



THE IMPACT OF THE BOLSA FAMÍLIA PROGRAMME ON CHILD LABOUR

By

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THE IMPACT OF THE BOLSA FAMÍLIA PROGRAMME ON CHILD LABOUR

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Abstract

This study analyses the impact of the conditional cash transfer programme by Bolsa Família on child labour, and was evaluated based on data from household surveys conducted in 2015.

Enrolment of children, school attendance, vaccinations, and taking the kids off work are conditionalities of the programme. One aspect of the programme's functioning takes into account that school attendance does not prevent child labour, as beneficiary families are low-income, schools are not full-time, and the value of the benefit is low.

The first chapter presents the problem of child labour in Brazil, providing data, and demonstrating how, over the last decades, state and society in Brazil have adopted strategies to eradicate child labour successfully.

The next chapter provides information on cash transfer programmes, the difference between conditional and unconditional cash programmes, and a review of past literature on the advantages and disadvantages of the two models.

Chapter 3 presents a discussion on the main effects of cash transfer programmes on child labour, referring to the main literature.

Next is a presentation of Bolsa Família: its main objectives, criteria for selecting beneficiary families, form of registration, operationalization, payment, monitoring of conditionalities, and hypothesis of exclusion.

The following chapter addresses the main issues related to the effects of the Bolsa Família programme on child labour, referred in several studies.

Finally, an empirical analysis applying the propensity score matching model is performed. Our findings show that in the treatment group, Bolsa Família led to a reduction in child labour.

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CHAPTER I - CHILD LABOUR IN BRAZIL

In Brazil, the Federal Constitution prohibits work before the age of 16 years, except as an apprentice from 14 years of age. Night time, unhealthy and dangerous work is prohibited before 18.

Brazil is recognized for its capacity to develop public policies child protection and has achieved significant results in the eradication of child labour in recent two decades.

According to the International Labour Organization there were 168 million children working in 2015 across the globe, while 75 million young workers between the ages of 15 and 24 were unemployed, receiving very low wages, without access to social security or decent working conditions (ILO, 2015).

Household survey data allows a better understanding of the characteristics of child labour, such as family structure, parental schooling, place of residence, among other factors. On the other hand, it should be remembered that there is insufficient data for child labour in illicit activities, such as sexual exploitation or drug trafficking.

Several studies point to a correlation between child labour and poverty. That is, rising income tends to increase school attendance and the incidence of working. Figures show that as countries develop, there is a decline in the number of children working.

Parents with higher levels of schooling tend to value more time in school for their children. This means that as parents study more, they also tend to see their children's education as a potential investment for their future.

There is also evidence that the number of siblings, especially younger siblings, influences child labour. Research indicates that when a woman is primarily responsible for the family, the child's chances of working increase.

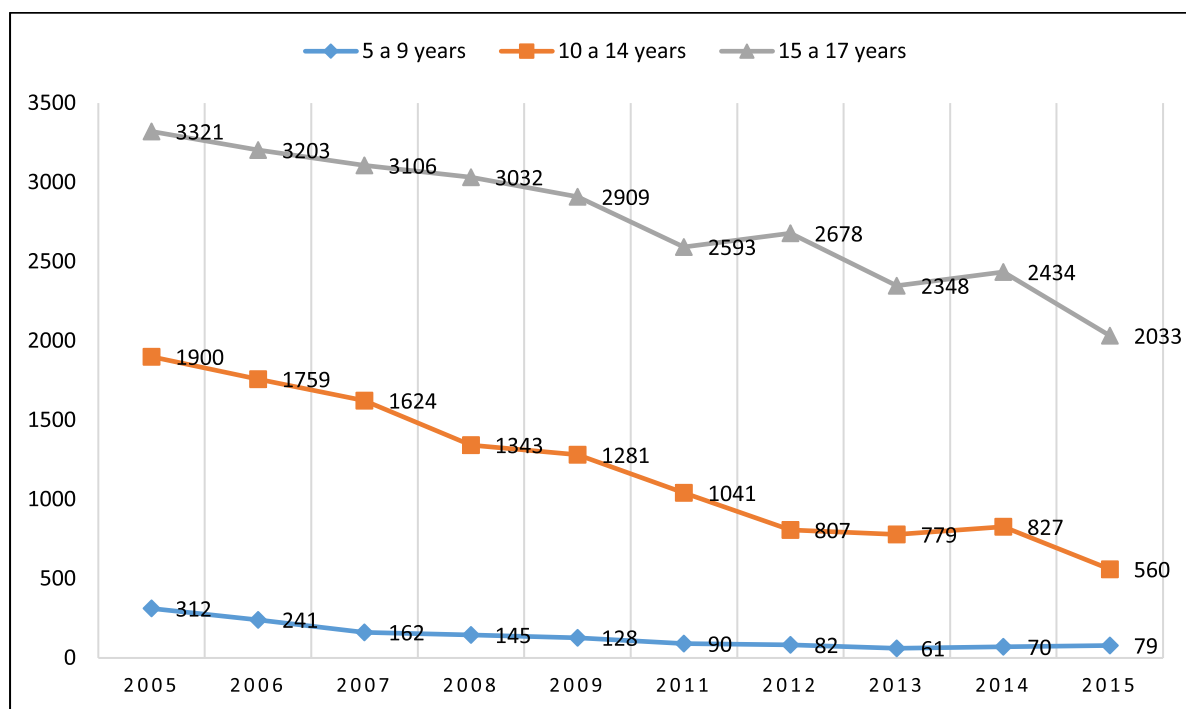
The rural area constitutes a larger portion of working children due to characteristics related to low income, precarious school infrastructure, and the use of labour-intensive technology, in addition to the cultural factor. Parents who have worked in childhood also tend to enforce work on their children from an early age.

Difficulties in educating children and exposure to crime may also explain why parents encourage work from an early age to ensure that young people are occupied and that free time is not used for illicit activities.

In the case of mothers who bear the responsibility of the family, earning of the eldest son eventually reverse the hierarchical relationship in the family, making the child the provider of the home and giving him authority over the other members.

Since child labour plays a negative role in the accumulation of human capital, working from an early age tends to reduce employment opportunities for low-skilled activities.

Table 1- Brazil: Total of people from 5 to 17 years of age working, by age group (thousand people)

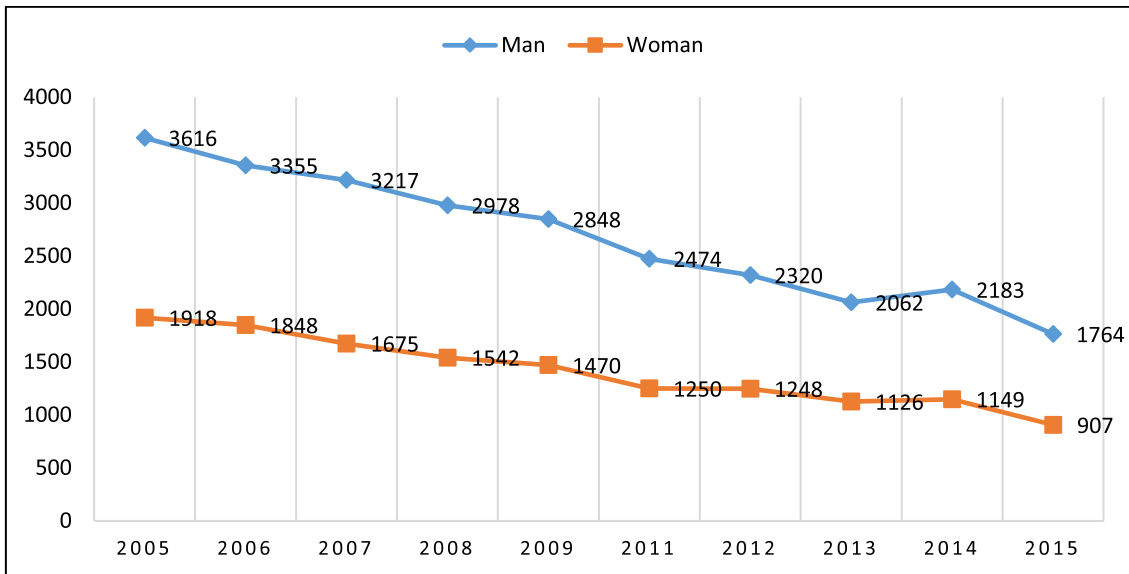


Instituto Brasileiro de Geografia e Estatística (IBGE): Household Survey

From 2005 to 2015, there was a steady reduction in child labour across all age groups. (Table 1). Table 2 shows that most working children are male, and the reduction trend occurs for both genders.

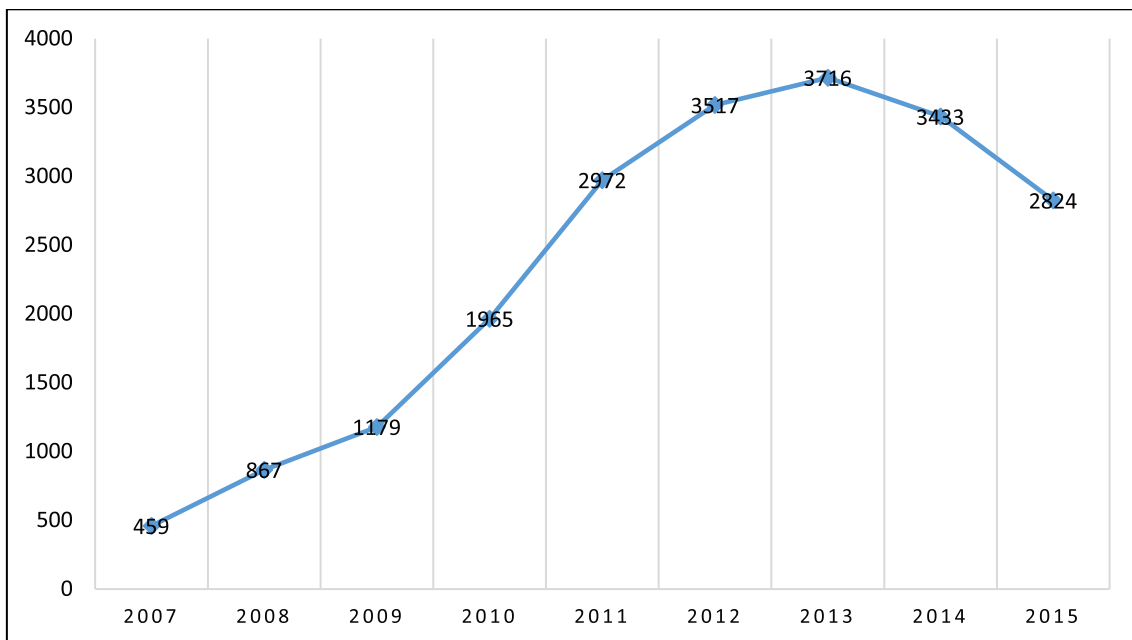
Data from the Ministry of Health also indicates a reduction in the number of work-related accidents for this age group since 2013 (Table 3).

Table 2: Brazil: People 5-17 years of age, occupied by sex (thousand).



IBGE: Household Survey

Table 3: Brazil: work accidents among children 5 to 17 years of age



Ministry of Health / SVS - Notification of Injury Information System - SINAN

The first program created in Brazil specifically to deal with this issue was the Child Labor Eradication Program (PETI). The PETI was created in 1996 with the support of the ILO

to combat child labour and incidence of children as charcoal workers in the midwest region of Brazil. Its coverage was then extended to the whole country.

In 2005, PETI was integrated into the Bolsa Família Programme, and in 2011, it became an intersectoral programme, integrating with the National Social Assistance Policy.

The National Social Assistance Policy considers that social protection can be basic or special, depending on levels of complexity of protection against the risks faced by individuals and their families. While basic social protection is intended for individuals in situations of social vulnerability, special social protection serves families and individuals in situations of personal and social risk; for example, in child labour situations (Brasil: 2005).

If faced with evidence of child labour, a family would be considered 'referenced' and had priority to receive financial assistance for the activities of PETI.

