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Minimum Wage in Brazil
Theoretical and empirical elements to debate a new policy

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1. Minimum wage controversy: a theoretical, empirical and political issue

Minimum wage policy is almost universal throughout the world, but it remains one of the most controversial issues in economics, policy and politics, due to its effects on employment, earnings, poverty and equality.¹ In Brazil, the minimum wage has a broader role in the economy and society, as the pensions and some social benefits floors are tied to the minimum wage, reaching directly more than 46 million people.

According to the main labor market economic theory, an excessive increase in the minimum wage above the clearance wage could result in losses in the quantity and quality of jobs. Besides that, informal labor would increase, especially for those marginally less productive and more vulnerable. Those who remain employed would have a higher well being. In Brazil, the positive effects of the minimum wage are expanded because of the value of pensions, unemployment insurance and social assistance benefits.

Since it has significant fiscal implications, some argue that minimum wage cost benefit is low and other policies would have a better impact on equality with a lower cost.

On the other hand, it is possible to argue that the companies have some market power in the low payment labor market and that a reasonable increase in the minimum wage would result in a higher level of employment with higher wages. The minimum wage also has a role in replacing the weak bargaining power of low pay workers, and balancing the market power of employers.

As in the theoretical discussions, the empirical research on minimum wage is not conclusive about its effects, which makes this a more controversial issue. The recent experience in Brazil makes this debate even more interesting. The minimum wage has been raised more than 100% in real terms during the last 20 years. This increase was intensified in 2005, since then it has increased 63%. Although the minimum wage has increased, the poverty rates and income GINI index have reduced, and undesirable effects were not

¹ International Labor Organization – ILO, 2008.

² The main example of political minimum wage decisions supported by technical studies is the Low-Pay Commission in the United Kingdom.

³ Sweating is the word given to unacceptable working conditions, with unusually low wage rates and excessive hours of labor.

⁴ This by-sector perspective of minimum wage was reflected in ILO Minimum Wage-Fixing Machinery

observed. Unemployment level has reduced to the lowest level and the formality rate is higher.

Raising the minimum wage is not necessarily a bad policy, however it is not necessarily a good one either. Many variables affect the outcome of this policy in a dynamic process, and the minimum wage should be considered within the economic context (Cardozo and Musse, 2014).

This perspective led us to some questions: what is a “reasonable” or an “excessive” increase in the minimum wage? Is there an optimal level? Is the current policy in Brazil suitable with a reasonable minimum wage? Is it possible to keep this policy and experience the same results?

Is not an easy task to answer these questions, and they reflect a political position. Despite this, the academic and technical debates have an important role in advising policymakers in their decisions.² This debate is even more important this year, when the current policy is ending and a new rule will be discussed for the period of 2016 to 2019.

In this regard, this work intends to shed some light on the debate about minimum wage in Brazil in order to contribute to the understanding about the current minimum wage policy. The objective is to provide an introductory theoretical and empirical understanding about the minimum wage and its effects as well as to discuss it in the Brazilian context. Without providing a definitive answer, the guide question to this paper is: does the policy in Brazil allow the minimum wage to increase in a reasonable amount?

To properly address this question, this exploratory paper: (1) does a short literature review about minimum wage, its concept, objective, history and institutional role in Brazil; (2) describes the current minimum wage policy and the main labor market’s behavior and income distribution indicators in Brazil; (3) presents an overview of the theoretical models and empirical research about minimum wage; (4) discusses the current policy in the light of the institutional context, theoretical and empirical findings.

² The main example of political minimum wage decisions supported by technical studies is the Low-Pay Commission in the United Kingdom.

The discussions presented in this paper are related to the minimum wage, its interaction with the labor market and implications on wages and income. This is, however, just one side of the coin. The minimum wage has important implications to fiscal policy and income distribution, since 22 million people have their pensions and social benefits directly linked to the minimum wage. Due to different methodological approaches and area of research involved, this paper does not address the aforementioned issue.

2. Minimum wage in the world and in Brazil

The first experiences of a modern minimum wage were developed in the end of 19th century in New Zealand (1894) and Australia (1896). England adopted its first minimum wage in 1909. It was established as a way to prevent “sweating”.³ The problem affected mostly children, apprentices and women, and was particularly severe in industries with low worker bargaining capacity. Hence, the first minimum wage was set by sector and only started to cover adult men few years latter.⁴ These minimum wage experiences created boards to facilitate agreements between employers and workers, with power to arbitrate and fix work conditions (Neumark and Wascher, 2010). To a certain extent minimum wages became and remains a substitute for wage bargaining between trade unions and employer associations (Herr et al, 2009) and they covered few categories of workers, with particularly low levels of wage.

Mexico was one of first the countries to adopt a nation wide minimum wage in 1931. The U.S. experienced its first national minimum wage legislation in 1938 with the Fair Labor Standard Act in the New Deal context. Previously, since 1912, some American states had established local minimum wages with different coverage, strength and legal confrontations.

³ Sweating is the word given to unacceptable working conditions, with unusually low wage rates and excessive hours of labor.

⁴ This by-sector perspective of minimum wage was reflected in ILO Minimum Wage-Fixing Machinery Convention n.26 adopted in 1928. It covers manufacture and commerce, but not agriculture. It was widely ratified, adopted by more than a hundred countries in the following decades. Under its Article 1, States parties undertake “to create or maintain machinery whereby minimum rates of wages can be fixed for workers employed in certain of the trades or parts of trades in which no arrangements exist for the effective regulation of wages by collective agreement or otherwise and wages are exceptionally low.”

After the Second World War the minimum wage expanded around the world and national minimum wages were widely adopted. This trend resulted in the adoption of the Minimum Wage Fixing Convention n.131 in 1970 by which Ratifying Member States commit to establish a system of minimum wages, which “covers all groups of wage earners” against “unduly low wages”. An important innovation of this last Convention was the introduction of the idea of a minimum living wage, as the wage necessary to satisfy basic living necessities of the worker and its family (DIEESE, 2010).

The trend changed after the oil crises in 1970s and the developing countries crisis in the 1980's, when the minimum wage was considered a distortion in the efficient labor market and a source of unemployment. The main symbol of this movement was the United Kingdom, which abolished the Wage Councils and denounced ratification of ILO Convention n.26. The abolishment of minimum wage was not the rule, but many countries kept the level frozen or insignificantly low, reducing its effect in the labor market.

At starting of 21st century minimum wage has experienced a revival. Many countries have recently adopted or reactivated minimum wages such as Brazil, China (2004), South Africa and UK, which introduced a system of national minimum wage in 1999, and Germany in 2014. Almost 70% of countries have increased minimum wages in real values between 2000 and 2007. Nowadays, minimum wage is almost a universal policy, as 90% of the 181 ILO members have adopted statutory minimum wages (ILO, 2008).

2.1 Minimum Wage in Brazil

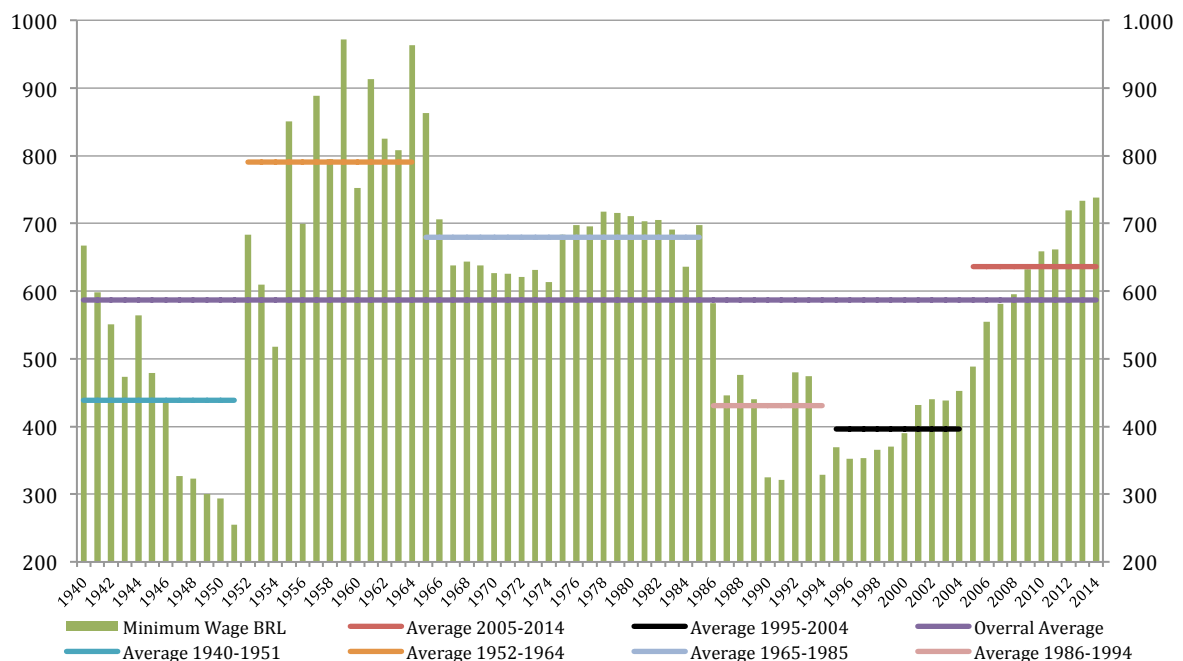
The beginning of the minimum wage in Brazil was in the context of constitution of the labor's rights, during the Vargas's Presidency in the 1930's and 1940's. In the same way than the firsts minimum wages experiences, the minimum wage machinery in Brazil was established per region (22 states and territories) by commissions composed by representatives of workers and employers and presided a government appointee. The main parameter to set the minimum wage value was the amount needed to keep the worker basic subsistence expenses in feeding, housing, clothing, hygiene and transportation. The amount was established by day, but only for workers in urban areas. Teenager apprentices received a half minimum wage value and workers under unhealthy conditions received fifty percent

more than the established minimum wage value.⁵

The 1946 Federal Constitution changed the parameter of the minimum wage including the basic subsistence of the family, not only the worker's. Minimum Wage Commissions had worked until 1964, when the military regime extinguished them. Thereafter, the National Department of Employment and Salaries assumed the Commissions' function.

Until 1964, the minimum wage value had experienced two different movements. As of 1943 until 1951 the minimum wage had lost more than a half of its value in real terms. This period coincides with the end of the Vargas's "Estado Novo" and the first democratic government with President Dutra. From 1952, with the democratic mandate of Vargas, until 1964, there was a strong minimum wage recovering, reaching its highest value in 1959 (see chart below).

Minimum wage real values and averages in Brazil, 1940-2014



Source: IPEADATA, elaborated by author

⁵ Initially were established 14 different minimum wage values. The highest value, in Rio de Janeiro (Guanabara State), was 2.67 times higher the smallest value in the Northeast States. In 1943, with the Consolidation of the Labor Law⁵, the minimum wage was legally extended to rural workers. Despite of the law, the rural minimum wage was implemented only 1963. Up to 1984, prevailed different minimum wages per region⁵. There were 14 levels in 1940 and it advanced to 38 in 1963. In 1974 the federal government reduced the number of minimum wages to 5 and to 3 in 1982, and finally the national minimum wage was unified in 1984 (DIEESE, 2010). Only in 1988, democratic Constitution unified the national minimum wage by law.

According to the data from Institute for Applied Economic Research - IPEA, during the military regime the minimum wage fell in the first years and was relatively stable around the historic average, a much lower level than in previous period. The second half of 1980's, the period of transition between the dictatorship and democracy, Brazil faced a period of economic stagnation and hyperinflation. In this period, the minimum wage was a tool for the macroeconomic stabilization, with large fluctuations and reductions in the real value, reaching its lowest values in 1990 and 1991 (Foguel, Ulysea and Courseuil, 2014).

The new paradigm of individual rights and guarantees, as well as the consolidation and expansion of social rights brought by the Constitution were reflected in the minimum wage and its role in Brazilian society. The concept of minimum wage was strengthened, as following (Brasil, 1988):

Article 7. The following are rights of urban and rural workers, among others that aim to improve their social conditions:

....

IV – nationally unified minimum monthly wage, established by law, capable of satisfying their basic living needs and those of their families with housing, food, education, health, leisure, clothing, hygiene, transportation, and social security, with periodical adjustments to maintain its purchasing power, it being forbidden to use it as an index for any purpose;

The minimum wage was designed as a fundamental right and therefore, cannot be revoked; the Constitution cannot be altered to reduce the scope of its coverage. Its main characteristics are: (1) monthly and national unified value; (2) covers urban and rural workers; (3) established by law, not by the Executive branch alone; (4) it should be capable of satisfying basic needs of the family, including for the first time education, health, leisure and social security; (5) the Constitution states the necessity to adjustments in order to, at least, keep the purchasing power; (6) and the minimum wage cannot be used as index, which is a way to avoid or minimize its impact on inflation.

