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**POVERTY AND INEQUALITY REDUCTION IN BRAZIL: THE  
ROLE OF CONDITIONAL CASH TRANSFER (BOLSA FAMÍLIA)  
IN THE BRAZIL WITHOUT EXTREME POVERTY PLAN (PLANO  
BRASIL SEM MISÉRIA)**

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## Abstract

In Brazil, near 16.2 million people were still living in extreme poverty by the year of 2010, as identified by the national census. The *Plano Brasil Sem Miséria* (Brazil Without Extreme Poverty Plan) was launched on 2011, with the ambitious goal to end extreme poverty by the end of 2014.

This study aims to assess the main results of the Plan concerning the use of Conditional Cash Transfers (CCT) in achieving the goal of extreme poverty alleviation and to identify possible improvements. A review of selected research works and official documents was conducted to address the design changes made in the main CCT of Brazil (*Bolsa Família*) in order to describe its main components and to identify its most important results on poverty and inequality reduction.

The main conclusion is that the improvements made in *Bolsa Família* resulted in practically eliminating extreme poverty and also had a noteworthy contribution to recent inequality reduction. There are opportunities for improvement in the program, especially with regard to educational policies associated with it and on the methods for selection of beneficiaries.

**Keywords:** Brazil, Plano Brasil Sem Miséria, Brazil Without Extreme Poverty Plan, Poverty, Inequality, Conditional Cash Transfer.

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## Table of Contents

1. Introduction: Poverty And Inequality in Brazil.....	5
2. Context of Recent Social Policies in Brazil.....	8
3. Conditional Cash Transfer Programs in the Fight Against Poverty: Bolsa Família and its Origins.....	11
4. The Brazil Without Extreme Poverty Plan ( <i>Plano Brasil Sem Miséria</i> ).....	14
5. Improvements on CCT Policy Within Brazil Without Extreme Poverty Plan and Main Results.....	16
6. Effects of Bolsa Família in Inequality Reduction .....	19
7. Importance of Education In Diminishing Poverty and Inequality - Effects of Bolsa Família.....	22
8. Possible Effects of <i>Bolsa Família</i> in Economic Growth.....	24
9. Discussion and Recommendations for Improving the CCT Policy in Brazil ..	27
10. Conclusions.....	29
11. References .....	30

## 1. Introduction: Poverty And Inequality in Brazil

Brazil is the largest country in Latin America and home to vast natural resources and a remarkable biodiversity. It was the world's eighth largest economy as of April 2015<sup>1</sup> and has been one of the fast advancing economies in the last decades, and acknowledged as one of the leading emerging countries on the global political and economic stage and also known by being part of the BRICS group (Brazil, Russia, India, China and South Africa)<sup>2</sup>, a group of countries believed in the early 2000s to have the potential to become new centers of regional economic power.

The country is an important global agricultural and industrial player and a middle-income country, according to the World Bank. Nonetheless, poverty is still widespread in Brazil and income inequality is very high, despite major improvements in recent history.

Among the main development achievements observed in the last decades was a significant reduction in the percentage of people living in extreme poverty, according to the international poverty line of U\$ 1,25 PPP (Purchase Power Parity) per capita per day, as shown in following graph, reproduced from a study made by the Brazilian Institute of Applied Economics (IPEA, 2013).

Even if other alternative measures of poverty are employed, such as multidimensional indicators of poverty, or even nutritional information, like calorie intake, the poverty and extreme poverty reduction was remarkable in last decades.

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<sup>1</sup> International Monetary Fund, World Economic Outlook Database, April 2015.

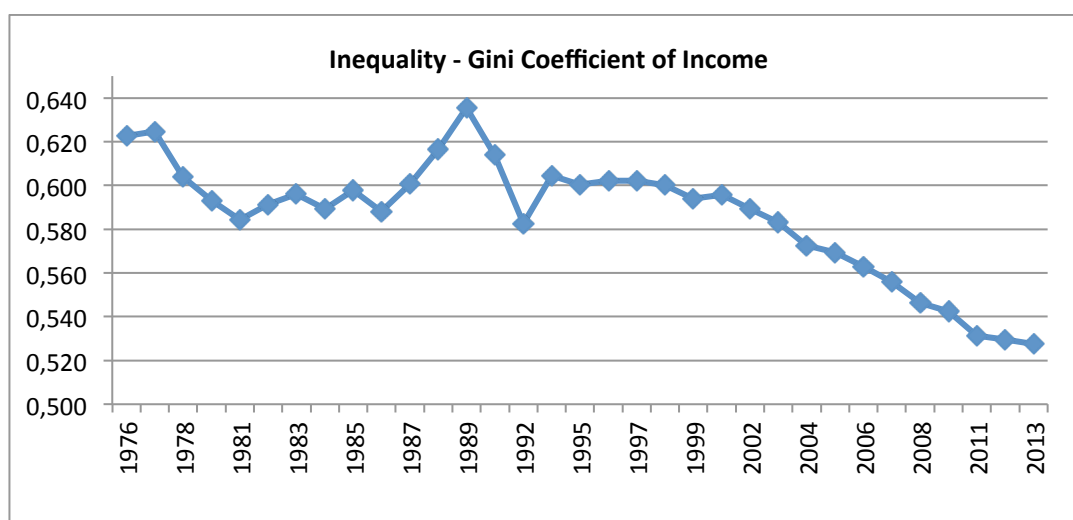
<sup>2</sup> The largely used acronym (originally "BRIC") was coined by the economist Jim O'Neill in a 2001 study entitled "Building Better Global Economic BRICs."

### Poverty variation since 1992 – U\$ 1,25 PPP



Source: IPEA, 2013

Regarding inequality, a remarkable decrease has been observed recently also, according to the income Gini coefficient<sup>3</sup>, which synthesizes the level of disparity in household income per capita between individuals, as depicted in the following graph.



Source: IPEADTA Database at <http://ipeadata.gov.br> (Author's elaboration. Series calculated from the responses to the National Survey by Household Sampling (PNAD / IBGE).

<sup>3</sup> Its value can theoretically vary from 0, when there is no inequality (the incomes of all individuals have the same value) to 1 when inequality is maximum (only one individual holds all the income).

