly halved.[9]

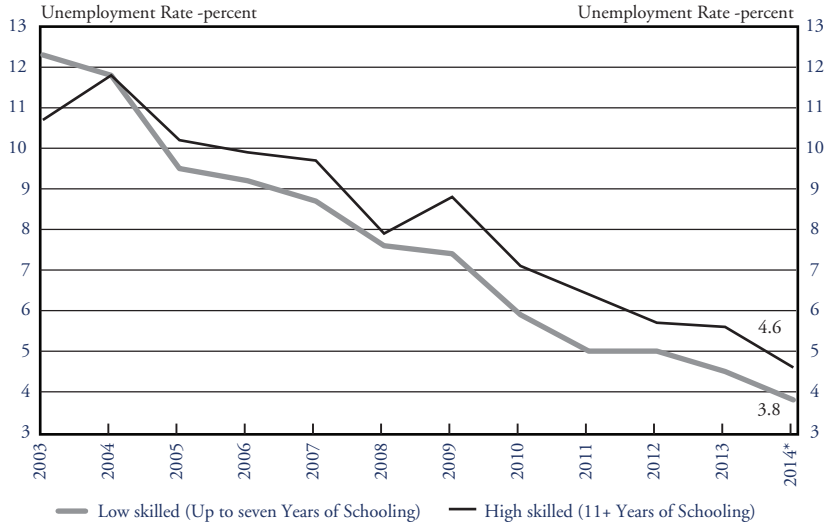
Thus, although wage premia for higher levels of educational attainment remain relatively high, they have fallen continuously. Chart 4 shows the wage premia for middle- and high-skilled workers relative to low- and middle-skilled workers, respectively. In other words, differently from many advanced economies[10] as we discussed

Chart 2
Expanded Middle Class



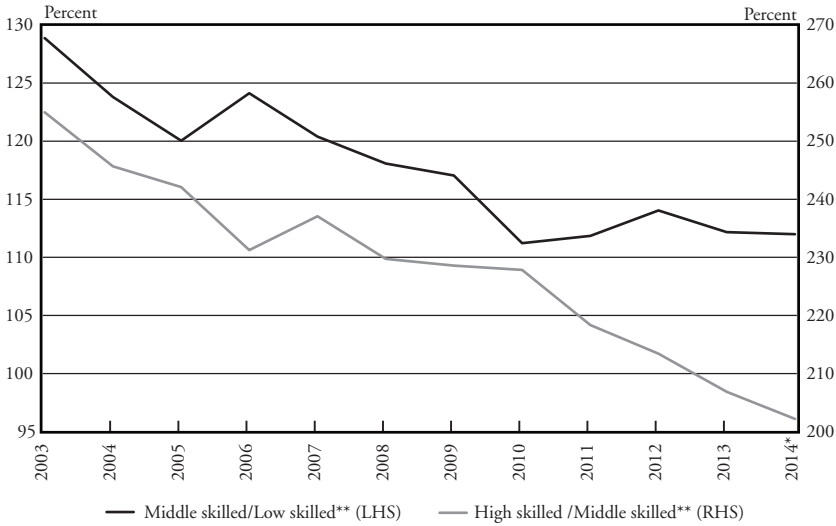
* The economic classes are calculated in terms of per capita household income from all sources. Average per capita household income by class is approximately (at 2009 prices – in R$): E – 75; D – 210; C (middle class) – 580; AB – 2,615. In 2009, the middle class comprised approximately people between the 50th and 90th percentiles of per capita household income.
Source: FGV.

Chart 3
Unemployment Fell More for Less-Skilled Workers



* In April (last complete data available). Each observation refers to the same month to avoid seasonality for comparability.
Source: IBGE (PME).

Chart 4
Education Wage Premium Fell (From a High Level)



* In April (last complete data available). Each observation refers to the same month to avoid seasonality for comparability
** Ratio of average wages by skill group
Note: Middle skilled: From eight to 10 years of schooling
Source: IBGE (PME).

yesterday in the "job polarization" session, wage developments in Brazil in the past decade have specially favored less-skilled workers, many of which had difficulty finding steady employment previously.

