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Abstract

In response to the Covid pandemic, the Brazilian government implemented in April 2020 an Emergency Aid Transfer program (EAT) benefiting 68 million individuals with a transfer of R$600, equivalent to 66% of the median wages, to mitigate the effects of the pandemic and allow beneficiaries to stay at home and avoid contamination and death. We evaluate the impact of this program on women labor supply using new longitudinal data and find a small negative short-run impact of the program, around 3 percentage points. The effect is higher for single women and for single-mothers who receive a higher transfer, but declines after the transfer value is reduced and disappears six months after the first transfer. We conclude that unconditional transfer programs can have small labor supply effects, even in the middle of a pandemic.

JEL Classification: I38

Keywords: Covid, Emergency Transfer, Labor Force Participation

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1 Introduction

Since 2020, the world has been experiencing the COVID-19 pandemic, with approximately 3.7 million people dying as a result of the disease until May 2021[1]. The health crisis led to an economic crisis, as social distancing measures reduced mobility and economic activity, disrupting lives around the globe (Melanie et al. 2021). In response to the crisis, social protection measures were implemented to mitigate short and long-term economic, social, and mental health impacts. In particular, cash transfer programs are being implemented in many countries to support individuals and families and allow beneficiaries to stay at home and avoid contamination (Bauer et al. 2021).

In Brazil, a large unconditional income transfer program was out in place from April 2020, the Emergency Aid Transfers (EAT), benefiting approximately 68 million people affected by the pandemic with transfers equivalent to 66% of median wages. The program has reduced poverty and inequality, with poverty rate dropping from 12% to around 8% and extreme poverty declining from 3% to 1% percent (Menezes-Filho, Komatsu, and Rosa 2021).

This paper sets out to estimate the impact of the EAT on women´s labor supply. We add to the literature by examining the impact of a cash transfer program on labor supply in a very different scenario with respect to previous studies. Brazil is in the middle of a pandemic, a situation of health crisis, in which most people may be willing to stay at home even at the cost of leaving the labor market to protect themselves from the disease.

We use new data combining the national household surveys (rotating panel) with the new "Covid household surveys" to follow the same women over time, before and after the start of the transfers. As all beneficiaries started receiving the transfer at the same time, we are able to use the traditional two-way fixed effects model to estimate the impact of the program, after examining the plausibility of the parallel trends assumption. We find a small

[1]World Health Organization- Coronavirus (COVID-19) Dashboard

negative impact of the EAT on labor supply, of around 3 percentage points. We also find that the effect is stronger for single women and single-mothers who receive a higher value, declines after the value of the transfer was halved and disappears six months after the first transfer.

The paper is structured as follows. In the next section we review the literature on the impact of cash transfers on labour supply, while section 3 describes the EAT program and section 4 sets out the econometric methodology. In section 5 we present the main results and section 6 concludes.

2 Literature Review

Income transfer programs have been widely used for quite some time. Governments in developing countries, since the 90s, have drawn up income transfer programs as a way of alleviating poverty of their citizens in situations of vulnerability. Honorati, Gentilini, and Yemtsov 2014 show that 119 developing countries had at least one unconditional income transfer program and 52 countries had conditional income transfer programs.

When compared to in-kind transfer programs, income transfers have a broader appeal, are better suited to the heterogeneous needs of families and may provide a psychological boost for beneficiaries, as they can choose how to use the money. The programs involve lower delivery costs than in-kind transfers. Unconditional cash transfers, in particular, are cheaper than conditional, as they do not need to be monitored (Haushofer and Shapiro 2016).

On the other hand, income transfer programs can have certain disadvantages. First, the income can be used to buy temptation goods and, consequently, decreases well-being in the long run (Haushofer and Shapiro 2016). Another issue that arises is the possible disincentive to involvement in the labor market, due to the "income effect" it can cause. In traditional labour supply models, individuals decide how much time they should allocate to work, by

comparing the gains from working longer hours (more income) with the costs (less leisure time). As leisure is considered a normal good, an increase in non-employment related income should lead to a greater demand for leisure (e. g. Becker 1978) and, therefore, less work (Baird, McKenzie, and Özler 2018).

Although much of the discussion about cash transfer programs focuses on the fact that they generate disincentives to work, the theory is to some extent ambiguous. Such policies could decrease the labor supply via two main channels: (1) given an increase in the non- employment income, beneficiaries can choose to allocate more time to leisure; and (2) transfers can decrease the labor supply if they were seen as a "tax" on earnings. In other words, if people understand that a higher income from employment could disqualify them from receiving the benefit, they feel a certain disincentive to work (Banerjee et al. 2017).

However, income transfers can lead to a greater supply of labor through other mechanisms. It can help individuals escape the poverty trap by allowing them to have a minimum standard of living so that they can be productive (Dasgupta and Ray 1986). Bastian, Goldstein, and Papineni 2017 provides evidence that the *Feed the Future Nigeria Livelihoods* Project, aimed at women living in extreme poverty in Nigeria, has had a significant impact on the labor supply of these women and has led to a 14% increase in the likelihood of their belonging to the economically active population (EAP). These results show that relief from severe budget constraints has encouraged women to join the workforce.

