

Dinâmica do Mercado de Trabalho em um Contexto de Mudanças Estruturais: um estudo comparativo entre Brasil e Estados Unidos¹

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Resumo

Observou-se, no final do século 20, um expressivo crescimento da prosperidade e riqueza das nações mais ricas do planeta, enquanto diversos países em desenvolvimento foram afetados por sucessivas crises domésticas e internacionais. Em meio a um contexto econômico de relevantes mudanças estruturais, o objetivo principal deste trabalho é analisar as dinâmicas contraditórias do mercado de trabalho e da distribuição de rendimentos no Brasil e nos Estados Unidos entre 1981 e 2006. A hipótese central deste trabalho é que não houve efeitos distributivos entre as duas principais economias da América no final do século 20, aumentando as substanciais diferenças existentes entre essas.

Palavras-chave: mercado de trabalho, desigualdade, globalização

Labor market dynamics in a context of structural changes: a comparative study between Brazil and United States

Abstract

The turn of the last century witnessed an expressive increase in prosperity and wealthy of the richest countries of world, while several developing countries were hit by successive domestic and international crises. Such a relevant economic context, the main purpose of this paper is to analyze the contradictory dynamics of labor market and wage distribution in Brazil and US (United States) between 1981 and 2006. The central hypothesis is that global economy did not witness distributive effects between these two majors developing and developed economies of America in the end of 20th century and rough disparities between them have increased.

Key-words: labor market; inequality; globalization

¹ Paper presented at "XV Encontro Nacional de Economia Política", São Luis, June 1-4, 2010. Special thanks to Prof. James Galbraith, Professor at Lyndon B. Johnson School of Public Affairs - University of Texas at Austin.

Introduction

The turn of the last century witnessed an expressive increase in prosperity and wealthy of the richest countries of world, while several developing countries were hit by successive domestic and international crises (Nayar, 2006; Reinert, 2003). This behavior occurred in parallel to a new trend of international economic integration, which has been basically characterized by liberalization of international trade, investment and finance (Ocampo, 2002).

Such a relevant economic context, the main purpose of this paper is to analyze the contradictory dynamics of labor market and wage distribution in Brazil and US (United States) between 1981 and 2006. The central hypothesis is that global economy did not witness distributive effects between these two majors developing and developed economies of America and rough disparities between them have increased.

In order to reach such purposes, this paper has been divided in three main parts: i) historical perspective of structural changes and economic growth in Brazil and US during the last quarter of 20th century; ii) labor market dynamics, identifying the relation between economic growth and unemployment, underemployment, productivity and real wage dynamic; iii) economic activity dynamics, analyzing the evolution of employment, gross add value and real wages according to major economic activities. First of all, it will be present a brief methodological description.

1. Methodology of analysis

In order to compare the Brazilian and American labor force dynamics, it has been used micro-data from PNAD (*Pesquisa Nacional por Amostra de Domicílios*), sponsored by IBGE (*Instituto Brasileiro de Geografia e Estatística*) and from CPS (Current Population Survey), sponsored by BLS (Bureau of Labor Statistics). In both surveys, employed has been considered that with 16 years of age or older who, during the reference week (a) did any work at all (for at least 1 hour) as paid employee; worked in his own businesses, profession, or on his own farm; or worked 15 hours or more as unpaid worker in an enterprise operated by a family member or (b) was not working, but who had a job or business from which he was temporarily absent (BLS, 2002). Unemployed has been considered that who were not employed during the reference week

and had made specific efforts to find employment some time during the 4-week period ending with the reference week.

Brazilian wages have been deflated according to INPC (*Índice Nacional de Preços ao Consumidor*) of IBGE and converted to dollars from 2004 considering the Purchasing Parity Power (PPP) proposed by United Nations (UN). North American wages have been deflated using the Consumer Price Index (CPI) of BLS.

Economic activities has been classified according to main groups suggest by United Nation Statistics: i) Agriculture, hunting, forestry and fishing; ii) mining, manufacturing and utilities (electricity, gas and water supply); iii) construction; iv) wholesale, retail trade, restaurants and hotels; v) transport, storage and communication; vi) other activities (financial intermediation, real state, renting, business activities, public administration, defense, education, health, social work, social services, personal activities, private households and others services).

2. Historical perspective

During the last quarter of the twentieth century, the world economics witnessed an increasing process of international economic integration. The principal features of this process of globalization has been an increasing liberalization of international trade, investment and financial market, which has occurred in parallel with dismantlement of barriers to international economic transaction, development of new technologies, emerging forms of industrial organization and political hegemony (Nayar, 2006).

Following the thought that international trade and foreign direct investment would lead developing economies to a sustainable economic growth, most Latin American countries abandoned the idea that late industrialization requires a significant State intervention in order to achieve economic development and turned into liberalization process in the beginnings of 90's (Ocampo, 2002). These strategies had been presented to developing countries as a way out of inefficient politics of trade protection and high levels of state intervention. But failures due, largely, to ineffective or misguided implementation and conduction of economic reforms resulted in unsatisfactory economic growth and maintenance of huge socio-economic differences between richest and poorest countries of America.