Even though it is easy to perceive a major decrease in inequality in the last decade, is important to note that Brazilian inequality was still the 12th highest in the world<sup>4</sup> in 2013.

Despite this fact, the country was still able to accomplish in advance two of the United Nations Millennium Development Goals before the target date of 2015. The first was to reduce the level of incidence of extreme poverty in the population to half of that measured in 1990, which was achieved in 2008, the second, to reduce to half the proportion of hungry people, which was reached in 2006<sup>5</sup>. The next section aims to highlight the context in which social policy was able to contribute to the social development in the recent period.

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<sup>4</sup> IPEA, 2012, p. 3.

<sup>5</sup> <http://www.odmbrasil.gov.br/o-brasil-e-os-odm>

## 2. Context of Recent Social Policies in Brazil

The turning point in this reality of chronic high poverty rates and inequality took place, from the economic perspective, after the economic stabilization that took place in the nineties. The *Plano Real* (Real Plan) made it possible to cease the chronic high inflation rates in Brazil, a situation that had lasted for about three decades, even after several failed previous governmental initiatives.

Even before the achievement of better economic conditions, the political intent to fight poverty and inequality through government action was already in place when the Federal Constitution of 1988 was enacted. This represented a crucial change from a previous system that was focused on a contributive basis for the formal labor sector of the economy and shifted to a broad non-contributive coverage of the most socially vulnerable populations.

Thus the new constitutional framework paved the way for the creation of a set of new programs and institutional arrangements. This, combined with the stabilization and economic growth, contributed largely to alleviate poverty and inequality. This noteworthy expansion of social rights was the mark of the welfare model designed within Brazil's re-democratization period, which started in 1985, after twenty years of the government of a military dictatorial regime.

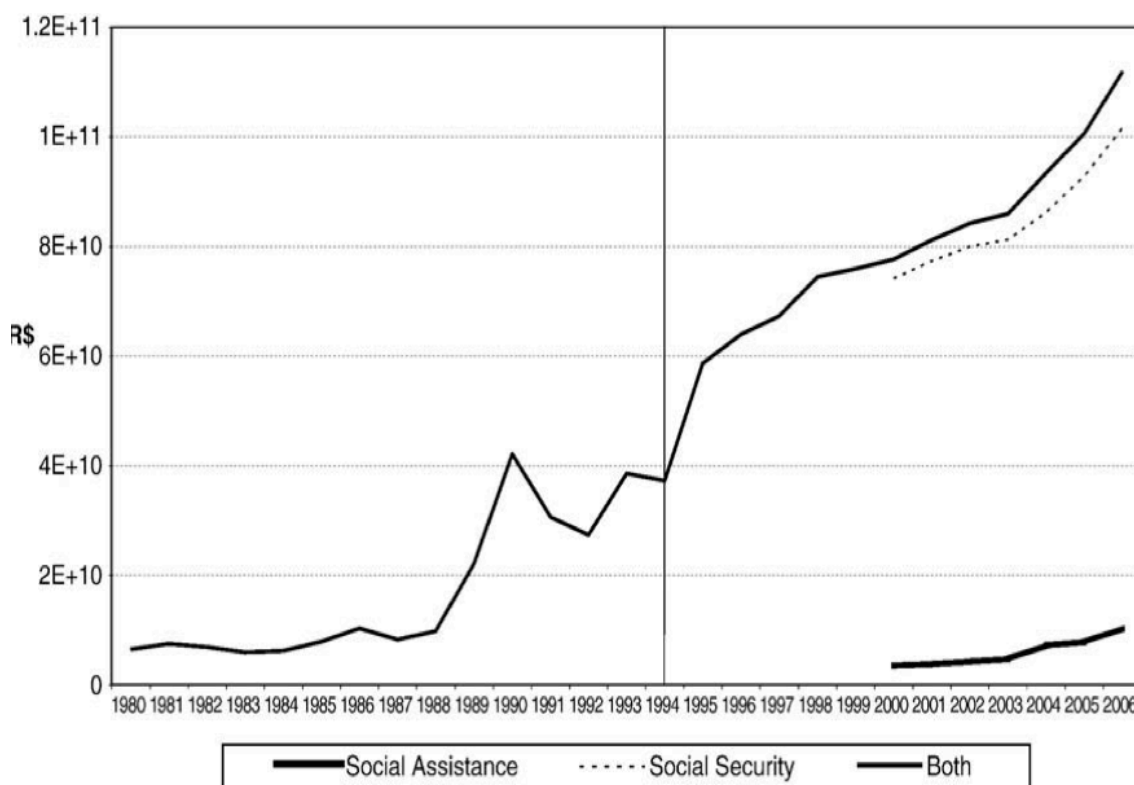
A comprehensive illustration of social security expenditure can be found in a study by Ferreira et. al (2009), showing the evolution of the federal social security and assistance spending since 1980<sup>6</sup>.

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<sup>6</sup> "Social Security" and "social assistance" comprises all expenditure of Federal government for the payment of individual pensions, insurance, social assistance and transfers to municipalities related to social programs, including *Bolsa Família* and the *Benefício de Prestação Continuada*. It is relevant to note that in Brazil the expression "Seguridade Social" usually includes also to expenditure in the Public Health System, which is not the case in this graph.



### Social Security/Assistance Expenditure in Brazil



Source: Ferreira et. al, 2009.

As the authors point out, the substantial expansion on social protection expenditure in late 1980s and early 1990s reflected the increase in coverage and benefit levels, as established by the new constitutional system. This included extended non-contributory pension rights to former agricultural workers and poor urban workers, and also a benefit for persons with disabilities, in its current version called *Benefício de Prestação Continuada* (BPC).

Despite the 1990s was a period marked by the containment of public expenditure due to the fiscal crisis in developed countries and its effects in emerging economies, the social spending continued to rise due to the fact that the benefits were tied to the official minimum wage, which real value rose after the economic stabilization provided by the *Plano Real*.

