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The effect of unconditional cash transfer programs on education: The case of basic citizenship income in Maricá

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ABSTRACT

In the context of this work, it was analyzed the Basic Citizenship Income Program in Maricá/RJ. The program currently transfers 200 reals per beneficiary, paid to families with a monthly income of up to three minimum wages. The objective of this study is to evaluate the impact of the Basic Citizenship Income Program in Maricá on basic education (Ideb). The synthetic control method was applied to compare the evolution of the Ideb in Maricá after the introduction of the policy to a set of control municipalities representing the counterfactual results in the absence of basic income payments. A positive effect of cash transfers on education in the municipality was observed. The impact on the Ideb for the final years of primary school was positive and significant and on the Ideb for the initial years was positive, but not statistically significant. The results are in line with previous studies which show that conditional and unconditional income transfers have positive effects on education.

Keywords: Cash transfers. Basic Income. Public policies. Social Protection. Education.
JEL: I22, I38, H53.

SUMMARY

1. INTRODUCTION

Cash transfers have been increasingly adopted by governments around the world as central elements of their poverty reduction and social protection strategies. In 2019, 1.5 billion people in poor and developing countries participated in at least one social safety net (Gentilini *et al*., 2014; 2019).

Among the Brazilian experiences of income transfer, we can highlight that of Maricá, in the state of Rio de Janeiro (RJ). In 2013, Maricá created the solidarity economy project, which operates along four lines: income transfer; popular education; fostering collective and solidarity enterprises; and food sovereignty. Approximately 93,000 residents benefit from the program through the monthly injection of R$18 million into the economy (Maricá, 2023a; Cristiane, 2023).

The general objective of this study is to investigate the effects of an unconditional cash transfer policy on education, based on the Basic Citizenship Income Program in the municipality of Maricá-RJ. More specifically, the aim is to measure the effect on the Basic Education Development Index (IDEB) . It is hoped that Maricá's Basic Citizen's Income will have improved students' school performance and, as a result, increased the municipality's educational indices. This expectation comes from the results of studies indicating that cash transfers have the potential to improve education by increasing school enrollment and attendance, and reducing dropout and grade repetition (Adato; Bassett, 2009; Baird; McIntosh; Özler, 2011; Akresh; Walque; Kazianga, 2013; Baird *et al*., 2014; Benhassine *et al*., 2015; Bastagli *et al.*, 2016; Fenton *et al*., 2016; Bastian; Michelmore, 2018). Also according to these studies, the positive effects can be explained as a consequence of the improvement in the conditions of the students' families, providing better coverage of school expenses; compensating for the loss of income when children are sent to school instead of working; ensuring that children are better nourished; reducing marriages and teenage pregnancies; and encouraging them to attend school.

The research method used is synthetic control (MCS) (Abadie; Diamond; Hainmuller, 2010, 2015; Abadie, 2021). It is a statistical method of the quasi-experiment type, commonly used to measure the effects of an intervention in comparative case studies. Ideb data was used before (2005 to 2013) and after the start of treatment (2014 to 2021) for the treatment unit (Maricá) and for the set of municipalities used to make up the synthetic control, made up of an average of municipalities with similar characteristics.

2. THEORETICAL FRAMEWORK

2.1 Universal basic income

A common feature over the centuries is that social protection has its origins in the struggles and hard-won gains of coalitions of the poor, working and middle classes (Desai; Kharas, 2017). Eventually, social protection systems adapt to contemporary challenges, but rarely without major crises, social battles or both. Institutions and the political system take time to adjust to a rapidly evolving society. Part of the narrative about universal basic income is that social protection systems, especially in higher-income countries, are being overtaken by structural changes in demographics, employment and culture. In other words, countries have a 20th century system to deal with the challenges of the 21st century (Gentilini *et al*., 2019). The pressure for change is visible. As Piketty (2014, p. 27) said, "the dynamics of wealth distribution reveal a powerful gear [...] and there is no natural or spontaneous process to prevent destabilizing forces, those that promote inequality, from prevailing."

Basic income is defined as "an income paid by a political community to all its members individually, regardless of their financial situation or work requirement" (Van Parijs, 2000, p. 179). It is an income in money (not goods or services) and paid on a regular basis. It is paid not necessarily by a country, but also by a municipality, state or supranational entity. It is paid individually and not to each family group. Regardless of financial situation, the same amount for rich and poor. It is also independent of whether you are working, have a job for a period of time or are willing to work in some way, not being obliged to accept job offers, be actively looking for one or be linked to some kind of training (Van Parijs, 2000).

According to the authors Suplicy (2013), Bregman (2018), Van Parijs (2018), Lazzarin (2020) and Neiva (2020), the origin of the proposal dates back to 1516, in Thomas More's work *Utopia*. In the work, the author describes the island of Utopia, a supposedly ideal society in which he advocates the distribution of basic means of subsistence to the population to prevent citizens from having to steal to survive. Possibly inspired by his friend Thomas More, Juan Luis Vives, in his 1526 report *De Subventione Pauperum* (On Aid to the Poor), proposed that the city council of Bruges, Belgium, create a law that would guarantee aid to all citizens. Thomas Paine, in 1797, in his work *Agrarian Justice*, argued that land income should be shared among the entire community. Charles Fourier and John Stuart Mill later addressed the issue, both in 1848. Mill, in his *Principles of Political Economy*, argued that it would be highly desirable for

subsistence to be guaranteed by law to the indigent, even the physically able, "deserving" or not, rather than relying on voluntary charity. Fourier, in *La Fausse Industrie*, argues that if society deprives man of the four branches of natural subsistence (hunting, fishing, gathering and grazing), the class that took the land owes the frustrated class a minimum subsistence.

In the 20th century, two Nobel Prize winners in economics from opposing currents proposed some form of minimum income. Milton Friedman (neoliberal, Chicago school monetarist and advisor to President Reagan) proposed the implementation of a negative income tax. And James Tobin (Keynesian and advisor to President Kennedy), together with John Kenneth, advocated the introduction of a *demogrant* (aid granted on the basis of certain demographic conditions). The proposal was even included in the campaign program of Democratic Party presidential candidate George McGovern, but was withdrawn a few months before the election (Bregman, 2018; Van Parijs, 2018; Lazzarin, 2020).

In Europe, in the 1980s, the debate on basic income was reborn. In 1986, an international network of researchers on the subject was created, the Basic Income European Network, later renamed the Basic Income Earth Network (BIEN), by philosopher Philippe Van Parijs and economist Yoland Bresson (Van Parijs, 2018; Lazzarin, 2020).

RBU aims to solve or mitigate many problems in order to increase fairness in social contracts, the potential coverage of policies, power relations in labor markets, gender equity, social inequality and poverty. In addition to the historical objectives, the policy can be an important solution to mitigate current problems such as the possible massive job losses caused by automation and artificial intelligence, as well as a simplification of the bureaucracy and complexity of public social assistance policies (Gentilini *et al*., 2019).

Governments around the world are increasingly implementing social assistance programs as central elements of their poverty reduction and social protection strategies. According to Bastagli *et al*. (2016), in 2016 there were around 130 low- and middle-income countries that have at least one UCT program, including targeted anti-poverty transfers and social pensions for the elderly. Adoption of these programs is growing especially strongly on the African continent, where 40 of the 48 countries in sub-Saharan Africa had a UCT in 2016, double the number in 2010. Similarly, 63 countries had at least one CCT program in 2016, compared to just two countries in 1997 and 27 countries in 2008. Thus, 1.5 billion people in poor and developing countries were participating in at least one social safety net in 2016 (Gentilini *et al*., 2014; 2019). This expansion has been accompanied by a growing number of evaluations and studies, resulting in a body of evidence on the effects of different programs on individual and household

outcomes (Bastagli *et al*., 2016). These programs have led to reductions in poverty and positive effects on education and health services (Gentilini *et al.*, 2014).

More broadly, social assistance programs can be classified according to three characteristics or dimensions: the type of transfer they offer; in what form and whether they are conditional; and in what form and whether they are targeted. An UBI is the combination of three options: a transfer that is provided universally, unconditionally and in cash. Within this framework, RBU proposals can still differ on a number of parameters, such as the level and frequency of the transfer, the age of eligibility and whether all citizens or residents are covered (Gentilini *et al*., 2019).

Banerjee, Niehaus and Suri (2019) also argue that universality would drastically reduce the administrative costs of maintaining the program, improve the political economy of redistribution and may have a modest effect on the perceived incidence of benefits, while substantially reducing the scope for corruption and other abuses of power. According to Gentilini *et al.* (2019), universality circumvents the problems of exclusion and inclusion errors that are inherent in conditional cash transfers. It can also eliminate any stigma affecting beneficiaries and reduce transaction costs involved in accessing benefits. In addition, a universal transfer would be more compatible with work than most programs, as it eliminates the price effect of transfers.

2.1.1 Effects of RBU

Many studies have shown the positive effects of a universal basic income. One great example is the Alaska Permanent Fund dividend program. The fund's resources come from *royalties* from oil exploration in the state. Since 1982, every resident has been entitled to an annual UCT. The only criteria are residency (having resided in Alaska the previous year and intending to stay indefinitely) and not having any recent serious criminal convictions. Normally more than 90% of the population receives the dividend. The amounts generally do not exceed 7% of the recipients' average annual income. The dividend has attracted significant public support across all demographic, socioeconomic and political strata. The program has reduced poverty and inequality and stimulated the economy, generating jobs and income without producing inflation. Fertility rates were not affected, generating only a slight increase in migration (Gentilini *et al.*, 2019; Lazzarin, 2020). Recent evidence shows that part-time work has increased by 1.8 p.p. (17%) (Jones; Marinescu, 2022). Alaska is, according to the latest available data (2022), the state with the lowest economic inequality among the 50 US states (Statista, 2023).

In the case of the only two RBU experiments implemented at national level, both used natural resource dividends to finance the cash transfer, as in the case of Alaska. In Iran, the government decided to partially cut subsidies on food, energy, fuel and other various products. As a compensatory measure, a universal cash transfer was implemented in 2010, benefiting up to 96% of families. Around US$45 a month was transferred per person, which represented 29% of the average *per capita* income. The costs represented 3% of the national GDP. With the end of the subsidies, the inflationary effect was great, generating a 20-fold increase in the prices of agricultural products and residential energy, which reduced the purchasing power of the transfer by two-thirds (Zytek; Farzin, 2016; Gentilini et al., 2019). Nevertheless, promising results emerged, such as the absence of negative effects on the labor market, both in terms of hours worked and labor force participation. On the contrary, positive effects have been identified for women's work and men's self-employment (Salehi-Isfahani; Mostafavi-Dehzooei, 2018).