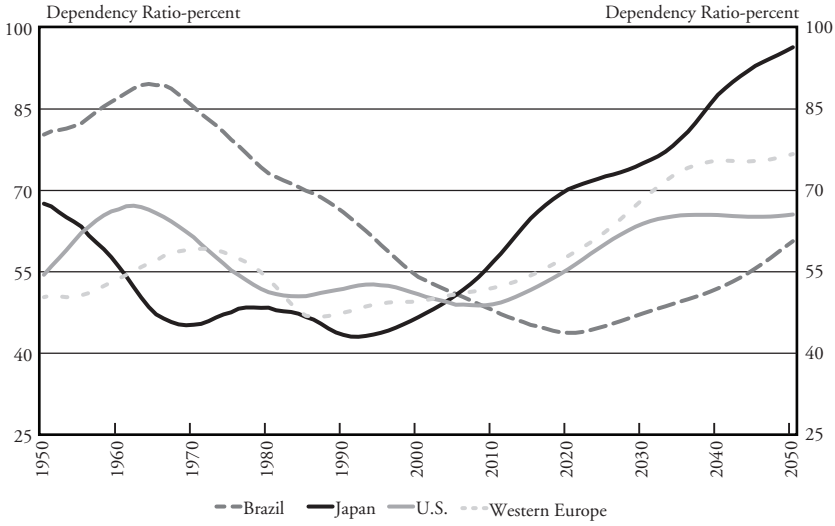
In a nutshell, greater demand for low-skilled labor, wider access to education and targeted antipoverty programs help explain how Brazil was able to reconcile economic growth and lower inequality in the past decade, as earnings increased relatively more in the left tail of the wage distribution.[11]

III. Situating the Demographic Transition and Labor Market Effects in Brazil

Another issue that was discussed in this symposium and that is especially relevant to Brazil is demographics.

Brazil is in an earlier stage relative to advanced economies that feature an older population, as can be seen in Chart 5. Although we have seen substantial improvement in life expectancy, only around a third of these gains went to the elderly—similar to the pattern that prevailed in the mid-20th century in today's high-income countries.[12]

Chart 5
Demographic Transition: Brazil at an Earlier Stage



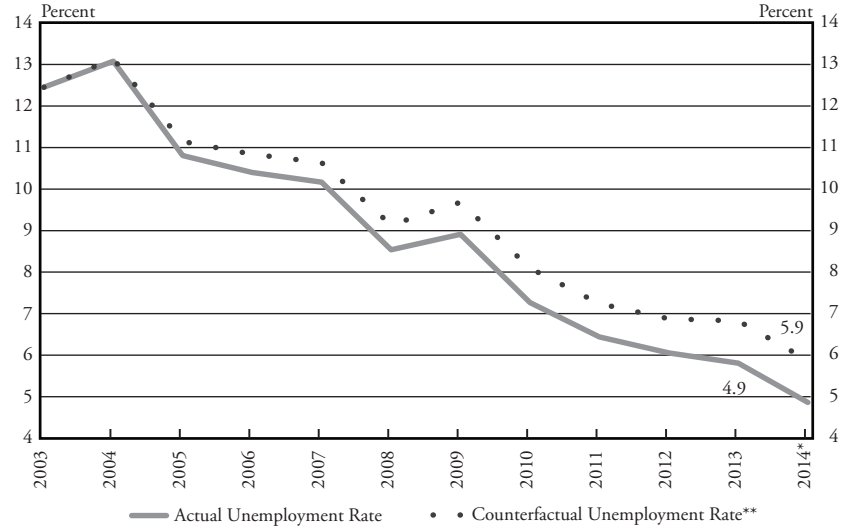
Source: United Nations.

Brazil, along with many other Latin American and developing economies, has experienced a relatively fast decrease in fertility since the mid-1960s.[13] As a consequence, the youth share of total population has fallen and this process became particularly intense in recent years. Although the dependency ratio is still declining, this is projected to reverse by the mid-2020s, when Brazil's "first demographic dividend" will taper off.[14]

As a result of this aging process, the growth of the working-age population is decelerating and the share of younger workers is falling. The age structure of the labor force has shifted toward groups with relatively lower unemployment rates and away from groups with persistently large unemployment rates, such as young workers.