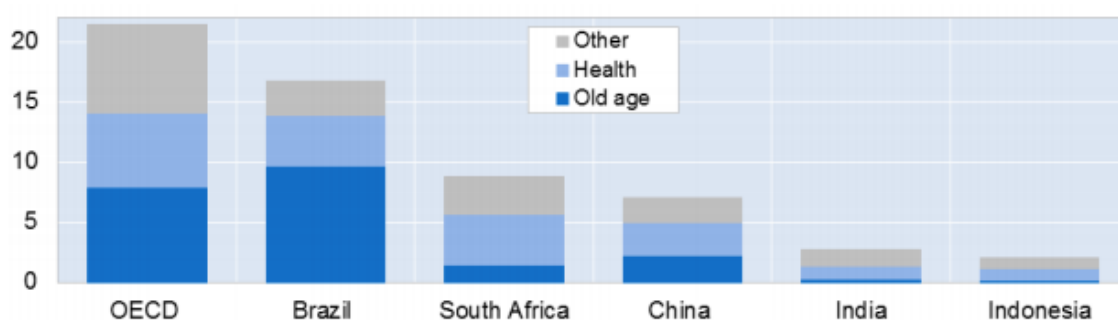
In the later half of the 1990s and beginning of the 2000s, the social spending continued to rise due to the implementation and growth of federal cash-transfer programs, like the *Bolsa-Escola* and *Bolsa-Alimentação* (conditional cash transfer related to education and health obligations) and then

*Bolsa Familia* since 2003, unified previous federal programs, which will be subject to more detailed analysis in the following sections.

Brazil's welfare system also grew in scope and resources due to the expansion of the universal public health care system and the educational system, which were also became subject of universal coverage within the realms of the Constitution of 1988.

Therefore, over the years, Brazil has achieved a standard of social spending that distanced from most emerging countries and approached a standard closed to the one from Organisation for Economic Co-operation and Development (OECD) countries, according to "Social Expenditure Update" from the Directorate for Employment, Labor and Social Affairs of the OECD.

**Public social expenditure as a percent of GDP in 2012 or last year available**



Source: OECD Social Expenditure database (SOCX), November 2014

Naturally, the mere presence of high levels of social expenditures as a percentage of the national product is not capable by itself to promote development. Economic growth is necessary to provide the resources required for adequate levels of investment in public provided goods, but this paper aims to present some important development contributions of the Brazilian public policy in promoting social development, with a particular interest given to conditional cash transfer programs in poverty alleviation and its effects in poverty and inequality reduction, as well some considerations on its overall economic effect of the program and its most important conditionality related to long term economic growth, which is education.

### 3. Conditional Cash Transfer Programs in the Fight Against Poverty: Bolsa Família and its Origins

Conditional Cash Transfer programs (CCTs) in Brazil started from local experiences in the middle of 90s, when municipalities began to use them as incentives to families to enroll school-age children in education. The first three cities which started this process were *Campinas*, *Brasília (Federal District)* and *Ribeirão Preto* in the year of 1995. The use of CCTs programs grow so fast that by the end of that decade, 60 municipalities implemented their own programs<sup>7</sup>

The Federal Government started its first CCT in 1996, during Fernando Henrique Cardoso's presidency, targeting child labour eradication (*Programa de Erradicação do Trabalho Infantil –PETI*), and aiming to prevent children to work in dangerous and degrading illegal conditions.

In 1998, *Bolsa Criança Cidadã* (Citizen Child Grant) was created and later converted to *Bolsa Escola* (School Grant) in 2001. It consisted of allowances managed by the Ministry of Education to children based on school attendance. Later on a food scholarship was created under responsibility of the Ministry of Health, named *Bolsa Alimentação* (Food Grant), where families needed to get vaccines and pregnant women needed to undergo prenatal exams. Those programs were complemented with a subsidy for the purchase of cooking-gas, called *Vale-Gás*.

In 2003, President Lula, recently elected, launched the “Zero Hunger Program”, which was initially focused on food security and soon shifted to the poverty alleviation commitment. It comprised of different actions from 19 ministries and also civil society partnerships<sup>8</sup>. Among its many initiatives was the creation of another cash transfer program, named Food Card (*Cartão Alimentação*), not conditioned by behavior, but limited to the buying of food only.

Later in the same year, the *Bolsa Família* Program (BFP) replaced all of the existing federal programs and in 2004 the Ministry of Social Development

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<sup>7</sup> Bastagli, 2008.

<sup>8</sup> Paes-Souza and Vaitsman, 2014.

and Fight against Hunger was created, in order to merge previous government bodies related to the non-contributory social policies and to improve managerial capability.

The program objectives were defined as to:

- Provide immediate relief from poverty, by means of direct income transfer to families;
- Contribute to break the intergenerational poverty cycle, by means of educational conditionalities;
- Develop the potentiality of the families, by means of integration with complementary programs.

As to the eligibility, the BFP targets poor and extreme poor families throughout income ceilings for eligibility, set initially at a monthly per capita family income of R\$100 (US\$48) for poor families and R\$50 (US\$25) for extremely poor families.

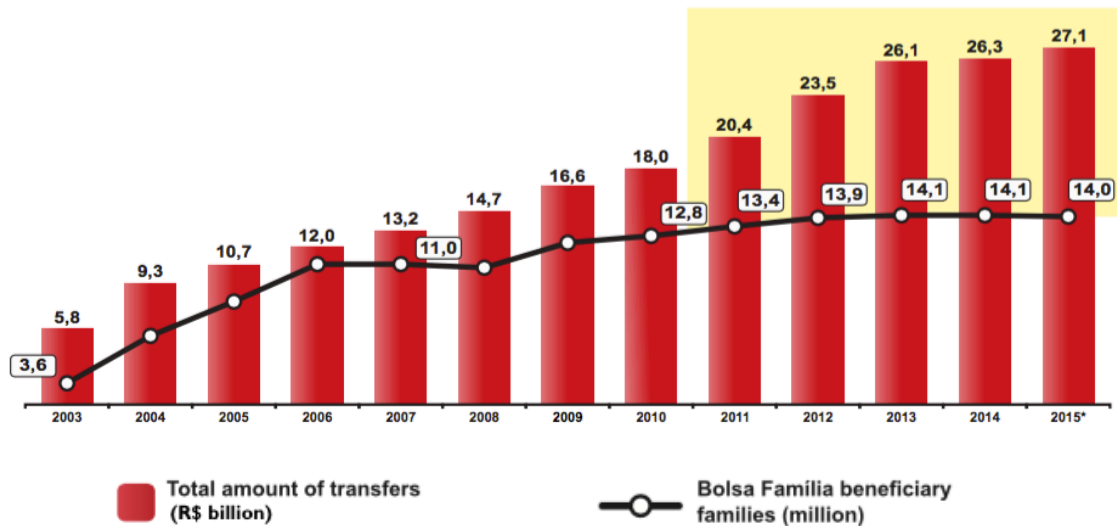
In *Bolsa Família*, there are two types of benefits: i) the basic benefit, intended for families in extreme poverty and; ii) the variable benefits, dedicated to families in poverty and that compose of pregnant women, nursing mothers, children between 0 and 12 years and/or adolescents under 17 years. The variable benefits were initially limited to up to three per family, in case of children up to 15 and two benefits in the case of young people of 16 and 17 (this specific benefit was created later, in 2007).