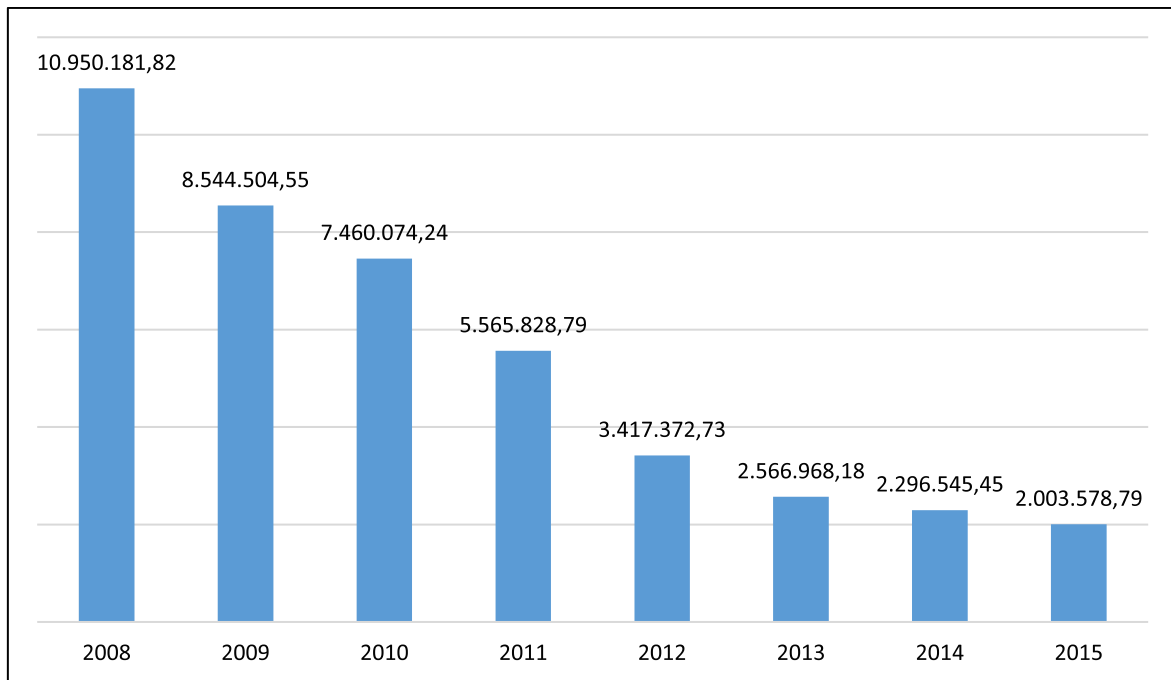
In 2000, the PETI had already protected approximately 140 thousand 7 to 15 years of age children in Brazil. In 2002, the number of participating children reached 810,769, reaching 2,590 municipalities (Carvalho, 2004: 2).

The priority of PETI was the care of families with per capita income of up to half of the minimum wage. Financial compensation was offered for withdrawing children from work to the tunes of US\$ 7,57 (R\$ 25,00) per child in rural areas, and US\$ 12,12 (R\$ 40,00) per child in urban areas. The condition for receiving money was school attendance. In addition to the transfer of resources to the family made by the federal government, the municipalities received US\$ 6,00 (R\$ 20,00) per child to fund the 'extended day'. This consisted of school reinforcement, cultural, and sports and leisure activities for children in the alternate period to school.

With the creation of the Bolsa Família Programme in 2004, several federal income transfer programs were unified, including the PETI. The children assisted in the 'extended' journey started to participate in coexistence activities together with other children in situations of social vulnerability in the centres of social assistance.

Resources allocated to the PETI have reduced over the years ever since the programme has been incorporated with the Bolsa Família Programme (Table 4).

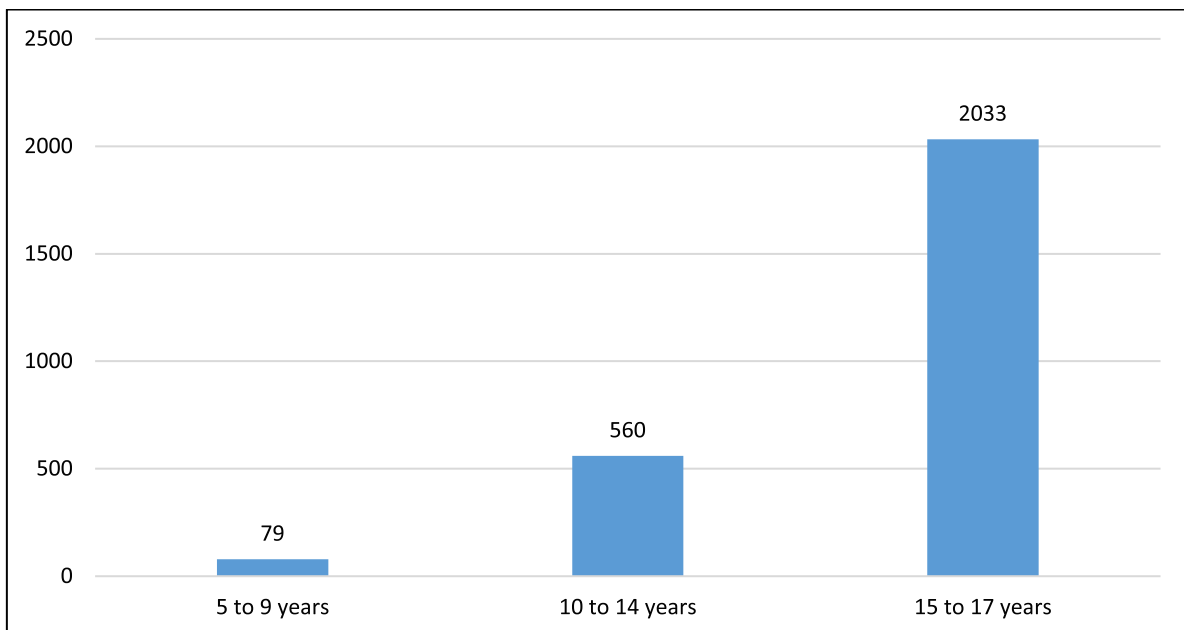
Table 4: PETI: cash grants for children and adolescents in work situation (dollars)



Portal of Transparency: www.portaldatransparencia.gov.br

Table 5 shows the number of children and adolescents who were working in 2014, by age group. Of these amounts, the adolescents who were hired as apprentices were discounted.

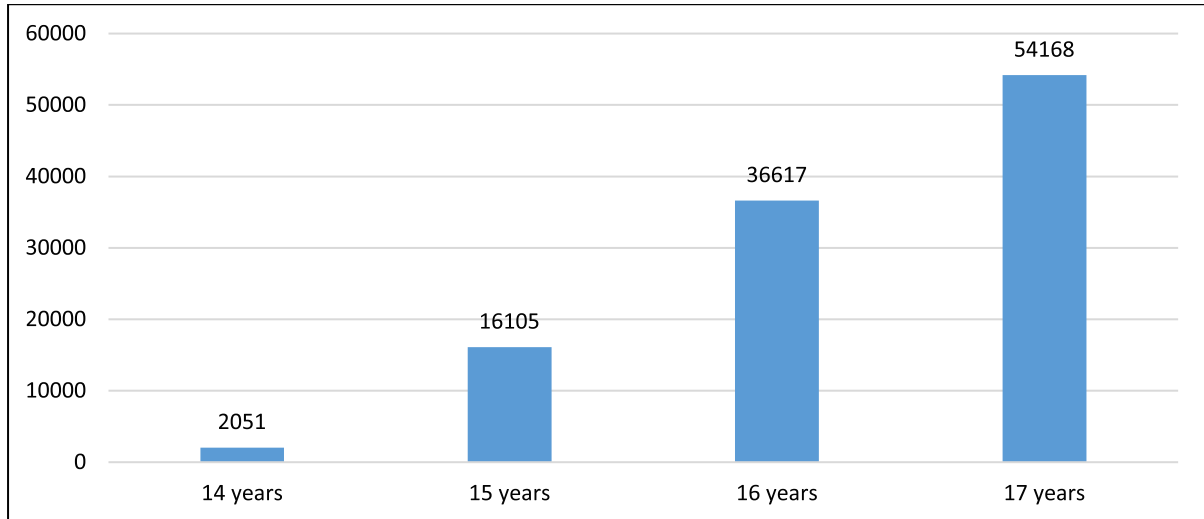
Table 5: Brazil: Distribution of children working by age group (thousand)



IBGE: Household Survey

In Brazil, it is mandatory for companies to hire people from 14 to 24 years of age as apprentices in a quantity corresponding to 5% of the number of professionally trained employees. Table 6 shows the number of apprentices from 14 to 17 years of age in 2014.

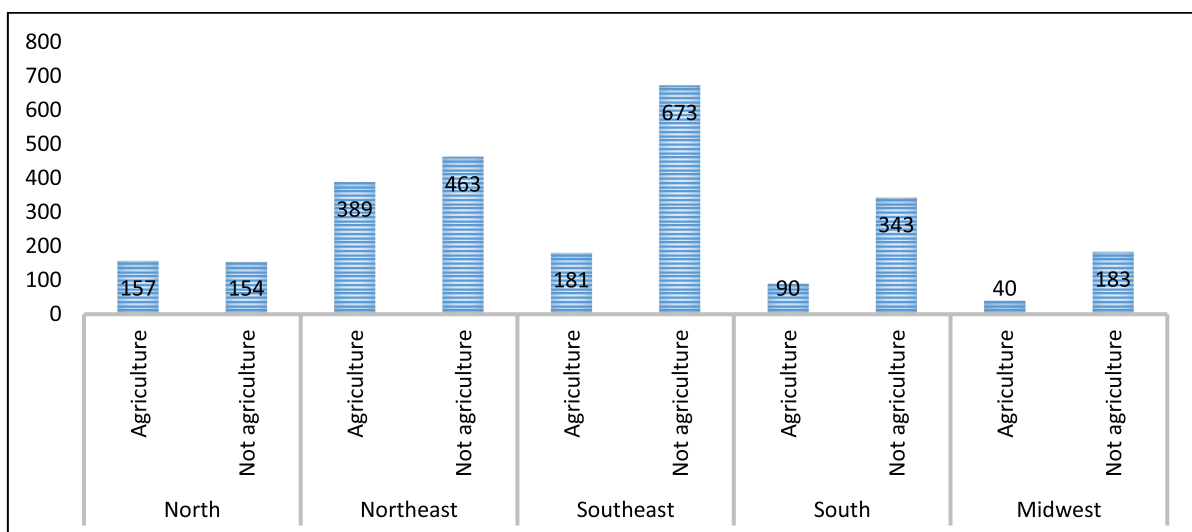
Table 6: Brazil: number of apprentices in 2014, by age



Ministry of Labour, RAIS: Annual Social Information.

Child labour occurs predominantly in urban activities, except in the northern region of Brazil (Table 7).

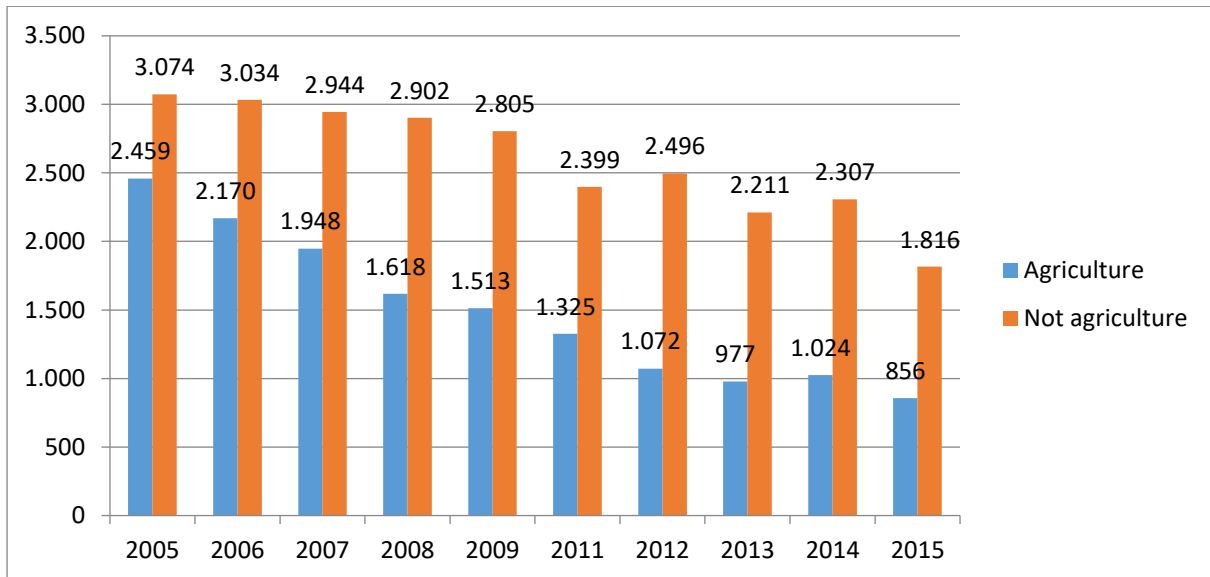
Table 7: Children and adolescents from 5 to 17 years of age that worked in the week of reference, in 2015, by region and sector of activity (thousand)



IBGE: Household Survey

Table 8 shows that there has been a reduction in work over the years for both urban and rural sectors. Moreover, there was a larger reduction in the rural sector.