Severe inflation had also frightened away domestic and foreign investment, and, thus, destroyed these countries' potential for economic growth. But, the object of managing inflation has been transformed into a near-obsession by the sensitivity of international financial markets, so that governments have been forced to adopt restrictive deflationary macroeconomic policies which had played an important role in the negative performance of economy and labor force dynamics (Nayar, 2006).

Brazil is the major developing country of America and one of the countries where economic reforms have been most intensively implemented in the beginnings of 90's. Although Brazil reached success controlling hyperinflation, it has not been able to maintain a sustainable economic growth nor to improve its precarious socio-economic indicators during the whole decade, especially in its labor market. After a glorious period with high economic growth in 70's, debit crisis in beginnings of 80's introduced a long period of low and unsteady economic growth in Brazil, which continued after economic reforms in 90's. In 70's, Brazilian GDP (Gross Domestic Product) grew 8.4 percent per year and, since then, Brazilian GDP has grown by an average of just 2.2 percent per year.

On the other hand, US, the bigger economy of the world, have witnessed a long period of respectable economic growth. The most instable period in US occurred in 70's, when oil crisis in 1973 and energy crisis in 1979 caused recession in diverse years. In this decade, North American GDP growth had been meaningfully lower than in Brazil: 3.7 percent per year. Since then, US has maintained an average of 3.1 percent per year of GDP Growth (Figure 1), besides briefly periods of crisis as junk bonds crisis in 1991 and dot com crisis in 2001.

Beside financial and economic liberalization, diverse restrictive policies had also been applied to reach economic stabilization in Brazil, which produced additional difficulties to Brazilian labor market. It can be stressed fixed exchange rate for a long period of time, privatization and constrainable monetary policy. Several international crisis, like Mexican crisis in 1994, Asian in 1997 and Russian in 1998 showed the vulnerability by cyclical capital flows and macroeconomic policies in such developing countries and also contributed to the unsatisfactory Brazilian economic growth in this period. In 90's, Brazilian economic growth had been the worst of post-crisis period, just 1.7 percent per year, while US maintained an average of 3.1 percent per year of economic growth.

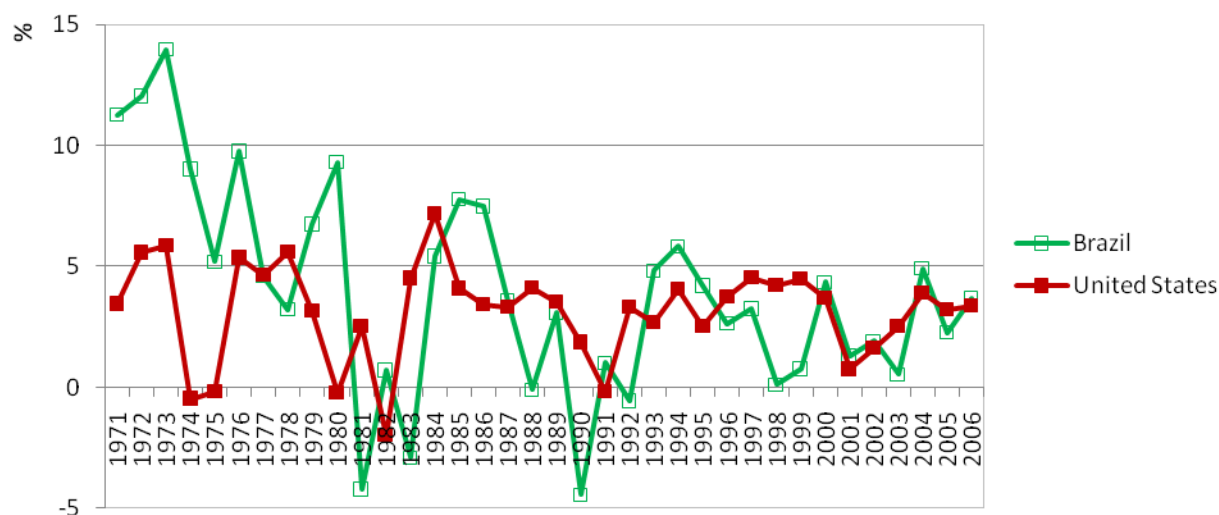


Figure 1 – Annual GDP⁽¹⁾ growth (%) – Brazil and United States 1971 to 2006

(1) GDP at constant prices – US dollars

Source: United Nations Statistics Division. Available in <<http://unstats.un.org/unsd/default.htm>> . Accessed in oct 2007.

To examine how these divergent economic trends have affected labor market performances in Brazil and US, follow two topics presenting the evolution of some relevant indicators to evaluate employment, productivity, wages and sectoral structure trends in these countries.

2. Labor market dynamics

The unsatisfactory and unsteady economic performance in Brazil resulted in severe restrictions to its labor market dynamics and huge differences to the most developed market of America have increased dramatically. From 1981 to 2006, cumulative economic growth in Brazil had been just 83 percent, 33 percentage points lower than North American cumulative growth (Figure 2). Specific difficulties arouse in Brazilian labor market concerning to its social-demographic dynamics. Brazil has a higher parcel of young population than US, which has been one of the major causes of expressive increasing in its labor force. Between 1981 and 2006, Economically Active Population (EAP) in Brazil increased 110 percent, 27 percentage points higher than its cumulative economic growth, whereas in US it increased just 39 percent. It means

that, whereas US could witness a respectful productivity improvement, with high economic and low labor force growth, Brazil fought against a restricted economy growth for respectful increasing in its labor force.