Hence, the demographic transition is likely to have strengthened the fall in the actual and natural unemployment rate during the past decade. A back-of-the-envelope calculation suggests that this composition effect could account for up to 20 percent of the total decrease in unemployment, that is, about 1 percentage point in the unemployment rate.[15] This is shown in Chart 6.

Chart 6
Demographic Transition Helped Lower Unemployment



* In April (last complete data available). Each observation refers to the same month to avoid seasonality for comparability
** Aggregate Unemployment Rate, such that the labor-force shares of age groups are fixed at the 2003 level
Source: IBGE (PME)

Furthermore, the labor market has exhibited a decreasing participation rate in the past three years, mostly due to younger workers. In part, this reflects greater investment in schooling. Demography plays a role here too, as smaller families are associated with greater human capital investment in children and young adults.[16] Another cause may be greater household income and income security due to higher wages, increased job formalization and wider access to social safety nets. More recently, there may also be a cyclical component to this lower participation rate as jobs and real income growth have moderated.

IV. Final Remarks: The Role of Monetary Policy in the Context of Structural Shifts in the Labor Market

The issues we have tackled so far help explain the remarkable decrease in unemployment in Brazil. The economic and demographic developments in the past two decades have led to structural shifts in the labor market that affected both labor demand and labor supply.

On one hand, structural changes in the Brazilian economy—in particular, the steep fall in poverty and inequality—have increased the demand for low-skilled labor, while investment in human capital

has increased the supply of more-qualified labor and contributed to postponing the entry of young adults in the market. On the other hand, the demographic transition has changed the age profile of the labor force.

These developments in the labor market in the past decade contributed to a gradual decline in the actual and natural rate of unemployment.

A challenge for setting monetary policy that arises in an environment of structural shifts in the labor market is to distinguish between cyclical and structural components in unemployment trends.

In this sense, the challenges facing Brazil are similar to those faced by advanced economies. However, Brazil is witnessing the other side of the coin. While the challenge for monetary policy in many advanced economies is to assess whether the natural rate of unemployment has increased in the aftermath of the global financial crisis, in Brazil right now the challenge is to figure out how much the natural rate of unemployment has fallen.

One clear message that applies to both advanced and emerging market economies is the need to assess a wider set of labor market indicators in order to accurately gauge the state of the labor market. In a context of structural shifts in the labor market, we must widen our information set if we want to identify potential structural breaks in established relationships between economic variables.

At the Central Bank of Brazil, we have also moved in this direction. We are increasing our efforts in researching labor market developments, as can be perceived in our published documents, such as our Quarterly Inflation Report and our Working Paper Series. We are evaluating the predictive power of additional labor market indicators, looking at how to adjust for structural shifts in a Phillips curve framework, and gauging the impact of increased human capital on labor market dynamics.[17]

Of course, the more information on the labor market, the better. A promising development in Brazil in recent years is the availability of more complete employment statistics. High-frequency data used to be restricted to large urban areas, but since 2012, the Brazilian

Institute of Geography and Statistics has started compiling nationwide quarterly employment statistics.[18]

As I alluded to earlier, another implication of the structural changes in the Brazilian economy are demand pressures on services prices, as consumption patterns adjusted due to higher incomes.[19] This is reflected in the fact that the weight of services prices in the Brazilian consumer price index increased considerably over the last decade.

Monetary policy in Brazil has successfully operated in this challenging environment. Despite inflation persistence that arises from services prices combined with adverse supply shocks, monetary policy has been able to keep inflation under control. Consumer inflation in Brazil remained within the tolerance range of our inflation targeting regime for 10 years in a row.

To conclude, I would like to once again thank our hosts for organizing this event, which, by bringing together academic research and policy experience in the breathtaking landscape of Wyoming, helps enrich our understanding of labor market developments.