In the case of Mongolia, the transfer program was financed by a *boom* in the country's mining activities. Between 2002 and 2008, GDP growth rates approached 9% per year. During the 2008 elections, the creation of a cash transfer program was a hotly contested promise between the political parties. In 2009, the Human Development Fund was created with the aim of collecting and distributing resources to the population. The transfers then began to be distributed, amounting to up to US$89 per person per year. Unlike Alaska, the amount to be distributed was set on the basis of electoral promises, not on the basis of the revenues accumulated in the fund. As expected, problems arose in financing the program. Commodity prices became very volatile, the financing of the benefit became dependent on government loans and the value of the transfers decreased significantly. Despite the problems faced, the program provided significant benefits in the short term, reducing poverty by a third and inequality by 13%, also making Mongolia the middle-income country with the highest rate of financial inclusion. The policy's inadequate design and misguided implementation made it unsustainable. It ended up increasing the country's foreign debt and quickly lost popular support, being terminated after two years (Yeung; Howes, 2015; Gentilini *et al*., 2019).

In a study carried out on the NGO GiveDirectly program, an attempt was made to analyze the economic and psychological effects of unconditional cash transfers on households in western Kenya. An average of 709 US dollars was transferred per family between 2011 and 2013, which corresponds to almost 2 years of spending *per capita*. The results showed an increase in spending on food and food security, but no increase in spending on superfluities. There was an increase in investment in livestock and durable goods, increasing income from commercial ac-

tivities, as well as significant increases in psychological well-being (Haushofer; Shapiro, 2016).

In Finland, a partial basic income experiment was carried out over a period of two years (2017-2018), in which 560 euros per month were distributed to two thousand people. The results showed that the well-being of the beneficiaries of the program was clearly better than that of the control group. Participants in the test group had far fewer problems related to health, stress and the ability to concentrate. The beneficiaries were also considerably more confident in their own future and in their ability to influence social issues, as well as being more confident in their job prospects. The beneficiaries had half a day more employment in the labor market than the control group. And earning gains from the labor market was more frequent among the treatment group by one percentage point (Kangas *et al*., 2019).

A frequent concern about cash transfer programs is, among other things, whether they discourage work (Banerjee *et al*., 2017). Regarding the effect of these transfers on employment, a series of studies based on the Negative Income Tax experiments of the 1970s and evidence from lottery winners estimate an income effect of approximately -0.1 in developed countries, implying that a 10% increase in unearned income will reduce labor income by about 1% (Jones; Marinescu, 2022).

In another study of seven cash transfer programs in six countries (Honduras, Indonesia, Morocco, Mexico, Nicaragua and the Philippines), aggregate evidence from randomized evaluations found no effects of transfers on work behavior, either on the propensity to work or on the total number of hours worked, for both men and women (Banerjee *et al*., 2017).

2.2 Universal basic income in Brazil

The first proposal to guarantee a minimum income in Brazil dates back to 1975, when Antonio Maria da Silveira proposed the implementation of a negative income tax. The same proposal was made by Edmar Lisboa Bacha and Roberto Unger Mangabeira in 1978. In 1986, on the national program of the Workers' Party (PT) broadcast on national television, economist and party member Paul Singer defended the need for a minimum family income program. In 1991, then senator Eduardo Suplicy presented Senate Bill 80, which instituted the Minimum Income Guarantee Program.

The first time a minimum income program was implemented in Brazil was by the governor of the Federal District, Cristovam Buarque, in 1994, the Bolsa Escola Program (Suplicy, 2013).

After this initial experience, several other municipalities approved and implemented similar programs, such as Ribeirão Preto, Jundiaí, Santo André, Piracicaba, Santos, Belém, Belo Horizonte, Blumenau, Caxias do Sul, Goiânia, Natal and Vitória. Minimum income bills were also presented in the House and Senate and, in 1997, Law No. 9,533 was passed and sanctioned, authorizing the federal government to finance half of the costs of the programs set up by the municipality. In 2001, with the approval of Law No. 10,219, the Bolsa Escola program was implemented at the federal level (Suplicy, 2013). Senator Eduardo Suplicy presented a new bill in 2001, instituting the Basic Citizenship Income, unconditional for all people and to be implemented gradually. The bill was approved by Congress and, in 2004, Law No. 10,835 was passed. The law has not yet been regulated, but Bolsa Família is considered to be the first phase of implementation (Lazzarin, 2020). Brazil became the only country in the world to have legislation guaranteeing every citizen the right to a basic income (Katz; Ferreira, 2020).

The PBF has become a fundamental part of the Brazilian social protection system, as it has managed to achieve excellent results with modest budgetary resources. A program with good targeting and huge coverage. It managed to reduce poverty (15%) and extreme poverty (25%) and was responsible for 10% of the drop in the Gini coefficient between 2001 and 2015 (Souza *et al*., 2019). Also according to Souza et al. (2019, p. 30), "it is unlikely that the targeting of the program can be substantially improved, given the complexity of the real world". It would be advisable to expand the number of beneficiaries, as well as increase the value of the benefit.

In 2020, during the covid-19 pandemic, emergency aid was implemented, expanding the number of beneficiaries and supplementing the amount paid by the PBF. As it was a temporary benefit, in 2021 the aid was incorporated into the Brazil Aid Program, which also replaced the Bolsa Família, permanently increasing the value of the transfer. The program was short-lived, since in 2023 there was a change of government and the PBF was reinstated, further expanding the value of the benefit, stipulating a minimum value of 600 reais for each family, to which 50 to 150 reais are added for each child or adolescent. The average value of the transfer is 687 reais and is paid to families with a monthly individual income of up to 218 reais. In 2023, it would serve 21.45 million families (Auxílio [...], 2021; Bolsa [...], 2023; Verdélio, 2023).

Similar to BIEN, the international basic income organization created in Europe, the Brazilian Basic Income Network (RBRB) was created in Brazil in 2019. Formed by professors, researchers, activists, students and public policy professionals, it was created with the aim of spreading the idea of income distribution in Brazil. Encouraging public and private organizations to adopt basic income, and serving as a link between interested individuals and groups

(Rede Brasileira de Renda Básica, c2024).

Currently, the main experience of basic income in Brazil is the Basic Citizenship Income Program in Maricá, Rio de Janeiro. The details of the program are contained in the next chapter of the work. Regarding the effects of the program, among the few studies carried out to date, one study found a positive effect on the labor market after the implementation of the basic income program, with the substantial creation of formal jobs (between 2,307 and 3,364 jobs per year on average, depending on the method) (Lima, 2021).

2.3 Effects of the RBU on education

Adato and Bassett (2009) conducted a review of several studies on 20 cash transfer programs in various countries around the world with the aim of examining the potential of social assistance systems to protect vulnerable families and children. Among other results, it was shown that cash transfers have the potential to improve children's education by covering school expenses, compensating for the loss of income when children are sent to school instead of working, ensuring that children are better nourished at school and providing an incentive for attendance when the transfer is conditional.

Regarding unconditional cash transfers, the following results were found. In a district in South Africa, the Child Support Grant (CSG) program was associated with an increase of 8.1 p.p. in the enrollment of 6-year-olds and 1.8 p.p. for 7-year-olds. In national data, the same CSG program, together with the Old Age Pension, was associated with a 25% reduction in children not enrolled in school. In Zambia, the Social Cash Transfer Scheme pilot program was responsible for an increase in enrolment of 8 p.p. for adolescents aged 14-15 and 10.4 p.p. for 5-6 year olds.

Conditional cash transfers are usually linked to enrollment and minimum school attendance. For the same review mentioned above, the results for CCTs were as follows. Mexico's Programa de Educación, Salud y Alimentación (Progresa) resulted in an increase of 9.3 p.p. for girls and 5.8 p.p. for boys in enrollment rates, as well as reducing dropout rates, grade repetition and child labor. Nicaragua's Red de Protección Social (RPS), with subsidies only for primary education, increased enrollment by 12.8 net percentage points. The impacts were greater for the extremely poor, at 25 p.p. The RPS also increased school attendance rates by 20 p.p. on average, and by 33 p.p. for the extremely poor. Bolsa Escola in Brazil has also had some positive impacts on school attendance, dropout rates and school pass rates. Colombia's Familias en

Acción program had an impact on secondary school enrolment of 5.2 p.p. in urban areas and 10.1 points in rural areas. Ecuador's Bono de Desarrollo program increased elementary school enrolment by 9.8 to 12.8 percentage points and reduced child labor by 15.4 to 20.6 points. In Cambodia, the Scholarships for Girls program increased secondary school enrollment by 22 to 33 percentage points. An evaluation of Bangladesh's Reaching Out of School Children (ROSC) program found no impact in areas that only received school subsidies, but in areas with school subsidies and student stipends, the project induced an average increase of 8.9 percentage points in elementary school enrollment for children aged 6 to 14. In Turkey, a CCT program increased girls' secondary school enrollment by 10.7 percentage points. In rural areas, the program increased beneficiaries' enrollment by 16.7 percentage points (Adato; Bassett, 2009).

In relation to the Bolsa Escola program (Brazil's CCT which transferred income to poor families conditional on school attendance), the study by Cardoso and Souza (2009) estimated that the average effect of the treatment was an increase of 3 p.p. in children's school attendance (from 92% to 95% for boys and from 93% to 96% for girls). However, no difference was found for child labor. Along the same lines, Janvry, Finan and Sadoulet (2006) estimated a 7.8 p.p. reduction in school dropout and a 0.8 p.p. reduction in failure rates. According to the authors, the results can be attributed to the fact that the cash incentive helped keep less able and motivated children in school who would otherwise have dropped out. A small negative effect on failure was also identified.

In another review of articles on the effects of cash transfers, the UK's Overseas Development Institute assessed the evidence on the effects of transfers on individuals and families through a 15-year literature review from 2000 to 2015. It focused on non-contributory cash transfers, including conditional and unconditional transfers. With regard to education indicators, 42 articles were reviewed. These studies refer to 27 programs, covering 20 countries in East Asia and the Pacific, Latin America and the Caribbean, the Middle East and North Africa, Sub-Saharan Africa and South Asia; in many cases including several studies on the same program. In general, the evidence extracted showed that cash transfers lead to an increase in school attendance in the short term. Of the nine studies that analyzed a measure of school absenteeism, all four that found significant effects involved reductions. Among the studies that measured school attendance (16 articles), all but one of the 10 with significant impacts were positive. However, no clear pattern of impact was found for learning and cognitive development outcomes, partly because they result from a dynamic interaction between biological, social and environmental factors, including the quality of the services provided. Five studies examined

the overall effect of cash transfers on test scores; four of them assessed mathematics (with no significant result); three assessed language (with two significant but opposite results); and one study assessed a mixed score of tests, (with no significant result). Five studies provided an estimate of the overall effect on cognitive development; of these, three studies found a statistically significant positive effect on cognitive development tests (Bastagli et al., 2016).