Another important innovation of the 1988 Constitution was the linkage of the minimum wage as the floor value to social security, social assistance and unemployment insurance (articles 201 and 202, among others). This constitutional provision, unique in the world, has important implications to the effects of the minimum wage in terms of equality

and, in another perspective, of fiscal impact.

As achieved the monetary stabilization as of 1994 with Itamar Franco Presidency and in the following years in the Fernando Henrique Cardoso government, the minimum wage stopped its declining trajectory, and experienced a new growth movement, while maintaining the lowest average threshold since 1940.⁶

2.2 The current minimum wage policy in Brazil

The movement of raising the minimum wage was strongly intensified in 2005, since when the minimum wage has achieved real growths every year up to now. In 2005 and 2006 the government has strongly increased the minimum wage, and there was a discussion among government, national workers unions and employers representatives about a long-run adjustment policy for the minimum wage until 2023. The objective of this policy would be a guarantee of sustainable minimum wage growth with certain predictability for the economic agents.

The outcome of the discussions was a political decision that minimum wage should increase by the families consumption inflation rate plus a measure of productivity. From 2007 up to 2011 the minimum wage was adjusted by the consumer prices national index plus the GDP growth of the two years before, if positive. However, this policy wasn't stated in law. Thus, every year a new law established the minimum wage value for the next year.

Only in 2011, the government passed a law fixing this formula to adjust the minimum wage for 2012-2015. With this rule, the minimum wage value was published every year by presidential decree. The mid-run minimum wage policy some advantages. The policy is simple, so it is easily understandable by all the economic agents. Also, it makes the minimum wage relatively predictable and allows marginal real increases every year, avoiding great jumps in value without correspondent economic growth. On the other hand, if the productivity of the minimum wage worker does not grow in the same proportion, with time

⁶ In 2000, the Federal Government has passed the Supplementary Law n.103/2000, which delegates to the states the possibility to set floor wages for some types of work. However, only four states until now have this floor wages for some categories and the lack of enforcement makes its effectiveness very low. Moura and Neri (2008) analyze the effectiveness of the state wage floor in 2001, controlling the results by the state of São Paulo, which had no wage floor. They main founding was that there was no impact on employment and wages of the wage floors in Rio de Janeiro e Rio Grande do Sul states, due to the non-compliance with the new legislations.

it can produce adverse employment effects.

This year, 2015, Brazilian government and Congress will need to discuss the new policy for the coming years. Does this policy allow the minimum wage to increase in a sustainable way, considering its labor market effects? What's have been its impact on employment, informality and income distribution? In order to discuss a new policy for the following years it is imperative to assess the impact of the current policy. In this sense, this part of the work is dedicated to present the context and behavior of the minimum wage, detailing the main labor market and equality indicators.

Since 1997 the minimum wage has experienced a continuum increase, with real growth every year. The minimum wage in 2015 is two times the 1995 real value. Two thirds of this growth happened since 2005, when the minimum wage valorization has been intensified. The changes in the minimum wage since 1995 can be observed as follows:

Year	Month	Nominal Minimum Wage (BRL)	Nominal Adjustment (%)	Consumption inflation index INPC (%)*	Real MW Variation (%)	Annual GDP variation
1994	September	70				
1995	May	100	42.86%	14.90%	24.33%	
1996	May	112	12.00%	15.79%	-3.27%	2,20%
1997	May	120	7.14%	6.84%	0.28%	3,40%
1998	May	130	8.33%	4.01%	4.16%	0,00%
1999	May	136	4.62%	3.14%	1.43%	0,30%
2000	April	151	11.03%	5.22%	5.52%	4,30%
2001	April	180	19.21%	6.18%	12.27%	1,30%
2002	April	200	11.11%	9.72%	1.27%	2,70%
2003	April	240	20.00%	7.06%	12.09%	1,10%
2004	May	260	8.33%	7.06%	1.19%	5,70%
2005	May	300	15.38%	6.61%	8.23%	3,20%
2006	April	350	16.67%	3.21%	13.04%	4,00%
2007	April	380	8.57%	3.30%	5.10%	6,10%
2008	March	415	9.21%	4.98%	4.03%	5,20%
2009	February	465	12.05%	5.92%	5.79%	-0,30%
2010	January	510	9.68%	3.45%	6.02%	7,50%
2011	January	540	5.88%	6.47%	0.37%	2,70%
2012	January	622	15.19%	6.08%	7,59%	0.9%
2013	January	678	9.00%	6.20%	2.64%	2,3%
2014	January	724	6.78%	5.56%	1.16%	0.3%
2015	January	788	8.84%	6.23%	2.46%	

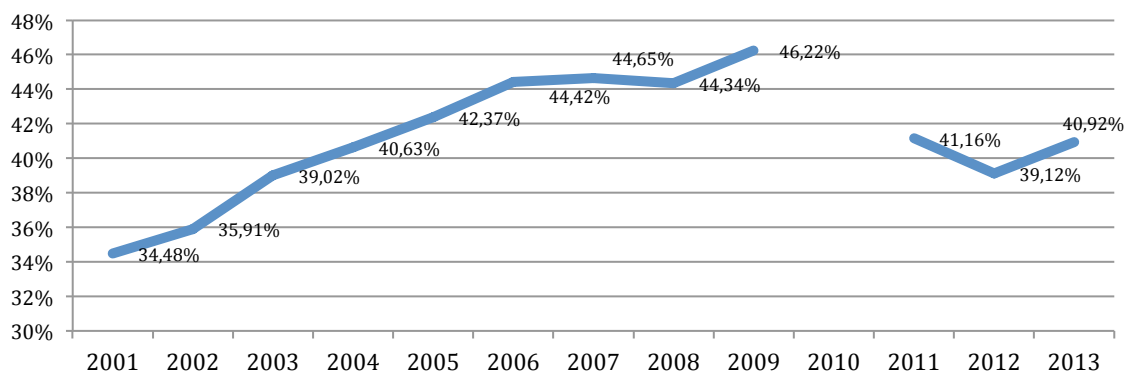
Source: PNAD and INPC. IBGE elaborated by DIEESE. 2015 and adapted by author

* The inflation index was calculated considering the months of the increase in the wage floor.

One of most common ways to measure the minimum wage is its ratio with the average wage in the economy. The higher the ratio, the higher the minimum wage. In 2001,

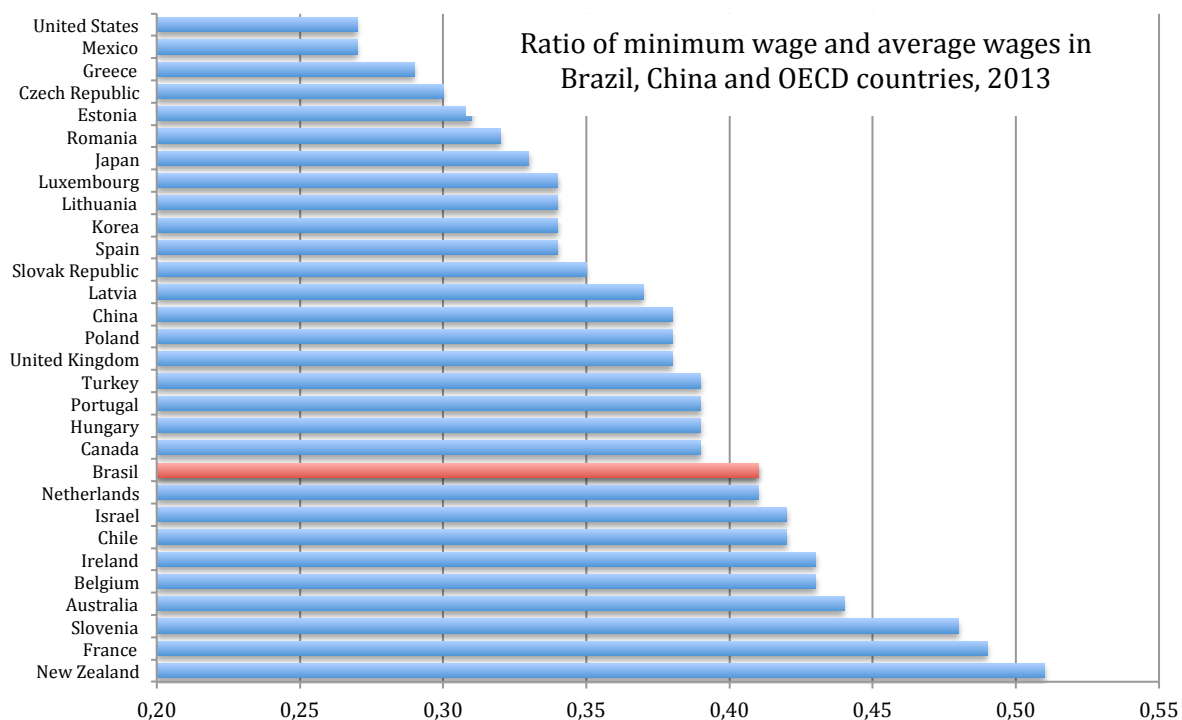
the minimum wage represented 34% of the average wage. Until 2005, the ratio reached 40% and since then the value has been oscillating up to 46%. What this means is that the minimum wage grew faster than the other wages in the economy, which are supposed to be adjusted according to labor productivity. Since 2011, the minimum wage has been relatively stable at 40% of the average wage.

Ratio of minimum wage and average wages of the principal work – 2001-2013



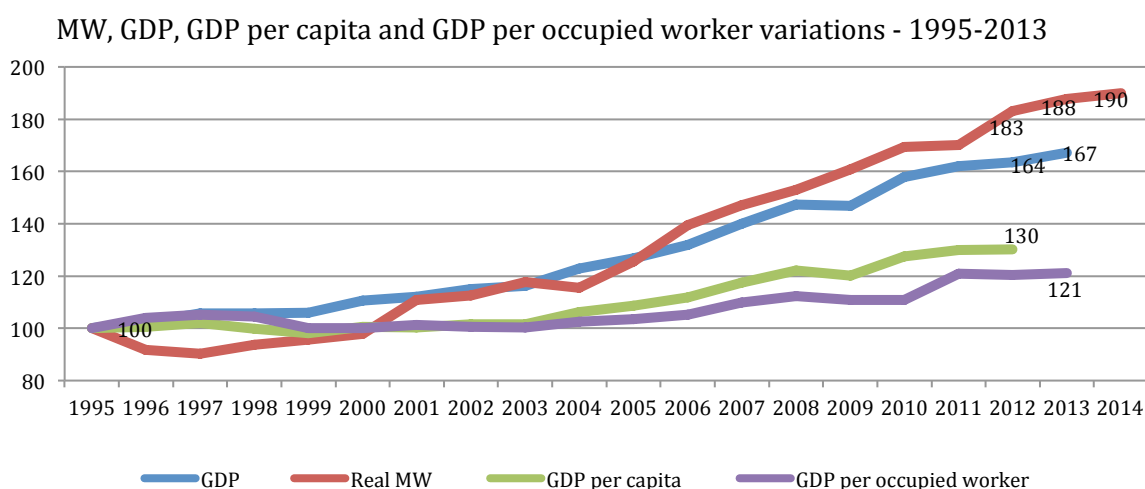
Source: PNAD, IBGE and Ministry of labor. Elaborated by the author.

In an international comparison, the ratio between the minimum wage and average wages in Brazil is in line with the OECD countries, whose average ratio is 38%. However, the ratio in Brazil, beside Chile, is above of the ratio of developing countries, such as Mexico, Turkey and China.



