### Fernando Duca<sup>1</sup>

### Introduction

The crisis in which Brazilian economy is immersed allows several analysis and interpretations point to various causes for the phenomenon. The own date of beginning of this crisis is source of dispute. While the Business cycle dating committee (CODACE) defines second quarter of 2014 as the beginning of this crisis, some others prefer using year of 2015 as correct date. Besides this point, there are the most diverse interpretations regarding its causes, reasons, probable length and possible ways of getting out. As Rossi and Mello (2016, pp. 253-255) enhance, main interpretative aspects on this crisis are four, all of them mainly focused in macroeconomic government policy performance. In addition to these ones, there is the interpretation made by Rezende (2016), focusing in over- indebtedness of Brazilian corporations.

The objective of present paper is to analyze Brazilian economic performance focusing the labor market, taking into consideration debate on the Brazilian crisis, however without directly talking about it. As it is a consensus among large portion of economic analysis on growth cycle post-2003, its main achievement was an intense creation of jobs and a decrease in economic inequality, two issues intrinsically linked (Dedecca, 2015). In view of centrality of Brazilian economic cycle labor market performance, we decided to assess closely this issue, to verify depth of impact of the crisis. Besides, Brazilian labor market specificities aim a more detailed narrowly focused analysis of its dynamics.

Our intention is to analyze labor market recent situation. Therefore we have to define productive structure and also labor market's own structure, and establish period of time we will consider. It is important to recall that Brazilian labor market has a series of specificities related to its historical formation, expressed in different ways along the country. It is also important to define what is understood as labor market situation, which is the most adequate period to this definition, and how it was established. To conclude, we must qualify existing relation between economic performance and labor market. Answers to these questions are mainly based in the Research of Employment and Unemployment (PED).

This paper is divided in three sections, besides this introduction. Next section includes a short explanation about Brazilian labor market theoretical conception, taking into account it is part of an underdeveloped economy. It is

also made a proposal of periodization of the Brazilian labor market performance since beginning of the century, to make possible detailing circumstances that might influence time period of analysis. In the following section, we will briefly describe economic dynamics of the country, qualifying the relation between economic performance and labor market. Then we will assess changes in regional labor market due to economic crisis. To conclude, we will deliver a synthesis of ideas discussed and will develop main conclusions of the paper.

# **Brazilian labour market: conception and periodization**

Labor market evolution in Brazil, like in all other underdeveloped countries, particularly the Latin American ones, was strongly influenced by heterogeneity of productive structure, rapid and intense urbanization process, with strong absorption of rural population (DIEESE; SEADE, 2009, p. 21). This gave birth to a labor market characterized by heterogeneity of jobs, with a significant part of the population working in instable jobs and getting low paid, plus chronic insufficiency of absorption of population willing to sell their labor force. As Carleial states (2010, p. 127), transformations undergone by capitalism highlighted wage earning as prevailing way of insertion in labor market; or better saying, of those which in fact, manage to find jobs. Or in other words, at the same time than selling labor force is own and main way in capitalism of allocating population in productive activities, it is insufficient to absorb the whole workforce willing to have a job. This apparent contradiction, as said, is even more explicit in the so-called underdeveloped economies, as already stated by several authors, among others, Furtado (1983) and Prebisch (1968), which respectively coined the "structural surplus of labor" and "dynamic insufficiency" concepts.

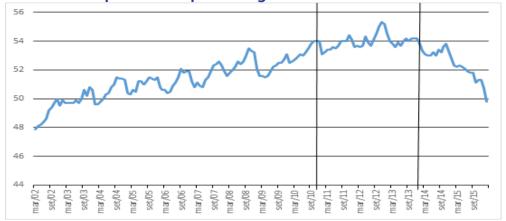
Due to these features, underdeveloped countries labor market analyses must consider specificities of economic systems of these countries and its trend to absorb insufficient available workforce. This was one of main issues which boosted and drove development of the Cepal document in 1979 on the need of elaboration of an own employment and income measuring methodology, through household researches, for Latin-American countries.