Bastian and Michelmore (2018) analyzed the long-term effects on children of the Earned Income Tax Credit (EITC) program in the United States. Using the variation in federal and state EITC benefits over time by family size, the results indicate that the EITC provides a significant improvement for children. And these improvements persist into adulthood. After a $1,000 increase in exposure to the EITC, between the ages of 13 and 18, individuals are 1.3% more likely to complete high school by age 20 and 4.2% more likely to complete a college degree by age 26. These educational gains also translate into increases in employment and earnings in adulthood. There was a 1.0% increase in the probability of being employed between the ages of 22 and 27 and a US$ 560 (or 2.2%) increase in average annual earnings.

In a randomized experiment carried out by the Moroccan Ministry of Education in 600 communities (Benhassine *et al*., 2015), the results showed that a cash transfer earmarked for education and made to families of primary school-age children in rural areas had a very large impact on school participation, even though the transfer was not conditional on attendance and was of a relatively small amount. The pilot program implemented was unconditional, but maintained an implicit endorsement of education due to the enrollment procedure being administered by school principals, and could be classified as a *labeled cash transfer* (LCT). The study also concluded that adding attendance conditions tends to decrease the overall impact on participation and learning, as well as concluding that focusing the program on mothers makes no difference. In addition, compared to conditional cash transfers, LCT is more cost-effective than a standard CCT, both because it requires lower transfer amounts and because the administrative costs are much lower. Conditionality still slightly reduces the effect and worsens segmentation.

On the other hand, in a study focusing on female adolescents in Malawi (Baird, McIntosh; Özler, 2011), the results in education were better for conditional cash transfers than for unconditional ones. CCTs performed better in increasing enrollment rates and school attendance, as well as a modest improvement in school grades. Despite this, unconditional cash transfers achieved much more effective results in reducing marriages and teenage pregnancies.

In the same vein, a study carried out by the World Bank found some differences between conditional and unconditional cash transfers (Akresh; Walque; Kazianga, 2013). The research

was based on a two-year pilot program (Nahouri Cash Transfers Pilot Project - NCTPP) which randomly distributed cash to low-income families in rural Burkina Faso. The results indicated that UCTs and CCTs have similar impacts on increasing the enrolment of children who are traditionally prioritized by families to attend school, such as boys, more able children and those of older school age. However, CCTs proved to be more effective than UCTs in increasing the enrollment of "marginal" children, those who are initially less likely to attend school, such as girls, children with low ability and younger children.

In yet another study comparing the impact of conditional and unconditional transfers, Fenton *et al*. (2016) analyzed data from a randomized controlled trial conducted in 4,043 households in Zimbabwe from 2009 to 2010. In both transfers, there was an increase in the proportion of children with school attendance above 80% in almost equal measures (7.2 to 7.6% on average), except in the least poor quintile, where only CCT increased attendance. CCT participants had a 0.69 lower probability of repeating a school grade compared to the control group, while UCT participants had no reduction in grade repetition.

Also seeking to verify the differences between conditional and unconditional transfers, Baird and colleagues (2014) conducted a systematic review using data from 75 reports covering 35 different studies. The authors find that both CCTs and UCTs improve the chances of school enrollment and attendance compared to no cash transfer program. The effect sizes for enrollment and attendance are always larger for CCTs compared to UCTs, but the difference is not statistically significant. When programs are categorized as having no school conditionalities; some conditionalities and minimal monitoring and coercion; and explicit conditionalities that are monitored and with coercion, a much clearer pattern emerges, in which programs that are explicitly conditional, monitor compliance and penalize non-compliance have substantially larger effects (60% improvement in the odds of enrolment). Unlike enrollment and attendance, the effectiveness of programs in improving test scores is small.

Saavedra and García (2012), in a meta-analysis of 42 studies on the impact of cash transfer programs on education, reached the following main results: the average effect sizes of CCTs on school enrollment, attendance and dropout are all positive, statistically significant and greater in magnitude for secondary school than for elementary school; the effects are greater in environments with lower initial conditions; more substantial transfer amounts are positively and significantly associated with greater effects on primary and secondary school enrollment; the imposition of performance conditionalities (such as not failing subjects), in addition to standard attendance conditionalities, are positively associated with greater enrollment and attendance ef-

fects in secondary school; and the effects are significantly greater on elementary school enrollment in programs that also attempt to expand the supply side through subsidies, infrastructure or other resources for schools.

In the previously mentioned study on the NGO GiveDirectly program in Kenya (Haushofer; Shapiro, 2016), which analyzed the economic and psychological effects of unconditional cash transfers on households in western Kenya, no improvements were found in education, health and female empowerment data. According to the authors, the possible cause is due to the short-term nature of the study's follow-up, as these results usually appear in the long term.

Using data from the Great Smoky Mountains Study of Youth in rural North Carolina (USA), we investigated the effect of an unconditional income transfer from the profits of a casino on the Eastern Cherokee Indian Reservation. A portion of these profits is distributed every six months on an equal *per capita* basis to all adult members of the tribe, regardless of employment status, income or other family characteristics. Individuals are eligible based on their pre-existing Native American status. The results showed that the children of the beneficiary families have higher levels of education and a lower incidence of petty crime, and that an additional US$4,000 per year for the poorest families increases the level of schooling by one year at the age of 21 and reduces the chances of committing a petty crime by 22% for 16 and 17 year olds (Akee *et al*., 2010).

It is important to analyze the impact of Brazil's largest social program, the PBF. The results point to a positive effect of the Brazilian CCT on education. Cavalcanti, Costa and Silva (2013) found a positive and significant impact of conditionality on the school attendance of children under 17, with a greater magnitude than the cash transfer itself. In the same vein, Amaral and Monteiro (2013) found that the PBF was responsible for a reduction in the chances of school dropout (between 33% and 57%) for three different *per capita* family income thresholds in 2005. For 2009, the results were not statistically significant, although they also pointed to a reduction in dropouts. Silva, Brandão and Dalt (2009) also found positive impacts of Bolsa Família on the schooling of children and adolescents. In the article by Simões and Sabates (2014), evidence was found of positive contributions of the PBF to school results as a function of the time effect and the income effect of the program, pointing out that the longer the time of receipt and the higher the value of the benefit, the better the results.

This study investigated the effect of the Basic Citizen's Income program in the municipality of Maricá on basic education, in order to evaluate the public policy implemented and its possible effects. The hypothesis is that the program has improved student performance and

school attendance, thereby increasing the municipality's educational indices. The proposed hypothesis is in line with the results of studies indicating that cash transfers have the potential to improve education by increasing school enrollment and attendance, reducing dropouts and grade repetition, as a consequence of reducing child labor, marriages and teenage pregnancy, improving children's nutrition and encouraging them to attend school (Adato; Bassett, 2009; Baird; McIntosh; Özler, 2011; Akresh; Walque; Kazianga, 2013; Baird *et al*, 2014; Benhassine *et al*., 2015; Bastagli *et al*., 2016; Fenton *et al*., 2016; Bastian; Michelmore, 2018).

3. CONTEXT: THE CASE OF BASIC CITIZENSHIP INCOME IN MARICÁ

The municipality of Maricá can be considered the closest federal entity to complying with Law No. 10,835/2004, which made RBU mandatory throughout the country (Matthews, 2019).

Maricá is a municipality in the state of Rio de Janeiro located in the metropolitan region of the capital. It has a population of approximately 197,000 inhabitants and a total area of 361.57 km². Its main economic activity is oil extraction and it is located in the Santos Basin.

Maricá created a sovereign wealth fund in 2017, which will allow the municipality to be more financially sustainable and not rely exclusively on *royalty* revenues, given the uncertain future of fossil fuels in the medium and long term (Ferreira; Katz, 2020). And, contrary to what one might assume, the volume of social spending is relatively low. The social assistance item in the 2023 budget law was approximately 77 million reais, a derisory amount in a total budget of almost 7.5 billion reais (Maricá, 2022).

In June 2013, through Law No. 2.448/2013, Maricá instituted the solidarity economy project, creating the mumbuca social currency and the Popular Community Bank, with the aim of combating inequalities, boosting the local economy, eradicating poverty and creating jobs. Initially, 70 mumbucas (equivalent to 70 reais) were transferred to a debit card, which could only be used in local stores, in establishments that accepted the currency. Several conditions were also required, such as vaccination and enrolment of children in schools, as well as an income of less than one minimum wage (Maricá, [2023?]; Waltenberg *et al*., 2022).

In 2015, with the approval of Law No. 2,652, the program was expanded. The family income range became 3 minimum wages, coinciding with the family income on the Unified Registry. The amount increased to 85 mumbucas, and the Renda Mínima Gestante and Renda Mínima Jovem Solidário were created. The Basic Citizenship Income Program was also implemented, with the aim of providing a universal benefit of ten mumbucas to 14,000 people. In

2017, the Minimum Income Programs paid out 110 mumbucas and the Basic Citizenship Income 20 mumbucas. The Mumbuca Indígena Program was also implemented, which paid 300 mumbucas to all the indigenous people in the two villages located in the municipality (Costa *et al*., 2020).

In 2019, the city government expanded the PRBC, absorbing the old programs and reaching 42,500 beneficiaries, almost 25% of Maricá's population; it also intends to reach the entire population (Costa *et al*., 2020). Another important advance was to make the benefit individual. Previously, only the head of the family received the payment. This significantly increased the amount received by each household. After numerous changes to the coverage rules, amounts and rules, the benefit now "almost fully complies with two of the three principles idealized by a basic income policy: unconditionality and individuality" (Waltenberg *et al*., 2022, p. 573). After this major expansion, it became the largest basic income program in Latin America (Ferreira; Katz, 2020).

With Law No. 3,153 of May 2022, the program updated the amounts to 200 mumbucas per person, subject to a monthly family income of up to three minimum wages and a minimum residence in the municipality of at least three years. The Indigenous Mumbuca Program maintained the value of 300 mumbucas. The value of the Basic Citizen's Income provisionally reached 300 mumbucas during the most serious period of the pandemic (Costa et al., 2020; Maricá, [2023?]; Waltenberg et al., 2022). The complete history of developments can be seen in figure 1. Currently, around 18 million reais are injected into the local economy every month (Maricá, 2023a). And, in addition to the cash transfer program, Maricá has massive investment initiatives in infrastructure, free public transport, student savings, a sovereign wealth fund, a community garden program, among other initiatives (Ferreira; Katz, 2020).