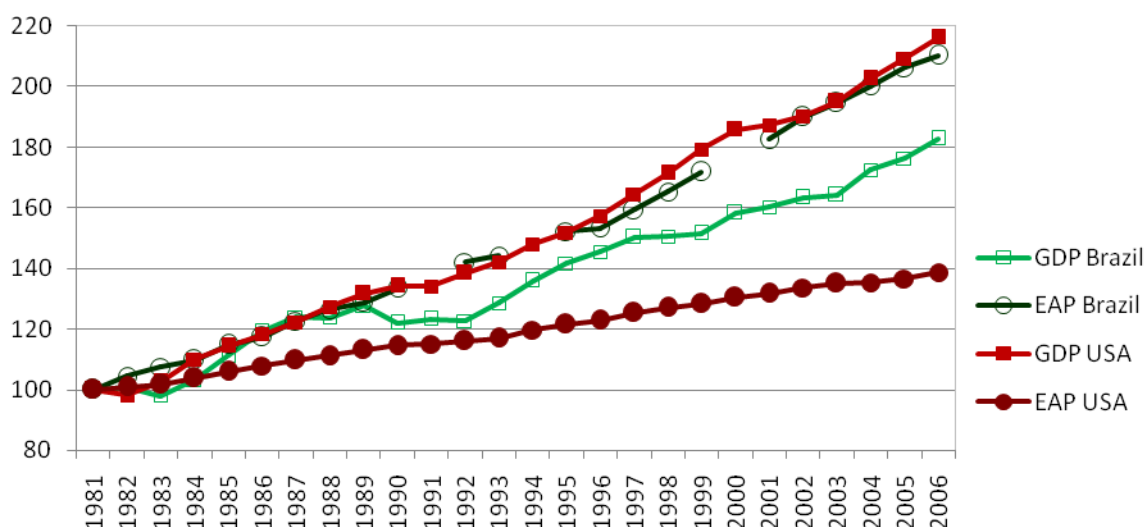


Figure 2 – Percent cumulative GDP⁽¹⁾ and EAP growth (1981=100) – Brazil and US 1981 to 2006

(1) GDP at constant prices – US dollars

Source: United Nations Statistics Division. Available in <<http://unstats.un.org/unsd/default.htm>>. Accessed in oct 2007. CPS (March supplement) – LBS and PNAD - IBGE.

Thus, extreme differences between economic and labor force growth in Brazil has been one of the major causes of blowing unemployment, underemployment and other precarious forms of insertion in the Brazilian labor market. In such difficult contexts, huge differences between Brazilian and American labor market increased expressively in this period. For instance, Figure 3 shows that unemployment rate shifted from 4.6 percent in 1990 to 11.1 percent in 1999 in Brazil during the first decade of economic reforms, whereas US remained all period long close to a full employment rate. Increasing exports, carried by world economic growth in ages 2000, reduced just slightly Brazilian unemployment in lasts years, which still remained close to 10 percent of economically active population and represented more than 9 million of Brazilians in

2006². Overall, although American EAP is 64 percent higher than Brazilian EAP, Brazil has 2.5 million of unemployed more than US.

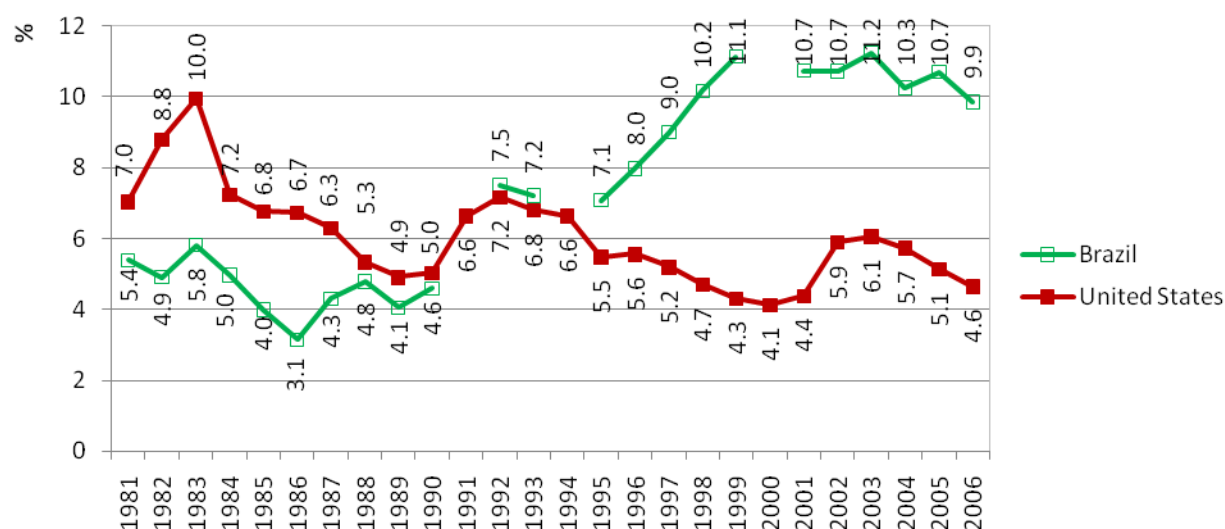


Figure 3 – Unemployment rate (% of PEA) – Brazil and United States 1981 to 2006

Source: CPS - March supplement – (LBS) and PNAD (IBGE).