Both values of benefits and eligibility income standards have been frequently modified in order to keep up with inflation and its impacts in the cost of living, but also to reflect improvements in the Program design, influenced by a large number of evaluations and social research conducted by the government, universities and international organizations.

In total, since the Program was created, the values of the benefits were increased five times and the eligibility lines used to select extremely poor and poor families, were modified four times. Also (and most important for this study) are the changes in design and coverage that were made after the *Brasil Sem Miséria Plan* (Brazil Without Extreme Poverty Plan - BWEP) and which will be subject to further analysis in this document.

In the following chart, it is possible to view both the resources employed and the number of families served by the program over the years, which illustrates its significant expansion over the years, both in relation to expenditure on the number of beneficiary families<sup>9</sup>.

**Bolsa Familia – Cash Transfer Amounts and Beneficiaries**



Source: MDS (2014)

The current values allocated to the program correspond to about 0.5% of Brazil's gross domestic product. The growth of 367% of expenditure on the program since its beginning allows one to have a dimension of public commitment degree of intensity of fighting poverty.

The area highlighted in yellow match the implementation period of the Brazil without Poverty Plan, when many improvements were put in place in order to overcome extreme poverty, which will be the topic of the following section, after which greater attention will be given to the main results of the plan.

<sup>9</sup> The graph values represent the real value of October 2014. In 10/31/2014 the exchange rate was 1,00 USD = 2,44 R\$ (Central Bank of Brazil).

#### 4. The Brazil Without Extreme Poverty Plan (*Plano Brasil Sem Miséria*)

The eradication of extreme poverty was a main goal in the electoral campaign of President Dilma Rousseff, elected in 2010. The advances made in the reduction of poverty and inequality and the ascension of millions of Brazilians to the middle class supported this objective.

In June 2011 the Federal Government launched the Brazil Without Extreme Poverty Plan – BWEPP (*Plano Brasil Sem Miséria*), in order to overcome extreme poverty by the end of the presidential term in 2014. At the time, the latest national census showed that 16,2 million individuals were living in extreme poverty, around 8,5% of all the country's population.

The Plan was designed from a multidimensional perspective of poverty and comprises various government programs and actions aimed at the most vulnerable populations. The plan was organized into three categories, which were called axes, as illustrated in the figure:



Source: Ministry of Social Development.

The first axis was designated Income Guarantee and intended to provide immediate relief of extreme poverty through improvements in conditional cash transfers from the Bolsa Familia Program. The second axis, Access to Public Services, is aimed in improving the education, health conditions and other issues related to the full exercise of rights and citizenship. The third axis, Productive Inclusion, was designed to increase the capacity and job opportunities and to generate income among the poorest families, both in urban and rural areas.

## Brazil Without Extreme Poverty – Public Policies by Axis

<b>Income Guarantee Axis</b>
<p><b>Active Search</b> (<i>Busca Ativa</i>) for eligible families still not included in CCT.  <b>Improvements on family grants</b> new set of benefits for extreme poverty beneficiaries, and 10% of increasing in the value of the poverty line.</p>
<b>Productive Inclusion Axis</b>
<p><b>Rural:</b> 1. Governmental Food Purchases Program (PAA); 2. Technical assistance and Productive Asset Oriented Cash Transfer; 3. Rural Micro Financing Program 4. Domestic cisterns; 5. Water systems for productive use; 6. Forest conservation through subsidy (Green Grant); 7. “Light for All” universal electricity expansion.</p> <p><b>Urban:</b> 1. Free professional qualification courses; 2. Individual micro entrepreneur special regime; 3. Oriented microcredit for production</p>
<b>Access to Public Services Axis</b>
<p><b>Protection for children and adolescents:</b> 1. Nurseries; 2. Fulltime time education; 3. Expansion of the “Health in School” Program; 3. Provision of nutritional supplements for children; 4. Free provision of asthma drugs.</p> <p><b>Strengthening the social assistance network:</b> Expansion of Centers for basic and specialized Social Assistance and also for care of the homeless street population, including hosting facilities.</p> <p><b>Expansion of the basic health care for low-income population</b></p> <p><b>Housing Subsidies for low income families</b></p>

Source: Ministry of Social Development and Fight against Hunger

For the purpose of this work, the analysis of BWEP will focus on the results of income guarantee axis, given its more direct contribution to the alleviation of poverty.

## 5. Improvements on CCT Policy Within Brazil Without Extreme Poverty Plan and Main Results

Since its first experiences in CCT programs in the 1990s, Brazil has developed a robust structure for implementing social programs across different levels of government. Such organizational efforts were accelerated since 2003 after the creation of *Bolsa Família*, the Ministry of Social Development and Hunger Combat (MDS) and the subsequent strengthening of the Single Register (Cadastro Único) for social programs.

This information system was created in 2001 and is an instrument that identifies and characterizes the low-income families, allowing the government to better know the socio-economic reality of this population. It comprises information about residence features, personal data for each person of families, education, employment status and income, among others. The Federal Government manages the system and the data is collected by municipalities, allowing for the selection of beneficiaries for social assistance programs of all levels of government<sup>10</sup>.