Source: PNAD, IBGE; Ministry of Labor and Employment and OECD

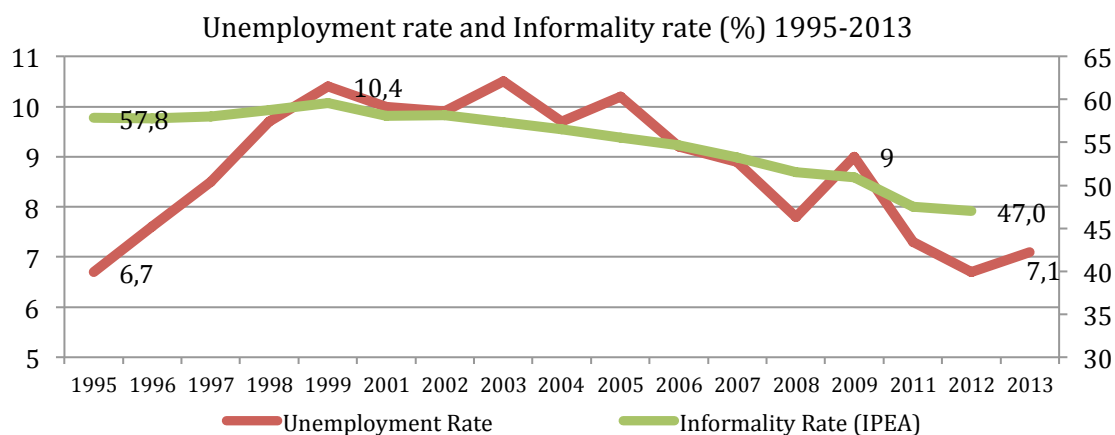
Until 2000, the minimum wage variation was below the GDP, GDP per capita and GDP per occupied worker. From 2001 to 2004, the minimum wage variation was closely to the GDP, but higher than the GDP per capita and per worker. From 2005 to 2007, the minimum wage grew faster than the GDP, and from 2007 the minimum wage advanced in line with the GDP growth of the previous two years, as the policy states. In this period, the minimum wage grew in a stronger rhythm than the GDP per capita and the average labor productivity.



Source: PNAD, IBGE; IPEADATA and Ministry of labor. Elaborated by the author

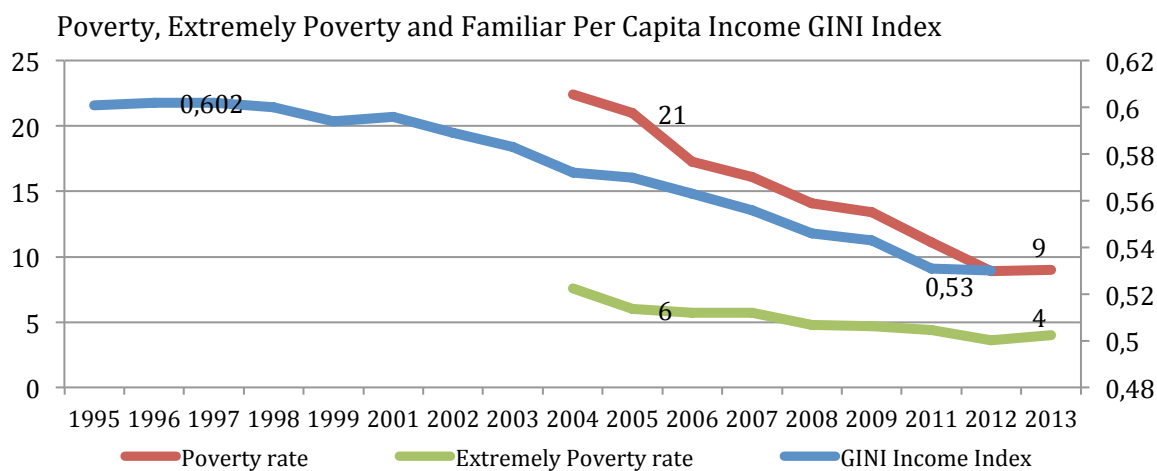
Although the strong growth of the minimum wage in the last two decades, apparently, the main labor market indicators responded positively. Both the unemployment and informality rate have fallen to the lowest levels ever recorded.⁷

⁷ The informal sector is the part of the economy in which the legislation is not complied. Is considered informal sector workers as those who do not hold a signed labor market contract card. The IPEA informality rate is the ratio of: (workers without signed labor card + self employed/ workers with signed labor card + workers without signed labor card + self employed).



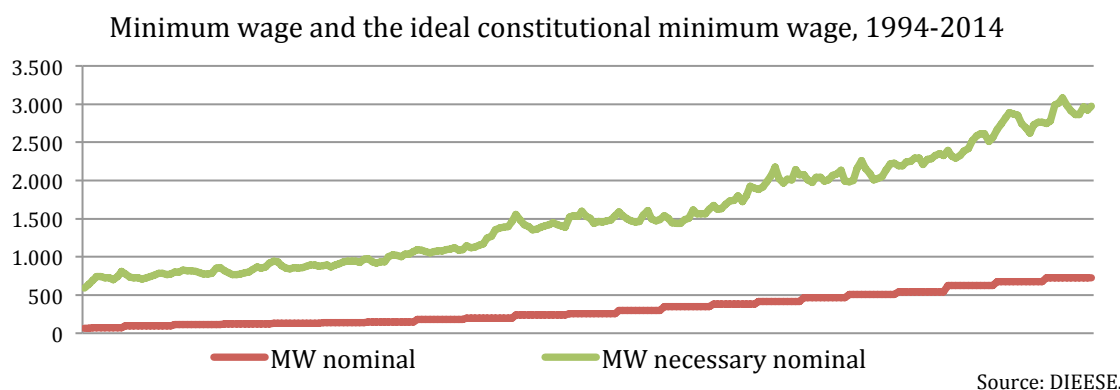
Source: IPEADATA. Elaborated by author.

The well-being indicators demonstrate that Brazil has strongly advanced in this period. The poverty and extreme poverty levels have considerably decreased to the historic lowest value and Brazil has changed the trajectory of inequality growth since the 1960's. The GINI index in Brazil is nowadays close to the value in 1963. However, the country remains as one of the most unequal countries in the world.



Source: IPEADATA. Elaborated by author.

One other way to follow the minimum wage evolution is compare its real value with the amount that would be necessary to satisfy the basic living needs of workers and their families. In this case, the minimum wage in Brazil continues to remain far from the ideal value.



2.3 Who earns a minimum wage in Brazil?

One other important perspective to assess the impact of the minimum wage in the economy is to analyze the group of people that earn a minimum wage and how it has changed in this period. The minimum wage directly affects 46.7 million people in Brazil. However, from this number, only 24.7 million are workers who earn a minimum wage as the result of labor. The others 22 million are pensioners and social assistance beneficiaries (DIEESE, 2015).⁸

As the minimum wage rises, the share of workers that earn a minimum wage has risen in Brazil. In 2012, minimum wage workers represented almost 20% of all workers in the private sector in Brazil, 40% more than in 1995. More than the quantity, the profile of the minimum wage earners has also changed since 1995 (Foguel et al, 2014).⁹

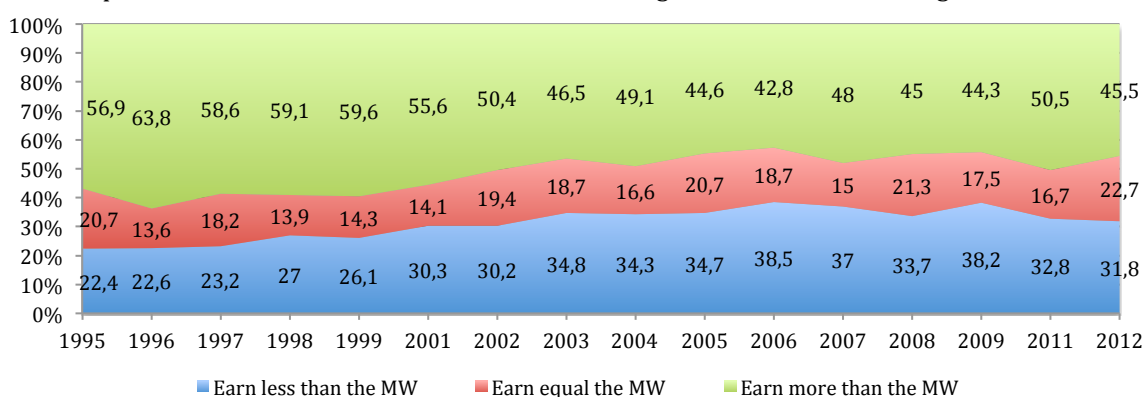
In Brazil, the minimum wage has a higher coverage on informal sector than in the formal sector, where 22.7% of the workers earn a minimum wage. With few variations along the years, this share of minimum wage workers has been relatively stable since 1995.¹⁰ On the other hand, the proportion of informal workers earning less than a minimum wage has increased 10% in this period.

⁸ The pensioners and social assistance beneficiaries represent 69% of the total beneficiaries of the social security system and 50% of the volume of payments.

⁹ Foguel et al (2014) considered a minimum wage worker, every worker earning between 0.95 and 1.05 minimum wages.

¹⁰ Considering errors inherent to household surveys to measure incomes, big variations from one year to another can be, in part, due to a rounding effect. It happens because the respondent tends to answer approximate round values.

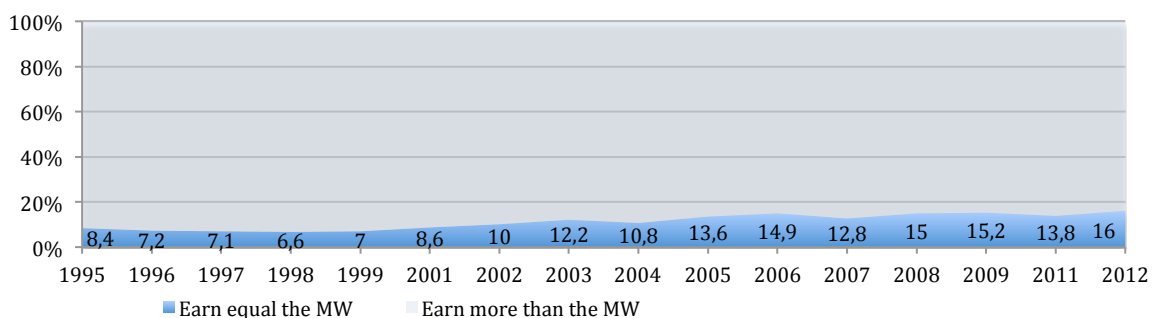
Proportion of workers in the informal sector with regard to the minimum wage, 1995-2012



Source: PNAD, IBGE. Adapted from Foguel et al. 2014

In the formal sector, workers with a labor market contract card signed, the proportion of workers earning a minimum wage is lower, but since 1995, it almost doubled its representation from 8.4% to 16% of total formal workers.

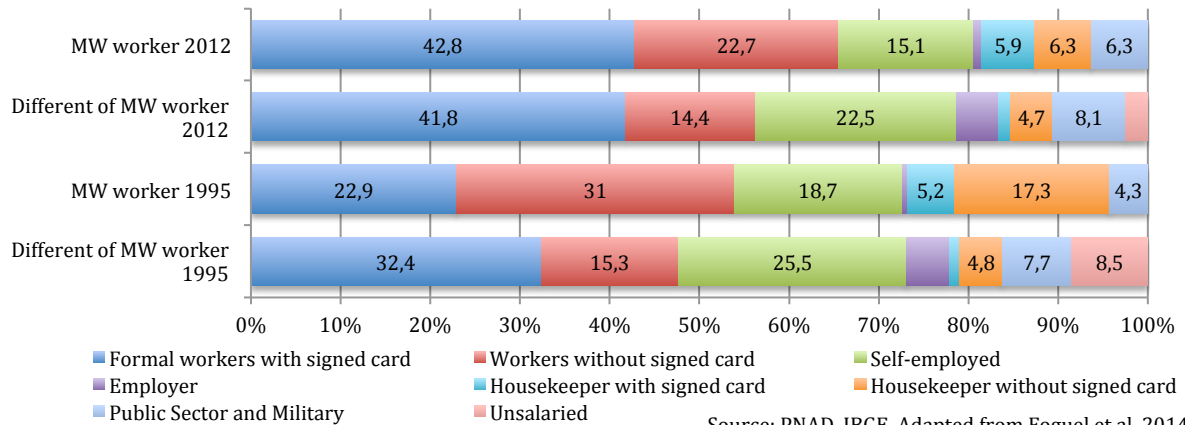
Proportion of workers in the formal sector with regard to the minimum wage, 1995-2012



Source: PNAD, IBGE. Adapted from Foguel et al. 2014

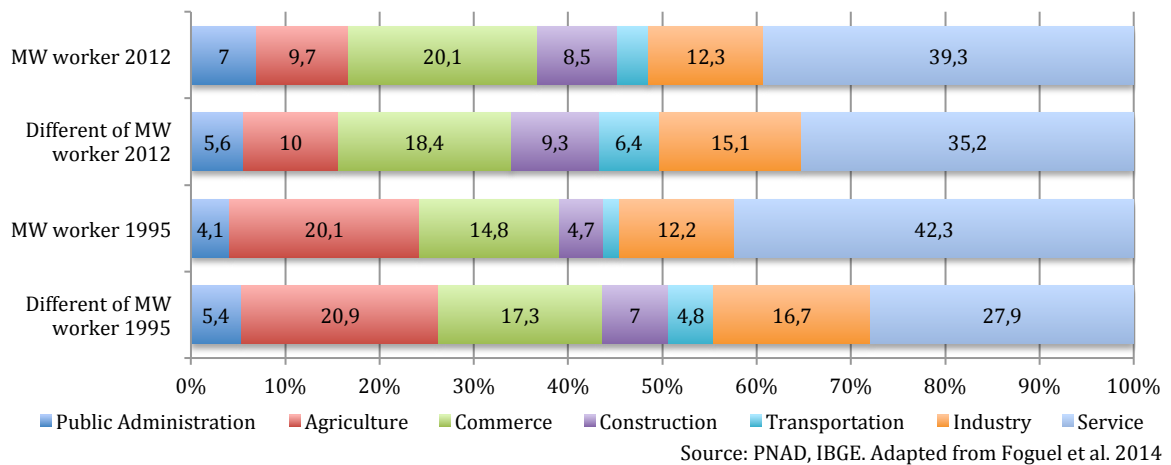
Considering the occupational position, the workers with signed labor cards gained participation in both minimum wage workers and non-minimum wage workers. Among the minimum wage workers, the workers with signed card advanced from 22.9% to 42.8%, while those without signed cards reduced from 31% to 22.7%. Another expressive modification was the decrease in the portion of housekeepers without signed cards among minimum wage workers.