Recent Brazilian history is characterized by a series of changes, where in general prevail economic growth with a decrease of inequality and improvement of employment conditions. Such situation seemed to mark a breach regarding historical rate of undeclared work, with high and low periods, typical characteristics of a labor market in an underdeveloped economy as stated by Furtado (1992). Besides, this impetus of the labor market was fundamental to boost aggregate demand and stimulate growth. However, such mechanism was not enough to develop a long-term growth model, because from 2014 to 2015 Brazilian economy, confirming what previous growth rates already showed, definitely got into stagnation, and later recession.

Nevertheless, it is important to mention that labor market, when me-

asured by occupation rate<sup>2</sup>, went through a long and continuous process of expansion (with typical fluctuations, due to seasonality). Next Chart 1 intends to temporarily delimit labor market evolution from 2002<sup>3</sup>, in three different periods.

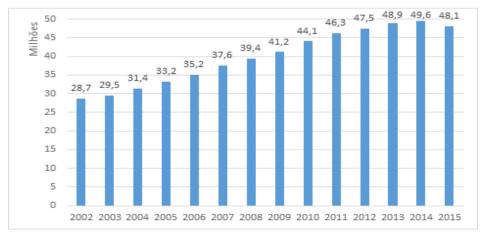
Chart 1 - Occupation rate percentage - Brazil - Mar/2002 to Feb/2016



Source: IBGE. Monthly Survey of Employment

As seen in Chart 1, occupation rate began a continuous expansion from 2002 up to end of 2010 – except year 2009 because of the effects of *Subprime* crisis. From 2011, labor market remained in a stable period, with some short fluctuations. But then, from 2014, labor market went into intense and continuous deterioration. Chart 2 data will help to have a better picture of the situation, with information on evolution of formal labor market. Between 2003 and 2014 average volume growth was 4.7pct, while in period 2004-2010 reached 5.9pct and between 2011 and 201 it was 4.3pct. From 2015 volume of employment began to decrease.

Chart 2 - Evolution of total formal workers - Brazil - 2002 to 2015



Source: MoL. Annual social information report (RAIS)

<sup>2</sup> The occupation rate is the ratio between working-age population rates (PIA) - which in Brazil consists of working people aged 10 or more years, compared with working population (PO).

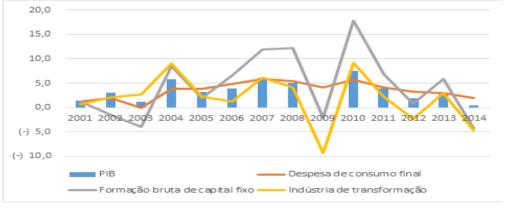
<sup>3</sup> The year 2000 has been chose because it signals the beginning of a period of relative stability of global economy (after Argentinian and dot.com crisis) and also because of being starting point of Monthly Employment Research (PME)

# **Economic activity and labor market**

To analyze labor market dynamics, it is relevant considering a more general economic dynamics. One of labor market dynamics features is its lagged reaction regarding production and consumption economic levels. Therefore, analyzing labor market situation also includes verifying such issues.

Baltar (2014) makes a comprehensive analysis of Brazilian labor market behavior, previously assessing macroeconomic constraints. The author states that after successive crisis occurred mainly from years 1990s to first years of decade of 2000s, the country resumed a growth trend of better sustainability and stability. From 2004 Brazil had satisfactory growth rates, increasing year by year its per capita GDP. However, Brazilian growth pattern was led by domestic absorption<sup>4</sup>, which often reached levels of growth exceeding those of GDP and industrial production. Brazil had a growth rate sustained by domestic demand and a gap between it and industrial production, while exports were in constant increase. This growth, led by demand but without being followed by expansion of supply, started to show signs of instability in 2012, when gross fixed capital formation (FBCF) showed growth close to zero and industrial production decreased when compared to previous year. Strictly speaking, still during GDP growth period, demand conditions (consumption and FBCF) and offer (industrial production) began showing signs of depletion. As shown in Chart 3, industrial production and FBCF had an evolution characterized by many upsets and strong fluctuations. Only consumption, even constantly loosing breath since 2010, had a more stable path. The GDP growth rate, had a relatively stable period up to 2008, then went into two troubled years: 2009 and 2010 and, from then, its rates are decreasing.