Figure 1 - Benefit amounts in Maricá (in R$)

Source: prepared by the author (2024) based on Costa et al. (2020) and Maricá ([2022?]).

*Temporary value due to the covid-19 pandemic.

By the end of 2023, the PRBC included approximately 50,000 new beneficiaries, reaching a number of almost 92,000 people, an increase of 113%. The value of the transfer will rise from the current 200 to 230 reais, and the requirement for a minimum period of living in the city will cease to exist, following approval by the City Council (Maricá, 2023a; Cristiane, 2023).

Each of the beneficiaries of Maricá's basic income program received, in 2019, an amount equivalent to R$1,560 per year, which represented 4.5% of Brazil's GDP per capita. In contrast, the value of the annual dividend paid by the Alaska Permanent Fund ranges from 1.5% to 3% of the state's GDP *per capita* (Ferreira; Katz, 2020).

The Mumbuca digital currency, managed by the Mumbuca Community Bank, has parity with the national currency. A 2% fee is charged on every transaction, which goes to the Banco Comunitário Popular de Maricá Fund and is used to finance the bank's credit policies, which offers loans to companies at 0% to 1% interest per month and interest-free housing loans (Costa *et al*., 2020; Maricá, [2023?]; Silva, 2022).

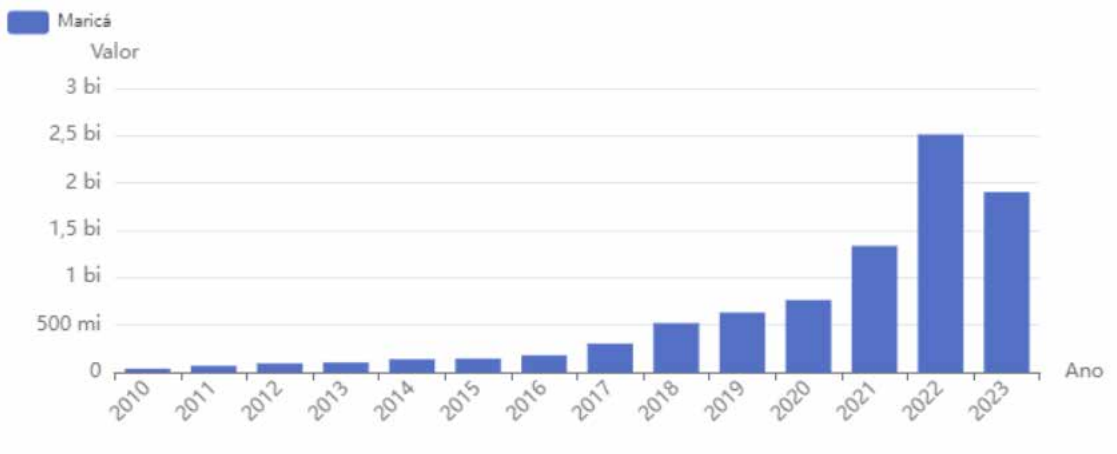
Another important axis of the PRBC is Mumbuca Futuro, created in 2017. The program targets students from the 6th year of elementary school in public schools. A monthly benefit of 50 mumbucas is offered to students who maintain a minimum attendance of 75% and who attend extracurricular classes on solidarity economy. In addition to the monthly transfers, an annual deposit of 1,200 mumbucas is made, conditional on passing the school year. Subsequent enrollment in higher education, participation in a cooperative/association or setting up a company is also required (Costa *et al*., 2020).

The municipality also has a policy of valuing school teachers, where a teacher's starting

salary can reach 282.39% of the national teaching floor. There is an attractive career plan and support for teachers. The ratio is 11 pupils for every teacher, preventing overload. In the last competition to fill 326 vacancies, more than 100,000 applicants were registered, demonstrating the attractiveness of the position (Silva, 2024).

The solidarity economy program in Maricá is financed mainly through the royalties generated by the exploitation of oil reserves, in a similar way to what happens in Alaska. The difference is that, in Alaska, the value of the benefit is indexed to the royalties and, in Alaska, the *royalties* are part of the municipality's budget, from which the financial resources for payment are drawn, without a direct link. The evolution of the royalties received by Maricá can be seen in figure 2. It is important to note that the program was implemented years before royalties reached more significant values.

Figure 2 - Royalties received annually by Maricá (in R$)



Source: Candido Mendes University ([2024?]).

With regard to spending on education financed with resources from *royalties* and special participation, Souza and Menezes (2021) carried out a study of the municipalities in the metropolitan region of Rio de Janeiro. Based on budget data from 2017 and 2018, only eight municipalities in the metropolitan region (36.4%) spent a portion of these resources on education, and none of them spent more than 10% of the total amount. The municipalities are Maricá, Cachoeiras de Macacu, Guapimirim, Itaguaí, Magé, Niterói, Petrópolis and Tanguá. For Maricá, spending represented 7.7% of *royalties*, the third highest proportion (Souza; Menezes, 2021). Looking at total spending on education for these eight municipalities, 30.3% of this expenditure in Maricá comes from oil *royalties*, the highest proportion within the group. In Niterói the percentage is 11.3% and in the others the share does not exceed 4% of total investment in education

(Souza; Menezes, 2021). The data demonstrates the value placed on education in Maricá, while at the same time showing the importance of royalties for education in the municipality.

Finally, it can be considered that Maricá's Basic Citizenship Income is already unconditional and almost fully individualized; however, it is not yet universal (Waltenberg *et al.*, 2022), which may raise questions about the results of this research in relation to the impacts of a pure RBU. In this respect, Gentilini *et al*. (2019) argue that classifying different programs in terms of RBU or quasi-RBU is not important for the following reasons: because (1) it confuses and polarizes the current debate, exchanging precision for public repercussion; (2) it risks reinventing the wheel around key issues for which there may already be a consolidated knowledge base; (3) it widens the gap between the actual and theoretical form of a program; and (4) it may not always elucidate the nuances and distinct characteristics that a set of alternative social protection measures possess to achieve similar objectives. It is concluded that testing at least two characteristics of a classic RBU can still yield useful information, as well as spark public and political debate.

Universality needs to be progressive and ensure that those most in need receive support to meet their vulnerabilities and needs. The gradual construction of a solid social assistance platform, whether through one program or several, must be done from the bottom up (Gentilini *et al*., 2019).

4. METHODOLOGY

4.1 Data collection

Ideb data was used before and after the start of treatment for the treatment unit (Maricá) and for the set of municipalities used, in order to make up the synthetic control, formed by a weighted average of municipalities with similar characteristics. The set of control variables, used to create the most appropriate counterfactual, is made up of municipal data on population, GDP *per capita*, percentage of BFP coverage and the Firjan Municipal Development Index (IFDM).

The IDEB was created in 2007 and is the combination of two important concepts for the quality of education: school flow and average performance in assessments. The Ideb is calculated from data on school pass rates and dropouts, obtained from the School Census, and from the average performance in the Basic Education Assessment System (Saeb). The index ranges

from 0 to 10. The best results in the IDEB are achieved by systems that concurrently achieve higher pass rates and proficiency in the assessments. The index is also an important driver of public policy and is the tool for monitoring quality targets for basic education (Brasil, [2022?]).

The index is calculated by school, municipality, federal unit, region and Brazil. Schools are separated into public and private and state and municipal. And the index is subdivided into: Ideb Elementary School Early Years (AI), covering the 1st to 5th year of elementary school; Ideb Elementary School Late Years (AF), from the 6th to the 9th year of elementary school; and Ideb High School (EM), from the 1st to the 3rd year of high school. The Ideb is calculated every two years.

When designing the assessment program, Inep set targets to achieve a minimum level of educational quality. For elementary school AI, the target was set at 6. For elementary school AF, the national target was 5.5. And for secondary education it was 5.2. The initial plan was to achieve the targets by 2021, which was made difficult by the impact of the pandemic.

An important point to note is the influence of the covid-19 pandemic on the 2021 Ideb results. On the one hand, there was a drop in learning as measured by Saeb scores. According to Inep (Brazil, 2022), the tests were administered in such a way as to allow comparisons between editions. However, the atypical educational context imposed by the pandemic (period of suspension of teaching activities, remote classes and review of curricula and criteria) had an impact on the assessment. On the other hand, there was an increase in student pass rates. This was due to adjustments in the approval criteria, since most states adopted automatic approval (Brazil, 2022).

Municipal GDP is the sum of all final goods and services produced by a city, and GDP *per capita* is the division between GDP and the total population of the municipality.

This study used the percentage of municipal coverage of the Bolsa Família program. The indicator was calculated by dividing the beneficiaries of the program by the population of each municipality.

The Federation of Industries of the State of Rio de Janeiro (Firjan) is responsible for drawing up the Firjan Municipal Development Index. The index is a study that annually monitors the socio-economic development of all of Brazil's more than 5,000 municipalities in three areas: employment and income, education and health. It was created in 2008 and is based on official public statistics made available by the Ministries of Labor, Education and Health.

4.2 Data description

For this analysis, the municipal indexes of the Ideb for primary education in the initial years (Ideb EF AI) and the Ideb for primary education in the final years (Ideb EF AF) for public schools were used. Or just Ideb AI and Ideb AF.

Municipalities that did not have the full series of indicators for the period of analysis, between 2005 and 2021, were excluded from the sample. In other words, if there was no IDEB calculated for one of the years in the range, the unit was removed from the sample. So of the 92 municipalities in the state of Rio de Janeiro, 78 were selected for the sample of the AI IDEB variable and another 78 units for the AF IDEB variable, including the Maricá treatment unit.

Tabela 1 — Estatísticas resumidas – média (desvio padrão): Ideb AI

	Maricá, n = 1		*Pool* de doadores, n = 77	
	Pré-tratamento 2005-2013	Pós-tratamento 2014-2021	Pré-tratamento 2005-2013	Pós-tratamento 2014-2021
Ideb EF AI	4,32	5,35	4,50	5,39
	(0,36)	(0,31)	(0,67)	(0,55)
População	119.069	157.108	190.213	203.386
	(18.222)	(9.249)	(719.422)	(763.665)
PBF Cobertura	5,78%	4,11%	9,38%	6,29%
	(0,04)	(0,00)	(0,34)	(0,02)
PIB *per capita*	18.078,33 (14.255,68)	115.977,92	28.806,36	22.947,96
		(93.474,83)	(42.445,98)	(23.391,31)
IFDM	0,68	0,71	0,69	0,70
	(0,05)	(-)	(0,07)	(0,06)

Fonte: elaborado pelo autor (2024).