Proportion of workers by occupational position, with regard to the minimum wage, 1995 and 2012



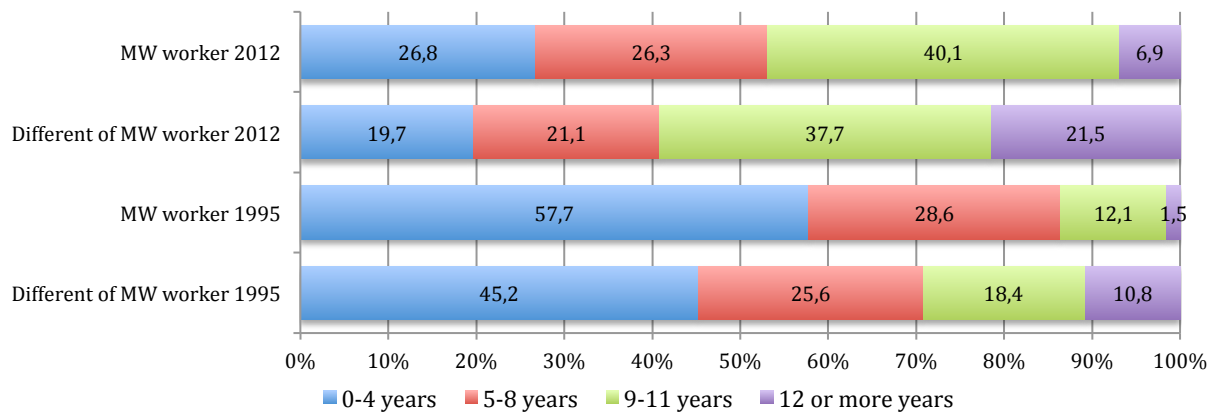
With regard to economic activity, the participation of minimum wage workers followed, in some extent, the participation of workers that did not earn a minimum wage. The highlights are in the commerce sector, with the greatest increase in labor force participation and agriculture, which in 2012 employed less than half of workers employed in 1995.

Proportion of workers activity sector, with regard to the minimum wage, 1995 and 2012



Perhaps most importantly, there was an expressive change in the minimum wage profile considering the educational level. The minimum wage worker is now much more educated than in 1995. There was a strong reduction from 57.7% to 26.8% of workers with up to 4 years of schooling among the minimum wage workers. The portion of those with 5 to 8 years of school remained relatively stable and the participation of workers with 9 to 11 years of school is prevailing, with 40%, against 18.4% in 1995.

Proportion of workers by years of schooling, with regard to the minimum wage, 1995 and 2012



Source: PNAD, IBGE. Adapted from Foguel et al. 2014

3. Theoretical models about minimum wage

The literature about minimum wage in Brazil can be classified in three categories: studies that try to understand the effects of the minimum wage on wage distribution; those that research the relationship among minimum wage and income distribution; and those that analyze the impact of minimum wage on the labor market (Courseuil and Servo, 2002). This work, in a similar way, will assess the minimum wage impact on two main areas: employment and wage and income distribution, considering this last two as one unit of analysis.

The most advanced empirical research on minimum wage is about the U.S., which began in the 1980s. Many of the methodological approaches used to understand the minimum wage were adapted from American studies. Thus, in order to present the empirical literature, this work presents a brief overview about the American research based on two recent surveys from Neumark and Wascher (2010) and from Belman and Wolfson (2014). Also, in order to allow a better understanding about the studies, this chapter does a brief presentation of the main methodological approaches.

This chapter starts with the presentation of three main models used to guide the research on minimum wage and follows with the overview of the empirical research. The second part is divided in two sections, employment effects and wage and income distribution effects, considering the U.S. and Brazil studies in each case.

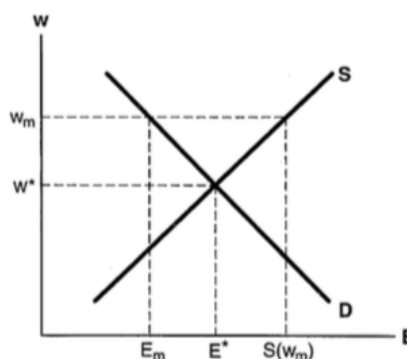
3.1 Labor Market Perfect Competition model

The neoclassical model or the perfect competition model is the simplest and most widely used economic model to analyze the labor market. The competitive labor market assumes that (1) there is perfect information, in other words, all the players have equal and complete access to all the information about the market; (2) there are many employers and workers and none of them, individually, can affect the level of wages, that is, they are price or wage takers; (3) there is only one type of labor, the labor is homogeneous; and (4) the output, homogeneous as well, is a function of capital and labor.

The chart below shows the demand and supply of labor in a competitive market with a minimum wage. In the competitive market, each profit maximizing company will contract labor until point where one more unit of labor will result in a smaller profits, which means that the marginal productivity of labor is equal to the wage. The equilibrium point, with W^* wage and L^* quantity of labor, is where the demand curve crosses the labor supply curve. When minimum wage is set above W^* , the clearance wage, more people will look for jobs and firms will demand less labor. The result is unemployment, as there are fewer jobs available but more workers seeking jobs than in the absence of a minimum wage.

Competitive Labor Market with minimum wage

Source: Brown, 1999.



This model predicts that “whenever the minimum wage results in higher wages, someone who would have been employed, in the absence of the minimum wage at a wage less than the minimum wage, must instead now be out of work” (Belman and Wolfson, 2014, p.10).

A minimum wage above the equilibrium wage has two economic effects: price of the output rises, therefore the demand falls (scale effect), and firms tend to substitute labor for capital (substitution effect). The result is a lower demand for labor whose magnitude will

depend on: (1) price elasticity of demand for the product; (2) share of labor in the production costs; (3) how easy it is to substitute labor for capital; (4) the difference between the minimum wage and equilibrium wage.

As a result of these factors, the total effect on labor (or employment) is called the elasticity of demand for labor with respect to the minimum wage.

The model has variations according to the assumptions. One extension of the competitive market model stems from the relaxing the assumption that there is just one type of labor. Consider there exist skilled and less-skilled labor, in this case the production is a function of capital, skilled, and less-skilled labor, which are substitutes to some degree. A higher minimum wage tends to raise the demand for the others factors of production, capital and skilled workers. The outcome would be a higher level of employment or wages for skilled workers and less employment for unskilled workers. Thus, minimum wage would have an undesired effect on those more vulnerable.

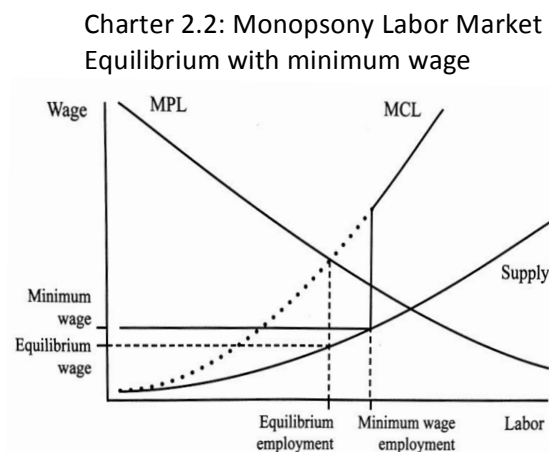
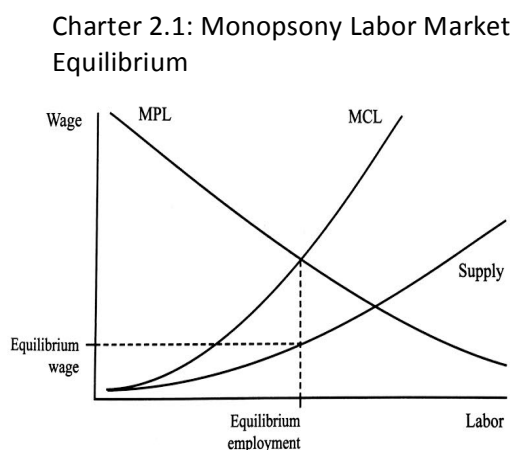
The neoclassical model has been applied as well in research about more than one sector or industry. In this case, a minimum wage rising can have cross-sector effects. If there are industries with substitute products but with different shares of labor in the costs, the minimum wage will affect negatively the industry with a higher share of labor cost, and can potentially benefit other industries with a lower share.

The two sectors model can also be applied to a labor market with a high non-compliance with the minimum wage. In this case, the two sectors would be the formal and informal (covered and uncovered). In this case, the basic conclusion remains: with a minimum wage greater than the competitive wage, the employment in the covered sector falls. A higher minimum wage would move workers from the formal sector to the informal sector. The expected theoretical result is a positive wage effect on the covered sector and a negative one on the uncovered sector, while the employment effect is negative in the covered and positive in the uncovered. The net effect on employment level can be negative, null or positive depending on the assumptions about the allocation of the workers among the formal and informal sector (Welch, 1976; Gramlich, 1976; Mincer, 1976 apud Courseuil and Servo, 2002 and Lemos, 2006). If there is a relevant transit to the informal market with lower wages, the minimum wage can potentially have adverse effects on equality and poverty (Foguel, Ulyssea and Courseuil, 2014).

3.2 Monopsony Model

The monopsony labor market relaxes the condition (2) of the competitive labor market model. While in the classical approach there are many firms, each of them is individually unable to affect the wage; therefore a firm does not have market power. The monopsony labor market considers that there is just one firm who hires labor and thus, the firm's behavior changes the labor price. The firm is not a wage taker, but a wage maker.

The only existing firm knows its effects on wages and in to order to hire an additional worker it needs to pay a higher wage not just for this one, but for all those already hired. In this case, the firm's demand curve for labor is equal to the market's demand curve. Therefore, the marginal cost of the additional worker is higher than its salary. As the firm seeks to maximize its profits, it will hire workers until the marginal cost of labor become equal to the marginal productivity of labor. The outcome is an equilibrium employment lower than it would be in a competitive market for each level of wages (Charter 2.1).



Source: Belman and Wolfson, 2014p.13

In the monopsony labor market, the minimum wage effect is the opposite of that in a competitive market. The charter 2.2 demonstrates how the minimum wage acts in a monopsony labor market. The firm's marginal cost of labor is now equal to the minimum wage up to the point it touch the supply curve. As the monopsonist maximizes it profits hiring until marginal productivity of labor reach marginal cost of labor, the equilibrium with the minimum wage is a point with higher employment than it would be without the minimum wage (Belman and Wolfson, 2014).

This model can be applied in any situation in which the firms have market power over wages and, therefore, face an upward-sloping supply curve and have to pay higher wages to attract additional workers. The firm not necessarily needs need to be the single firm.

The general conclusion is that when a firm has market power in the labor market, the minimum wage can, if no set too high, lead to an increase in employment (Neumark and Wascher, 2010). For this purpose, the minimum wage can raise employment until the level at which the wage floor reaches the potential equilibrium wage in a competitive labor market. Further than this point, a minimum wage would reduce employment. Thus, minimum wage can have positive or negative impact on employment relying on its level.

This optimal point – the higher level of minimum wage that raise employment – depends on the market power of the firm on the labor market economy, which can be measured by the elasticity of labor supply regarding the wages. As lower the elasticity, higher is the firm market power and so, higher is the capacity of the minimum wage to boost employment.