Chart 3 - Real percentage of rate variation, for some GDP selected items - Brazil (2001 to 2014)



LABOUR SCIENCES JOURNAL Nº 7 **APRIL 2017** 

Source: IBGE. System of National Accounts. GDP / Gross fixed capital formation/ Final consumption expenditure -Manufacturing industry.

4 Domestic absorption is the sum of private consumption, government expenses and investment.

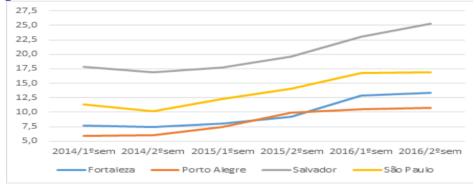
It is important to note than from 2011 both industrial production and

FBCF behavior begin to lose relevance, while consumption increases its importance. Nevertheless, this increased consumption went slowly losing its intensity, signaling arrival of crisis. The consumption growth peak in 2010 coincides with end of period here described as expansion of labor market, showing its relevance to boost aggregate demand.

This rapid performance assessment of recent Brazilian economy Brazilian allows analyzing now how the economic performance affected employment conditions. Taking into account four main Brazilian metropolitan regions (Porto Alegre, São Paulo, Salvador and Fortaleza), we will analyze Research of Employment and Unemployment (PED) half-yearly data from 2014 for general labor market characteristics (unemployment, participation, occupation and wage earning) and changes in its structure, regarding job positions and sectors of activity.

As shown in Chart 4, total unemployment<sup>5</sup> continuously increased, without exception, in all researched regions. However, impact of economic slowdown in each region happened in different ways. Excluding Porto Alegre, all other regions reduced unemployment rate in second half of 2014, when compared to the first one. And as from first half of 2015, all regions showed a continuous increase of unemployment rates, however with different degrees of intensity. It is also worth mentioning that unemployment grew proportionately more in lower unemployment rate regions: Porto Alegre and Fortaleza.

Chart 4 - Total unemployment rate percentage - Metropolitan Regions (First half /2014 to second half /2016)

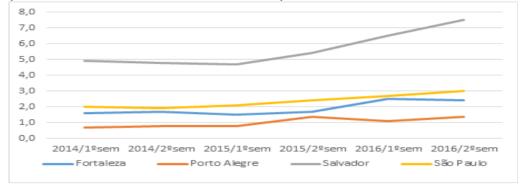


Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment

Still regarding unemployment rates, there was an increase of hidden unemployment, as shown in Chart 5, mainly in precarious jobs. Group of people with this type of unemployment was so low in regions like Fortaleza and Porto Alegre, that it was not possible to be measured by the research sample. The fact is that as labor market gets worst, more people end up accepting precarious jobs. However, it is relevant mentioning that only Salvador shows an increase participation trend in hidden unemployment in total unemployment.

<sup>5</sup> One of PED methodological features is recognition of labor markets idiosyncrasies in underdeveloped countries. Therefore, there are three types of unemployment: open, hidden by precarious jobs and hidden by discouragement. Total unemployment includes open unemployment and types of hidden unemployment. For a more detailed explanation of these concepts, see DIEESE and SEADE (2009, p. 35-38).

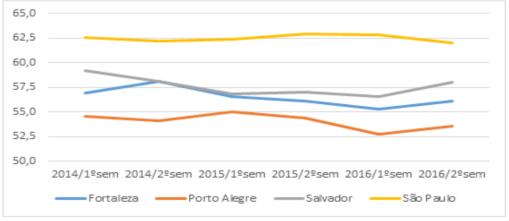
Chart 5 - Total hidden unemployment rate - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment.

Once done this first characterization of unemployment growth, we must assess which "source" made it grow. Since it is a ratio between Unemployed Population (PD) and Economically Active Population (PEA), pressure on unemployment rate may come from any sources. Therefore, we must evaluate if unemployment growth derives from an increasing pressure on labor market<sup>6</sup>, or from a decrease in jobs. Chart 6 shows participation rate: as we can see, in general terms, it is reduced along the period, and rises in last semester of the analysis. Only São Paulo has a different dynamics, inclusively opposed to a great extent. Specifically, there is no extra pressure on labor market during the period, but the opposite (except for São Paulo). We must enhance that there is not necessarily a reduction, in absolute values, of PEA, since it shows an increasing demographic trend. What we can see is a decrease in number of working-age population, looking for a job or already working.