Beside unemployment, underemployment also rose substantially in Brazil. Although there is no common and effective way to measure simultaneously underemployment in Brazilian and North American household surveys, one approach can be done using the percent of occupied working less than 35 hours per week. It must be stressed that occupied in partial time are not necessarily underemployed because they could not be willing to work full time. This behavior is more recurrent in USA, where higher wages afford partial jobs for significative parcel of occupied. For instance, 64 percent of North American working less than 35 hours per week just wanted to work part time in 2006. But in Brazil, although there is no specific question concerning to willingness to work full time at PNAD, low average wage for most of partial workers suggest a straight relationship with precarious socio-occupational status.

² This number doesn't include long time unemployment (those who were looking for a job in a period further than 1 month), which represented 19 percent of Brazilian unemployed population in 2006 (MAIA, 2007) and could increase the number of unemployed to more than 11 million of Brazilian.

In Brazil, this percentage rose from 15.7 percent in 1981 to 24.5 in 2006, whereas in US it stayed close to 4 percent all period long (Figure 4).

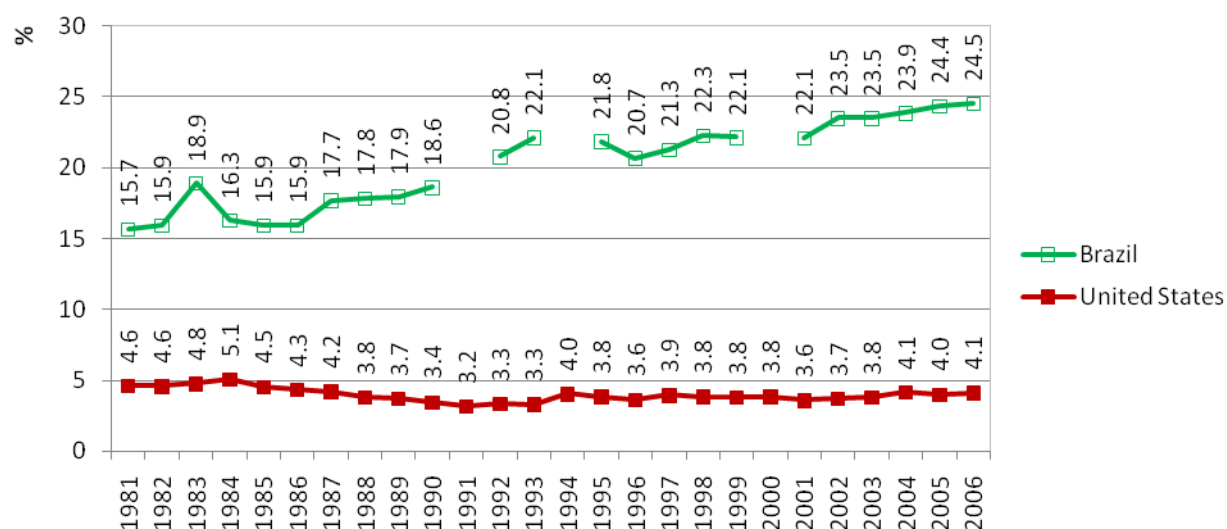


Figure 4 – % of employees who work less than 35 h per week – Brazil and United States 1981 to 2006

Source: CPS (March supplement) and PNAD.

Expressive economic growth with low labor force supply has been achieved in US with substantial improvement of labor productivity. Figure 5 shows the relation between Gross Value Added (GVA) and labor hour in US and Brazil and highlight the expressive rise of labor productivity in US meanwhile Brazil remained specialist in labor intensive activities. Labor productivity in US grew 44 percent between 1981 and 2006, whereas it fell 6 percent in Brazil. In the US, technological progress could be achieved as a result of the development and better use of information technologies, from computers to faster communication networks. In this period, the ration between American and Brazilian labor productivity shifted from 4.9 to 7.4.