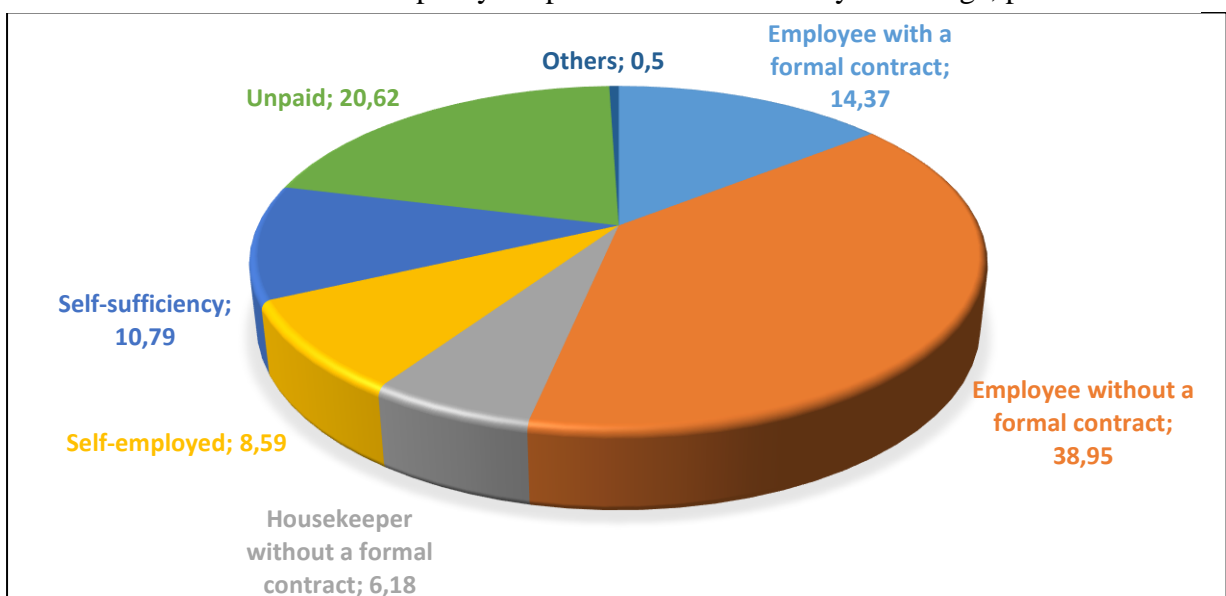
Table 8: Children and adolescents from 5 to 17 years of age that worked in the week of reference, from 2005 to 2015, by sector of activity (thousand)



IBGE: Household Survey

Most cases of child labour are irregular, and 38.95% of the contracts are informal (Table 9).

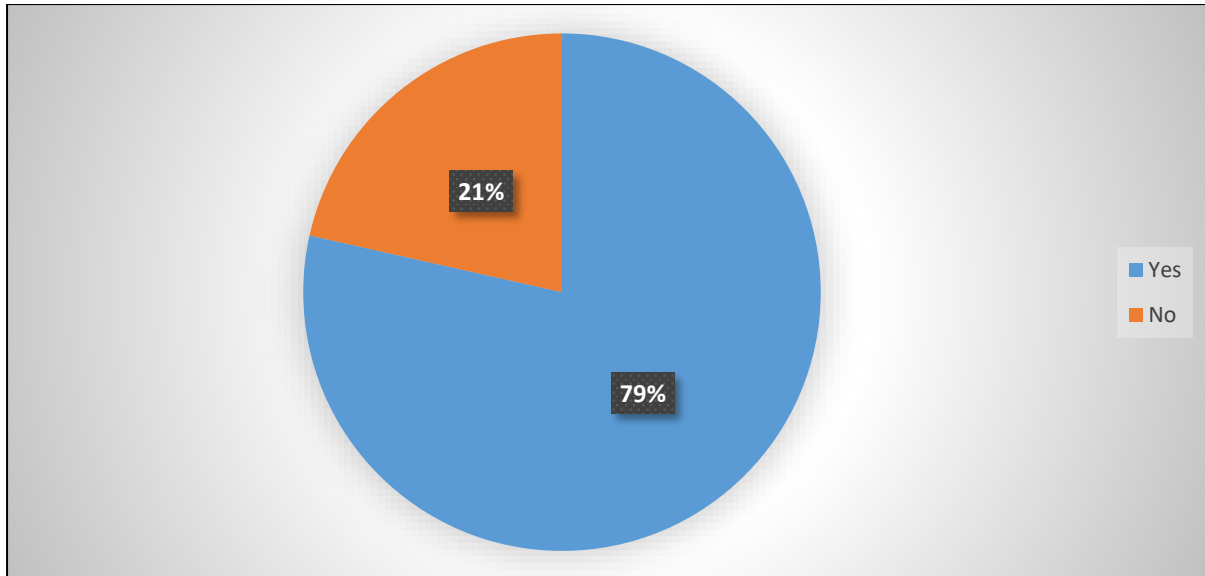
Table 9: Position in occupancy for persons from 10 to 17 years of age, percent



IBGE: Household Survey 2015

Table 10 shows that school attendance does not prevent child labour and 79% of working children go to school.

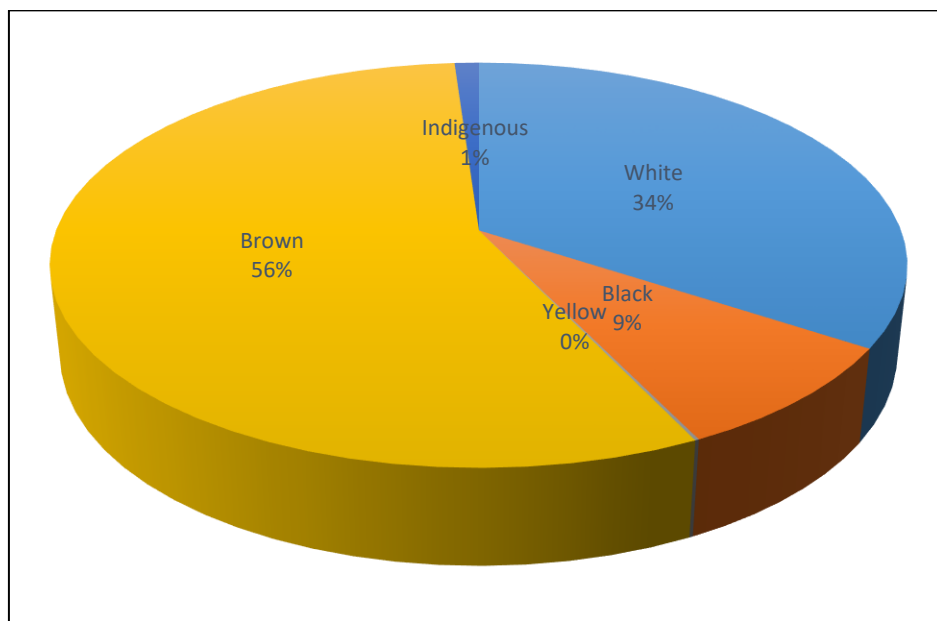
Table 10: Children and adolescents from 5 to 17 years of age that worked in the week of reference, by school or daycare attendance (percent)



IBGE: Household Survey 2015

Our findings also reveal that 56% of working children are brown-skinned (Table 11).

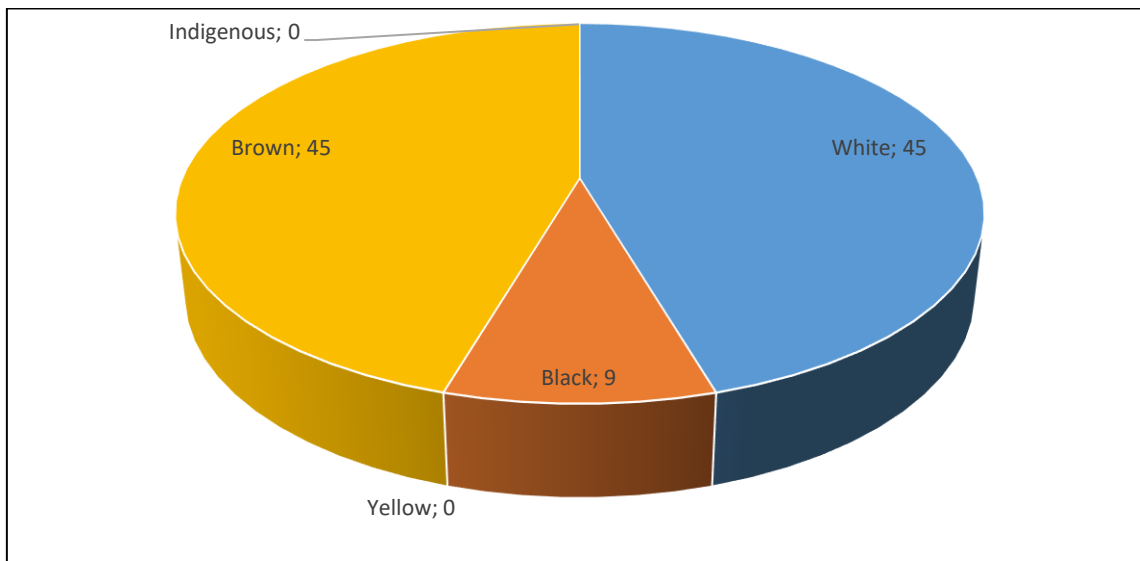
Table 11: Children and adolescents from 5 to 17 years of age that worked in the week of reference, by color or race (percent)



IBGE: Household Survey 2015

When compared to the racial composition of the population, being brown-skinned increases the likelihood of being engaged in child labour (Table 12).

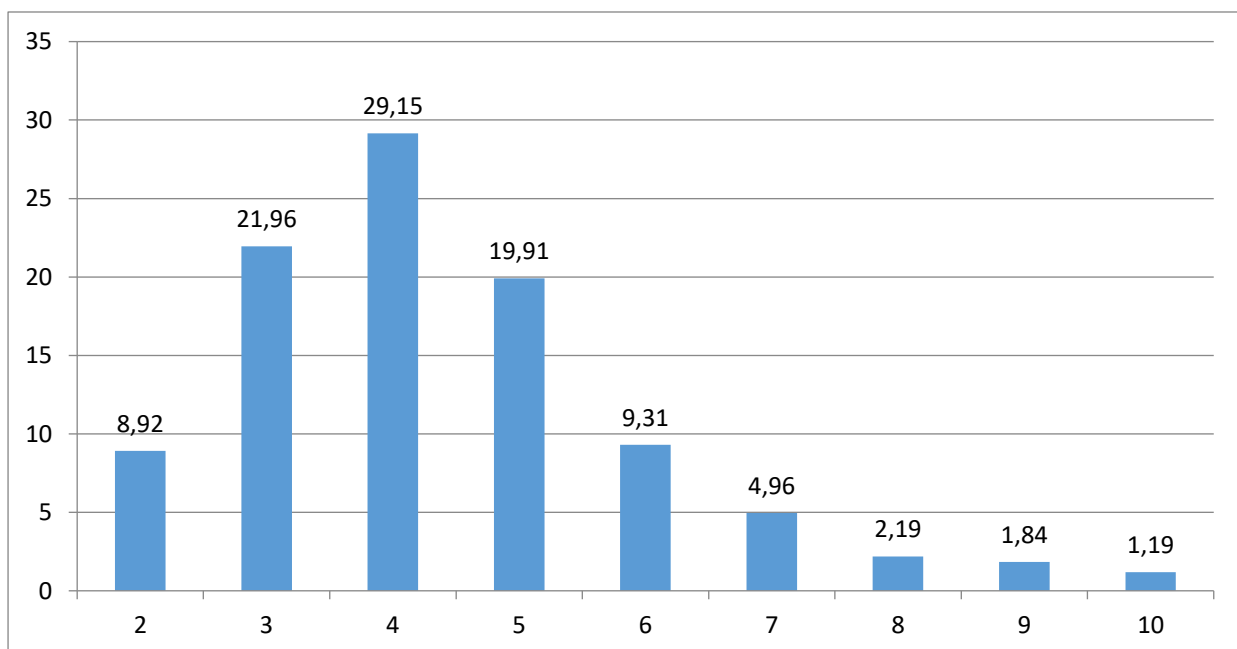
Table 12: Brazil: population by color or race, 2015



IBGE: Household Survey 2015

Furthermore, 89,25% of households with child labour have two to six members (Table 13).