Chart 6 - Participation rate - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment.

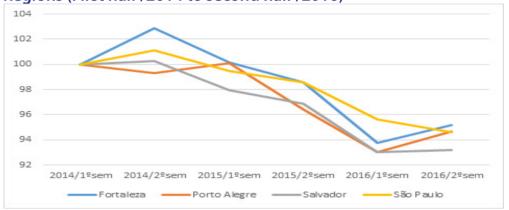
LABOUR SCIENCES JOURNAL № 7 APRIL 2017

To complement this analysis, we must see evolution of number of workers in regions. As seen in Chart 6, there was an expressive decrease in number of

<sup>6</sup> Pressure on labor market is a more proportional increase of PEA in working age population's growth; this showing that increase in number of people in labor market is not only derived from demographic questions.

workers in all regions from 2015. In 2014, in spite of poor macroeconomic performance, there is not yet a significant impact on labor market. This can be verified through increase of employment in all regions, except Porto Alegre. Even with minimum growth in 2014, with two quarters of negative growth, impact on labor market was only perceived in following year. Years of 2015 and 2016 signaled a strong downturn in number of posts filled, but in second half of 2016 there was an increase when compared to first semester.

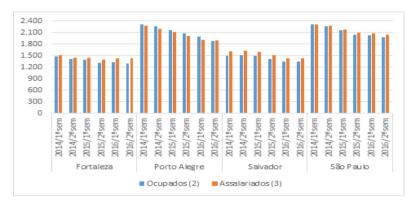
Chart 7 - Number of workers (start of series=100) - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment. Notice: Values are measured through an index; value of first available figure of the series is 100. For all the regions, 100 are number of workers in the region in first half of 2014.

Regarding income arising from employment, results, as expected, are similar to those observed for occupation and unemployment, with an overall reduction. Chart 8 compares wage evolution among informal and formal workers, and we see a continuous decrease in wages of both groups and for all regions (Salvador increases this figure in second half of 2016). However we do not see a general rule regarding intensity of decrease in wages of informal and formal workers, since it varied in each region. In Salvador, in general, decrease was higher among formal workers than in informal, while in other regions, decrease was higher in informal workers.

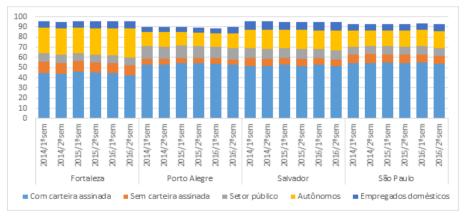
Chart 8 - Formal and informal workers real average income (1) (Nov/2016) - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MoLb/FAT and regional agreements. PED - Research of Employment and Unemployment. (1) Includes real wages in values of May 2016, updated by indexes: INPC-RMF/IBGE; IPC-IEPE/RS; IPC-SEI/BA; ICV-DIEESE/SP. (2) Excludes formal workers and domestic workers not remunerated in this month, not remunerated home workers, and workers paid in cash or through social benefits. (3) Excludes workers not remunerated in this month.

Regarding occupational structure, Chart 9 shows relative participation of each one of main five occupational positions in total of occupations per region. Considering all jointly regions, we do not see any expressive changes of positions. This means that in general terms intensity of reduction in occupation, when compared with stocks of each position, was similar. Or even though absolute reduction in number of informal workers in each position was higher when higher was the number of informal workers in this position, there were no significant changes in the occupational structure: each position, in 2016, still has similar relative participation than in 2014. However, it is worth mentioning that whilst workers with and without work card slightly lost relative participation, the self-employed gained.