Tabela 2 — Estatísticas resumidas – média (desvio padrão): Ideb AF

	Maricá, n = 1		*Pool* de doadores, n = 77	
	Pré-tratamento 2005-2013	Pós-tratamento 2014-2021	Pré-tratamento 2005-2013	Pós-tratamento 2014-2021
Ideb EF AF	3,70	4,53	3,77	4,45
	(0,16)	(0,74)	(0,59)	(0,56)
População	119.069	157.108	194.102	207.397
	(18.222)	(9.249)	(719.917)	(764.315)
PBF Cobertura	5,78%	4,11%	9,52%	6,42%
	(0,04)	(0,00)	(0,34)	(0,02)
PIB *per capita*	18.078,33 (14.255,68)	115.977,92	28.234,03	22.529,44 (23.365,37)
		(93.474,83)	(42.506,94)	
IFDM	0,68	0,71	0,69	0,69
	(0,05)	(-)	(0,07)	(0,06)

Fonte: elaborado pelo autor (2024).

Tables 1 and 2 show the summary statistics on the basic characteristics and analysis variables for Maricá and the other municipalities in the sample, comparing the pre-treatment and post-treatment periods. The means, standard deviation and number of municipalities (n) are shown.

The dependent variable in this study is the Ideb. For scenario 1 we used data from the Ideb AI and for scenario 2 data from the Ideb AF. Ideb data for secondary education at municipal level is only available from 2017 onwards, which is why this variable was not analyzed. The Ideb AI and Ideb AF data have been available since 2005 and are published every two years.

4.3 Synthetic control method

The research method used in this study is synthetic control. This is a statistical method of the quasi-experiment type, commonly used to measure the effects of an intervention in comparative case studies. In this method, the counterfactual is created from a weighted combination of control units, in order to create a synthetic unit with similar characteristics to the treatment unit. This method therefore combines elements of estimation by pairing and differences in differences (Jones; Marinescu, 2022). According to Abadie, Diamond and Hainmuller (2010), the idea behind the approach is that a combination of regions often provides a better comparison for the region exposed to the intervention than any of the units individually.

The main advantage of synthetic control is that the method enables causal inference in observational scenarios, using a single treatment unit. Compared to traditional regression methods, transparency and protection against extrapolation are two attractive features of MCS. Since a synthetic control is a weighted average of the available control units, the method makes explicit: the relative contribution of each control unit; and the similarities (or lack thereof) between the treated unit and the synthetic control. Furthermore, the conditions under which the synthetic control estimator is valid are more general than the conditions required for linear panel data or for the method of differences in differences. It also depends on the number of comparison units and periods available and whether the data is individual (micro) or aggregated (macro). Data-driven procedures reduce discretion in the choice of comparison control units by forcing the researcher to demonstrate the affinities between affected and unaffected units using observed quantifiable characteristics (Abadie; Diamond; Hainmuller, 2010, 2015; Abadie, 2021).

The proposed model is based on the following premises: it starts with a panel of $J+1$ units of analysis (municipalities); it is assumed that only the first unit ($J=1$) is assumed to be the treated unit, i.e. the region affected by the policy in question; the remaining J units constitute the set of potential comparison units.

A synthetic Maricá was constructed, reflecting the values of the IDEB predictors before the implementation of the PRBC. The effect of the program on IDEB was estimated as the difference in the indexes between Maricá and its synthetic version in the years after the start of the cash transfers.

Placebo tests were then carried out by applying the synthetic control method to the municipalities in the donor pool, which did not implement a large-scale basic income program during the study's sampling period. The aim was to assess the statistical significance of the

estimates, trying to answer whether the results could have been obtained entirely by chance.

The idea of the placebo test is similar to the classic structure of permutation inference, in which the distribution of a test statistic is calculated under random permutations of the assignments of the sample units to the intervention and non-intervention groups (Abadie; Diamond; Hainmuller, 2010).

To assess the significance of the estimates, a series of placebo studies were carried out, iteratively applying the MCS used to estimate the effect of PRBC in Maricá to all the other municipalities in the donor *pool*. In each iteration, the intervention was reassigned to one of the control municipalities. We proceeded as if each of the municipalities had approved a basic income program in 2013. The estimated effect associated with each placebo run was then calculated. This iterative procedure provided a distribution of estimated differences for the municipalities where there was no intervention.

The placebo tests made it possible to calculate the pre- and post-intervention MSPE (*mean squared prediction error*) for Maricá and for the *pool* of untreated municipalities (placebos). From this, the ratio between the pre- and post-intervention MSPE was calculated.

Fisher's p-value was used to check the statistical significance of the results. According to Fisher's definition, a result can only be accepted as true if there is a 95% probability that it is genuine. In other words, there is only a 5% chance that the result occurred by chance. For this to happen, the p-value needs to be less than 0.05. With this, there is 95% confidence that the result is true, and therefore there is statistical significance (Field, 2009). By comparing the pre- and post-intervention MSPE ratio between Maricá and the group of donors, it was possible to calculate the p-value for the treatment unit.

If the placebo studies create *gaps* of a similar magnitude to that estimated for Maricá, the analysis is interpreted as not having provided significant evidence of a positive effect. If, on the other hand, the placebo tests show that the difference estimated for Maricá is exceptionally large, compared to the differences for municipalities that did not implement the basic income program, the analysis is interpreted as providing significant evidence of a positive effect of the PRBC on the IDEB.

5. RESULTS

5.1 Results of the synthetic inspection method

5.1.1 Outcome variable Ideb initial years

The estimated weights were used to obtain synthetic Maricá and compare it with real Maricá in the pre-treatment characteristics. The results displayed in table 3 show that synthetic Maricá is very similar to real Maricá in all the covariates used in the estimation. In contrast, the sample average of all municipalities in the state of Rio de Janeiro does not seem to provide an adequate control group.

Figure 3 shows the trajectory of the Ideb AI for Maricá and its synthetic counterfactual from 2005 to 2021. The index in synthetic Maricá closely resembles the trend of this variable for real Maricá throughout the period prior to the implementation of the program. This confirms that the combination of municipalities in the donor *pool* can effectively reproduce the characteristics of Maricá before the policy was implemented.

The estimate of the effect of the policy on the IDEB in Maricá is given by the difference between real Maricá and its synthetic counterpart after the implementation of the policy in 2013. After that date, the lines oscillate and, from 2017 onwards, there is a positive effect in Maricá in relation to its counterfactual.

Figure 4 shows the *gaps* in the Ideb AI between real and synthetic Maricá. It is possible to identify little difference between the indices in the pre-treatment period and an initial negative effect after the start of treatment, with a subsequent improvement in the index from 2015 onwards.

The estimated effect size of the program can be seen in Table 4. In the period from 2014 to 2021, the average treatment effect was 0.12 every 2 years.

Figure 5 shows the results of the placebo test. The gray lines represent the difference associated with each of the test runs. In other words, the gray lines show the difference in the Ideb AI between each municipality in the donor *pool* and its respective synthetic version. The colored line indicates the difference estimated for Maricá. It is possible to identify the positive effect for Maricá; however, there are placebos with a higher result.

In addition, figure 6 shows the frequency distribution of the MSPE ratios before and after the intervention for Maricá and the placebos. To better visualize the graph, the natural logarithm of the MSPE ratio was used. Maricá had the ninth highest MSPE ratio among the 78 municipalities, with a p-value of 0.1154, which means that there is an 11.5% probability that the result was obtained by chance.

5.1.2 Outcome variable Ideb final years

In the same way as for Ideb AI, the estimated weights were used to obtain the synthetic Maricá and compare it with the real Maricá in the pre-treatment characteristics. The results shown in table 5 show a synthetic Maricá similar to the real Maricá in all the covariates used.

Figure 7 shows the trajectory of the Ideb AI for Maricá and its synthetic counterfactual from 2005 to 2021. The index in synthetic Maricá closely resembles the trend of this variable for real Maricá throughout the period prior to the implementation of the program. This confirms that the combination of municipalities in the donor pool can effectively reproduce the characteristics of Maricá before the policy was implemented.

The estimate of the effect of the policy on the IDEB in Maricá is given by the difference between real Maricá and its synthetic counterpart after the implementation of the policy in 2013. After that date, the lines oscillate and, from 2017 onwards, a positive effect is seen in Maricá in relation to its counterfactual; in the same way as with the Ideb AI variable, but with a more pronounced positive effect.

Figure 8 shows the *gaps* in the Ideb AF between real and synthetic Maricá. It is possible to identify little difference between the indices in the pre-treatment period. And an initial negative effect after 2013, with a subsequent improvement in the index from 2017 onwards.

The magnitude of the estimated PRBC effect can be seen in table 6. In the period from 2014 to 2021, the average treatment effect was 0.15 points every 2 years.

Similarly to the IA IDEB, figure 9 shows the results of the placebo test for the PA IDEB. The gray lines represent the difference associated with each of the test runs, i.e. the gray lines show the difference in the PA IDEB between each municipality in the donor set and its respective synthetic version. The colored line indicates the difference estimated for Maricá. The positive effect for Maricá is highlighted.

Figure 10 shows the frequency distribution of the pre- and post-intervention MSPE ratios for Maricá and the placebos. Maricá had the highest MSPE ratio among the 78 municipalities, with a p-value of 0.0128. This shows that when the treatment is reallocated to other municipalities, there is a very low probability of obtaining a difference as great as that obtained for Maricá in relation to the AF IDEB.

Tabela 3 — Média das variáveis pré-tratamento: Ideb AI

	Maricá	Maricá Sintética	Amostra
IFDM	0,68	0,68	0,69
Cobertura PBF	5,78%	7,03%	9,38%
PIB *per capita* (R$)	18.078	18.085	28.806
População	119.069	119.110	190.213
Ideb AI	4,32	4,32	4,50

Fonte: elaborado pelo autor (2024).

Tabela 4 — Efeito médio do tratamento: Ideb AI

	Maricá	Maricá Sintético
2005	3,90	3,90
2007	4,30	4,30
2009	4,20	4,20
2011	4,30	4,30
2013	4,90	4,90
2015	4,90	5,06
2017	5,50	5,17
2019	5,40	5,30
2021	5,60	5,39
Média (2005 - 2013)	4,32	4,32
Média (2014 - 2021)	5,35	5,23
Diferença entre médias	1,03	0,91
Efeito	0,12	

Fonte: elaborado pelo autor (2024).