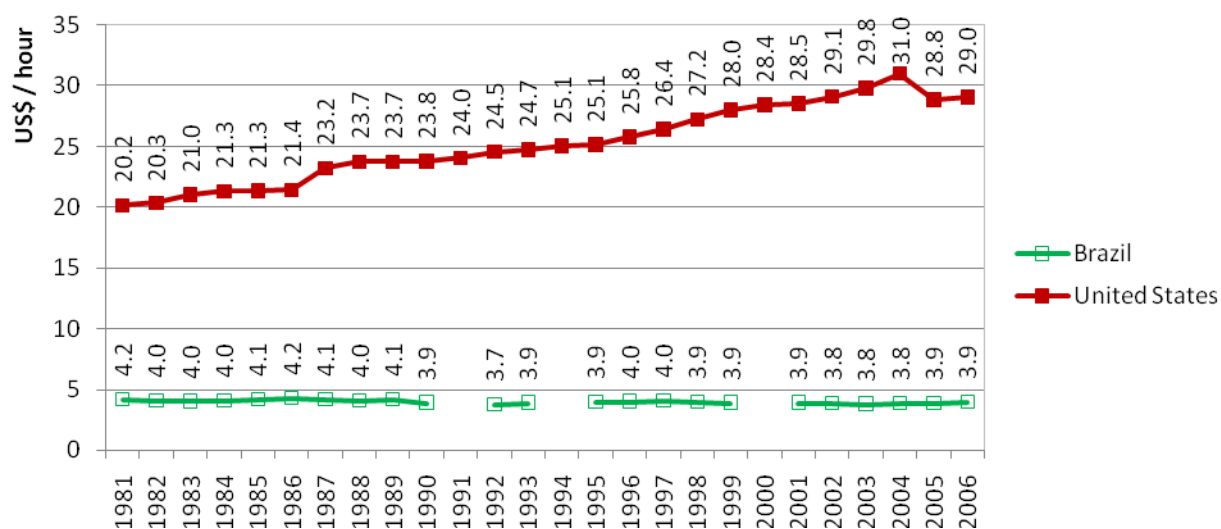


Figure 5 – Labor productivity (US\$ / hour) – Brazil and United States 1981 to 2006

Source: CPS (March supplement), PNAD, and United Nation Statistics.

Labor productivity improvement in US gave opportunity to real wage rise and, between 1981 and 2006, average wage in US grew 38 percent. This means that the benefits from productivity improvement have not only spread to consumer as lower prices, but also in terms of higher wage to the workers in US. Meanwhile, average wage in Brazil decreased 13 percent in Brazil, which can also be associated with labor productivity reduction in this country. Thus, ratio between American and Brazilian average wage increased from 3.3 in 1981 to 5.3 in 2006.

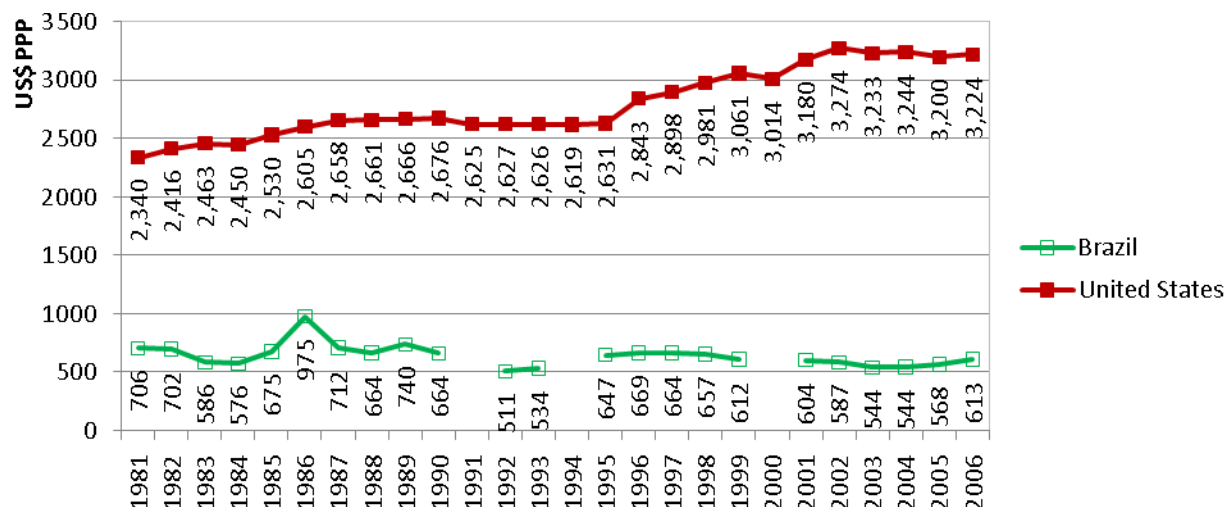


Figure 6 – Average monthly wage (US\$ PPP) – Brazil and United States 1981 to 2006

Source: CPS (March supplement), PNAD, and United Nation Statistics.

3. Sectoral structure

Besides economic liberalization, adoption of new technologies had also been responsible for important changes in the sectoral dynamics and had not been done with enough care in developing countries to avoid unemployment and underemployment. In Brazil, these changes affected more expressively agricultural and manufacture services, which remained with similar importance in GVA but reduced reasonably theirs contributions to labor force (Table 1a). This premature reduction of manufactural labor force suggests that Brazil pulled down the ladder of development. In other words, Brazil didn't reach and equivalent stage of development and competitiveness of the richest nations and, suddenly, blocked up the road of development, which had been followed by all industrialized countries up until now.

On the other hand, the expressive reduction of manufactural labor force in US, from 24 to 12 percent between 1981 and 2006 (Table 1b), is related to the new development process in industrialized countries. According to Yotopoulos (1999), although comparative advantage in commodities still remains an important part in the twentieth century globalization, trade in services (from transportation and communications to insurance and financial services) grew substantially and already represents more than 20% of total international trade. Relative advantages related to reputation, customization, trust and infra-structure give special advantage

to developed countries in this trade competition. Services exported for US are not easily accessible to developing countries because public infrastructure that has made such export specialization possible usually comes at great cost to the countries involved concerned to: technical education infrastructure in the form of technology and biotechnology parks, high speed fiber optics communication, networks that make the instantaneous transmission of data possible, and specially an army of well trained engineers.