Alongside the National Survey by Household Sampling (Pesquisa Nacional de Amostragem Domiciliar-PNAD) and the National Census, the Single Registry gained a lot of importance over time to provide information for program improvements.

As noted in the previous section, the poverty map constructed in order to orient the BWEP actions, shows that 16,2 million individuals were still living in extreme poverty, according to the Census of 2010. In 2011, before the Plan was issued, there were in total 36 million people in the Single Registry that would be in poverty if they survived only on their family income, without the grants of *Bolsa Família*. Around 13,9 million were been already lifted out of poverty but 22 million still remained in this situation even receiving the benefits from the program.

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<sup>10</sup> Since 2003, the Single Registry has become the main Brazilian state instrument for selection and inclusion of low-income families in federal programs, being used necessarily for the granting of the Bolsa Família Program, the Social Electricity Rate subsidies, the “Minha Casa Minha Vida” (My House, My Life Housing Program), among others.



The data from the mentioned sources were combined to provide estimates about eligibility failures and to identify how many families should be included, comparing the information from research and from the registry. That led to two basic strategies for the implementation of the Income Guarantee Axis.

The first one was called Active Search (*Busca Ativa*) and its goal was to insert around 800.000 eligible who were eligible but not included in the safety and social promotion net, according to estimates. Active Search is comprised several initiatives in order to include those families and is a joint effort between federal and local governments comprised of searching campaigns in poor regions, crossing records among public data banks and training of municipal public social services managers. By the end of 2014, the initial goal was surpassed as 1.38 million extremely poor families were included in the Single Registry and in *Bolsa Família*.

The second strategy of the Axis was the actual redesign of the program's benefits aimed at families that remained in extreme poverty, despite being beneficiaries of the program. Initially, modifications were made in order to increase the number of variable benefits for children in the families and also the values of transfers because many studies focused in analyzing the poverty demographics showed that most of the poverty was concentrated in children and young populations within the families.

Thus, modifications to the program after 2011 started to aim on the difference between family income and the extreme poverty lines, called poverty gap or *hiatus*, in order to define the benefits so as to effectively make the beneficiary families to be uplifted from poverty<sup>11</sup>.

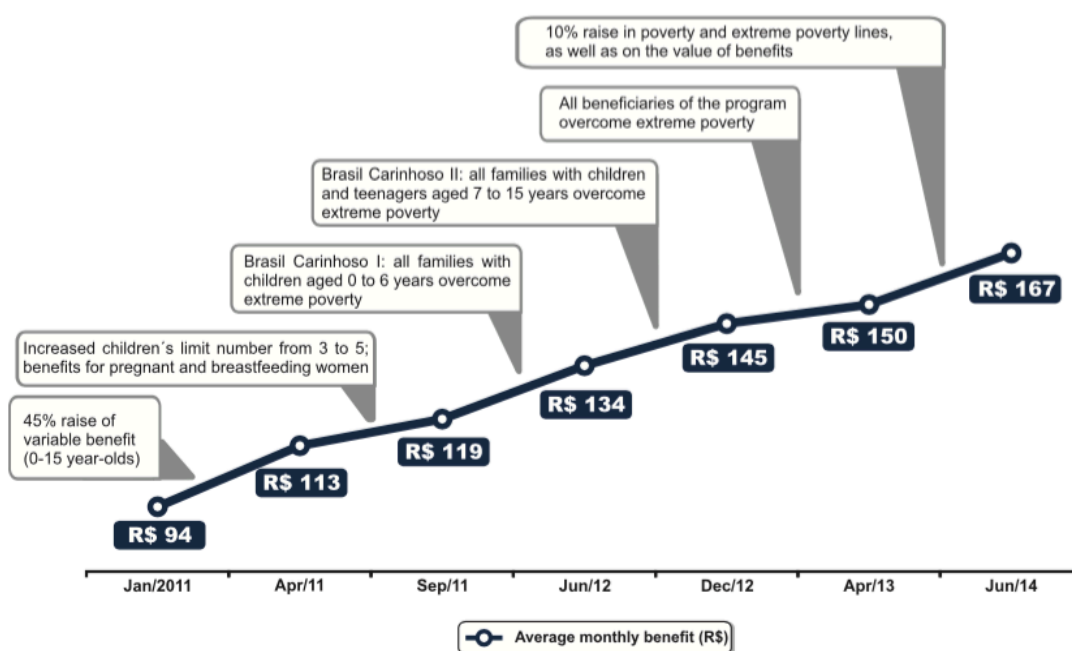
This goal was not achieved until 2012, with the introduction of a variable benefit for overcoming extreme poverty, where the extreme poverty gap reference becomes the transfer value itself.

The following figure shows the cycle of enhancements in *Bolsa Família* Program, both in design and in terms of average monthly benefit value:

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<sup>11</sup> Osório and Soares, 2014

## Enhancements in Bolsa Familia within Brasil Sem Miséria Plan



Source: Ministry Social Development and Fight Against Hunger. Program Payroll and Sigle Registry Data.

As shown in the figure, an important milestone for the BWEP was reached by March 2013, when all families that were part of the single registry transposed the extreme poverty line after the adoption of the benefit designed to fill the poverty gap. That meant that over 22 million people were lifted out of extreme poverty after the implementation of BWEP. This number added to the total of beneficiary families above the BFP, which resulted in the total of 36 million people relieved from extreme poverty, as identified before by the single registry.

There are some criticisms of the use of poverty lines, mostly regarding choices about established values. Falcão and Costa (2014) state that the absolute poverty lines adopted in BWEP are consistent with best practices for countries with a large proportion of urban population and a large market economy, being appropriate to study the incidence and evolution of poverty. They emphasize also that the adopted values took into consideration studies on caloric intake and also a set of indicators of precarious living conditions, based on census data.

## 6. Effects of Bolsa Família in Inequality Reduction

In recent years, many studies have been dedicated to understanding the effects of PBF program to recent reduction of inequality in Brazil. Soares (2012) has reviewed a series of studies dedicated to measuring the impact of *Bolsa Família* on the Gini Coefficient variation in certain given periods. The table reproduced from the resulting article shows that the contribution of the Program was a significant percentage of inequality decrease, despite of the use of different methodologies.