Tabela 5 — Média das variáveis pré-tratamento: Ideb AF

	Maricá	Maricá Sintética	Amostra
IFDM	0,68	0,68	0,69
Cobertura PBF	5,78%	5,78%	9,52%
PIB *per capita* (R$)	18.078	18.080	28.234
População	119.069	119.057	194.102
Ideb AF	3,70	3,68	3,77

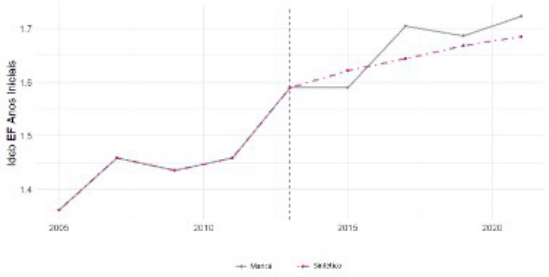
Fonte: elaborado pelo autor (2024).

Tabela 6 — Efeito médio do tratamento: Ideb AF

	Maricá	Maricá Sintético
2005	3,70	3,70
2007	3,50	3,50
2009	3,90	3,80
2011	3,80	3,80
2013	3,60	3,60
2015	3,70	4,10
2017	4,20	4,24
2019	4,80	4,21
2021	5,40	4,88
Média (2005 - 2013)	3,7	3,68
Média (2014 - 2021)	4,53	4,36
Diferença entre médias	0,83	0,68
Efeito	0,15	

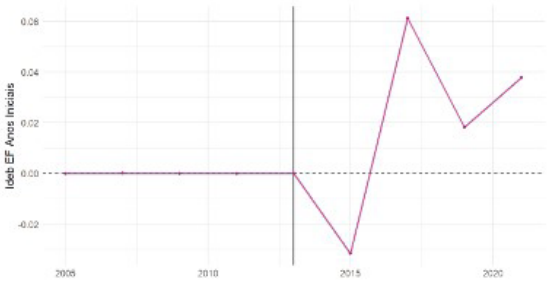
Fonte: elaborado pelo autor (2024).

Figura 3 — Resultado Maricá x Maricá sintética: Ideb AI



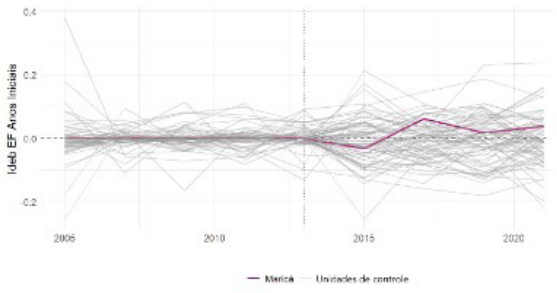
Fonte: elaborado pelo autor (2024).

Figura 4 — *Gap* entre Maricá x Maricá sintética: Ideb AI



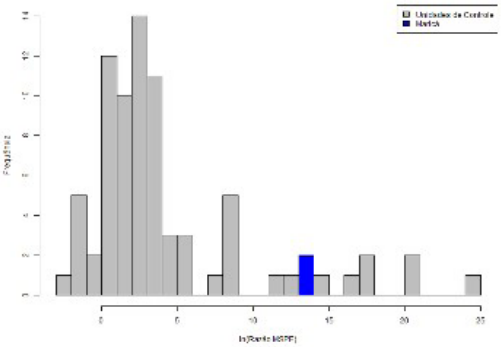
Fonte: elaborado pelo autor (2024).

Figura 5 — Diferenças entre os placebos e Maricá: Ideb AI



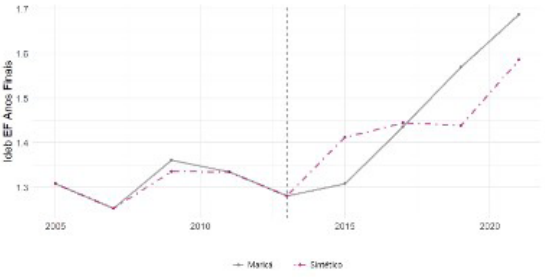
Fonte: elaborado pelo autor (2024).

Figura 6 — Razão MSPE pré e pós-intervenção de Maricá e controle: Ideb AI



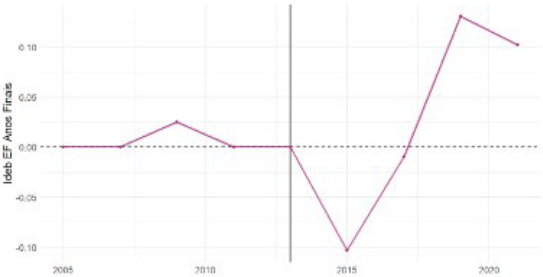
Fonte: elaborado pelo autor (2024).

Figura 7 — Resultado Maricá x Maricá sintética: Ideb AF



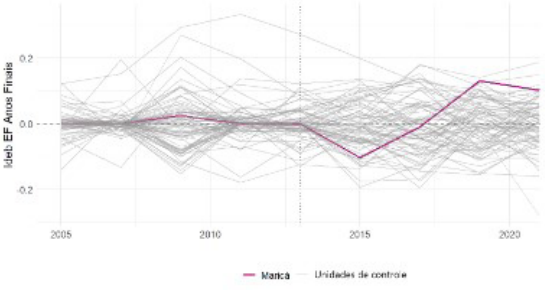
Fonte: elaborado pelo autor (2024).

Figura 8 — *Gap* entre Maricá x Maricá sintética: Ideb AF



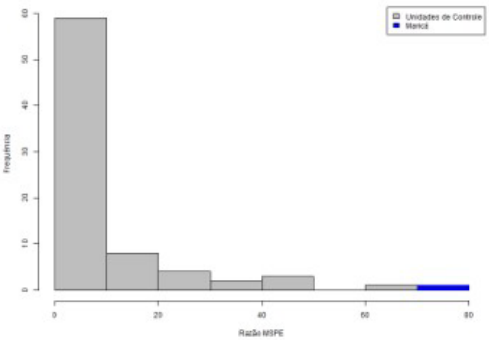
Fonte: elaborado pelo autor (2024).

Figura 9 — Diferenças entre os placebos e Maricá: Ideb AF



Fonte: elaborado pelo autor (2024).

Figura 10 — Razão MSPE pré e pós-intervenção de Maricá e controle: Ideb AF



Fonte: elaborado pelo autor (2024).

6. DISCUSSION

6.1 Interpretation of results

The aim of this study was to determine the effect of implementing cash transfers and Solidarity Economy policies in Maricá on education quality indices. The results suggest that, after the introduction of cash transfer programs in the context of the Solidarity Economy in 2013, education indices were higher than predicted by the synthetic control, although not significant for all the models observed. The synthetic control represents what Maricá's IDEB would have been like in the absence of the cash transfer and Solidarity Economy programs.

The effect on the outcome variable Ideb AF was positive and statistically significant. The average treatment effect was 0.15 every 2 years. Regarding the robustness test of the results, Maricá obtained the highest MSPE ratio among the 78 municipalities in the donor *pool*, calculating a Fisher's exact p-value of 0.0128. This shows that when treatment is reallocated to other municipalities, there is a very low probability of obtaining a difference as large as that obtained for Maricá in relation to this outcome variable.

As for the Ideb AI variable, the PRBC effect was also positive, but not statistically significant. Over the period from 2014 to 2021, the average treatment effect was 0.12 every 2 years. And, when running the placebo tests, Maricá obtained the ninth highest MSPE ratio among the 78 municipalities, producing a p-value of 0.1154. Above the p-value < 0.05, i.e. not significant.

The positive results of the program on educational indices are in line with previous studies that show that conditional and unconditional cash transfers have positive effects on increasing school enrollment and attendance and reducing dropout, grade repetition and child labor (Adato; Bassett, 2009; Baird; McIntosh; Özler, 2011; Akresh; Walque; Kazianga, 2013; Baird *et al*, 2014; Benhassine *et al*., 2015; Bastagli *et al*., 2016; Fenton *et al*., 2016; Bastian; Michelmore, 2018). The positive effects can be explained by the improvement in the conditions of students' families, providing better coverage of school expenses, compensating for the loss of income when children are sent to school instead of working and ensuring that children are better nourished at school.

This is particularly consistent with the results of this study for the school flow parameters that make up the IDEB (school approval and dropout), obtained from the School Census.

The other part of the index refers to the school performance averages obtained from the Saeb. In terms of performance, the positive results found are more modest when they are iden-

tified (Baird, McIntosh; Özler, 2011; Baird *et al*., 2014). Bastagli *et al.* (2016) found no clear pattern of impact for learning outcomes and cognitive development. The justification, in part, is that they result from a dynamic interaction between biological, social and environmental factors, including the quality of the services provided.

The gradual evolution in the amounts transferred and the number of beneficiaries is one of the possible reasons for the negative results between 2013 and 2015, since results for educational variables occur over longer time scales (Haushofer; Shapiro, 2016). And more substantial amounts of cash transfers are associated with greater effects on education, at least on enrollment rates (Saavedra; García, 2012). With a larger number of beneficiaries, higher amounts and longer exposure to treatment, the positive effects began to emerge.

As for the larger and more significant effects on the IDEB in the final years of elementary school compared to the initial years, a possible influencing factor is the Mumbuca Futuro Program, since the initiative grants monthly benefits to public school students from the 6th year of elementary school, which corresponds to the final years of the IDEB, in addition to annual deposits, conditional on the student passing. The program began in 2018, possibly affecting the Ideb results for 2019 and 2021.

Still on the more significant effects on the PA IDEB compared to the IA IDEB, a study analyzing 42 studies found that the average sizes of the effects of transfers are greater for secondary education compared to primary education in the variables of enrolment, attendance and school dropout (Saavedra; García, 2012). This may indicate that the more advanced the school grades, the greater the effects of transfers on education.

The same study by Saavedra and García (2012) found that the effects of transfers are greater in environments with lower initial conditions, which may explain the better performance of the IDEB in the final years compared to the initial years, since the IDEB AI calculated in 2013 was 4.9, while the IDEB AF was only 3.6 in the same year.

According to Bastagli *et al*. (2016), positive impacts of cash transfers on learning can be expected in theory, especially in the case of conditional transfers with the specific aim of increasing school attendance. If students attend school more regularly and achieve higher levels of schooling, they may score higher on tests than non-beneficiary children. Transfers can also stimulate increases in family spending, resulting in better food security and nutritional status for children, which in turn can also positively affect cognitive capacity and learning efficiency in the long term. However, the final impact of a cash transfer program on learning outcomes will depend on a number of moderating factors related to the project and its implementation and to

contextual factors, including initial (pre-treatment) enrolment rates, child nutrition, parenting practices, parental human capital and additional interventions that improve the quality of education, which makes it extremely difficult to identify a linear impact of additional income.