Table 1a – Sectoral structure - Brazil 1981 and 2006

Economic Activity	1981			2006		
	People		% GVA	People		% GVA
	N (1.000)	%		N (1.000)	%	
Agriculture, hunting, forestry, fishing	11,021	26.7	6.0	12,656	15.3	7.4
Mining, manufacturing, utilities	7,036	17.0	28.8	12,791	15.5	28.5
Construction	3,503	8.5	8.2	5,608	6.8	5.4
Wholesale, retail trade, restaurants and hotels	6,089	14.7	8.7	18,454	22.3	8.1
Transport, storage and communication	1,719	4.2	2.8	3,999	4.8	6.5
Other activities	11,951	28.9	45.5	29,229	35.3	44.2
Total	41,319	100.0	100.0	82,738	100.0	100.0

Source: PNAD and United Nation Statistics.

Table 1b – Sectoral structure – US 1981 and 2006

Economic Activity	1981			2006		
	People		% GVA	People		% GVA
	N (1.000)	%		N (1.000)	%	
Agriculture, hunting, forestry, fishing	3,012	3.0	2.3	1,976	1.4	2.2
Mining, manufacturing, utilities	23,892	23.9	24.7	17,869	12.3	22.5
Construction	5,682	5.7	4.8	11,353	7.8	3.7
Wholesale, retail trade, restaurants and hotels	21,284	21.3	13.8	29,475	20.3	18.8
Transport, storage and communication	4,882	4.9	4.9	8,101	5.6	6.7
Other activities	41,364	41.3	49.4	76,573	52.7	46.1
Total	100,116	100.0	100.0	145,347	100.0	100.0

Source: PNAD and United Nation Statistics.

The sectors more affected by productivity improvement in US have been agricultural and manufatural activities, meanwhile Brazil continued specialized in low add value production (Figures 7a and 7b). In 2006, productivity in American agriculture was 21 times higher than in Brazil and 7 times higher in mining, manufacturing and utilities services.

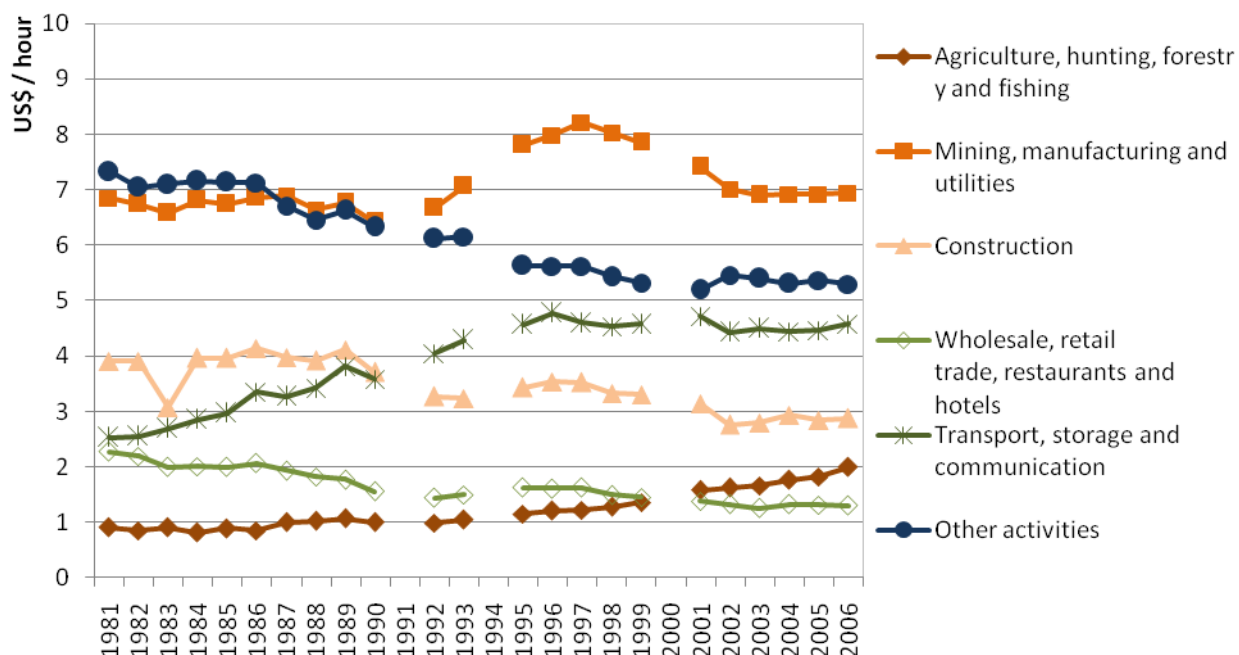


Figure 7a – Labor productivity (US\$ / hour) according to economic activity – Brazil 1981 to 2006

Source: PNAD – IBGE – and United Nations Statistics Division.