3.3 Search Models

Another class of theoretical model “has been used to induce monopsony-like behavior by incorporating search-relating frictions into the labor market” (Neumark and Wascher, 2010). This approach, also referred as “dynamic monopsony” or “competitive monopsony”, introduces the imperfect and no free information to the framework, assuming that workers do not have complete information about the job opportunities. There are some costs to workers and employers to find each other and individuals must decide among a limited number of job offers and even if it’s worthwhile to engage in a search for a job.

The firms that pay low wages tends to lose workers along time and have more difficulties to find workers while the firms paying higher wages have a lower quit rate and can recruit new worker easier. The intensity of searching jobs depends on the expectancy wages. In the other side, unemployed workers only get a job if the wage covers their reservation wage (Neumark and Wascher, 2010).

As Belman and Wolfson (2014) describe, there are two key variables in this approach: (1) the contact rate, as the probability that someone who is searching for a job

will be offered one in a period of time; and (2) the distribution of wages. In a competitive labor market, the contact rate is equal to one and the offer distribution result that all offers equal the equilibrium wage. In search models, the contact rate is positive but less than one, and the wage distribution is not varies. The model is used to explain employment, participation in the labor force, job vacancies and job distribution within the firms.

In many cases, the search model leads to a conclusion in which the minimum wage results in higher employment, depending on the level of the minimum wage. It occurs because the search frictions result in a positive relationship between employment and wages at the firm level and in an equilibrium level of employment below that founded in the competitive model. The minimum wage has positive impact on employment both because it raises the probability that some workers will receive an offer that exceed their reservation wages and because it induces firms already paying above the minimum to also raise their wage offers (Neumark and Wascher, 2010).

4. Empirical research on minimum wage

Although the fact that the theoretical model is an important guideline and valuable to suggest testable hypotheses to empirical research, Neumark and Wascher (2010) warn about the care needed in interpreting empirical results as evidence for and against alternative models. Even the neoclassical model does not forecast that minimum wage will result in less employment in all instances. Furthermore, the monopsony model can lead to a reduction in employment if the minimum wage is set above the equilibrium value. Actually, the economic theory of the minimum wage rarely makes firm predictions about the effects of the minimum wages. Thus, the discussion about the effects of the minimum wage is regularly treated on empirical bases.

In so far as this is the most controversial issue, the greater part of the minimum wage research is dedicated to identifying the effects on employment and earnings distributions. The main methodological challenge is to isolate the minimum wage effects from others, observable or not, which can impact the employment (Ulyssea and Foguel, 2006). The method most utilized on the minimum wage research is the econometric

approach, in order to obtain the elasticity of employment regarding the minimum wage.¹¹

The classical way to identify the elasticity is to compare the changes on employment minimum in a group in which the minimum wage was raised (treated group), against the employment changes in an identical group in which there were no change in the minimum wage.¹² Despite the simple idea, it is very difficult to find adequate data about two similar groups with and without changes in the minimum wage. This method is more common in studies about minimum wage in the U.S., trying to measure the impact of a change in a state minimum wage comparing low-pay sectors (e.g. restaurants and hotels) in closed cities in different states. The increase of the minimum wage in a state could work like a “natural experiment.”

In the U.S., the availability of longitudinal individual-level data and the frequent changes in the state minimum wages create good empirical opportunities for this methodological approach. Card and Krueger (1994) were pioneers, and their study demonstrates a theoretical counterintuitive result: there was no negative impact on youth employment in the fast-food industry due to the increase in New Jersey’s minimum wage.¹³ ¹⁴ The author used the state of Pennsylvania, where the minimum wage remained constant, as a control group. This work generated a huge discussion and gave rise to many others studies.

Due to the difficulty to set treatment and control groups appropriately, many studies use another econometric approach, trying to estimate an equation in which employment variables (dependent variables) are associated with the minimum wage (independent variable) in time-series studies. The task is to compare the employment behavior in different moments, when the minimum wage is relatively high and low. The

¹¹ The elasticity indicates how a percentage change in the minimum wage affects the employment in percent value. If the elasticity is negative, there is a negative impact of the minimum wage on employment. As higher the elasticity, higher the impact is.

¹² For a better understanding about difference-in-difference method in natural experiments, see Foguel, 1997 and Ulyssea and Foguel, 2006.

¹³ Myth and Measurement, the new economics of the minimum wage. Belman and Wolfson (2014) offer a comprehensive overview of the research and others that follow this approach.

¹⁴ Trying to reduce the impact of other wages on employment. a normal strategy is to narrow the focus of the research on low pay sectors and low pay workers. That’s why many studies in US focus on teenagers employment vis a vis others age-groups. There also studies that focuses on other demographic groups. such as women. immigrants.

regressions are controlled by some variables, such as economic growth and fixed geographic/time effects. The main risk, in this case, is to infer correlations without a necessarily causality (Ulyssea and Foguel, 2006).

Another econometric method is used in cross-sectional studies, which try to measure the relationship between the minimum wage and other labor market variables in a point in time and identify how this variable would prevail in the minimum wage absence (Jales, 2014).

The minimum wage empirical literature in the U.S. is much more focused on the effects on the labor market and employment and only a few studies are dedicated to understanding its impact on wage and income distribution. The Brazilian literature, however, has the opposite concern. There are much more studies regarding the distribution impacts than studies about employment outcomes (Courseuil and Servo, 2002 and Neumark et al, 2005).

4.1 Minimum wage and employment in US

In the U.S., the main concern about minimum wage research is the effect on employment. The relationship between minimum wages and employment has been widely researched since the 1980's. Otherwise, the empirical studies show different outputs of a minimum wage increase regarding employment. There is a huge quantity of papers published about the issue, and at least two recent surveys are dedicated to consolidating and overviewing the empirical literature, with special concern about the U.S. labor market.¹⁵

The Neumark and Wascher (2010) survey is based on their more than twenty years of empirical research on minimum wage. Regarding the effects of the minimum wage on employment, they based the discussion on their papers and on others most relevant works. They conclude, "the preponderance of evidence supports the view that the minimum wage reduce the employment of the low-wage workers". When the studies focus on the least-skilled workers, more directly affected by minimum wage increases, "the evidence for disemployment seems especially strong."

¹⁵ Belman and Wolfson, What does the minimum wage do? (2014); and Neumark and Wascher, Minimum Wages (2010).

The authors also argue that there are very few studies that provide reliable evidence of positive impact on employment. The studies about US that found zero or positive impact on employment generally were either short panel data studies or case studies of a state change in the minimum wage on a particular sector or industry. The argument is that some time is needed to adjust production process after a minimum wage increase, thus is necessary longer panel data to capture the full impact on employment. Regarding the impact on a particular sector, the absence of effects does not mean overall null impact. They point out that long run panels that incorporate state and time variation in minimum wage tend to find negative and statistically significant employment effects from minimum wage raises.¹⁶

There is, also, evidence of labor-labor substitution, by which employers replace their lowest-skilled labor in response to a higher minimum wage. Therefore, the minimum wage would harm the least-skilled workers more than the overall employment net effect (Neumark and Wascher, 2010). So, low-wage labor market would be approximated by neo classical competitive model.

Analyzing more recent studies, the authors find a range of elasticity of employment regarding the minimum wage, which extends from -1.0 to above zero in US, indicating possibly important negative effects on employment. Early surveys indicate a relatively consensus range from -0.1 to -0.3, with adverse and small impacts on employment. According to Neumark and Wascher (2010), this difference between the early and recent studies can be explained by greater state-level variation in minimum wages and new approaches and methods used to estimate the effects.

However, the controversy about the minimum wage effects on employment remains, even among the wide assessments from surveys. In other hand, Belman and Wolfson (2014, p.402) survey review 50 articles published between 2001 and 2013 and concluded that “it is unlikely that increases in the minimum wage that raise wages always or even often have negative consequences for youth employment”, otherwise, most of the studies report that there is a reduction on the number of hours of work, with elasticities around -0.2 to -0.4.

¹⁶ These critics were specially addressed to the work of Card and Krueger (1994).

They also argue that most of the studies contain statistic bias, which compromise their reliability. Those who have satisfactory addressed this method issues, few have detected “*a substantively significant response of employment.*” The authors also have done bias correction in some of the studies for the US and the overall elasticities of the employment with regard to the minimum wage “are both statistically insignificant and very close to zero”. This results remains even if focus only to teenagers and young adults.

An interesting approach of the Belman and Wolfson (2014) survey is the meta-analysis, trying to combine the different statistical results to determine an overall result of the empirical literature. They use 74 analyses of the employment effect published since 2001, with a total of 439 estimates. The meta-analysis shows a range from -0.099 to -0.034 that concentrates the estimates of the most part of the studies. The most part of the studies report elasticities close to zero and thus, the evidence is that increases in the minimum wage result in modest reduction in employment.¹⁷

Belman and Wolfson (2014, p.401) concludes that “*moderate increases in the minimum wage are a useful means of rising wages in the lower part of the wage distribution that has a little or no effect on employment or hours*”. In other words, they say that incremental adjust in the minimum wage can generate good results with a relatively low cost. They advert, otherwise, that large increases in the minimum wage can boost undesirable effects, mainly the employment effect. The author highlights the lack of empirical findings of large increases in the minimum wage due to its absence in US on last generation.

4.2 Minimum wage and employment in Brazil

The minimum wage research tends to be different for developed and developing countries for many reasons. Developing countries have very informal sectors in which labor laws are not enforced; a higher ratio of adults who earn low wages and thus are affected by the minimum wage; incomplete social safety nets to balance the negative effects of the minimum wage; and a frequent practice of linking the minimum wage to government expenditures. Therefore, the minimum wage in developing countries has a higher impact on

¹⁷ The author alerts to the methodological caution needed with the meta-analysis study. Due to the effort to make the studies comparable, many of the observations are discarded.

household welfare and public finance than in the U.S. and Europe (Cunningham, 2007 and Neumark and Wascher, 2010).

In Brazil, there are few studies about minimum wage and its impacts if compared with United States. The research on minimum wage seeks to measure its impact on wages, income inequality and poverty; hence the studies about the minimum wage effect on employment are less common (Bondezan and Scorzafave, 2010). In this section, the main published studies are presented in order to assess the state of employment effects of minimum wage in Brazil.

The first empirical studies were published in the 1990s, analyzing the employment in the 1980s. Foguel (1998) explores the process of unification of the minimum wage in Brazil in the 80`s and compare the effects of a higher increase on minimum wage in some metropolitan areas in the Northeast region than in South and Southeast regions. The authors argue that the minimum wage unification was a kind of natural experiment, allowing applying the difference-in-difference method. The study shows that a 10% increase in the minimum wage was responsible for a 1% reduction on the labor force participation, decomposed on a 1.3% reduction on occupation rate and a 0.3% increase in the no-occupied proportion. The drop in the occupation rate was relatively uniform among the formal and informal sectors, with an unexpected increase in the formality rate of 1%. Foguel finds similar results when analyzing the short-run behavior of the employment.

Fajnzylber (2001) uses longitudinal panel data from Monthly Employment Research - PME over the 1982-1997 period. The study estimates the counterfactual wage and employment distribution to calculate the effect of the minimum wage for formal, informal and self-employed workers. They estimate negative elasticities for low-payment workers, around -0.1 for formal workers, and between -0.25 and -0.35 for informal and self-employed. The adverse effect seems to be more intense for men, adults and head of households, with potential negative effects over poverty.

Carneiro and Courseuil (2002) assess the impact of the minimum wage on Brazil`s labor market using times series data for 1982-1999 and longitudinal information for 1995-99. In the long-run assessment, they find a negative, but very low, impact on formal

employment (elasticity ranged from -0.001 to -0.024) and a low positive impact on informal employment (from 0.0004 to 0.003). In the analysis with longitudinal data, using with the differences in differences approach¹⁸, the evidence in the short-run showed similar patterns.

Lemos (2006) used a two sectors (formal and informal) model to evaluate the minimum wage effects in Brazil in a time series and longitudinal data study, controlling the regression by demand and supply shocks variables. The author uses the Monthly Employment Research for the period 1982-2000. The main conclusion is that “the minimum wage has no adverse effect on employment, despite the sizeable wage effects in both formal and informal sectors”, in contrast with the predictions of the two sector model. The author suggests that “the economics of the minimum wage in developing countries might be very different from that of developed countries” and that more research is needed.

Neumark et al (2005), use the Monthly Employment Research (1996-2001) in order to assess the impact of the minimum wage on the income distribution, finding an overall negative and small effect on employment with an elasticity of -0.07. However, they suggest that the disemployment effect is concentrated among lower-wage workers and household head of lower-income families.