***Bolsa Família* Impacts on Inequality**

Study	Identification strategy	Methodology	Period	Absolute impact in Gini Points (x100)	As percentage of $\Delta G$
Soares (2006)	No identification	Decomposition by factor components	1995–2004	–0.64	27%
			2001–2004	–0.86	30%
Hoffmann (2006)	No identification	Decomposition by factor components	1997–2004	–0.79	25%
			2002–2004	–0.41	31%
Soares F. et al. (2007)	Supplement	Decomposition by factor components	1995–2004	–0.57	21%
Soares S. et al. (2007)	Supplement	Decomposition by factor components	1995–2004	–0.57	21%
Barros, Carvalho and Franco (2007)	Typical values	Micro-simulation	2001–2005	–0.32	12%
Hoffmann (2010)	No identification	Decomposition by factor components	2001–2007	–0.80	19%
Soares, Ribas and Soares (2009)	Supplement	Decomposition by factor components	2004–2006	–0.20	21%
Soares, Souza, Osório and Silveira (2010)	Typical values	Decomposition by factor components	1999–2009 (Odd years)	–0.81	16%

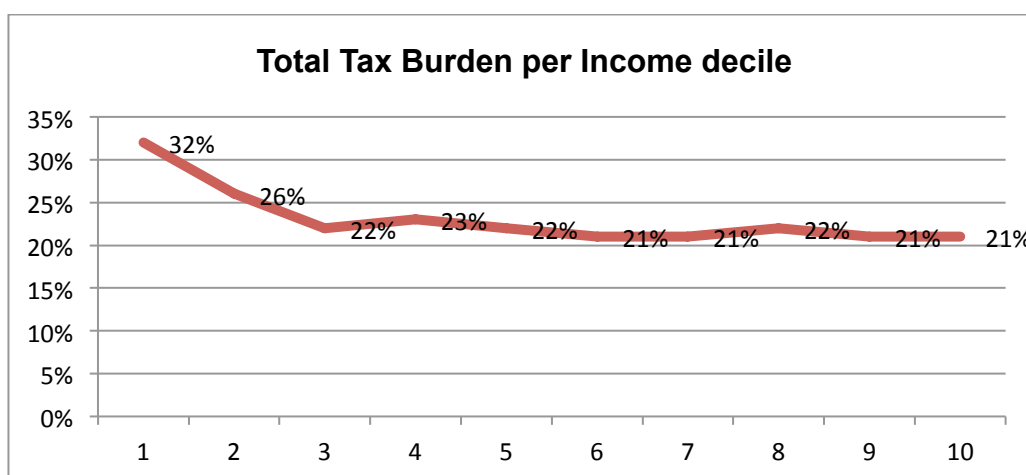
Source: Soares, 2012, p. 20

Observing the results for different periods in each of the mentioned studies, it is possible to perceive that those which included more recent periods tend to show a smaller share of the program in the decreasing of Gini coefficient, which may suggest the existence of diminishing returns scale of *Bolsa Família* in reducing inequality throughout its expansion over time.

Unfortunately other similar studies have not been done to measure the effects of transfers after the creation of the BWEP and the after the ending of extreme poverty among the families within the single registry.

Regarding inequality in general, a recent study by Medeiros et. al (2014) revealed some extra complexity to the task of understanding recent inequality changes in Brazil over the last decades. The authors combined data from household surveys to income tax records (not present in the previously mentioned studies) to examine the level and the evolution of the income distribution in Brazil and concluded that income inequality in the country was higher than that estimated by household surveys, remaining stable between 2006 and 2012.

Even if the program's effects may be in fact more modest than was captured by previous studies, it is notable that the program can act as a factor of inequality reduction, using only around 0.5% of the GDP, considering that in Brazil institutional conditions in general favored the concentration of income over time. The most known factor that makes difficult to reduce inequality and to foster of a pro-poor growth<sup>12</sup> in Brazil may be the fact that its tax burden is strongly regressive, which means that the poorest segments of the population pay more taxes than the richest ones relative in terms according to their income. This is illustrated in the following graph, which shows the tax burden according to income deciles.



<sup>12</sup> Pro-poor growth can be defined as an increase in national income where there is a gain in the growth rate due to a decrease in inequality, according to Kakwani et. al (2006).

Source: Data by Salvador (2014), graph by author.

The regressivity of the Brazilian tax burden can be explained through the existence of a system in which most of the taxes are levied on goods and services, with relatively low taxation on income and assets.

## 7. Importance of Education In Diminishing Poverty and Inequality - Effects of Bolsa Família

As seen in the previous section, studies on the effects of the program on inequality showed a reduction ranging from 12% to 31% in the Gini index, depending on the methodology used and the time period under analysis.

Regarding the drop of income inequality as a whole in Brazil, a study by Barros et. al (2010) focused on the decomposition of factors that influenced the 7% decrease in the Gini index between 2001 and 2007. The study showed that about 60% of the reduction is the result of increased income, associated with gains in salaries. The study concluded that a significant portion of this inequality decline is associated with improvements in the educational level of the workforce. By isolating the impact of the high educational expansion that occurred in the past decade in Brazil, one can see that there was a 50% decline in inequality in labor income and 30% decline in inequality in per capita income between 2001 and 2007.

The impact that increasing the educational level had in higher labor income levels and in the reduction of inequality motivated a lot of studies, as the educational conditionality is believed to act as a tool to break the intergenerational cycle of poverty.

Regarding school attendance, Silveira Neto (2010) used Propensity Score Matching applied to household survey data to estimate the impact of *Bolsa Família* on school attendance, finding that the program increased it by 2,2% the attendance of children on the program. That does not seem to be much, but is important to bear in mind that school enrolment was already almost universal (98% in 2009, according to the national household survey).

As for the results on cognitive skills, a study conducted by Santarrosa (2011), with the use of administrative data estimates for the 2007-2009 period in Sao Paulo State, found no significant effects. Nevertheless, Simões (2012), in a doctoral thesis, provides evidence that improvement of school outcomes also depend on the length of time of participation and the cash value paid to families, a perspective not explored in previous studies. It also found significant data to

show that the Program provides lower dropout rates and higher progression rates among beneficiaries. Positive effects on learning outcomes were found even in the most disadvantaged schools mostly attended by beneficiaries.