6.2 Limitations

It may have been difficult to identify the effect of just one of the various public policies implemented concurrently in Maricá. This study identifies the effect of a set of policies, the main one being the Basic Citizenship Income Program.

The cash transfers implemented went through several phases of improvement over a short period of time until they reached the current format; therefore, the time to evaluate the results of the measures is short. Another important limiting point for the study was the COVID-19 pandemic. The socio-economic effects were intense, especially in the school sphere, with the closure of schools and the implementation of remote classes. As described in the methodology chapter, there was a drop in Saeb scores (worsening learning) and an increase in pass rates, due to the adoption of automatic approval by many states. Therefore, caution should be exercised when comparing results, and more research is needed to assess the long-term impact of the measures implemented and the effect of the pandemic on results.

7. FINAL CONSIDERATIONS

Increasing automation and robotization has led to the massive replacement of workers by computers, intensifying the processes of income concentration and social inequality. The Covid-19 pandemic has further amplified and exposed these problems of inequality and the inadequacy of current social protection systems. And this whole situation of economic crisis and vulnerability has reignited the debate on forms of social protection and a minimum income for the population.

Part of the narrative about universal basic income is that social protection systems, especially in higher-income countries, are becoming outdated due to structural changes in demographics, employment and culture. The systems are therefore outdated and inadequate to deal with the challenges of the 21st century. In this context, cash transfers have been increasingly adopted by governments as a strategy for poverty reduction and social protection (Gentilini *et al*., 2014; Bastagli *et al*., 2016).

This study investigated the effects of the PRBC on education in Maricá. The topic is highly relevant in several respects. Within the framework of the Sustainable Development Goals (SDGs), increasing the level of schooling is one of its main targets: "Ensure access to inclusive, quality and equitable education and promote lifelong learning opportunities for all" (United Nations Brazil, c2024). The development of education is fundamental to reducing poverty and inequality, as well as improving a range of other measures of social well-being. In Brazil, there has been great progress in the universalization of education in recent decades; however, there is still a major challenge in terms of quality. There is a stagnation in the proportion of students who reach the end of elementary school and the end of secondary school and start and finish school at the correct age (Soares *et al*., 2024). This stagnation occurs at very low levels. This educational deficiency is exacerbated the lower the income of the students' families. This shows that there is great room for improvement in the education system in Brazil and that family income has a major influence.

The results indicated that Maricá's Basic Citizenship Income improved the municipality's educational indices. The effect on the outcome variable Ideb AF was positive and statistically significant. The average treatment effect was 0.15 points every 2 years, with a Fisher's exact p-value of 0.0128. As for the Ideb AI variable, the effect of PRBC was also positive, but not statistically significant. From 2014 to 2021, the average treatment effect was 0.12 points every 2 years. Fisher's p-value was 0.1154.

The positive results of the program on educational indices are in line with previous studies that indicate that conditional and unconditional cash transfers have positive effects on increasing school enrollment and attendance and reducing dropout, grade repetition and child labor (Adato; Bassett, 2009; Baird; McIntosh; Özler, 2011; Akresh; Walque; Kazianga, 2013; Baird *et al*, 2014; Benhassine *et al*., 2015; Bastagli *et al*., 2016; Fenton *et al*., 2016; Bastian; Michelmore, 2018).

At the end of 2023, Maricá's PRBC underwent a transformation leap, with the inclusion of approximately 50,000 new beneficiaries, reaching a number of almost 92,000 people, an increase of 113%. The value of the transfer will rise from the current 200 to 230 reais and the requirement for a minimum period of living in the city will cease to exist (Maricá, 2023a; Cristiane, 2023). The program will come even closer to universalizing transfers, benefiting almost half of Maricá's population. This raises the importance of further studies to better understand the effects of an RBU on education and other socio-economic aspects, allowing for a broader understanding of this public social protection policy.

BIBLIOGRAPHICAL REFERENCES

ABADIE, A. Using synthetic controls: Feasibility, data requirements, and methodological aspects. **Journal of Economic Literature**, v. 59, p. 391-425, 2021.

ABADIE, Alberto; DIAMOND, Alexis; HAINMUELLER, Jens. Comparative politics and the synthetic control method. **American Journal of Political Science**, Wiley Online Library, v. 59, n. 2, p. 495-510, 2015.

ABADIE, A.; DIAMOND, A.; HAINMUELLER, J. Synthetic control methods for comparative case studies: Estimating the effect of California's tobacco control program. **Journal of the American statistical Association**, v. 105, n. 490, p. 493-505, 2010.

ADATO, Michelle; BASSETT, Lucy. Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition. **AIDS care**, v. 21, n. sup1, p. 60-75, 2009. Disponível em: https://doi.org/10.1080/09540120903112351. Acesso em: 6 mar. 2024.

AKEE, Randall K. Q.; COPELAND, William E.; KEELER, Gordon; ANGOLD, Adrian; COSTELLO, E. Jane. Parents' incomes and children's outcomes: a quasi-experiment using transfer payments from casino profits. **American Economic Journal: Applied Economics**, v. 2, n. 1, p. 86-115, 2010.

AKRESH, Richard; WALQUE, Damien; KAZIANGA, Harounan. Cash transfers and child schooling: evidence from a randomized evaluation of the role of conditionality. **World Bank Policy Research Working Paper**, n. 6340, 2013.

AMARAL, Ernesto Friedrich de L.; MONTEIRO, Vinícius do P. Avaliação de impacto das condicionalidades de educação do Programa Bolsa Família (2005 e 2009). **Dados-Revista de Ciências Sociais**, v. 56, n. 3, p. 531-570, 2013.

AUXÍLIO Emergencial 2021: veja perguntas e respostas. **G1**, [s. l.], 23 mar. 2021. Disponível em: https://g1.globo.com/economia/auxilio-emergencial/noticia/2021/03/23/auxilio-emergen-

cial-2021-veja-perguntas-e-respostas.ghtml. Acesso em: 14 mar. 2024.

BAIRD, Sarah; FERREIRA, Francisco H. G.; ÖZLER, Berk; WOOLCOCK, Michael. Conditional, unconditional and everything in between: a systematic review of the effects of cash transfer programmes on schooling outcomes. **Journal of Development Effectiveness**, v. 6, n. 1, p. 1-43, 2014.

BAIRD, S.; MCINTOSH, C.; ÖZLER, B. Cash or condition? Evidence from a cash transfer experiment. **The Quarterly journal of economics**, v. 126, n. 4, p. 1709-1753, 2011.

BANERJEE, Abhijit; HANNA, Rema; KREINDLER, Gabriel E.; OLKEN, Benjamin A. Debunking the stereotype of the lazy welfare recipient: Evidence from cash transfer programs. **The World Bank Research Observer**, v. 32, n. 2, p. 155-184, 2017.

BANERJEE, Abhijit; NIEHAUS, Paul; SURI, Tavneet. Universal basic income in the developing world. **Annual Review of Economics**, v. 11, p. 959-983, 2019.

BASTAGLI, Francesca; HAGEN-ZANKER, Jessica; STURGE, Georgina. Cash transfers: what does the evidence say. A rigorous review of programme impact and the role of design and implementation features. **London: ODI**, v. 1, n. 7, p. 1, 2016.

BASTIAN, Jacob; MICHELMORE, Katherine. The long-term impact of the earned income tax credit on children's education and employment outcomes. **Journal of Labor Economics**, v. 36, n. 4, p. 1127-1163, 2018.

BENHASSINE, Najy et al. Turning a shove into a nudge? A "labeled cash transfer" for education. **American Economic Journal: Economic Policy**, v. 7, n. 3, p. 86-125, 2015.

BOLSA Família completa 20 anos; entenda o que é e como funciona. **Poder 360**, 20 out. 2023. Disponível em: https://www.poder360.com.br/governo/bolsa-familia-completa-20-anos-entenda-o-que-e-e-como-funciona/. Acesso em: 14 mar. 2024.

BRASIL. Ministério da Educação. INEP. **Índice de Desenvolvimento da Educação Básica**

(Ideb). Brasília: Ministério da Educação, [2022?]. Disponível em: https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/Ideb. Acesso em: 21 fev. 2024.

BRASIL. Ministério da Educação. INEP. **MEC e Inep divulgam resultados do Saeb e do Ideb 2021**. Brasília: Ministério da Educação, 16 set. 2022. Disponível em: https://www.gov.br/inep/pt-br/assuntos/noticias/saeb/mec-e-inep-divulgam-resultados-do-saeb-e-do-ideb-2021#:~:text=No%20ensino%20fundamental%20dessa%20rede,94%2C4%25%20em%202020. Acesso em: 19 jun. 2024.

BREGMAN, Rutger. **Utopia para realistas**: como construir um mundo melhor. Tradução Leila Couceiro. Rio de Janeiro: Sextante, 2018.

CARDOSO, Eliana; SOUZA, André P. **The impact of cash transfers on child labor and school attendance in Brazil**. Nashville: Department of Economics, Vanderbilt University, 2003.

CAVALCANTI, Daniella Medeiros; COSTA, Edward Martins; SILVA, Jorge Luiz Mariano da. Programa Bolsa Família e o Nordeste: impactos na renda e na educação, nos anos de 2004 e 2006. **Revista de Economia Contemporânea,** v. 17, p. 99-128, 2013.

COSTA, Nathan M.; PEREIRA, Amanda Souza do Nascimento; SIQUEIRA, Diego Zeidan Cardoso; SENRA, Lorena Thevénard. As políticas públicas de economia solidária no município de Maricá/RJ. **Mercado de Trabalho: Conjuntura e Análise**, Brasília, n. 70, p. 171-182, 2020.

CRISTIANE, Renata. Prefeito de Maricá mais que dobra número de beneficiários do programa de renda básica. **O Dia**, [s. l.], 03 nov. 2023. Disponível em: https://odia.ig.com.br/colunas/politica-costa-do-sol/2023/11/6735484-prefeito-de-marica-mais-que-dobra-numero-de-beneficiarios-do-programa-de-renda-basica.html. Acesso em: 16 abr. 2024.

DE JANVRY, Alain; FINAN, Frederico; SADOULET, Elisabeth. **Evaluating Brazil's Bolsa Escola program:** Impact on schooling and municipal roles. Berkeley: University of California at Berkeley, 2006.