Lucas (2006) studies the impact of the minimum wage on employment based on the differences of the minimum wage in two states in Brazil (treatment group). She uses the differences in difference methodology based on the Monthly Employment Research for the period 2000-2005. Four others states – where the minimum wage was equal to the national level – were used as control group. Her studies shows that the minimum wage had not significant effect on employment, except for Rio de Janeiro in 2002 and 2004. An unexpected result was the increase of employment for young people between the ages of 15 and 17. A possible explanation for the absence of effects of the state minimum wage in Brazil is the lack of enforcement of the state law in labor legislation (Moura and Neri, 2008).

Ulyssea and Foguel (2006) conduct a brief overview of the minimum wage literature

¹⁸ The control group was set by those who earns from 1.5 to 2 minimum wages in the month before and after the minimum wage increase.

in Brazil that uses econometric approach with some kind of control group.¹⁹ The overall result of the researchers is that the minimum wage seems to have a reduced and negative effect over the employment (elasticity between -0.09 and -0.16). The negative impact is more intense on the informal sector (elasticity between -0.25 and -0.35), but it still remains low. Despite some divergence among the studies, the authors conclude that the minimum wage also has some negative (and reduced) impact on the informality. Although there was no consensus among the studies, the author argues that a higher minimum wage would raise the probability of a worker to transit from the formal sector to the informal sector and from this one to inactivity.

On the other hand, Moura and Neri (2005) present evidence that the minimum wage doubles the probability of a worker transit to the informal sector, from 4.4% to 8.8% during the month of adjustment. In the same way, the minimum wage also raises the probability of a formal worker becoming unoccupied from 4.1% to 6.3%.

As this work does, Bondezan and Scorzafave (2010) make an overview of the empirical research about the minimum wage and employment in Brazil. The conclusion is that a great part of the studies show an adverse, but limited, relationship between minimum wage and employment.

Although the current minimum wage policy will be finished in 2015 and a new rule will be discussed to 2016-2019, few academic discussions happened in the last years. The most recent effort to academically discuss the issue was a workshop “Minimum wage policy to 2016-2019: social and economic impact assessment” promoted by the Brazilian Institute of Economics – IBRE from Getúlio Vargas Foundation - FGV.²⁰

The work presented by Carlos Henrique Courseuil (2014) at the workshop try to explain why the minimum wage increases had no negative impact on employment on the past years. Using its methodology (Carneiro and Courseuil, 2002) to recent data, he finds no

¹⁹ They analyses four studies that investigate the impact of the minimum wage. The period of analysis vary from the 80`s to the 90`s. The studies use the Monthly Employment Research – PME from IBGE, which is a household survey panel.

²⁰ The workshop was organized in four different aspects regarding to the minimum wage: labor market, income distribution, public finance, inflation and macroeconomics. The audios and presentations are available on [link](#).

negative elasticity of employment regarding a higher minimum wage and the probability of a worker transit from the formal sector to the informal sector is not higher for those who earn a minimum wage than for those who earn high-wages. He suggests two hypotheses to conciliate the minimum wage theory (competitive model) and the facts in Brazil. At first, the minimum wage would boost the aggregate demand and the positive impact over the labor demand would be bigger than the negative effect of the firm's layoffs. The social security and the social assistance benefits (more than 20 million people), linked to the minimum wage, is the main mechanism to boost the aggregate demand. Another possibility is a process of change in the composition of the labor force. As presented in the chapter 2, the less educated workers are losing participation among the occupied workers that earn a minimum wage. A higher minimum wage could collaborate expel the most vulnerable workers from the labor market. The author points out, however, that more research is necessary to verify the validity of these hypotheses.

Fernando de Holanda Barbosa Filho (2014) estimates, from aggregate data, a negative, but small estimative of elasticity of employment regarding the minimum wage (closed to -0.2) with panel data for the period 1995-2009. The author, in line with other studies, finds that the impact does not always exist but when it is, its effects overall over employment are small. The author suggests a hypothesis that the higher minimum wage can affect negatively more some less skilled workers, such as those between 15 and 19 years of age that are not studying.

More recently, Foguel, Ulysea and Courseuil (2014) report results of the minimum wage impact on employment from 2003 to 2013 with data from the Monthly Employment Research - PME. They use the method differences in differences and take as control group the workers that earned between 1.5 and 2.5 minimum wages in the month following the increase in the wage floor. The group affected by the minimum wage had more chances to transit to unemployment in the next month after the floor increases, but this differences had not remained ten and eleven months latter. However, the adverse impacts toward the transition to informality and to inactivity were higher in the short and mid-run. They present evidence that, on average, 4% of the formal workers that receive a minimum wage move to the informal and the impact over the transit out of the activity would be even greater, reaching 6% in 2012 and 8% in 2013. These are extremely high adverse effects comparing to

previous studies and suggest elasticities greater than -1.0. When decomposing the results by age, the expel effect occurs over those workers in the formal and informal market, adults and young people and with 4 to 8 and 9 to 11 years of schooling.²¹

Jales (2014) adopts a two-sector (covered and uncovered) competitive model and uses cross-sectional data from 2001 to 2009 from the national yearly household survey to identify the behavior of a range of variables that would prevail in absence of minimum wage.²² Comparing this result with the actual outcomes after the minimum wage increases; he measured the impact of the minimum wage on the labor market. Its results are quite different of the other studies because the focus is not the marginal changes in the wage floor, but the existence of the minimum wage. It could be interpreted as the sum of all the marginal effects over the years. With the minimum wage, the formal sector is 11% smaller than it would be in its absence. Also, from the formal sector, the mobility toward unemployment would be higher than the mobility to the informal sector.

He finds that there is limited mobility between formal and informal sector, resulting in a higher unemployment effect. From those workers who lost their jobs at the formal market, only 10% actually migrate to informal jobs. The main effect of the minimum wage would be the worker migration from the formal sector to the minimum wage, reducing the formal sector in 11%.

The studies can be summarized as follows:

Study	Method	Data	Effects	
			Employment (elasticities)	Formality
Foguel (1998)	Analyze the unification of the minimum wage with difference in differences approach	PME 1980's	Negative -0.13	Positive
Fajnzylber (2001)	Estimate counterfactual wage distribution to assess employment effect on formal and informal sector	PME 1982-1997	Negative -0.1 (formal sector) to -0.25 and -0.35 (informal sector)	-

²¹ The adverse effects appears not harm the workers from 0 to 4 years of schooling. This was an unexpected result, since the literature indicates that those less productive workers would be more affected by an increase in the minimum wage.

²² The variables explored were: unemployment.; average wages; wage inequality; sector mobility; size of the informal sector; and labor tax revenues.

Carneiro and Courseuil (2002)	Long run analysis with time series and short run, with longitudinal information	PNAD 1982-99 PME 1995-99	Negative -0.001 to -0.024	Positive
Neumark et al (2005)	Analyze longitudinal data, assessing employment, wage and income effects comparing low-wage and high-wage metropolitan areas	PME 1996-2001	Negative -0.07	-
Moura and Neri (2005)	Asses the impact of state minimum wages	PME 2000-2001	Negative Raises the chances of formal workers become unoccupied from 4.1 to 6.3%	Negative Double the chances of formal workers transit to informal jobs from 4.4 to 8.8%
Lemos (2006)	Longitudinal time series analysis on formal and informal sector	PME 1982-2000	None	-
Lucas (2006)	Analyze employment effect of state minimum wage, with difference in differences approach	PME 2000-2005	None	-
Courseuil (2014)	Update Carneiro and Courseuil (2002)	PME 2007, 2008, 2013 and 2014	None.	None.
Barbosa Filho (2014)	Use dynamic panel data, estimate employment effects regarding the ratio minimum over average wages	Unknown source Aggregate Data 1995-2009	Negative -0.2 (preliminary)	-
Foguel, Ulyseia and Courseuil (2014)	Use the method differences in differences, using workers that earn 1.5 -2.5 minimum wages	PME 2003-2013	Negative in the short run and none after 10 and 11 months	Negative Elasticities higher than -1.0
Jales (2014)	Adopt a two-sector (covered and uncovered) competitive model and identify the behavior of a range of variables in absence of minimum wage	PNAD 2001-2009	Negative	Negative Formal sector is 11% due to the minimum wage

Source: Elaborated by author

4.3 Minimum Wage, Wages and Income Distribution

The effects of the minimum wage on employment reflect just one face of its complex interaction in the economy. The capacity of the minimum wage to improve economic conditions of those at the bottom of the income distribution is, in last instance, the main criteria to assess if the minimum wage is a useful policy tool (Neumark and Wascher, 2010).

The studies that seek to understand the minimum wage impacts on wages usually focus on three different groups of workers: those who earn a wage between the previous and the new minimum wage, or directly affected; the bound workers, those who earn less

than the floor; and those who earn more than a minimum wage (Belman and Wolfson, 2014). The sum of the wage changes in these three groups is the overall impact on wages.

The result on wages distribution and average wages depends on the employment effects. The competitive two-sector model indicates an increase in the wages of those directly affected, when considers only those who would remain in the formal market. The study also predicts an increase for those workers with higher wages (spillover effect), as far as the higher skilled workers could substitute the first group and the demand for them would rise.²³ Finally, the formal workers would tend to migrate to informal market and the greater labor supply would reduce the wages in this sector.

The final balance of the wage distribution depends on many variables, such as the loss of employment due to the minimum wage, the degree of substitution among high skilled and low skilled workers, the mobility from the formal to the informal sector, and how the wages would respond to these changes on labor demand and supply on each sector.²⁴

The literature also relates other indirect effects. The minimum wage could raise the wages (spillover effects) for both bound workers and high skilled workers, independent of changes in labor supply and demand in these sectors. The explanation comes from institutionalism and behavior trend of economics, according to them workers form their explanation of wages through comparison with other workers (Belman and Wolfson, 2014). So, the minimum wage would be a signal in the labor market. High skilled workers would tend to target and bargain to keep their gap from the low skilled workers. The bound workers in the informal market also can use the minimum wage as measurement unit to target their wages, trying not to let the gap from the minimum wage grow.

Again, to explain these movements is not an easy task for researchers. However, the empirical research demonstrates relative consensus about effects on wage distribution. The minimum wage compresses the wage distribution, reducing its inequality (Brown, 1999;

²³ A more accurate interpretation of the competitive model could indicate an ambiguous effect on the minimum wage. The negative scale effect of a higher minimum wage would impose a lower quantity of all the factors of production and consequently lower skilled labor, reducing its wage. However, in order to simplify the explanation, the example explores only the substitution effect of a higher minimum wage.

²⁴ For example, depending on the task, high skilled workers would not substitute low skilled workers high a significant difference in productivity. Considering a continuous distribution of skills among workers, only those with skills close the minimum wage workers' would substitute them, and consequently have higher wages.

Lemos, 2006; Foguel, 2006). If there is a good level of enforcement and compliance, this is a direct and a logical consequence. The minimum wage thin out the lower tail of the wage distribution and to creates a spike at the minimum.

More, to explain the impact of the minimum wage on income distribution is a much more difficult task. The main cause it that income distribution and poverty are household phenomena, and minimum wage affects individuals. The income distribution also is related to net effects on employment and changes on wage distribution and how it affects the most vulnerable families.

Despite the fact that the redistribution effect of minimum wage be appointed as the main goal of this policy, the American empirical literature normally focuses on its effects on employments. A priori, there is not a theoretical prediction about the distributional effects of the minimum wage. If there is no employment effect, the low-income workers would benefit and, as far as they belong to low-income families, there would a redistributive effect toward the poorer families. However, assuming adverse effects on employment, especially less productive or vulnerable workers, if they compose the poorer families, the minimum wage net effect on well-being can, or cannot, be negative.

This part of the paper will try to assess the output of the minimum wage regarding the wage and income distribution from the empirical literature about the U.S. and Brazil.

4.4 Minimum wage, wages and income distribution in The United States

The Belman and Wolfson's survey (2014) reviewed 41 studies regarding the minimum wage and its relationship with average wages, its spillover effects and how it affects bound workers.²⁵ The preponderant evidence (37 from 41 studies) are that the minimum wage has some positive outcomes over the wages. The average wage responds positively with a minimum wage increase. There are spillover effects, so "higher minimum wages raises the wages of both bound workers and workers who had previously been earning above, but close, to the new minimum". Even when minimum wage tends to cause job losses, the conclusion is that large majorities of bound workers benefitted from a higher

²⁵ Due to relatively scarcity of studies in the US, the authors complement the survey with studies about UK and others developed countries. From the total of 41 studies, 26 are studies about US, 13 from UK and 2 others from Switzerland and Portugal.

minimum wage.