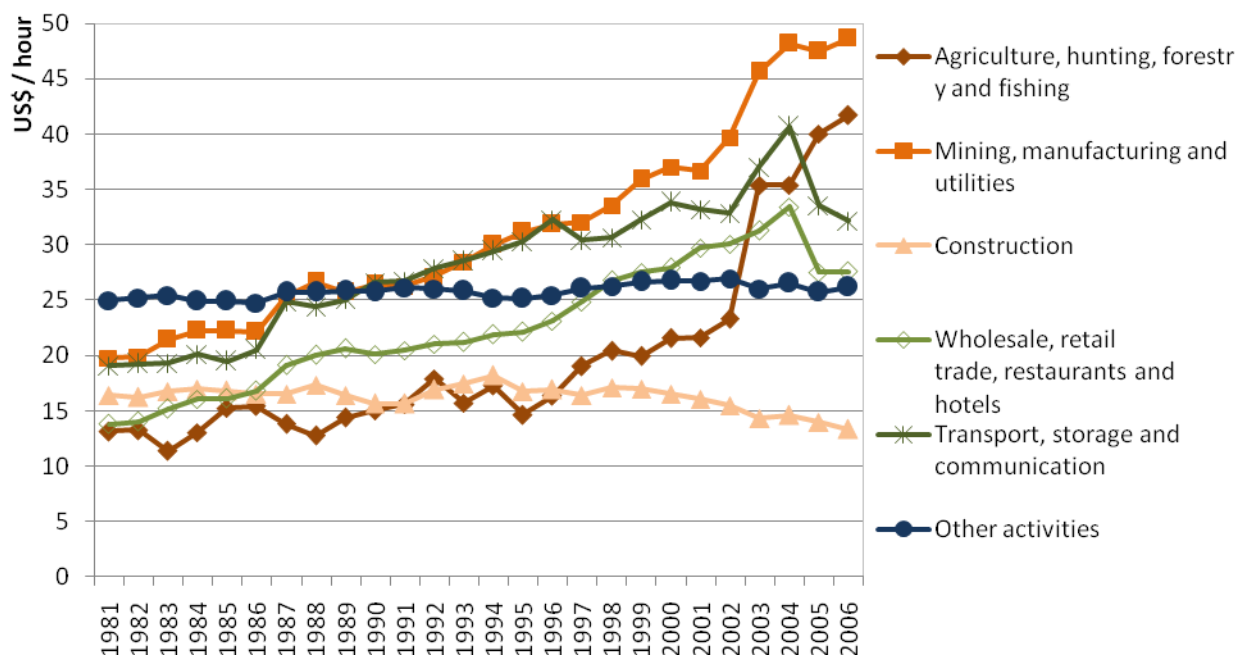


Figure 7b – Labor productivity (US\$ / hour) according to economic activity – USA 1981 to 2006

Source: CPS – BLS – and United Nations Statistics Division.

As argues Reinert (2003), these results suggest that US is specializing in producing continuous flows of innovations that raise their real wage, whereas Brazil is specializing either in economic activities where there is very little or no technological change, or where technological change takes the form of process innovations (in which technical change is taken out in the form of lower prices to the consumer rather than in higher wages to the workers, who are typically unskilled). In other words, economic liberalization caused US to specialize in being rich, and Brazil to specialize in being poor. The result is that the labor market rewards people with exactly the same productivity very differently in Brazil and US. For instance, a agricultural worker in US enjoy an average wage 5 times higher than in Brazil (Figure 8a and 8b).