DESAI, Raj M.; KHARAS, Homi. **Is a growing middle class good for the poor?** Social policy in a time of globalization. Global Economy and Development Working Paper 105. Brookings Institution: Washington, 2017.

FENTON, R. et al. Wealth differentials in the impact of conditional and unconditional cash transfers on education: findings from a community-randomised controlled trial in Zimbabwe. **Psychology, Health & Medicine**, v. 21, n. 8, p. 909-917, 2016.

FERREIRA, Leandro; KATZ, Paul R. What a solidarity economy looks like. **Boston Review**, 9 de abr. de 2020. Disponível em: https://www.bostonreview.net/articles/paul-katz-leandro-ferreria-brazil-basic-income-marica/. Acesso em: 14 mar. 2024.

FIELD, A.. **Descobrindo a estatística usando o SPSS**. Porto Alegre: Artmed, 2009.

GENTILINI, Ugo; GROSH, Margaret; RIGOLINI, Jamele; YEMTSOV, Ruslan (ed.). **Exploring universal basic income:** a guide to navigating concepts, evidence, and practices. Washington: World Bank Publications, 2019.

GENTILINI, Ugo; HONORATI, Maddalena; YEMTSOV, Ruslan. **The state of social safety nets 2014**. Washington: The World Bank, 2014.

HAUSHOFER, Johannes; SHAPIRO, Jeremy. The short-term impact of unconditional cash transfers to the poor: experimental evidence from Kenya. **The Quarterly Journal of Economics**, v. 131, n. 4, p. 1973-2042, 2016.

JONES, Damon; MARINESCU, Ioana. The labor market impacts of universal and permanent cash transfers: evidence from the Alaska Permanent Fund. **American Economic Journal: Economic Policy**, v. 14, n. 2, p. 315-340, 2022.

KANGAS, Olli; AUHIAINEN, Signe; SIMANAINEN, Miska; YLIKÄNNÖ, Minna. **The basic income experiment 2017–2018 in Finland:** preliminary results. Helsinki: Ministry of Social Affairs and Health, 2019.

LAZZARIN, Sonilde K. **A (in) seguridade social em tempos de pandemia:** a renda básica universal como possível solução ao precariado e à crescente desigualdade social no Brasil. Porto Alegre: HS Editora, 2020.

LIMA, João P. D. **Employment Effects of Cash Transfers:** evidence from Maricá. 2021. 68 f. Dissertação (Mestrado) – Universidade Federal do Rio de Janeiro, Instituto de Economia, Programa de Pós-Graduação em Economia da Indústria e da Tecnologia, Rio de Janeiro, 2021.

MARICÁ. Lei nº 3.256 de 08 de dezembro de 2022. **Jornal Oficial De Maricá:** Maricá, RJ, ano XIV, n. 1.391, p. 2-294. Disponível em: https://marica.processolegislativo.com.br/leis/32374518.pdf. Acesso em: 18 mar. 2024.

MARICÁ. Prefeitura de Maricá. **Maricá inclui mais de 50 mil novos beneficiários no programa RBC.** Maricá: Prefeitura de Maricá, 25 out. 2023a. Disponível em: https://www.marica.rj.gov.br/noticia/marica-inclui-mais-de-50-mil-novos-beneficiarios-no-programa-rbc/. Acesso em: 16 abr. 2024.

MARICÁ. Prefeitura de Maricá. **Renda Básica de Cidadania**. Maricá: Prefeitura de Maricá, [2023?]. Disponível em: https://www.marica.rj.gov.br/programa/renda-basica-da-cidadania/. Acesso em: 10 jun. 2023.

MATTHEWS, Dylan. More than 50,000 people are set to get a basic income in a Brazilian city. **Vox**, 30 out. 2019. Disponível em: https://www.vox.com/future-perfect/2019/10/30/20938236/basic-income-brazil-marica-suplicy-workers-party?fbclid=IwAR0F21nrt0rcM_Il3KbNXMB-GBErenINpUDWVftDHlYifdmzES7BXYcReHjQ. Acesso em: 10 fev. 2024.

NAÇÕES UNIDAS BRASIL. **Os objetivos de desenvolvimento sustentável no Brasil**. Brasília: Nações Unidas Brasil, c2024. Disponível em: https://brasil.un.org/pt-br/sdgs/4. Acesso em: 16 jun. 2024.

NEIVA, Leonardo. Nascida há mais de 500 anos, ideia de renda básica para todos ganha força na pandemia. **BBC News Brasi**l, São Paulo, 26 jul. 2020. Disponível em: https://www.bbc.com/portuguese/geral-53494255. Acesso em: 19 mar. 2024.

PIKETTY, Thomas. **O capital no século XXI**. Tradução: Monica Baumgarten de Bolle. Rio de Janeiro: Intrínseca, 2014.

REDE BRASILEIRA DE RENDA BÁSICA. **Quem somos**. São Paulo: Rede Brasileira de Renda Básica, c2024. Disponível em: https://rendabasica.com.br/sobre-a-renda-basica/quem-somos/. Acesso em: 07 mar. 2024.

SAAVEDRA, Juan E.; GARCÍA, Sandra. Impacts of conditional cash transfer programs on educational outcomes in developing countries: a meta-analysis. **RAND Labor and Population Working Paper Series**, WR-921-1, 2012.

SALEHI-ISFAHANI, Djavad; MOSTAFAVI-DEHZOOEI, Mohammad H. Cash transfers and labor supply: Evidence from a large-scale program in Iran. **Journal of Development Economics**, v. 135, p. 349-367, 2018.

SILVA, Anderson P. da; BRANDÃO, André; DALT, Salete da. Educação e pobreza: o impacto das condicionalidades do Programa Bolsa Família. **Revista contemporânea de Educação**, v. 4, n. 8, 2009.

SILVA, Gustavo. 'Oásis' dos professores? Concurso de Maricá promete salário de R$ 9 mil e atrai 100 mil candidatos. **Extra**, Rio de Janeiro, 14 abr. 2024. Disponível em: https://extra.globo.com/economia/emprego/noticia/2024/04/oasis-dos-professores-concurso-de-marica-promete-salario-de-r-9-mil-e-atrai-100-mil-candidatos.ghtml. Acesso em: 19 jun. 2024.

SILVA, Jônatas Rodrigues da. **Renda básica como instrumento de liberdade**. 2022. 193 f. Tese (Doutorado) – Universidade Estadual Paulista, Araraquara, 2022.

SIMÕES, Armando Amorim; SABATES, Ricardo. The contribution of Bolsa Família to the educational achievement of economically disadvantaged children in Brazil. **International Journal of Educational Development**, v. 39, p. 141-156, 2014.

SOARES, Chico; RODRIGUES, Clarissa Guimarães; FONSECA, Izabel Costa da; ALVES,

Teresa Gonzaga. **A permanência escolar importa**: indicador de trajetórias educacionais. São Paulo: Observatório da Fundação Itaú, 2024. Disponível em: https://www.itausocial.org.br/wp-content/uploads/2024/04/Indicador-de-trajetorias-educacionais.pdf. Acesso em: 20 mar. 2024.

SOUZA, Fábio Araújo de; MENEZES, Janaina Specht da Silva. A aplicação dos royalties na educação dos municípios da região metropolitana do Rio de Janeiro. **Revista Teias**, Rio de Janeiro, v. 22, n. 64, p. 20-40, jan. 2021. Disponível em: http://educa.fcc.org.br/scielo.php?pid=S1982-03052021000100020&script=sci_arttext. Acesso em: 21 jun. 2024.

SOUZA, Pedro H. G. Ferreira de; OSORIO, Rafael Guerreiro; PAIVA, Luis Henrique; SOARES, Sergei Soares. **Os efeitos do Programa Bolsa Família sobre a pobreza e a desigualdade:** um balanço dos primeiros quinze anos. Texto para discussão. Brasília: Instituto de Pesquisa Econômica Aplicada (IPEA), 2019.

STATISTA. **Gini coefficient as a measure for household income distribution inequality in the United States 2022, by state.** [s. l.]: Statista, 3 nov. 2023. Disponível em: https://www.statista.com/statistics/227249/greatest-gap-between-rich-and-poor-by-us-state/. Acesso em: 20 maio. 2024.

SUPLICY, Eduardo M. **Renda de cidadania:** a saída é pela porta. 7. ed. São Paulo: Cortez Editora, 2013.

UNIVERSIDADE CANDIDO MENDES. Royalties recebidos mensalmente pelos municípios. **Inforoyalties,** [2024?]. Disponível em: http://inforoyalties.ucam-campos.br/. Acesso em: 18 mar. 2024.

VAN PARIJS, Philippe. Basic income and social democracy. In: VAN PARIJS, Philippe (org.). **Basic income and the left:** a european debate. Londres: Social Europe Edition, 2018.

VAN PARIJS, Philippe. Renda básica: renda mínima garantida para o século XXI? **Estudos Avançados**, v. 14, n. 40, p. 179-210, 2000. Disponível em: https://doi.org/10.1590/S0103-40142000000300017. Acesso em: 17 ago. 2022

VERDÉLIO, Andreia. Bolsa Família completa 20 anos alcançando 21,45 milhões de famílias. **Agência Brasil**, Brasília, 20 out. 2023. Disponível em: https://agenciabrasil.ebc.com.br/direitos-humanos/noticia/2023-10/bolsa-familia-completa-20-anos-alcancando-2145-milhoes-de--familias. Acesso em: 14 mar. 2024.

WALTENBERG, F.; SILVA, J. L.; SILVA, R. C.; FREITAS, F. Políticas socioeconômicas de reação à crise da covid-19 no município de maricá, Rio de Janeiro. In: SILVA, Sandro P. da;

CORSEUIL, Carlos H. L.; COSTA, Joana S. M. (orgs.). **Impactos da pandemia de covid-19 no mercado de trabalho e na distribuição de renda no Brasil**. Brasília: IPEA, 2022. Disponível em: http://dx.doi.org/10.38116/978-65-5635-042-4/capitulo26. Acesso em: 12 mar. 2024.

YEUNG, Ying; HOWES, Stephen. Resources-to-cash: a cautionary tale from Mongolia. **Development Policy Centre Discussion Paper**, n. 42, 2015.

ZYTEK, Roman; REZA FARZIN, Mohammad. Iran–The chronicles of the subsidy reform: successes, controversies, and shortcomings of the 2010-2014 reforms and lessons for future reformers. **USAEE Working Paper**, n. 16-288, 2016. Disponível em: https://ssrn.com/abstract=2874906. Acesso em: 11 mar. 2024.