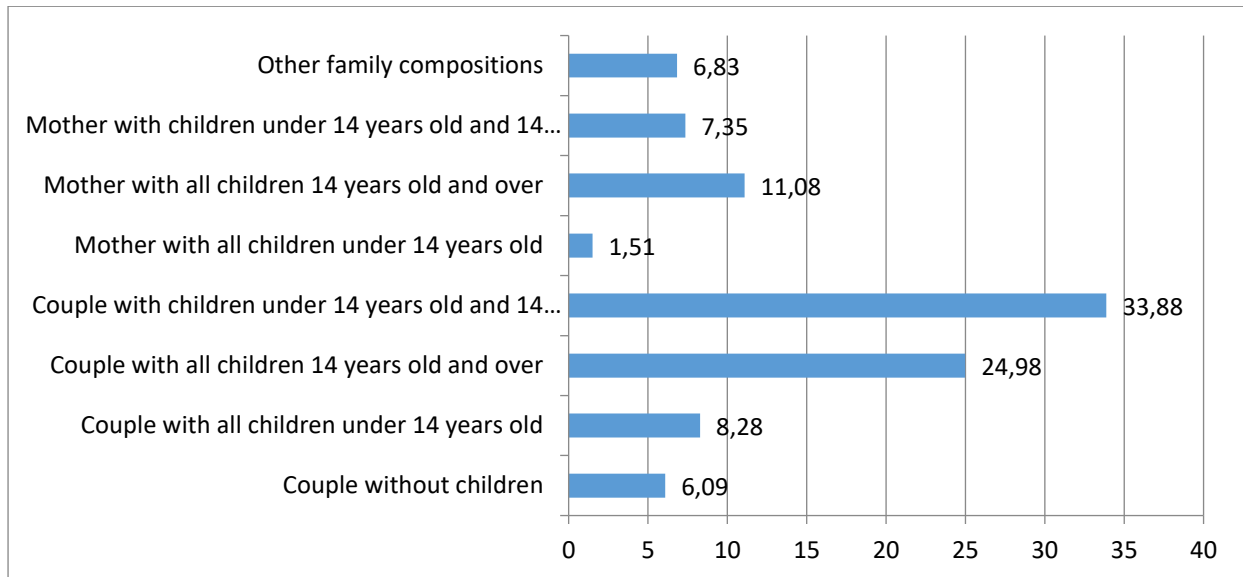
Table 13: Families with children and adolescents from 5 to 17 years of age that worked in the week of reference, persons in household (percent)



IBGE: Household Survey 2015

The majority of households with child labour consist of couples with children under and over 14 years of age (Table 14).

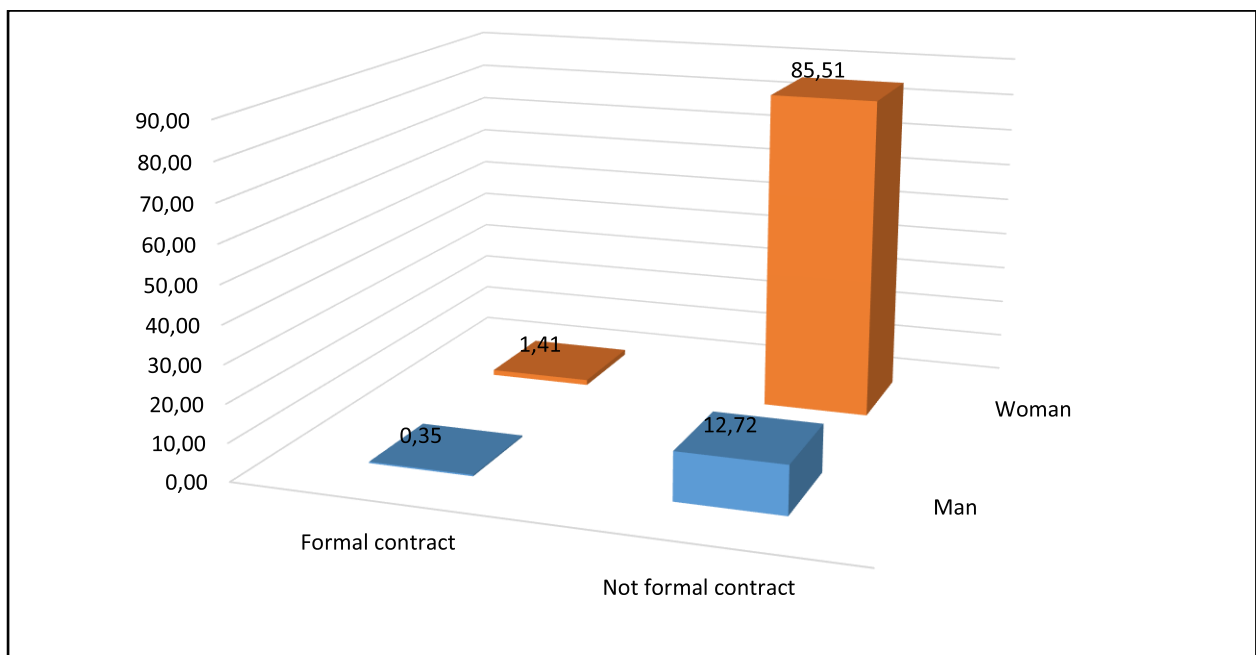
Table 14: Households with children and adolescents from 5 to 17 years of age that worked in the week of reference, family composition (percent)



IBGE: Household Survey 2015

Domestic child labour is mainly informal and composed of females (85%) (Table 15)

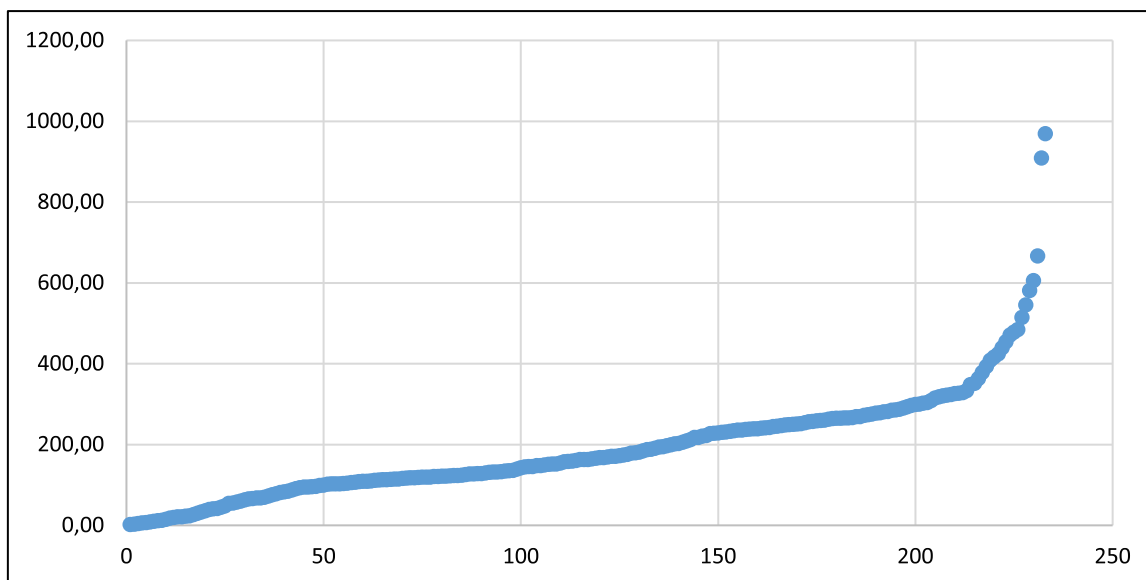
Table 15: Housekeeper from 5 to 17 years of age



IBGE: Household Survey 2015

Approximately 32% of working children receive no remuneration; those who are paid receive on average US\$ 163,64 monthly (Table 16).

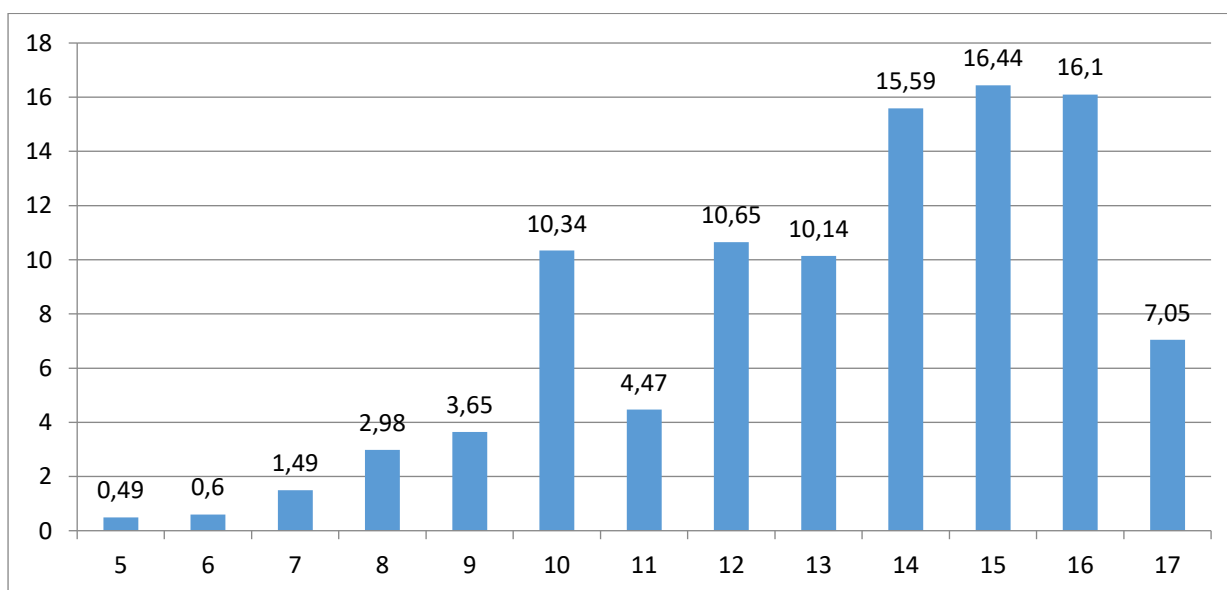
Table 16: Salary of children and adolescents from 5 to 17 years of age (in dollars)



IBGE: Household Survey 2015

Furthermore, 90.78% of working children started working between the ages of 10 and 17 (Table 17).

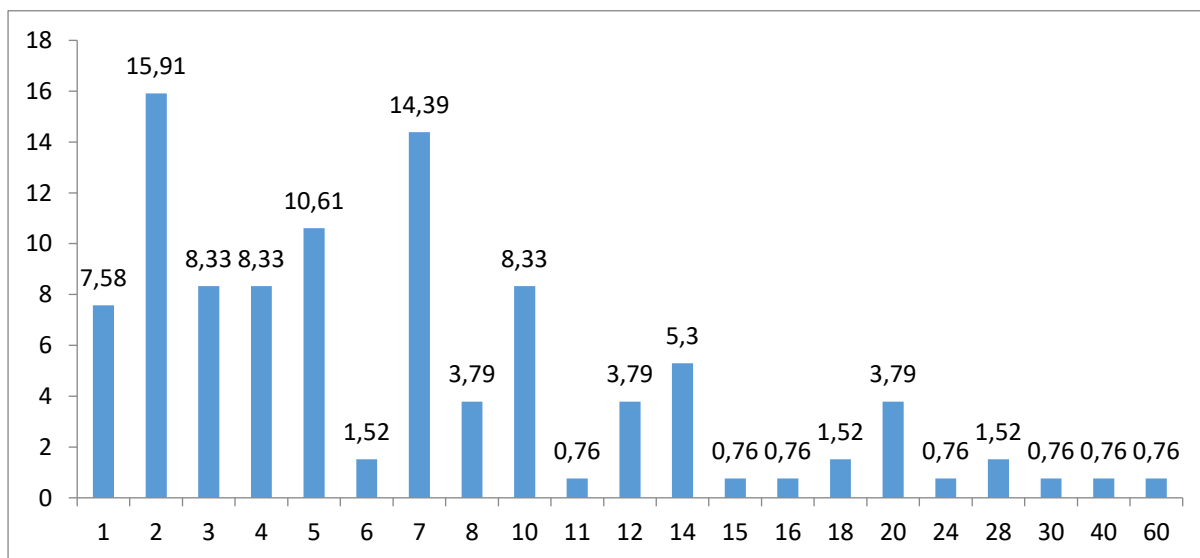
Table 17: Children and adolescents from 5 to 17 years of age that worked in the week of reference, age the person started working (percent)



IBGE: Household Survey 2015

Around 78.79% of children work up to 10 hours per week (Table 18).