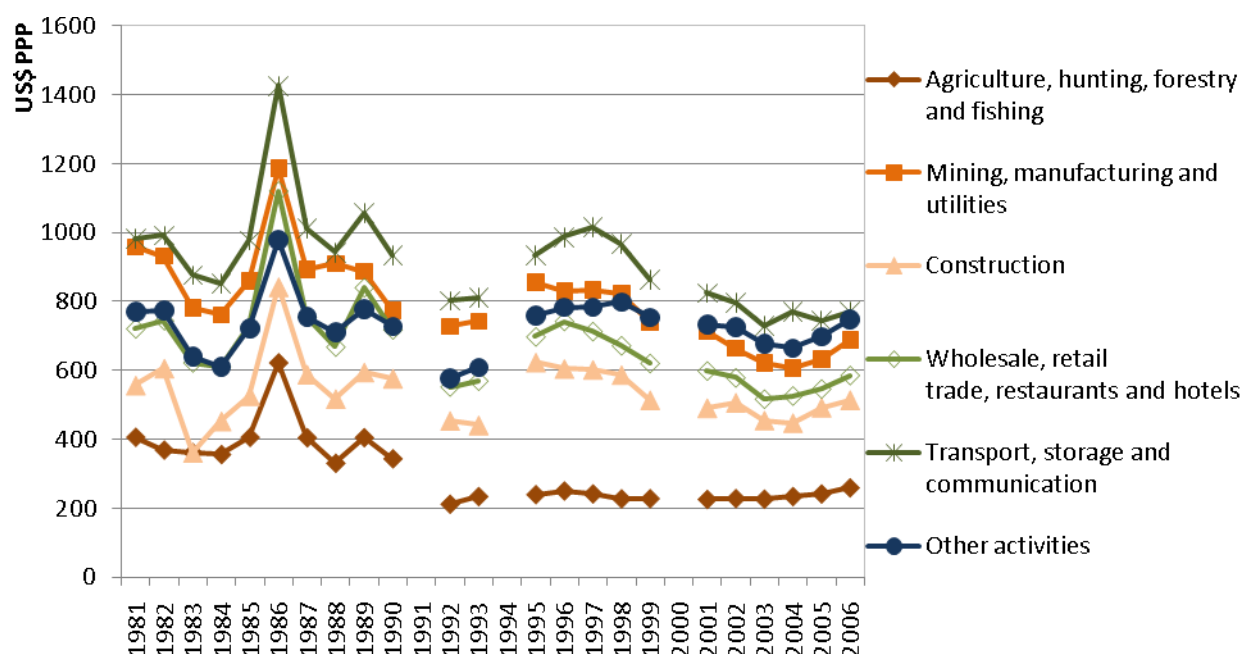


Figure 8a – Average monthly wage (US\$ PPP) according to economic activity – Brazil 1981 to 2006

Source: PNAD – IBGE.

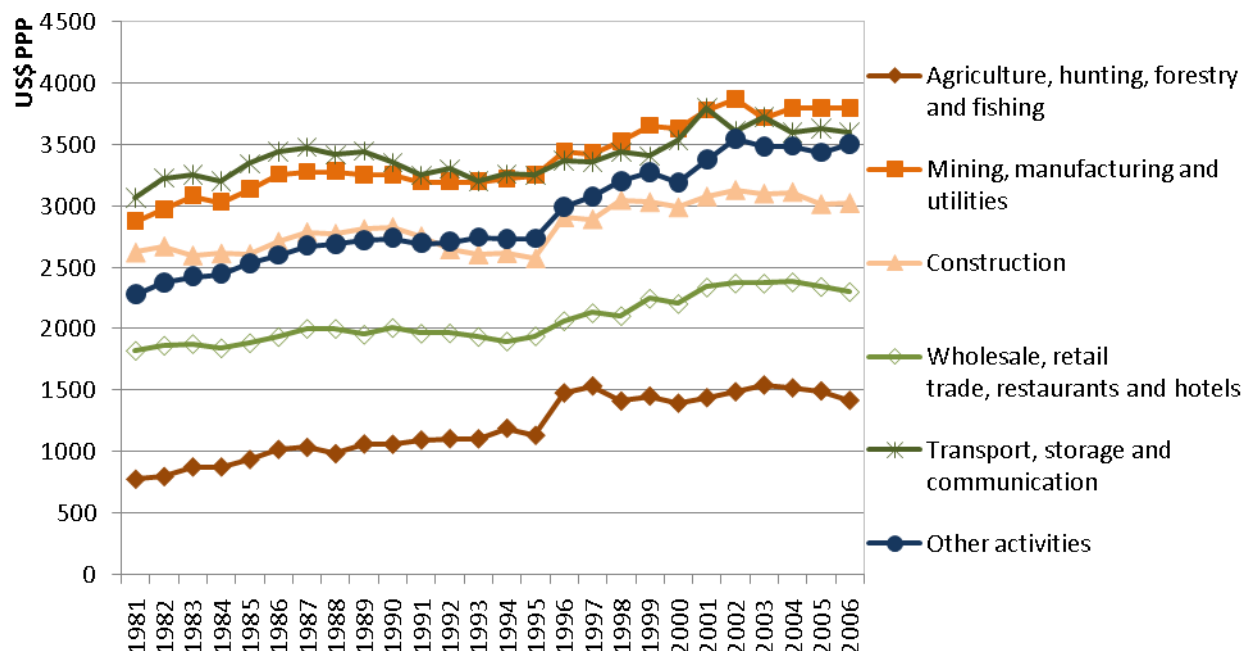


Figure 8b – Average monthly wage (US\$ PPP) according to economic activity – US 1981 to 2006

Source: CPS – BLS.

Conclusion

This paper has attempted to illustrate how structural changes witnessed in the last quarter of 20th century produced opposite effects in Brazil and US, the two major economies of America with opposite levels of development. Instead a convergence of wages (towards factor-price equalization), there has increased wages in the most rich nation (US), meanwhile there has declined in the most poor country (Brazil). The results confirm in such way the assertion that poorest countries are specially affected by instabilities in the global economy.

The results showed that this period delivered especial benefits to US, the most developed country of world, whereas significant costs arose in the Brazilian labor market. After a glorious period of high economic growth in 70's, debit crisis in beginnings of 80 decade introduced a long period of low and unsteady economic growth in Brazil, which had been prolonged with economic liberalization in 90's. The results in the Brazilian labor market had been

unemployment, underemployment and stagnation of low wages. Meanwhile, US witnessed an expressive growth of productivity and real wages, also maintaining low rates of unemployment and underemployment.

There are huge differences between labor markets in Brazil and US, and higher economic growth in Brazil is a necessary condition to improve its precarious condition development and reduce disparities to US, but economics dynamics observed in these countries are far from expected. Recently, US were hit by a huge economic crisis while Brazil seems to show a new trend of sustainable economic growth. But the real impacts of such new trend of development in their labor market will just be known in a close future.

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