In a recent paper, De Brauw et. al (2015) used longitudinal household data and propensity score weighting methods to evaluate a broad range of schooling outcomes of children aged 6–17 years, disaggregating results by sex, age, and location. The study found an increased school participation (by 8 percentage points) and grade progression (by 10 percentage points) among girls, with significant effects across both younger and older girls in rural areas but concentrated among girls aged 15–17 years in urban areas. The results show a widening of an existing gap that already favors girls, suggesting the need for further studies to understand this effect and to promote changes to foster better results also for boys<sup>13</sup>.

In the discussion and recommendations section, some suggestions from the mentioned studies and others are presented in order to improve the program. The advancement of further studies of the links between the CCT programs and educational results are of the utmost importance, given the fact that human capital enhancement is a main source for improvement in standards of living over time. As for short-term economic effects, the next session is dedicated to demonstrating the economic contribution of CCT to economic growth, from studies focused on the analysis of the multiplier effect of the program on the Gross Domestic Product (GDP), compared to other public expenditure and some private activities

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<sup>13</sup> For results regarding women's empowerment as an effect of *Bolsa Familia*, see de Brauw et. al. (2014), produced by the same authors.

## 8. Possible Effects of *Bolsa Família* in Economic Growth

As the impact of cash transfers to the reduction of poverty and inequality is well recognized, some efforts have been made in order to learn more about how the money received by families, among other sources of public and private expenditure, affect the macroeconomic performance of the country. Because the transfers are spent in the purchase of goods and services they therefore, affect the production and the overall GDP.

In general, these studies are based in the identification of economic growth multipliers of spending, based on a Social Accounting Matrix which relates the streams of income in a input-output basis in a circular flow of income model with the effect of selected expenditures in the families consumption.

Ipea (2011) analyzed and compared the multipliers from different public expenditures and also some important economic activities<sup>14</sup> in the attempt to show how the social expenditure are, in general, beneficial to a increase in the GDP and also to the families income, as shown in the following table:

**Multipliers of an increase of 1 % of GDP According to Type of Expenditure**

Expenditure	Multiplier for each R\$ 1,00 spent		Multipliers per GDP percentage and family income	
	GDP	Families	GDP	Families
Pensions - General Regime	1,23	1,7	1,23%	2,10%
Bolsa Família Program	1,44	1,82	1,44%	2,25%
Benefício de Prestação Continuada	1,38	1,79	1,38%	2,20%
Public Health	1,7	1,17	1,70%	1,44%
Public Education	1,85	1,35	1,85%	1,67%
Public debt interest payments	0,71	1,09	0,71%	1,34%
Mix from exported Commodities	1,4	0,84	1,40%	1,04%
Construction Investments	1,54	0,93	1,54%	1,14%

Source: Ipea (2011)

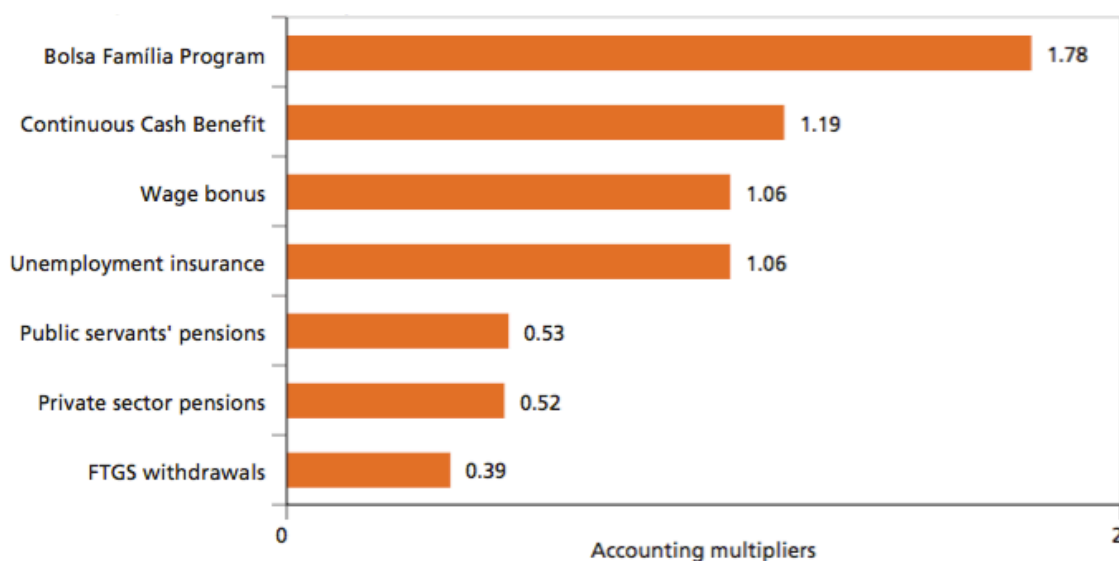
<sup>14</sup> Most of the data used in the simulations came from the Brazilian Institute for Geography and Statistics (IBGE): the System of National Accounts aggregates from 2006 (IBGE), the National Household Sample Survey (IBGE) from 2006 and the Family Budget Survey (POF) from 2002-2003 . It also used administrative records from public bodies related to each specific expenditure.



As a general conclusion, based on assumptions and limitations of a short-term analysis<sup>15</sup>, traditional Brazilian economic activities such as export of commodities and construction produce a kind of growth that perpetuates the existing inequality, while social expending could foster a kind of growth also related to income distribution.

Another important relevant study of the same kind was done by Neri et. al. (2013) with more recent consumption and income data from the household budgetary research from 2008 to 2009 and focused only on welfare policies transfers, like *Beneficio de Prestação Continuada* and *Bolsa Família* and social security and labor expenditures, like salary bonuses (*abono salarial*), pensions of the social security for the public and private employees regimes, unemployment Insurance and the FGTS (Fund for compensation in case of unemployment, according to the duration of labor, funded by the employers). The multiplier effects of each transfer is presented on the following graph:

**Multiplier Effects of Monetary Transfer on GDP**



Source: Neri et. al 2013.