Table 18: Children and adolescents from 5 to 17 years of age that worked in the week of reference, hours worked per week (percent)



IBGE: Household Survey 2015

CHAPTER II - CASH TRANSFER PROGRAMMES

Cash transfer programmes have become a reference in virtually all developing countries, and are present globally as a strategy to overcome extreme poverty. A cash transfer programme can be an Unconditional Cash Transfer (UCT) or a Conditional Cash Transfer (CCT) programme.

‘Unconditional cash transfers are given to poor and vulnerable people with no restrictions on how the cash is spent, and no requirements beyond meeting the eligibility criteria (for example, being poor, an orphan, or over 60 years of age). (...) By contrast, conditional cash transfers (CCTs) are delivered only on condition that recipients meet certain requirements, such as that their children should be enrolled in and attending school, and must be immunized’ (Sabates-Wheeler, 2009: 2).

For Rawlings and Rubio (2005), income transfer programmes are an alternative to traditional social assistance programmes and serve as a complement to health and education systems in developing countries. The results of the evaluation of the first generation of these programs in Colombia, Mexico, and Nicaragua show that there has been a success in increasing school attendance, access to health care, and increased family consumption. The results of the evaluation of its second generation in Honduras, Jamaica, Turkey, and urban areas of Mexico have highlighted the sustainability of the programmes in the medium term. The authors point out that there are still some issues that need to be addressed by other studies, such as the impact on long-term well-being of beneficiaries and coping with chronic poverty.

Janvry and Sadoulet (2006) studied Mexico’s Progressa programme. The objective of this study was to evaluate the probability of the program influencing school attendance, and the heteronormativity of the results showed that age, ethnicity, and school existence in the community greatly influence school enrolment.

Skovdal et al. (2013) researched the income transfer program in eastern Zimbabwe and found that the program improved school attendance and student performance. Improvements were also observed in the physical and psychosocial health of the beneficiary children. The program also provided access to food, vaccination, and local medical care.

According to Fiszben and Shady (2009: 1), ‘countries have been adopting or considering adoption of CCT programs at a prodigious rate. Virtually every country in Latin America has such a program’.

A sample of 75 reports, including data from five UTCs and 26 CCTs, performed by Baird et al. (2013) suggests that both UTCs and CCTs have significant effects on enrolment of children in schools. However, the effects of enrolment and attendance are always larger for CCT programmes.

What is better, conditional or unconditional transfer programmes? In Sabates-Wheeler (2009), we find a summary of the main arguments against and in favour of both.

Reasons favouring conditional cash transfers:

- 1) ‘CCTs deliver both well-being benefits to recipient households and improved education and health outcomes for children in these households’.
- 2) ‘They achieve significant impacts on poverty reduction, especially poverty gap and poverty severity measures’.
- 3) ‘Domestically financed social protection requires buy-in from tax-paying middle classes who typically object to ‘welfare handouts’.

Reasons favouring unconditional cash transfers:

- 1) ‘Recipients invest some of their cash transfers in education and health anyway so there is no need to compel them to do so’.
- 2) ‘Conditionalities are paternalistic and interfere with people's right to choose how they allocate their resources’.
- 3) ‘Linking social transfers directly to public services requires well-functioning services’.
- 4) ‘The burden of adhering to conditionalities falls disproportionately on women’.

CHAPTER III - CASH TRANSFER PROGRAMMES AND CHILD LABOUR

Chaluda (2015) performs a synthesis of 51 studies that analyse the capacity of cash transfers programs to improve wellbeing in childhood. The impact of programmes, conditional and non-conditional, is observed in levels of education, health, and child labour. Although the programs appear to increase enrolment in school, the same cannot be said for school attendance or learning outcomes, neither is there much evidence that the programs reduce child labour. Its main effect is the change in the type of activities in which children are involved.

Studies about programs in Nicaragua, Brazil, Cambodia, Chile, Colombia, Bangladesh, Uruguay, Jamaica, Honduras, Turkey, Ecuador, South Africa, Malawi, and Zimbabwe indicate a strong effect on education. The effect of the programs on school attendance is more evident when there are economic barriers, such as cost of fees or uniforms. The key issue, however, remains the parents' decision between time at work or at school. When the value of the benefit offsets the loss in labour income, family tends to decide in favour of school attendance. Some studies have reported increased enrolment, attendance, and school performance. This correlation is true for both conditional and unconditional programs. Other surveys indicate an increase in the cognitive development of children from beneficiary families. In the case of conditional programs, it is also necessary to evaluate the costs of monitoring and compliance with the conditions.

There is no single concept of child labour or a single statistical methodology adopted by all countries to account for it. A deficiency in statistics, common in many countries, is the emphasis on paid work outside households, as many children perform unpaid work activities through family chores. Not accounting for this fact means undervalue considerable participation of girls at work.

On the other hand, the enrolment of children in school does not necessarily mean the abandonment of work. Children can study and continue working in the period they are not in school to supplement the family income.

According to Chaluda (2015:3), 'findings from studies that evaluate the impact of cash transfer policies on the likelihood of a child working and the time spent working are quite heterogeneous. The impact does not seem to be strongly correlated with the size of the transfer

nor with an increase in school attendance, but rather related to the type of work activities in which children are involved’.

The survey performed by Carpio e Marcous (2009: 22) regarding the CCT programme ‘Atención a Crisis’, in Nicaragua, states that the programme ‘reduced total hours worked for older boys, and for boys with low past academic achievements, and these results are driven by reductions in agriculture and livestock. On the other hand, the productive investment package reinforced existing specialization in specific tasks within the household for older girls in particular. (...) A possible explanation of these differences in impacts by gender relates to the timing of the different activities. Agricultural work tends to be done in the mornings, at the same time of classes, while nonagricultural work, domestic work, and chores can be done at a time that does not directly compete with class. Moreover, boys’ work in agriculture can be substituted for with hired labour, while this is more difficult for the tasks in which the girls specialize’.

Borraz and Gonzales (2009: 19) find that the CCT programme of Uruguay’s ‘Ingreso Ciudadano’ ‘has no impact on school attendance, it reduces female child labour in Montevideo and it reduces total hours of work in the rest of the urban country’.

In Honduras, Glewwe and Olinto (2004: 47) studied the CCT programme ‘Asignacion Familiar’. The results show that ‘the demand side intervention of the PRAF II program appears to offer significant promise to improve schooling outcomes in poor rural areas of Honduras. (...) Despite the reduction in child absences, the demand intervention had no effect on child labour force participation. Some of these impacts appear to be negatively correlated with household income, which means that they are stronger for poorer households’.

The study of Gee (2010:16) about CCT programme of Nicaragua estimates that ‘the *Red de Proteccion Social* (Social Safety Net) programme, as implemented in Nicaragua, reduced both the *probability of occurrence* and the *duration* of child labour. More specifically, I estimate that the offer of an RPS subsidy lowers the probability that a child will engage in work by approximately 10.7%, and reduces the weekly hours that a child engages in work, given that the child is currently working, by almost 4 hours on average’.

There are few studies on unconditional cash transfers. The UCT programme of South Africa, Child Support Grant, was analysed by Edmonds (2005: 28), whose study ‘finds that anticipated large cash transfer to the elderly in South Africa appear to be associated with

increases in schooling and declines in hours worked. The average rural South African child living with an elder that is not yet pension eligible spends almost 3 hours per day working. In the data, pension income to an elder male is associated with over an hour less work per day. These declines in hours worked occur simultaneously with increases in school attendance (to nearly 100 percent for rural boys)'.

Analysing the UCT 'Malawi Social Cash Transfer', Covarrubias (2012: 17) finds that the programme decreases the amount of time a child works outside of the home, and increases the amount of time the child works within the household on household chores. 'Adult household members increased their involvement in home based productive work while seeking younger child household members to substitute them in chores and household member care'.

The survey of Miller and Tsoka (2012: 22) about the unconditional Malawi Social Cash-Transfer Scheme, 'confirms that the cash transfer is achieving its goal of helping families overcome income poverty in order to get children into school and out of work'.

CHAPTER IV - THE BOLSA FAMÍLIA PROGRAMME

The Brazilian Bolsa Família programme is one of the largest social assistance programmes in the world. It was conceived at the beginning of the first Lula administration. As part of integrated social policies, the programme aims to reduce current poverty and inequality by providing a minimum level of income for extremely poor families. The strategy is to break the inter-generational transmission of poverty by making these transfers conditional on the compliance by beneficiaries with ‘human development’ requirements (for example, children’s school attendance, attendance at vaccination clinics, and arrangement of prenatal visits).

Brazil brought together several previous programmes in the Single Database for Social Programmes of the Federal Government (Cadastro Único). The Cadastro Único is an instrument that identifies and characterizes the low-income families, allowing the government to know better the economic reality of this population. It registers residence characteristics, identification of each person, education, employment status, and income.

Since 2003, the Cadastro Único became the main Brazilian state instrument for selection and inclusion of low-income families in federal programmes, being used necessarily for the granting of the Bolsa Família Programme, Social Electricity Rate, Minha Casa Minha Vida (housing for low-income families), Bolsa Verde (for families in extreme poverty living in relevant areas for environmental conservation), among others. It can also be used for selecting programme beneficiaries offered by state and local governments. Therefore, it acts as a gateway for families to access various public policies.

The Bolsa Família Programme (PBF) is a conditional cash transfer programme income that benefits poor and extremely poor families enrolled in the Cadastro Único. In November 2016 the federal government paid US\$ 727 million (R\$ 2.4 billion) to 13.5 million families. The average amount of the benefit in that month was US\$ 55.7 (R\$ 183.78) (Brasil, 2016).

Among many challenges faced by Bolsa Família Programme, it was necessary to overcome the objection that the beneficiary families would not know how to properly use the resources passed on. It was also argued that families would choose to have more children to gain access to more resources. However, studies show that there is, in last few decades, a trend

of fertility decline across the income ranges in Brazil, especially among the poorest families (Alves and Cavenaghi: 2013, Jannuzzi and Pinto: 2013).

The main myth about Bolsa Família is that families would stop working when they received the benefit, a Brazilian version of the 'lazy welfare recipient'. Surveys show that there is no significant difference in the occupation rate between beneficiaries and non-beneficiaries of the programme. It has also not been proven that the programme encourages informality (Jannuzzi and Pinto: 2013, Barbosa and Corseuil: 2013).

Evaluations show positive impacts on the reduction of poverty and inequality, contributing to the country's recent progress in this respect, as well as on the level of children's school attendance. While no significant negative impacts on labour supply have been noted, the programme appears to have generated a positive impact on female labour force participation, particularly in the lower-income deciles.

The amount received by the families benefiting from the Bolsa Família Program (PBF) increases with a rise in the number of family children and adolescents. Then comes the question: does the variable benefit paid for each additional child stimulate the PBF beneficiary families to have more children?

The female fertility in Brazil has been falling since the sixties (Alves, 2011). Fertility rates are lower for segments of the urban population, higher income, of higher education, that is, greater social inclusion in Brazil. At present, part of the population with lower levels of income and education have higher fertility rates, but these rates are now falling.

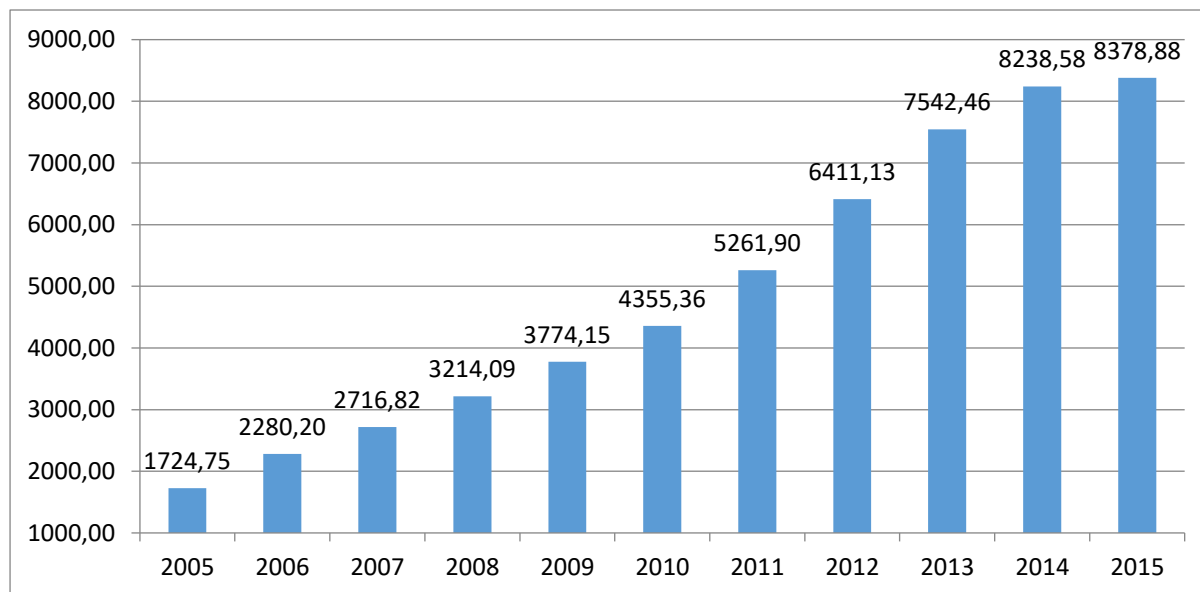
Thus, the data indicate that the fertility rates of the poorest in Brazil fell in the last decade. This fact is already an indication that the Bolsa Família Program (PBF), in force since 2004, does not seem to have pronatalist effects, as some argue.