Also, minimum wage increases have relatively greater impact on women than on men. Another fact is that the spike in the wage distribution in the U.S. is not at the minimum wage value, but at somewhat above the minimum wage. The main hypothesis to explain this phenomenon is that the minimum wage has declined in the last 50 years, transforming the minimum wage into a benchmark rather than a true floor (Belman and Wolsfon, 2014).

In turn, the survey conducted by Neumark and Wascher (2010) comes to similar conclusions. For industrialized countries, minimum wage creates a spike in the distribution, and it boosts wages for workers who previously earned somewhat more than the minimum wage. They estimate that spillover effects extend to wages about 20% above the minimum, with elasticities around 0.4 near the floor and 0.2 above it, but these spillovers tend to dissipate over time in subsequent years. The behavior for developing countries would be a bit different. The spike in the wage distribution exists not only for the formal, but also for the informal labor market. Moreover, the spillovers extend more widely over the wage distribution.

Two main empirical studies are appointed as references to understand the minimum wage impact on wage inequality. In the context of the falling minimum wage in the 1980s, Dinardo, Fortin, and Lemieux (1996, apud Neumark and Wascher, 2010) use non-parametric density estimation of wage distribution to decompose change in wage inequality associated with changes in the minimum wage and other factors. The idea is to construct counterfactual, latent wage densities that capture how the distribution of wage would evolve in the absence of a change in the minimum wage. They assume, however, no spillover and no employment effects, which tend to maximize the main conclusion of the work: the fall in the minimum wage contributed to raise the wage inequality.²⁶

Lee, 1999 (apud Neumark and Wascher, 2010) also studies the wage inequality in the 1980s, exploring the “natural experiment” coming out of the two increases in the

²⁶ This results are in line with studies about the reduction of the minimum wage in Britain during the 80's. It had contributed to widening wage distribution (Bell and Wight, 1996 apud Carneiro and Courseuil, 2002) and the abolition of the Wage Boards and Councils resulted in wage falls in new jobs and employment gains (Machin and Manning, 1996 apud Carneiro and Courseuil, 2002).

minimum wage at the 1989-1991 period. Considering the different state minimum wages, the increase in the national minimum wage functions as different increases in each state. The different increases allow understanding of the impacts over the wage distribution in each state. They concluded that the minimum wage had an important role to reduce wage inequality.

Thus, the minimum wage fall is indicated as the main reason for the wage inequality increase during the 1980s. Nevertheless, the wage inequality analysis is incomplete in order to understand the impact of the minimum wage in well being. Neumark and Wascher (2010) evince that the total labor income, including employment effects, of workers initially paid at and just above the minimum wage declines as a result of minimum wage increases in the U.S..

As presented, this information, also, is not enough to make a conclusion about the effect of the minimum wage on well being. The impact of the minimum wage on employment and wages are two important pieces to address this problem and must be put together in another perspective: the distribution of the families' income.

In the U.S.' experience, Neumark and Wascher (2010) demonstrate the absence of empirical evidence indicating that minimum wages have beneficial distributional effects. The minimum wage increase generates a redistribution effect of income among low-income families. Some would gain as a result of higher wages, whereas others would lose due to diminished employment opportunities or reduced hours. On net, poor or low-income families could even be worse off. The authors note that this result depends on many factors, and hence this conclusion cannot be generalized for other countries. Even in the U.S., the distributional effects could be affected by changes in the policy environment.²⁷

In a similar way, Belman and Wolfson (2014) suggest that minimum wage may not have much effect on poverty in the U.S.. In part, that is because the people in poverty are less likely to be working or to be without any contact with minimum wage increases.²⁸

²⁷ Such as magnitudes of gains and losses of different types of workers, the location of these workers in the family income distribution, the response of other family members and government policies.

²⁸ Although the minimum wage is a good policy tool to address low income needs, it does not offset other

Considering the difficulty in assessing the impact of the minimum wage in the past, to forecast about outcomes of an increase in minimum wage is a much more difficult challenge. In this sense, even under an uncertainty, the Congressional Budget Office - CBO has made an exercise simulating the impact of the Executive branch proposal to increase the federal minimum wage in the United States. The study assesses the outcomes of raising the minimum wage from US\$ 7.25 to US\$ 9.00 and to US\$ 10.10, alternatively. The number of workers affected, job losses and net income increases can be summarized in the table XX.

Table X: Estimated effects on employment, income and poverty of an increase in the federal minimum wage in the second half of 2016

US Minimum wage proposals	US\$ 9.0 option	US\$ 10.10 option
Change in employment Likely range (probably of 2/3)	-100.000 workers -200.000 workers	-500.000 workers -1.0 million workers
Number of workers with hourly wages less than the proposed minimum whose earnings would increase in an average week	7.6 million	16.5 million
Change in Real Family Income (2013 US\$)		
Families whose income is below the poverty threshold	\$1 billion	\$5 billion
Families whose income is between one and three times the poverty threshold	\$3 billion	\$12 billion
Families whose income is between three and six times the poverty threshold	\$1 billion	\$2 billion
Families whose income is six times the poverty threshold or more	-\$4 billion	-\$17 billion
Change in the number of people below the poverty threshold	-300.000	-900.000

Source: Congressional Budget Office

In contrast to other studies, the CBO's estimate predicts a positive impact over poverty and income distribution. However, the error margin is high and the range of adverse impact on employment can change the estimate. As the minimum wage interacts with many variables and prices in the economy, it is impossible to assess exactly. However, this kind of simulation must be encouraged when discussing a policy change (ex-ante evaluation), and then confronted with the reality after the policy (ex-post evaluation).

4.5 Minimum wage, wages and income distribution in Brazil

As for the U.S., the spike on wage distributions regarding the minimum wage is documented for Brazil and other Latin America countries. Lemos (2006) also finds that

income and assistance policies such as EITC – Earned Income Tax Credit – and Food Stamps in The United States.

minimum wage strongly compresses the wage distribution in both formal and informal sectors without affecting employment. This compression is stronger for low educated workers, who could face more adverse employment impacts. The study highlights that compression on wages combined with null or small effects on employment can be an effective policy tool against poverty and inequality. However, minimum wage policy must be complemented with other policies with focus on the 10% poorest, as far as the minimum wage does not reach those at the bottom of the wage distribution in the informal sector.

In the same way, spillover effects can be observed in Brazil in both formal and informal sector (Lemos, 2006). Neumark et al (2005) find that minimum wage pushes up wages at the bottom of wage distribution, with no impact on wages of higher-wage workers. The spillover is higher, the closer the wages are to minimum wage along the wage distribution. Carneiro and Courseuil (2002) find spillover effect up to wages of two times minimum wage.

Saboia (2010) estimates the elasticity of wages regarding the minimum wage for each tenth of the wage distribution in the period of 1995-2006. The workers with earnings close to the minimum wage, at the 3rd decile of the wage distribution, both in the formal and the informal sector were the most benefited with the minimum wage increase. The elasticity is close to one, in other words, a 10% increase in the minimum wage resulted in wages 10% higher to them, contributing to reduce the earnings inequality.

This effect of minimum wage over other wages in the economy, even over wages in the informal market, is due to a “signal effect.” The minimum wage is a kind of unit of measurement and a mark to the bargain process in the labor market (Moura and Neri, 2005 and Barros, 2007). It works as a partial indexer for workers in the informal market and for those in the formal market with higher wages. As a result, minimum wage effects on wages “are not restricted to those earning around or below one minimum wage in the formal protected sector. Rather, significant minimum wage effects appear to be present across the whole wage distribution, and they seem to affect not only formal but also informal salaried, as well as self-employed workers.” (Fajnzylber, 2001)

The Saboia (2010) study also shows that there was not a fall in the share of

population earning a minimum wage (around 12-13% of the population), but there was a significant growth of those earning less than a minimum wage, from 14.9% to 22.4%.²⁹ It suggests that minimum wage has little impact in the wages of those in the first decile of the wage distribution. If the first decile of wage distribution does not coincide with the poorest on familiar income distribution, as Lemos (2006) points, the minimum wage is not enough and should be complemented by social assistance measures.

Saboia (2014) repeats the exercise for the period 2004-2009. The results are similar. The minimum wage had a positive impact on wages over all the deciles of the wage distribution; however, there is a redistributive impact. Those in the range of 3rd to 8th deciles are winning participation on the total amount of wages in the economy. The minimum wage was responsible for 75% of the reduction in GINI of the work earnings in the period. Saboia alerts, nevertheless, that the potential of an increase in minimum wage to reduce inequality tends to decrease as far as those who earn a minimum wage transition to higher levels of earnings.

Firpo and Reis (2007) analyze the impact of minimum wage in the labor income inequality reduction during 2001-2005 period using data of the National Household Research - PNAD. They calculate a counterfactual labor distribution without the minimum wage in the period and find that minimum wage was responsible for 36% of the reduction in the labor income GINI index.

In the same way, Komatsu (2013) calculates counterfactual densities of the wages distribution. Also, the author decomposes the effect of formality, personal characteristics, labor demand and supply beyond the minimum wage. He confirms the minimum wage compression effect over the wages distribution. Also, the increase in formality rate in the period was an important factor to reduce wage inequality during the period 2002-2011.

Jales (2014) shows that in total absence of a minimum wage, 34% of the workers would receive wages below the floor. Minimum wage also reduces the standard deviation of wage in 20% and the GINI index for wages in 1%. However, there is a trade-off when considering the adverse effect on employment and informality. The accounts demonstrate a

²⁹ This result is in line the data present in the section 2.

net result with a loss in 10% of the wages mass, with a corresponding loss in labor tax revenues. The study suggests that the sizable unemployment effects and the reduction in the formal sector size would more than compensate for the increase in expected wages, and minimum wage is not a good policy.

When analyzing the impact of the minimum wage on poverty, Moura and Neri (2005) separate the effect of the labor income and the pensions and benefits effects. They found that there is a positive impact of minimum wage on poverty. But 73% of the poverty reduction regarding to a higher minimum wage is due to pensions and benefits. Two thirds of the labor income effect on poverty is from the wage increases of those in the informal market. Neri (2006) also suggested that the minimum wage had reached its maximum effect over poverty, considering only the labor income.

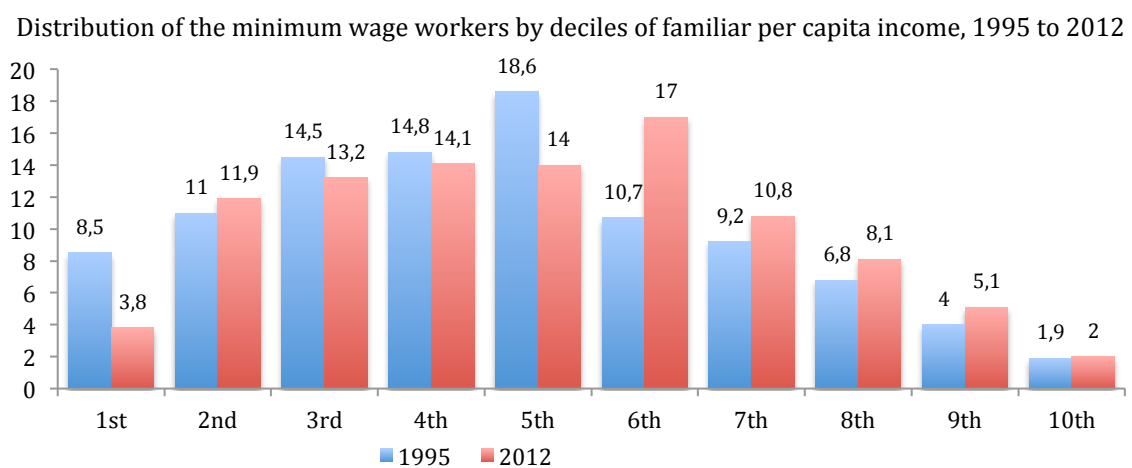
In fact, minimum wage had an important role to explain the falling on income inequality during the last decade. The wage floor was responsible to reduce the GINI index in 21% from 1995 to 2009. This is really considerable as less than 20% of workers earn a minimum wage, and it represents around 5% of the total labor income. The compression effect of the minimum wage was stronger than the disemployment effect of the minimum wage. The transfers were important as well, responding for one third of the income GINI reduction, especially because of the Bolsa Família Program, but in part for others transfers linked to the minimum wage (Soares, 2011).