Based on the multipliers shown in graph, the transfers that have the biggest values are also the ones that are more targeted to the poor

<sup>15</sup> The simulation implies that the supply is perfectly elastic, meaning that prices are fixed and what varies is the production, consistent with an assumption that idle productive capacity exists and is able to meet increased demand caused by the income transfers.

beneficiaries. The authors point that the poorer families have a higher marginal propensity to consume, even if one considers that a significant portion of its consumption is independent of income. By construction, household saving was kept out of the circular flow of income and does not have multiplier effects on economic activity. Nevertheless, the magnitude of the effect of PBF draws attention, especially when it is compared to other targeted transfers, such as the BPC. It is also worth highlighting the similarity between the RGPS and RPPS, although the latter is more unevenly distributed.

The conclusions of these studies, among others, contribute to support the hypothesis that the programs aimed at transferring income to the poor has a positive effect in producing inclusive economic growth and could contribute to poverty reduction and inequality at the same time. CCT programs can also play a counter-cyclical role in times of economical crisis, acting as an automatic stabilizer (like the unemployment insurance), as the transfers can help reactivate the economy through consumption stimulus, while preserving the income in the poor families.

It is important to bear in mind, though, that multipliers are based on a short run scenario where there are no changes in prices, so in the real world its values are subject to changes in any given economic reality over time. In the long term, the most important factor is the gains in overall productivity of the country, where human capital investment plays a significant role.

## 9. Discussion and Recommendations for Improving the CCT Policy in Brazil

In such large programs as *Bolsa Familia*, it is important that targeting be always improved in order to prevent families that are not eligible from participating, given the huge size of public resources involved. Although the program is considered well focused on the poor families by studies like Medeiros et. al (2007)<sup>16</sup>, it is known that the reliability of household income information contained in the single registry is far from perfect, given its declaratory character and discrepancies between data from other sources, like the household survey. Information about household incomes from informal labor is systematically smaller in the Single Registry than in annual household surveys.

In order to address this issue, Ferreira (2013) suggests that the program's design could be enhanced by a statistical analysis of data on living conditions of the beneficiaries, known as *proxy-means testing* (PMT), in order to minimize inclusion errors in the program, similar to what is already done in similar programs in Colombia (Families in Action) and Mexico (*Oportunidades*). In this method, a score is computed for each household by directly observable variables that are correlated with income in order to establish eligibility.

The current process of selecting beneficiaries of the Program is more similar to the targeting method known as simple means test (SMT), because the main information is the income declared by the families. There are some checks to the data by means of other sources such as formal employment data from the Ministry of Labor, but they are not systematized. As Tavares et al (2009) point out, the most accurate standard of targeting is the verified means test (VMT), which involves checking the income declared with the bank and tax information of individuals. However, this type of verification is complex and is only possible with a high degree of formality between eligible families and therefore is most widely used in developed countries. Thus, PMT seems to be more suitable to the Brazilian reality as it is to developing countries in general,

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<sup>16</sup> This study estimated that more than 80% of the beneficiaries belong the poorest percentiles of income, according to the National Household Sampling Survey.

because the administrative costs are lower than those required for a VMT system.

The consequences of the educational conditionality are a key feature that allows the program to help provide the beneficiaries with the conditions for the autonomous generation of income in the future, by means of human capital formation, and is an area where some relevant discussion takes place.

In order to improve the educational quality within the program, Ferreira et. al (2013) proposes to carry out standardized tests of cognitive and non-cognitive skills for children of beneficiary families to the program and to use the results to design intensive intervention strategies for the development of capabilities.

Simões (2012) adds that *Bolsa Família* participation in disadvantaged schools can be used as a proxy for poverty incidence and to target educational policies, attributing special attention to pre-school, given the major influence on children's school outcomes. It also suggests that cash transfers should be dimensioned based not only on the number of children, but also the level of regional per capita poverty and regional labor markets variables, in order to adjust the benefit according to the opportunity cost of having children engaged only in study in different regions of the country.

Souza (2011) in turn, believes that the main problems related to the low quality of education and low school attendance in high school can be faced by creating financial incentives for the most vulnerable students through the provision of an extra benefit in the form of savings account for each year of study completed, to be paid only after the conclusion of the second degree. This proposal is based on satisfactory results found in the Mexican Program *Oportunidades*. The author suggests also that municipalities with better educational results should receive more federal funds to the local management of the program<sup>17</sup>.

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<sup>17</sup> In 2006, the Federal Government created a Decentralized Management Index (*Índice de Gestão Descentralizada - IGD*), in order to encourage municipalities to perform well its tasks in the management of Bolsa Família, by measuring performance of municipalities in the management and assignment of financial resources to municipalities with good performance in the index, in order to invest in activities related to the management of the Program.

## 10. Conclusions

Brazil faces the challenge of achieving inclusive economic growth and to develop, as it is still a very unequal country. The Brazil Without Extreme Poverty Plan's income guarantee axis presented an important contribution that can be measured mainly by the alleviation of poverty for millions of people and a relevant relative contribution to the recent inequality reduction in Brazil. Its contribution to the future and can be envisioned by increasing prospects that next generations can achieve better quality of life and productivity through education, reducing the reproduction of poverty among generations.

The important achievements of *Bolsa Família* in the context of the Brazil Without Extreme Poverty were the fruit of a governmental commitment to incremental improvement in conditional cash transfer that took into account not only the acquired experience not only from administering the policy, but also an effort to incorporate improvements in program design suggested by various studies devoted to understanding its effects and that allowed the overcoming extreme poverty in a over a decade period.

Nevertheless, is important to remember that the goal of a more prosperous and equal society does not depend only on the transfers of income and quality of the educational system available to beneficiaries of income transfer programs, but also the evolution of other institutions and policies that allow an enabling environment long term inclusive growth, as a tax system that evolves towards a more progressive taxation and also sound economic policies capable of maintain the inflation under control and to foster economic growth in order to allow real increases in productivity to work as a engine of a sustainable economic development.

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