Similarly, the results obtained by Simões (2012) show that PBF did not show this effect, at least at the beginning of the program.

Many previous programmes were unified by the Bolsa Família Programme. The basic objectives of the Bolsa Família Programme are to promote access to public services network, in particular health, education, and social assistance, fight hunger and promote food and nutrition security, stimulate sustained emancipation of families living in poverty and extreme

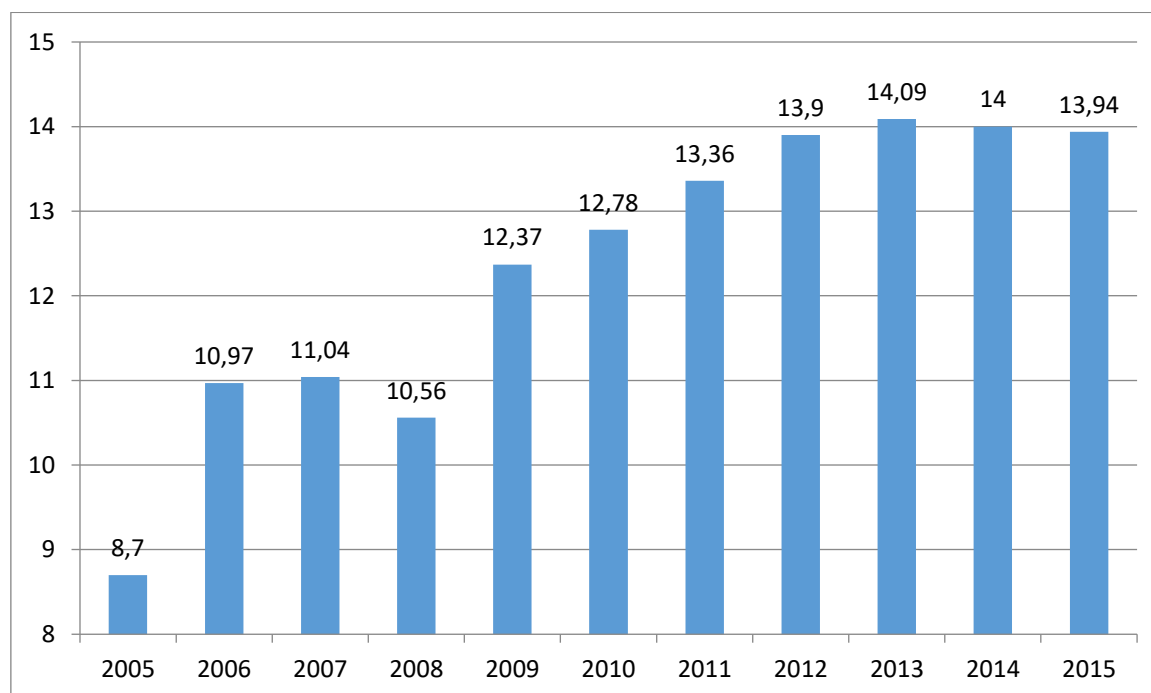
poverty, combat poverty, and promote intersectoral approach, complementarity and synergy of the social actions of the government (MDS, 2016).

Table 19: Bolsa Família Programme – Total transferred, by year, in dollar (thousand)



Ministry of Social Development: Secretary for Evaluation and Information Management

Table 20: Bolsa Família Programme: Total of beneficiary families, by year (thousand)



Ministry of Social Development: Secretary for Evaluation and Information Management

The admission of families into the Bolsa Família Programme takes place through the Cadastro Único. The Bolsa Família Programme attends to families in poverty and extreme poverty, characterized by monthly per capita family income. Families eligible for the Bolsa Família Programme, as identified in the Cadastro Único, shall be selected from a set of social indicators able to establish more accurately the situations of social and economic vulnerability.

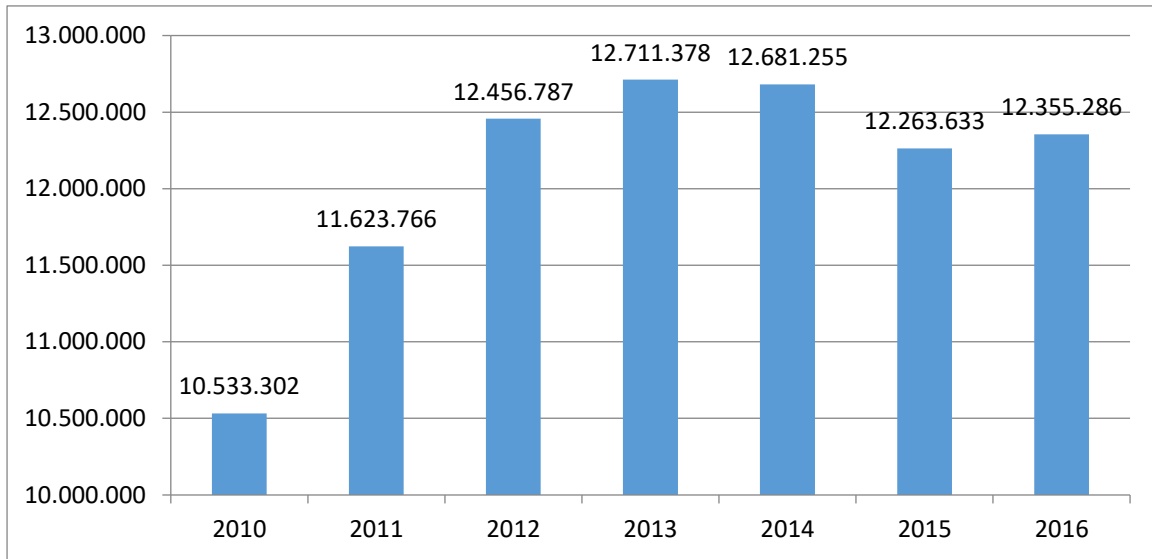
The financial benefits of Bolsa Família Programme are: 1) basic benefit, intended for households that are in a situation of extreme poverty; 2) variable benefit for households that are in a situation of poverty or extreme poverty and have in their composition: a) pregnant women, b) nursing mothers, c) children between 0 and 12 years, or d) adolescents up to 15 years; 3) variable benefit of extraordinary character consists of a part of the value of the benefits of previous programmes incorporated into Bolsa Família Programme.

The families receiving the benefit will continue to receive monthly payments, except in the occurrence of evidence of child labour in the family. If there proves to be child labour occurring, the case in question shall be submitted to the relevant authorities.

Conditionalities of the Bolsa Família Programme include effective participation of families in the educational process and in health programs that promote the improvement of living conditions from the perspective of social inclusion.

It will be up to the various levels of government to ensure full access rights to educational and health services, which enable the fulfilment of conditionalities by the families benefiting from the programme.

Table 21: Bolsa Família Programme: Amount of basic benefits

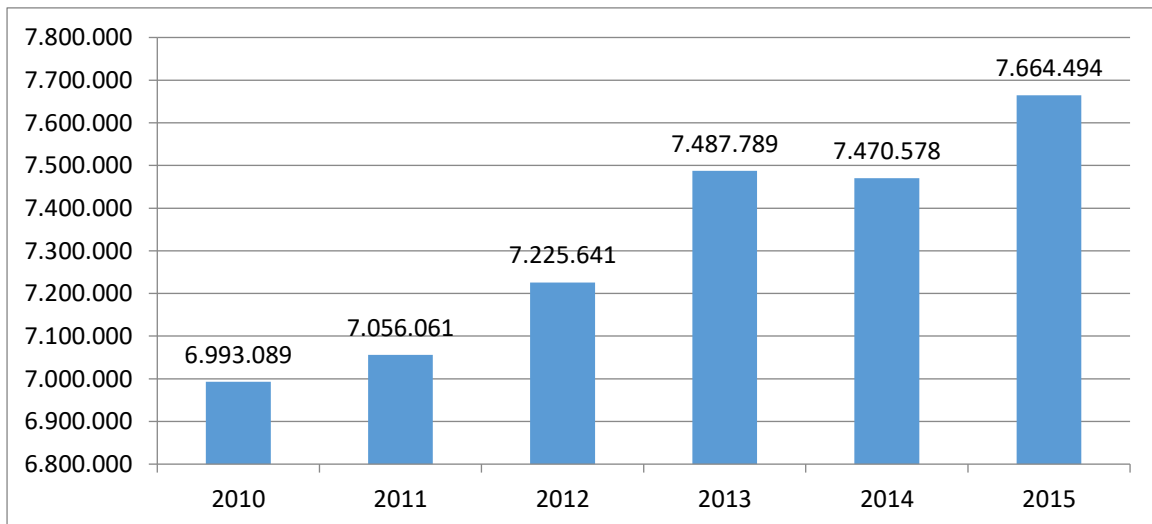


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In addition to the Basic Benefit, a family can receive up to five Variable Benefits:

A) Benefit for families with children or adolescents from 0 to 15 years old, amounting to US\$ 11.81 (R\$ 39.00). School attendance is required.

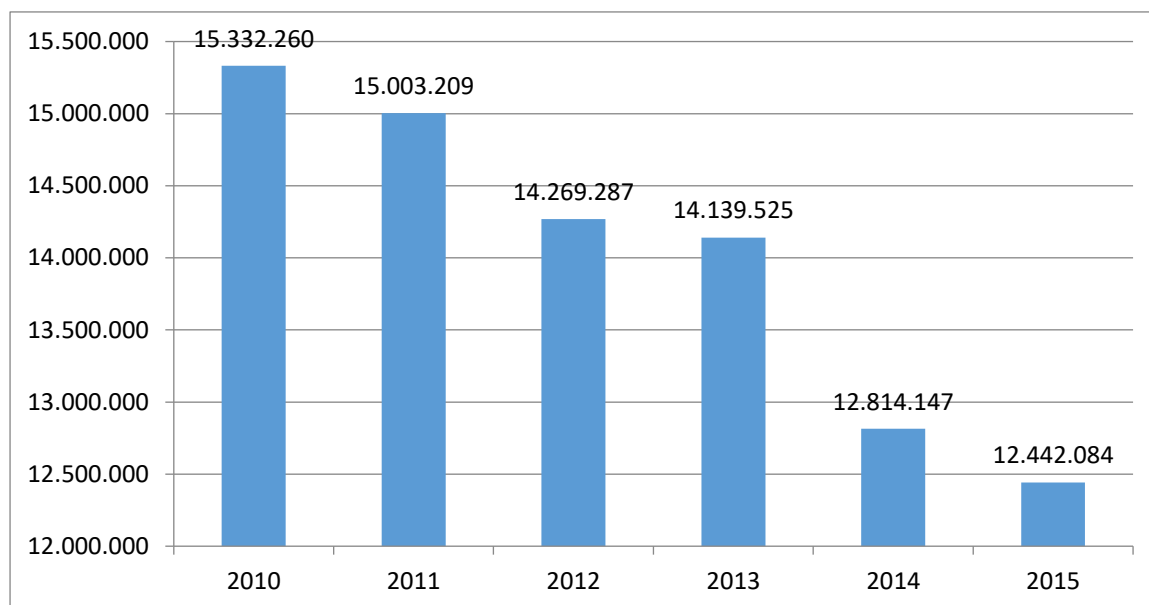
Table 22: Bolsa Família Programme: Amount of benefits for 0 to 15 years of age



Ministry of Social Development: Secretary for Evaluation and Information Management

B) Benefit for families with adolescents between 16 and 17 years old, amounting to US\$ 13.93 (R\$ 46.00). Up to two members per family are paid. School attendance is required.