Thank you.

Endnotes

[1]See, for instance, Bonelli (2010) and Araujo and Lima (2007).

[2]Neri (2010). The economic classes are calculated in terms of per capita household income from all sources. Average per capita household income by class is approximately (at 2009 prices – in R$): E – 75; D – 210; C (middle class) – 580; AB – 2,615. In 2009, the middle class comprised approximately people between the 50th and 90th percentiles of per capita household income.

[3]We can cite, for example, construction, retail, food, lodging, transport, warehouse and communication, among other subsectors that are (low-skilled) labor intensive.

[4]According to the Annual Survey of Services (PAS) and the Annual Survey of Industry (PIA) compiled by the Brazilian Institute of Geography and Statistics (IBGE), the share of labor costs accounted in 2011 for approximately 40 percent and 15 percent of total costs in services and manufacturing, respectively. These surveys also point out that added value over total employment is 50 percent higher in manufacturing than in services.

[5]According to the United Nations Human Development Report 2014, the mean years of schooling in Brazil increased from 5.6 in 2000 to 7.2 in 2012.

[6]See Pauli et al. (2012).

[7]Brazil and many emerging market economies feature a segmented labor market. The formal sector follows labor legislation by paying labor taxes and contributions to social security and benefits from the social protection system. The informal sector does not follow labor legislation. According to PME/IBGE, formal sector (formal employees in the private and public sectors and employers in the private sector) and informal sector (total employment subtracted by formal employment) accounted for, respectively, 56.5 percent and 43.5 percent of total employment in 2004 (12-month average up to April). In 2014, the formal sector already accounted for 67.5 percent of total employment.

[8]Low-skilled workers are defined as having less than eight years of formal education. High-skilled workers are those that have at least 11 years of formal education. Middle-skilled workers form an intermediary group (people that have between eight and 10 years of formal education).

[9]The PME/IBGE survey shows that the services sector accounted for around 95 percent of total employment growth over the past decade. In 2004 (12-month average up to April), low-skilled and high-skilled workers accounted, respectively, for 32 percent and 41 percent of total unemployment. In 2014, these groups accounted for 16 percent and 61 percent, respectively, of total unemployment. The share of middle-skilled in total unemployment remained virtually steady during this period.

[10]For example, Autor (2010) and Autor and Dorn (2013) argue that the developments of the technological structure of some advanced economies vis-à-vis the relatively slow growth of the high-skilled labor supply has generated unbalances in the labor market that increased wage premia and income inequality.

[11]Lustig et al. (2013).

[12]Eggleston and Fuchs (2012).

[13]Alves (2008) and Carvalho and Wong (2006) argue that the magnitude of the reduction in fertility in a relatively short period of time is remarkable compared to the experience of developed nations. Indeed, most European countries took nearly a century to complete their fertility transition. Sweden and England, for example, took about six decades (roughly 1870-1930) to decrease their fertility levels by about 50 percent. Brazil, meanwhile, experienced a similar decline in a quarter of a century (from 1965 to 1990).

[14] According to the Brazilian Institute of Geography and Statistics (IBGE).

[15]This calculation refers to the PME/IBGE survey. For more details on this type of calculation that uses different surveys and robustness exercises, see Brunelli (2014). Barbosa Filho and Pessôa (2011) found similar figures.

[16]See Lee and Mason (2010).

[17]See, for instance, Brunelli (2014); Alves and Correa (2013); Silva Filho (2012); Silva Filho (2008); and Central Bank of Brazil (2013a, 2013b, 2012a, 2012b, 2011, 2010, 2009, 2008).

[18]The PME/IBGE was the only comprehensive monthly survey that comprised both formal and informal markets. However, it is restricted geographically by the six main metropolitan regions of the country. The most comprehensive survey on labor market that comprised the entire country until 2012 was the PNAD/IBGE, however, it is an annual survey.

[19]For more details on consumer demand patterns considering households' characteristics and income, see Blundell et al. (1993). The authors point out, for example, that by controlling for demographics and households' characteristics, the share of expenses on services increases with income.

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