Chart 9 - Participation rate of occupational positions in total of informal workers - Metropolitan Regions (First half /2014 to second half /2016)

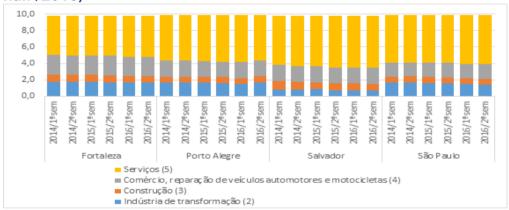


LABOUR SCIENCES JOURNAL Nº 7 APRIL 2017

Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment. Notice: The sum of all positions is smaller than 100 since in this Chart employers, owners of a family business, not remunerated home workers, self-employed professionals and other occupational positions are not represented.

Finally, we may analyze changes related with sectors of activity. As in previous paragraph, here we will analyze relative participation of each sector of total of informal workers and not the absolute variation in amount of informal workers in each sector. As seen in Chart 10, most significant change is reduction in participation in both building and transformation industry. This trend accounts for all regions, except Porto Alegre which reverses it in second half of 2016. On the other side, service sector increased most strongly its relative participation in all regions, with higher intensity in the two Northeast areas covered by the research. But this increase of participation does not mean there was an increase of absolute number of informal workers in this sector, but only that reduction of stock of informal workers of this sector was, when compared to the proportion in total of informal workers, less intense than in other sectors.

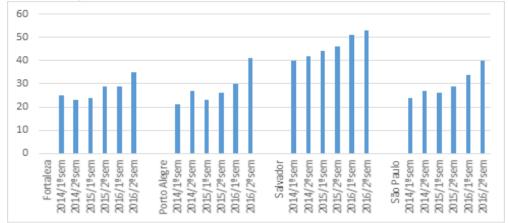
Chart 10 - Participation rate of sectors of activity in total<sup>(1)</sup> of informal workers - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MoL/FAT and regional agreements. PED - Research of Employment and Unemployment. Notice: (1) The sum of all sectors of activity is smaller than 100 since in this Chart agriculture, livestock, forestry, fishing and aquaculture (Section A); extractive industries (Section B); electricity and gas (Section D); water, sewage treatment and waste management systems and decontamination (Section AND); international organizations and other extraterritorial institutions (Section U); badly defined activities (Section V). Mentioned sections refer to CNAE 2.0 household; (2) Section C da CNAE 2.0 household; (3) Section F da CNAE 2.0 household; (4) Section G da CNAE 2.0 household; (5) Sections H a T da CNAE 2.0 household, are not represented.

Finally, last point of this analysis, we will deal with average unemployment period. As we have seen, the average searching job time continuously increased in all regions. In the second half of 2016, average searching job time in all regions reached a peak. Currently in all regions it exceeds six months' time. And regions with higher unemployment rates are also those having longest average searching time.

Chart 11 - Average time (in weeks) spent by unemployed when searching a job - Metropolitan Regions (First half /2014 to second half /2016)



Source: DIEESE/SEADE, MTb/FAT and regional agreements. PED - Research of Employment and Unemployment

Regarding difficulties to get a job, we also can analyze average time when people left or lost last employment. As seen, time spent without occupation increased in all regions along the period. This together with previous data signals increasing difficulties to get a job. Therefore it remains clear labor market deterioration: even with poorer wages and worsening of occupational and sectorial structure, getting a job becomes more and more difficult.

Chart 12 - Average time (in months) when people left or lost employment - Metropolitan Regions (First half /2014 to second half /2016)

## **Conclusion**

The objective of this paper is to analyze Brazilian labor market situation to understand how it is affected by undergoing economic crisis. To link these two issues, we tried to search evolution of main macroeconomic aggregates and subsequently several labor market indicators. It is important to point out that we did not try to develop an analysis to exhaustively examine the matter, but only showing that economic crisis deeply impacted labor market dynamics in almost all its indicators; and that labor market deterioration feedbacks crisis by impacting in aggregate demand dynamics, main important factor in Brazilian growth cycle. Furthermore, we also aimed to discuss regional domestic labor market differences, and the main conclusion is that deterioration spread over different regions, however with a differentiated dynamics. Given this limited scope, we suggest, in order to broaden future research agenda: to deeply assess labor market importance in recent growth cycle; to see role of labor market in the economic crisis deepening; and social impacts of labor market deterioration, mainly in different population segments.