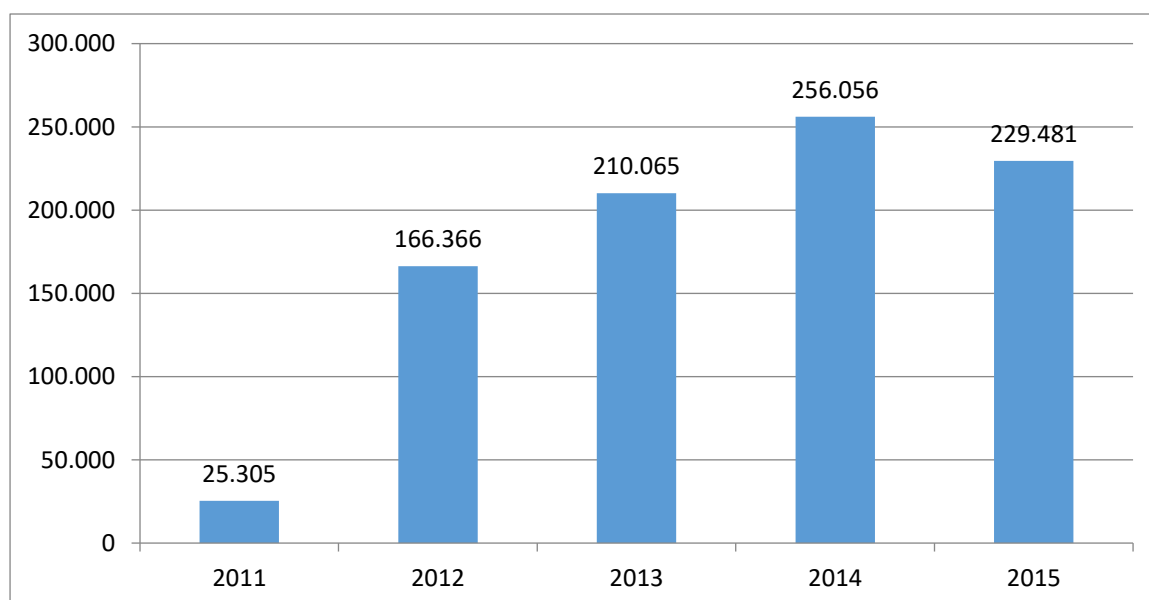
Table 23: Bolsa Família Programme: Amount of benefits for 0 to 15 years of age



Ministry of Social Development: Secretary for Evaluation and Information Management

C) Benefit for families with pregnant women, amounting to US\$ 11.81 (R\$ 39.00).
Nine monthly instalments are transferred.

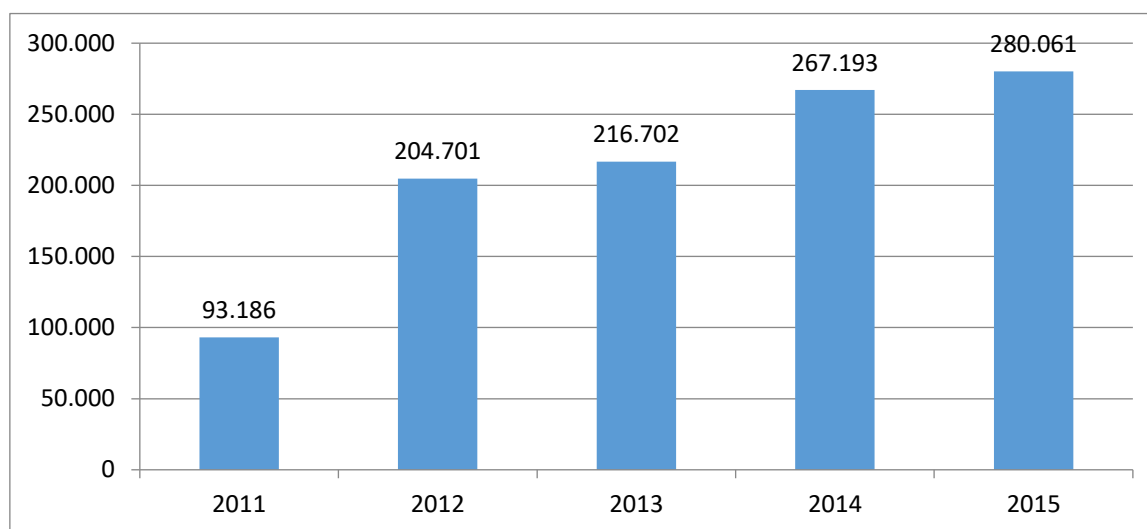
Table 24: Bolsa Família Programme: Amount of benefits for pregnant women



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D) Benefit for families with children aged 0 to 6 months, to reinforce the baby's feeding, even in cases in which the baby does not live with the mother. There are six monthly instalments of US\$ 11.81 (R\$ 39.00).

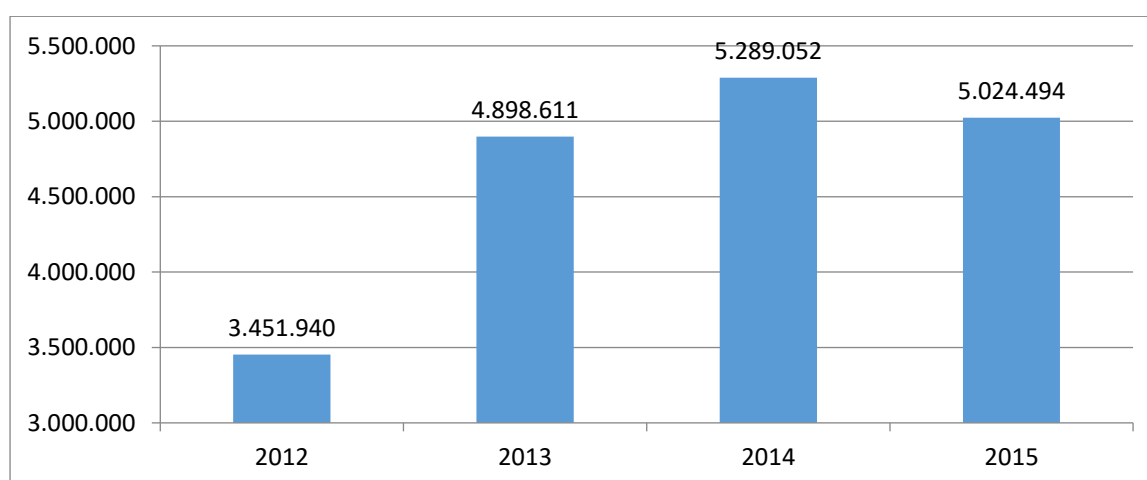
Table 25: Bolsa Família Programme: Amount of benefits for 0 to 6 months



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E) Benefit for Overcoming Extreme Poverty, the value of which is calculated individually for each family. Payment to families that continue with monthly income per capita less than US\$ 25.75 (R\$ 85.00), even after receiving the other types of benefits of the Programme. The benefit amount is calculated on a case-by-case basis, according to the family's income and number of people, to ensure that the family exceeds US\$ 25.75 per capita income.

Table 26: Bolsa Família Programme: Amount of benefits for overcoming extreme poverty



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CHAPTER V - BOLSA FAMÍLIA AND CHILD LABOUR

Cacciamali (2010), using a synthesis of the results estimated by probit bivariate, concludes that likelihood of child labour incidence is higher among boys and increased with the age of the child, family size, rural area, informal occupation of the head of household, and when the spouse is also in some form of occupation. On the other hand, with a man as household head, education and family income act against the phenomenon. There is a positive coefficient for the variable Bolsa Família, indicating that the fact of being beneficiary of the program increases the chances of incidence of child labour in poor households.

According to Araújo (2014), the implementation of the PBF can be a cause of reduction of child labour, as shown by the results obtained in this study. It was noted, however, that domestic child labour did not decrease but there was an increase for the two studied income levels. This fact can be attributed to the absence and difficulty of monitoring this category of employment.

In the study of Nascimento (2014), none of the results of the impact of the Bolsa Família program on the binary variable is statistically significant, so it is not possible to say that the program has an impact on child labour. Although not significant, the sign is negative for most results, signalling that the program would reduce the probability of a child working.

In 2016, families who are entitled to the benefits offered by the Bolsa Família programme are those in extreme poverty with per capita income less than US\$ 25.75 (R\$ 85.00) or those in poverty with per capita income of US\$ 25.76 (R\$ 85.01) to US\$ 51.51 (R\$ 170.00). The national minimum salary in Brazil in 2016 was US\$ 266.66 (R\$ 880.00).

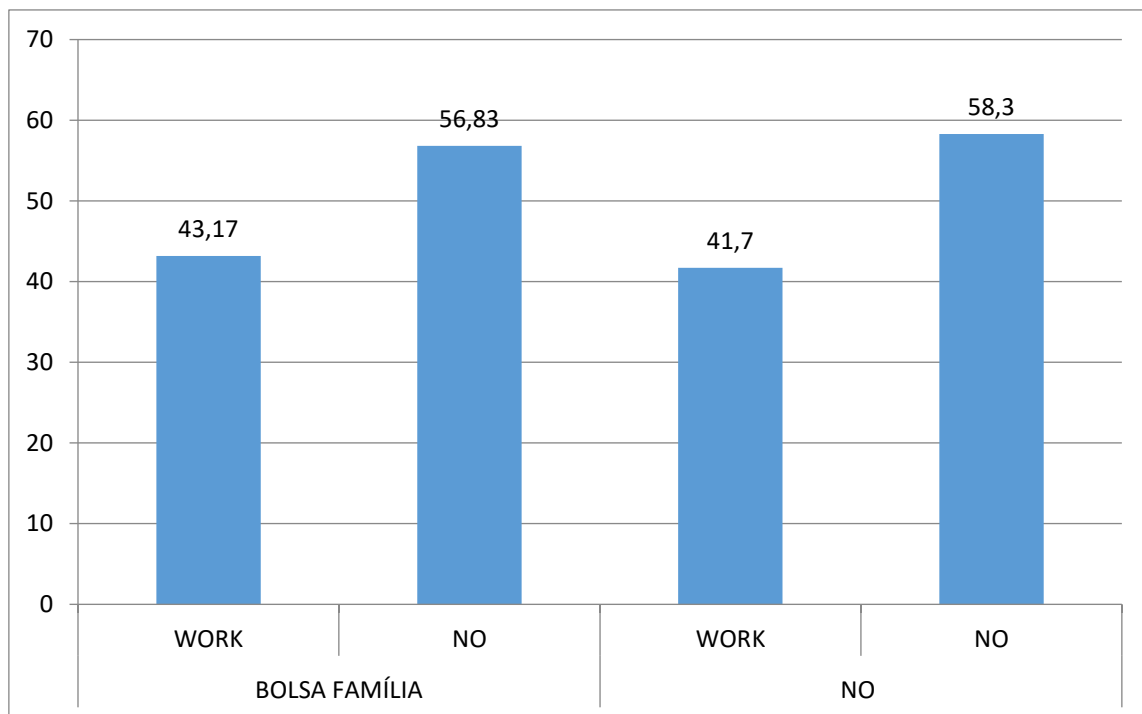
Despite the claim that the BFP causes families to not seek work, the data show that many beneficiaries are working, albeit informally, in order to increase their income. Research, such as Tavares (2010), reveals that programme participation has a positive effect on the decisions of working mothers.

‘The explanation for this result may arise from the substitution effect, characterized by the increase in the labour supply of the mothers as a consequence of the increase of the school attendance of the children and, consequently, of the reduction of child labour. Moreover, it can be assumed that simply leaving their children in school implies more time available for mothers to work, which serves as another argument for the positive effect of the program on labour

supply. Finally, it can also be considered that receiving the benefit of the program stimulates the increase of mothers' labour supply in response to the stigma of participating in the program' (Tavares, 2010: 18).

The table below shows the number of low-income families (inscribed in federal single register) receiving and not receiving the income of the BFP. Among them are families with people who worked and did not work in the week before the survey. The percentage of families in the programme (43.17) with at least one person who worked is greater than those outside the program (41.70).