Marginal increases in the minimum wage contributes positively against poverty, however Barros (2007) argues that minimum wage might not be the most efficient policy to face poverty in Brazil. Using data of the National Household Research - PNAD in 2005, he evaluates the efficiency of the minimum wage in contrast to the Bolsa Família, a national conditional cash transfer program. Considering the minimum wage as a tax, it is 2.4 times less effective to raise the income of the 40% poorest, and 5 times less considering the 20% poorest.³⁰ The minimum wage would be more efficient to improve the income of those

³⁰ Barros argues that minimum wage is compulsory and has a distributive effect, what would make it similar to a tax. However, the firms have the alternative to layoff when facing a higher minimum wage. Maybe the author should not the minimum wage increase as a tax, and probably the general conclusion would similar, but with much smaller intensity. Even considering the minimum wage as a tax, maybe the difference between the competitive clearance wage and the minimum wage would be a better measure.

between the 4th and 8th deciles of the income distribution. It happens because only 15% of the workers with wages close to the minimum wage belong to extremely poor families and 40% to poor families.³¹

So, the minimum wage is a policy that reduces inequality and poverty, but it is not the most efficient compared to conditional cash transfers. The relative importance of the minimum wage in the tasking of reduce poverty is decreasing over the years. As the minimum wage increase, more distant it becomes from the poorest and the number of poor (and extremely poor) households with an individual with the earnings linked to the minimum reduces (Afonso et al. 2011).³²



As the chart demonstrates, from 1995 to 2012 minimum wage workers have moved from the bottom of the wage distribution toward the center. Only 3.8% of the workers who earn a minimum were among the 10% poorest families in 2012, in contrast with 8.5% in 1995. With the exception of the 2nd decile, minimum wage workers have lost participation among the lowest deciles of wage distribution, and so minimum wage has become more far from the poorest and a middle-class policy.

The table bellow offers an overview of the main findings of this section:

³¹ The author considers a poor family the one who is up to the 4th decile of income distribution, and extremely poor those are up to the 2nd decile.

³² Considering the strong increase of the minimum wage in 2006 and 2007, the proportion of poor households with an individual earning a minimum wage fell from 14.2% in 2005 to 6.7% in 2007. The same proportion of extremely poor households fell from 7.6% to 3.8%. In the same way, the proportion of households with an individual earning a minimum wage in the first decil reduced from 16.1% to 11.3%, and among the extremely poor household the proportion was 1.0% in 2007 (Afonso et al, 2011).

Study	Summary	Data	Effects		
			Wage Equality	Familiar Income Equality	Poverty
Fajnzylber (2001)	Estimate counterfactual wage distribution to assess employment effect on formal and informal sector	PME 1982-1997	-	-	Negative effects on employment are more likely on vulnerable workers
Carneiro and Courseuil (2002)	Long run analysis with time series and short run, with longitudinal information	PNAD 1982-99 PME 1995-99	Positive Spillover effect up to wages of two times minimum wage	-	-
Neumark et al (2005)	Analyze longitudinal data, assessing employment, wage and income effects comparing low-wage and high-wage metropolitan areas	PME 1996-2001	Positive Push up the wages at the bottom, with no impact on the higher-wage workers.	None.	Negative effects on employment are more likely on vulnerable workers
Moura and Neri, 2005	Asses the impact of state minimum wages	PME 2000-2001	Positive Report the existence of "signal effect"	-	Small Decreasing. 73% of the poverty reduction regarding to a higher minimum wage is due to pensions and benefits. 2/3 of the labor income effect on poverty due to increase on informal wages
Lemos (2006)	Longitudinal time series analysis on formal and informal sector	PME 1982-2000	Positive Strong compression on formal and informal sector	-	Small Small impact in the wages of those in the first decil of familiar income
Firpo and Reis (2007)	Estimate counterfactual labor distribution without the minimum wage in order to asses impact in the labor income inequality	PNAD 2001-2005	Positive Responsible for 36% of the labor income GINI index	-	-
Saboia (2010)	Estimates the elasticity of wages regarding the minimum wage for each tenth the wage distribution	PNAD 1995-2006	Positive Compression effect close to the 3 rd decil of wage distribution	-	Small Small impact in the wages of those in the first decil of familiar income
Soares (2011)	Analyzes the causes of the income inequality reduction	PNAD 1995-2009	-	Positive Responsible to reduce the GINI index in 21%	-
Komatsu (2013)	Calculates counterfactual densities of the wages distribution and decomposes the effect of formality, personal characteristics, labor demand and supply beyond the minimum wage	PNAD 2002-2011	Positive	-	-

Saboia (2014)	Estimates the elasticity of wages regarding the minimum wage for each tenth the wage distribution	PNAD 1995- 2009	Positive Responsible for 75% of the reduction in GINI	Positive Decreasing potential to reduce inequality	Small Small impact in the wages of those in the first decil of familiar income
Jales (2014)	Adopt a two-sector (covered and uncovered) competitive model and identifies the behavior of a range of variables in absence of minimum wage	PNAD 2001- 2009	Positive Reduces wage inequality up to 20% the standard deviation of log- wages	-	-

Elaborated by the author

5. The new minimum wage policy: points to debate

Considering the discussion about the minimum wage in Brazil, its recent trajectory of increase, the theoretical models and empirical studies, what do we know that supports the debate about the minimum wage policy for the following years?

First of all, the interaction of minimum wage in the economy is complex and affects many different prices. Minimum wage affects the firm's decision to hire new employees or dismiss the current ones, to invest on capital to offset the more expensive workers, or simply the decision to reduce other costs and require more from the workers. Also, minimum wage can raise the prices of final products, causing inflation. In turn, based on the value of the minimum wage, unoccupied workers can decide to look for a job, or the informal worker can bargain for a pay raise. All these potential interactions depend on the labor market institutional environment and the economic context. In this sense, a policy adopted in the U.S. will not have the same result in Brazil, and maintaining the same policy in Brazil could generate different results in the following years.

The different theoretical models do not predict that higher minimum wage would always lead to less employment, unemployment or more informality in all instances. However, the models predict that a very high minimum wage, above the clearance wage, would have adverse employment effects. Also, a very low minimum wage has no effect at all. Considering that the market equilibrium wage varies with the sector and region, the minimum wage effect is not uniform, and it is not easy to define the optimum value.

The empirical research has made important progress during the last two decades, even though it has not solved the controversy. Even two recent comprehensive surveys about the empirical literature conclude in opposite directions. Neumark and Wascher (2010) highlight the preponderance of most convincing evidence, which points towards negative effects of minimum wage on employments, unambiguous reduction on wage inequalities in the U.S., but the absence of beneficial effects on poverty and income inequality. For them, minimum wage is not a viable policy tool to improve life conditions of those at the bottom. On the other side, Belman and Wolfson (2014) conclude little evidence of negative labor market effects with reduction on admissions and dismissals after minimum wage increases. According to them, there is a certain consensus regarding positive effects on reducing wage inequality and low impact on poverty in the U.S.. For them, the minimum wage would be a valid policy to improve wages of those in bottom of the wage distribution.

The evidence for Brazil regarding the effects of minimum wage is mostly negative, with at least 7 to 11 studies indicating reduction on employment. However, most of the studies indicate low magnitudes of the employment effects. A 10% increase in the minimum wage might cause something around 1% or 2% less employment. Despite the low intensity, the effect can be concentrated in the less productive worker, probably in the most vulnerable to poverty. Other studies indicate null effect on employment, and none of them conclude for positive effects. Among the studies, the conclusions about the effect on formality are different. From 6 studies that assess this issue, 3 indicate negative impact, 2 conclude for positive impact and 1 for null impact. The most recent studies indicate negative impact, what might suggest some concern about this adverse effect.

Considering the effects on wages, the result for Brazil is the same as the theoretical predictions and the empirical results in The United States: minimum wage strongly compresses the wage distribution. However, differently from The United States, the spillover effect of the minimum wage is much more expressive in Brazil. Both the workers who earn more than a minimum wage and those at informal sector experience gain on wages after the minimum wage rise. It happens because the minimum wage is a benchmark, or signal, for the agents in the labor market.

On the other hand, this compression on the wage distribution is not automatically transferred to more equality on the familiar household income. It would happen if the minimum wage workers were at the bottom of the income distribution and this is becoming less true for Brazil year-by-year. In this sense, the empirical studies demonstrate that minimum wage increase was important to reduce inequality in Brazil, but its potential is reducing to the extent that workers earning a minimum wage are moving in the direction of higher income decile.

Any attempt to boil down a large body of research into a few key conclusions will miss many of the complexities. Also, the studies are not comparable, because of data sources, differences in time period, techniques, and unit of measures, which lead to different focuses and findings. Many of the research in Brazil are based on PME, which covers only 6 metropolitan areas. Probably, reality in the whole country might not be the same.

So, considering all this, is the minimum wage high in Brazil? Does the current policy increase it a reasonable amount in order to improve the lives of low-wage workers and low-income families?

The minimum wage in Brazil is not as low as it was until 2003. Also, the minimum wage is definitely not as low as it is in The United States, where the minimum wage is about 27% of the average wage, and the spike of wage distribution is above the minimum wage. The minimum wage has a negative effect, although does not provide meaningful restriction in Brazil in terms of employment, which might mean that the increase in the minimum wage has been marginal and reasonable in the last two decades. Evidence in this direction is that since the policy was established in 2007, the ratio between minimum wage and average wage is relatively stable.

The minimum wage has had an important role in the recent process of inequality reduction. However, there are no guarantees that the same behavior should prevail in the following years. Actually, increasingly, the trade-off evolving higher minimum wage becomes harder to solve, once those more vulnerable tend proportionally be more harmed by its adverse effects. So this means that there is a price to be paid by those who are at the

margins of employment, such as those least educated people and those in the informal labor market, who will be more likely to lose their jobs.

By the way, as the theories predict, the minimum wage cannot grow more than productivity for many years without undesired effects in the end. In the last two decades, the minimum wage has grown faster than other measures of productivity. It might intensify adverse effects and probably the real impact of the current policy may take some years to complete.³³

So, minimum wage must be wisely coordinated with other policies, such as cash transfer programs, educational and training, innovation and technology policies, in order to balance eventual adverse effects on the poorest and promote gains on productivity, which would avoid or minimize these effects.³⁴

As presented, the current policy has advantages and there are good reasons to have a mid-term policy to adjust the minimum wage. The policy is simple, predictable, and avoids erratic big jumps or losses in its value. However, a way to refine the policy would be introduce a more precise measure of productivity (such as GDP per capita or GDP per worker) to link the real adjustment of minimum wage, instead of the GDP growth. It would guarantee that the minimum wage variation would be closer to the labor productivity changes.

Also, it is important to highlight that the minimum wage worker nowadays is not the same than in the past. The minimum wage worker is much more educated and so, more productive. This process tends to remain for a while, which could account favorable to keep the policy.

When finishing this article, the Executive Branch sent to Congress a Provisory Act, maintaining the current policy for the period 2016-2019.³⁵ The Act must be discussed in Congress, and the political environment indicates that the policy will be kept. The

³³ In The United States, employments can take until three years to complete (Neumark and Wascher, 2010). In Brazil, where there are more labor market regulation, the effect might take still more time.

³⁴ The second term of President Dilma Roussef has the slogan “Brasil, Educator Homeland”, which might indicate some concern and the adoption of policies in this direction.

³⁵ Provisory Act n. 672, from 24 of March of 2015.

maintenance of the current policy, probably, will not cause many constraints to the labor market, due to the low economic activity in 2014 and, apparently, in 2015. The GDP growth in 2014 was 0.1% and the market forecasts a recession this year, what means that the minimum wage might be stable in real terms for the following two years.

In this case, one important recommendation would be to set a board of specialists with the objective of monitoring and evaluating the effects of these policies, stimulating new studies and trying to reconcile and compare different research strategies.³⁶ This board, inspired by the Low Pay Commission experience in the United Kingdom, could offer important empirical elements to clear the effects of the minimum wage in Brazil and support the debate and the political decisions.

Although the advances, Brazil remains among the most unequal countries in the world. Despite the fast rhythm of reduction in the inequality in the last decade, the path toward a society with civilized level of inequality is still very long. The minimum wage was one policy tool in the last decade and now must be more strongly complemented in order to keep the observed pace of inequality reduction. If the minimum wage does not have the same potential to reduce inequality as in the past 20 years, at least the policy must be considered in order to prevent the inequality rise again.

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³⁶ The Law 12.282/2011, which establishes the current policy states also establishes the creation of a governmental commission coordinated by the Ministry of Labor and Employment. However, there is no information regarding to its the operation, eventual works and results. The Provisory Act n. 672/2015, has no legal provision about the commission, what could be a point under discussion on the Congress.

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