To reach such conclusions, this paper started discussing about particula-

rities of a labor market in an underdeveloped economy and its implications in occupation and wages. Then we defined what could be considered a context of crisis in the labor market, starting from a period in which we can affirm began changes which drove to an increase of difficulties, and allow classifying it as typical of a time of crisis. We followed with a short assessment of some macroeconomic variables to qualify the crisis and link economic performance (here understood as GDP growth and its main variables) and labor market. And continued analyzing recent labor market changes in five main Brazilian metropolitan regions: Porto Alegre, São Paulo, Salvador and Fortaleza.

This discussion drove us to see extension and crisis impact deepness in labor market. All analyzed indicators and statistics got worse. The economic downturn affected labor markets of every region. Obviously, deepness and specific ways how the crisis hit each region depend of how its economies and labor markets are structured, but general results are quite similar: increase of open and hidden unemployment, due to reduction in number of informal workers and fall in income, of both informal and formal workers. It is interesting mentioning that regions did not show variances of great intensity in its occupational structure, at least not the intensity it would be expected considering depth of crisis. Besides, there was a significant worsening in finding jobs, measured by the time it took to be searching for a job and time spent since last job. It must be observed that average time spent in searching for a job now exceeds six months for all regions and average time without job now exceeds one year for São Paulo and Salvador regions.

Above mentioned indicators show, even if indirectly, how labor market crisis impacts in social life conditions of the population, making the economic crisis a one of worrying social dimensions. The Brazilian economy, whose labor market is heterogeneous and insufficient to absorb large populations searching jobs, with a structure of low and unequal income, when going through a crisis process of crisis would have these characteristics made more acute. And this would inevitably end up in worst social conditions for the country. Therefore, in current moment we must find ways to avoid levels of employment and income continuing its deterioration process, by building programs to keep employment and income transfer social policies to grant minimum social conditions to population. The upturn in employment and income will in turn only come with growth and income distribution favoring policies. In spite of Brazilian growth being elapsed, the experience of growth with decrease of inequality was a milestone in economic history of our country. More than renege the way such cycle happened, it is important finding ways to make it becoming more self-sustainable. To achieve our objectives we must have policies promoting income distribution and qualified occupational insertion, as a way of social emancipation and reduction of inequality, and not only a livelihood. This must be in the center of any national development agenda.

# **Bibliografical references**

BALTAR, P. Crescimento da economia e mercado de trabalho no Brasil. In: CALIXTRE, A.; BIANCARELLI, A.; CINTRA, M. (eds.). Presente e futuro do desenvolvimento brasileiro. Brasília: IPEA, 2014.

CARLEIAL, L. Subdesenvolvimento e mercado de trabalho: uma análise a partir do pensamento latino-americano. Sociologias, Porto Alegre, v. 12, n. 25, set./dez. 2010.

CEPAL. La medición del empleo y de los ingresosen áreas urbanas a través de encuestas de hogares. Santiago do Chile: Comisión Económica para América Latina, 1979.

DEDECCA, C. A redução da desigualdade e seus desafios. Texto para discussão do Instituto de Pesquisa Econômica Aplicada. Brasília: n. 2031, 2015.

DIEESE; FUNDAÇÃO SEADE. Pesquisa de emprego e desemprego (PED): conceitos, metodologia e operacionalização. São Paulo: DIEESE, 2009.

FURTADO, C. Teoria e política do desenvolvimento econômico. São Paulo: Abril Cultural, 1983.

PREBISCH, R. Dinâmica do desenvolvimento latino-americano. Rio de Janeiro: Editora Fundo de Cultura, 1968.

REZENDE, F. Financial fragility, instability and the brazilian crisis: a Keynes-Minsky-Godley approach. Multidisciplinay institute for development strategies discussion paper. Geneva: n. 1, 2016.

ROSSI, P.; MELLO, G. Componentes Macroeconômicos e Estruturais da Crise Brasileira: o Subdesenvolvimento Revisitado. Brazilian keynesian review. Belo Horizonte, v. 2, n. 2, jul/dez 2016.