Table 27: Single Database: families with person that work last week

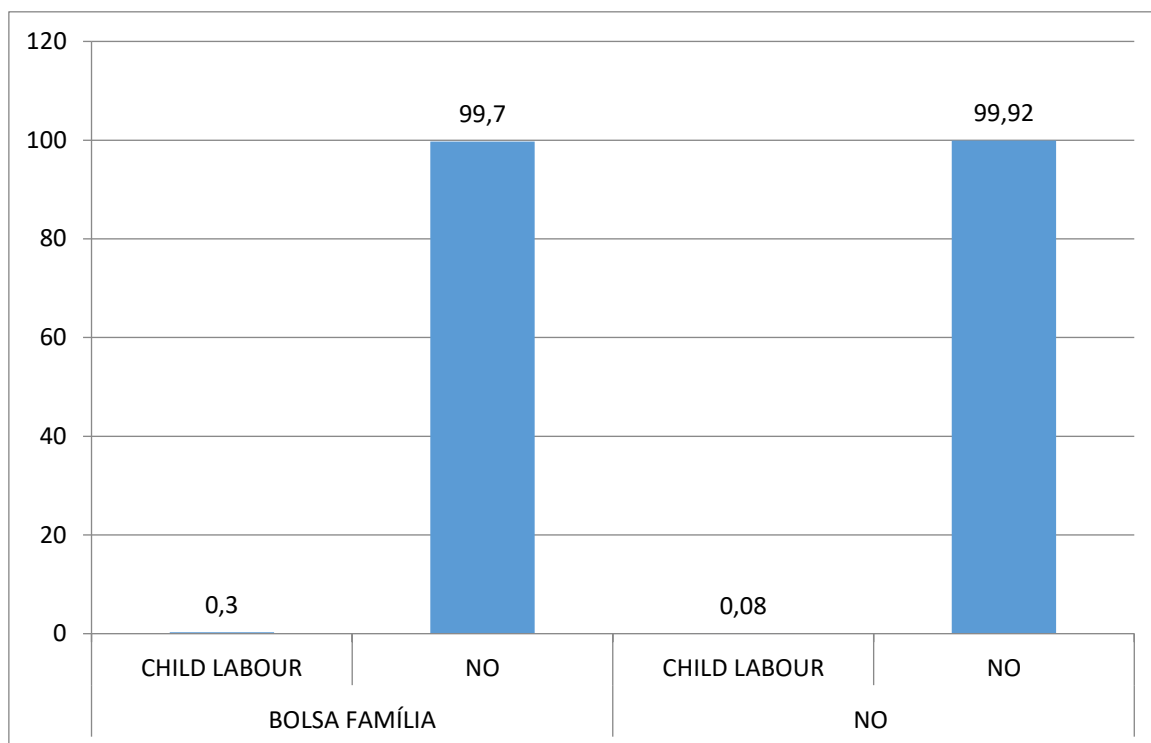


Ministry of Social Development: Secretary for Evaluation and Information Management.

Although many factors, such as low parental education or neglect in the care of children, can contribute to child labour, the search for additional income is certainly one of the key reasons.

The table below shows the number of BFP beneficiary and non-beneficiary families. Among them are those that had at least one child working. The percentage of families in the programme (0.3) with a child working is greater than those outside the program (0.08).

Table 28: Single Database: families with child labour



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CHAPTER VI - IMPACT OF BOLSA FAMILIA ON CHILD LABOUR.

To estimate the effect of the Bolsa Família Programme on child labour, the propensity score matching model was applied. The treatment variable is whether or not people participate in the programme. The outcome is labour, and the independent variables are age, gender, and school.

The household survey (Pesquisa Nacional por Amostra de Domicílios) of 2015 has 356.904 observations. People occupied and not occupied from 5 to 14 years of age were selected. Registered workers were excluded to avoid inclusion of apprentices between 14 and 17 years of age. Only those households with no income and income up to a quarter of minimum wage were selected.

```
. describe $treatment $ylist $xlist
```

variable name	storage type	display format	value label	variable label
programme	byte	%9.0g		received income from social prog
labour	byte	%9.0g		worked in the week
age	int	%9.0g		age of resident
gender	byte	%9.0g		gender
school	byte	%9.0g		school attendance

```
. summarize $treatment $ylist $xlist
```

Variable	Obs	Mean	Std. Dev.	Min	Max
programme	12806	.0142902	.118689	0	1
labour	12806	.0586444	.2349671	0	1
age	12806	11.03038	3.642553	5	17
gender	12806	.509683	.4999258	0	1
school	12806	.9330782	.2498962	0	1

```
. bysort $treatment: summarize $ylist $xlist
```

```
-----> programme = 0
```

Variable	Obs	Mean	Std. Dev.	Min	Max
labour	12623	.0587024	.2350761	0	1
age	12623	10.98828	3.641695	5	17
gender	12623	.5111305	.4998959	0	1
school	12623	.9340093	.2482756	0	1

```
-----> programme = 1
```

Variable	Obs	Mean	Std. Dev.	Min	Max
labour	183	.0546448	.2279092	0	1
age	183	13.93443	2.274093	10	17
gender	183	.4098361	.4931525	0	1
school	183	.8688525	.3384877	0	1

Summarizing by treatment, the number of households that received the treatment is 183, while 12.623 did not receive it. Around 1,4% of the data have received the treatment. In the control group, child and adolescents work a little more than in the treatment one. They are younger, there are more males, and the school attendance is higher.

When performing a regression with a dummy variable for treatment, the difference is very small (-0,004).

```
. reg $ylist $treatment
```

Source	SS	df	MS	
Model	.00296982	1	.00296982	Number of obs = 12806
Residual	706.955097	12804	.055213613	F(1, 12804) = 0.05
Total	706.958067	12805	.055209533	Prob > F = 0.8166

R-squared = 0.0000
 Adj R-squared = -0.0001
 Root MSE = .23498

labour	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
programme	-.0040576	.0174954	-0.23	0.817	-.0383511	.030236
_cons	.0587024	.0020914	28.07	0.000	.0546029	.0628019

Now controlling for treatment (x), y to outcome variables, dummy for treatment, and the x variables. Those who receive treatment work less 4,6.

```
. reg $ylist $treatment $xlist
```

Source	SS	df	MS	Number of obs = 12806		
Model	53.4594693	4	13.3648673	F(4, 12801) = 261.80		
Residual	653.498597	12801	.05105059	Prob > F = 0.0000		
				R-squared = 0.0756		
				Adj R-squared = 0.0753		
Total	706.958067	12805	.055209533	Root MSE = .22594		

labour	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
programme	-.0467837	.0169079	-2.77	0.006	-.0799257	-.0136417
age	.0148435	.0005574	26.63	0.000	.0137509	.0159361
gender	.053679	.0039955	13.43	0.000	.0458473	.0615108
school	-.068026	.0080919	-8.41	0.000	-.0838873	-.0521647
_cons	-.0683021	.0108024	-6.32	0.000	-.0894763	-.0471278

The characteristic of being older or male are positively correlated with child labour. School attendance and participation in the Bolsa Família Programme reduces the likelihood of child labour.

Estimating a propensity score matching model. Dummy variable for treatment variable (whether or not the treatment is being received).

```
. pscore $treatment $xlist, pscore(myscore) blockid(myblock) comsup
```

```
*****
```

```
Algorithm to estimate the propensity score
```

```
*****
```

```
The treatment is programme
```

received	Freq.	Percent	Cum.
income from			
social prog			
-----+-----			
0	12,623	98.57	98.57
1	183	1.43	100.00
-----+-----			
Total	12,806	100.00	

```
Estimation of the propensity score
```

```
Iteration 0: log likelihood = -959.10365
```

```
Iteration 1: log likelihood = -895.43719
```

```
Iteration 2: log likelihood = -889.79419
```

```
Iteration 3: log likelihood = -889.68889
```

```
Iteration 4: log likelihood = -889.68882
```

```
Probit regression                                Number of obs   =    12806
                                                LR chi2(3)      =    138.83
                                                Prob > chi2     =    0.0000
Log likelihood = -889.68882                    Pseudo R2      =    0.0724
```

programme	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
-----+-----					
age	.1035308	.0104515	9.91	0.000	.0830462 .1240153
gender	-.1549872	.0612073	-2.53	0.011	-.2749513 -.035023
school	-.0431508	.1001614	-0.43	0.667	-.2394635 .1531619
_cons	-3.366144	.1872002	-17.98	0.000	-3.73305 -2.999239
-----+-----					

```
Note: the common support option has been selected
```

```
The region of common support is [.00571981, .0541236]
```

Description of the estimated propensity score
in region of common support

Estimated propensity score

Percentiles		Smallest		
1%	.0057198	.0057198		
5%	.0057198	.0057198		
10%	.006615	.0057198	Obs	8534
25%	.0101188	.0057198	Sum of Wgt.	8534
50%	.0172213		Mean	.0200369
		Largest	Std. Dev.	.0124953
75%	.0282092	.0541236		
90%	.0398179	.0541236	Variance	.0001561
95%	.0436651	.0541236	Skewness	.8759311
99%	.0541236	.0541236	Kurtosis	2.899105

Step 1: Identification of the optimal number of blocks

Use option detail if you want more detailed output

The final number of blocks is 4

This number of blocks ensures that the mean propensity score
is not different for treated and controls in each block

The participation in the programme reduces the labour in 3,8% to people from 5 to 17 years old.

```

*****
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
*****

```

The balancing property is satisfied

This table shows the inferior bound, the number of treated and the number of controls for each block

Inferior of p-score	received income from of block	social prog	Total
	0	1	
.0057198	3,074	44	3,118
.0125	2,532	54	2,586
.025	2,623	75	2,698
.05	122	10	132
Total	8,351	183	8,534

Note: the common support option has been selected

```

*****
End of the algorithm to estimate the p-score
*****

```

ATT estimation with Nearest Neighbor Matching method

(random draw version)

Analytical standard errors

n. treat.	n. contr.	ATT	Std. Err.	t
183	7553	-0.038	0.017	-2.188

CONCLUSION

At the time of this study (December 2016), the Brazilian Institute of Geography and Statistics (IBGE) was yet to publish the results of the household survey (PNAD) of 2015. The result of this last PNAD confirms the trend of the last decade of reduction in child labour in Brazil. The country has been successful in tackling child labour and is a reference for the whole world. The survey of 2014 showed an increase in child labour compared to 2013. However, the 2015 PNAD showed a steady reduction trend.

When the survey of 2014 was published, the IBGE stated that the increase in child labour was due to the crisis that began in Brazil in 2013, which culminated in the impeachment of President Dilma Rousseff. With the reduction of economic activity, families would have to introduce their children to the labour market to supplement income.

When the survey of 2015 was published, the IBGE again affirmed that the reduction of child labour is the result of the economic crisis. In this case, child labour would have diminished because parents and children were no longer finding jobs in the labour market.

Therefore, if child labour is declining year by year in Brazil, there are still many doubts regarding the factors that explain it. The factors that determine child labour are multiple, involving both income and cultural factors, and the reduction of child labour in Brazil is the result of several initiatives by both the Brazilian State and society, and the quest for the eradication of child labour occurs within the context of the policy focused on the protection of children and adolescents.

Brazil has had a standardized social assistance policy since the 1990s, specialized labour inspection groups have been set up in the Ministry of Labour, and non-governmental organizations for the prevention and eradication of child labour have emerged throughout the country, constituting a very successful network.

Child labour, because it is exercised informally, is difficult to measure, and fulfilling the obligation of the family to remove the child from work is more difficult than keeping the children in school. There is a downward trend in child labour in Brazil, and this is largely due to the set of programmes adopted by the government in recent years, including the Bolsa Família programme.

Child labour is one of the cruellest faces of poverty. The fact that children work prolongs the cycle of poverty, since it jeopardizes children's physical, social, and intellectual development. People who work from an early age have fewer opportunities in the job market. Their academic achievement and, consequently, their productivity at work as adults are compromised.

Income transfer programmes are now present in many developing countries and contribute to the reduction of child labour. In Brazil, the Bolsa Família Programme was responsible for taking thousands of families out of extreme poverty. Among its merits, we can highlight the increase in women's power. The benefit is usually paid to women through the Citizen's Card, which values and recognizes her role as the main bearer of responsibility for the family.

Concerning its difficulties, the program faces the problem of payment where the banking system is precarious. Some localities in Brazil do not have bank branches. This raises the cost of receiving the program money. Not infrequently, third parties receive the money, or merchants retain the Citizen's Card as a guarantee of indebtedness by the beneficiaries of the programme.

Regarding the measures of attention to children who are in work situations, previously attended by the activities of the PETI, within the scope of the Bolsa Família Programme, children today must be assisted by the Service of Coexistence and Strengthening of Family Links, offered by Centres of Social Assistance, maintained by the municipalities.

Despite the legal forecast regarding the composition of the team, property, and infrastructure, most Reference Centres all over the country do not operate in a uniform manner. The method of hiring staff is precarious and often follows political and non-technical criteria. The childcare service, as of today, is much worse than that existing at the time of PETI.

The partisan political identification of Bolsa Família is a limit to be surpassed in order to ensure its future. Initiated at the beginning of the Workers' Party government, the program needs to be consolidated as part of a public policy, a commitment of the Brazilian State to address extreme poverty.

The social assistance policy needs to be improved so that the working child is cared for and the adolescent has opportunities for professional qualification.

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