Such effects differ depending on other variables such as: geographic area, credit restrictions, lack of job opportunities and the costs involved in looking for employment, especially in rural communities (Brauw et al. 2015; Soares, Ribas, and Osório 2007). In addition, they also vary according to gender and age. Taking more complex family interactions into account, the impact of income transfers on the adult labor supply can be heterogeneous as it is also influenced by intra-household decision-making on the allocation of resources and

time. That, in turn, depends on various factors, such as cultural norms related to the role of each gender in the family, and bargaining power within the family (Novella et al. 2012). Thus, gender issues are crucial and the benefit can have both negative and positive impacts on the involvement of adults in the labor market, depending on household decision-making (Scarlato and d'Agostino 2019).

Different studies find distinct results for the impacts of income transfers on the labor supply of women. For example, Behrman, S. W. Parker, and Todd 2011, study the impact of the Mexican Program *Progresa/Oportunidades* on the involvement in the labor market after 5 years of exposure to the Program. They find a great impact on the reduction of labor supply in 15 to 16-year-old males (post program age), which is consistent with their still attending school (conditionality of the program). They do not find any significant impact on women at this age group, but find a considerable increase in the labor supply of 19 to 21-year-old females (post program age). One possibility is that these women replaced their younger sisters or family members in the labor market. Analysing the same program, Skoufias and S. Parker 2001 find a significant reduction in the number of children in the labor market, both for their participation in the labor force. These results are in line with other studies which show that, apparently, income transfers do not negatively affect the labor supply and that, when they do have an impact, it is in fact positive (Banerjee et al. 2017; Posel, Fairburn, and Lund 2006; Ardington, Case, and Hosegood 2009).

Alternatively, Scarlato and d'Agostino 2019 analyze the impact of the *Child Support Grant (CSG)*, a major unconditional social welfare program in South Africa, which targets poverty and inequality, on the labor supply of parents of beneficiary children. They find negative impacts for males of 20% and for females of 5% on the probability of being employed. At first, this result could be a positive evidence in terms of gender equality. However, in the case of males, the drop in the probability of being employed is largely due to an increase in

the likelihood of being unemployed, while for females, the drop is almost entirely due to a probability of not belonging anymore to the workforce.

The literature shows, therefore, that there are heterogeneous impacts of income transfer programs on labor supply. For women the results in the labor market are endogenously determined by the distribution of their power within the household, which depends on economic, social and cultural factors (Basu 2006). Thus, the impacts of social benefits are ultimately linked to women's access to economic resources, to the job opportunities available outside home and to their autonomy. From a theoretical point of view the effect is ambiguous, and the direction of the impact is, ultimately, an empirical question (Alzúa, Cruces, and Ripani 2013; Novella et al. 2012).

Adding to these considerations, the program we examine was put in place in the middle of the Covid-19 pandemic that has already killed more than 500,000 people in Brazil. This means that women receiving the program have incentives to leave the labor market to avoid being contaminated by the virus. We therefore expect this program to have stronger effects on labor supply in this context. We examine this conjecture in the econometric exercises below.

3 The Emergency Aid Transfer

As a result of the widespread crisis caused by the Covid-19 pandemic in the world and, especially, in Brazil, many informal workers and people in vulnerable situations faced a sharp drop in income, mainly due to job losses. In order to mitigate the effects of this crisis, a federal government income transfer benefit, the Emergency Aid Transfer (EAT), was introduced in April 2020. The EAT is targeted exclusively to informal low-income workers and the unemployed, who met certain criteria. The initial monthly benefit was R$600.00 and

up to two people in the same household could received the transfer. In families where a single woman is head of the household and has children, the amount was doubled (R$1,200.00). The benefit was intended to last for 3 months, but was extended in June and again in October with a smaller value.

The EAT beneficiaries fall into two categories. The first is composed of individuals who are registered in the Unified Registry for Social Programs on March 20, 2020.[2] Among these individuals, for the Bolsa Familia beneficiaries, the government replaced the Bolsa Família Program (BFP) benefit with that of the EAT for individuals where the EAT would be more advantageous. individuals who were not BFP beneficiaries had to meet some criteria to be eligible for the EAT: (1) be at least 18 years of age (with the exception of mothers under 18); (2) do not hold a formal job; (3) do not receive any other federal government income transfer program (with the exception of the BFP); (4) have family income per capita of up to half a minimum wage (R$ 522.50) or total income of up to 3 minimum wages (R$3,135.00); (5) earn less than R$28,559.70 in taxable income in 2019; and (6) be unemployed or working as an individual entrepreneur, individual contributor to social security (General Social Security Regime - RGPS), or an informal worker.

The second group of beneficiaries consists of individuals who met the eligibility requirements, but were not registered with the Unified Registry for Social Programs. To access the benefit, they had to register on the website or App of the Caixa Econômica Federal (EAT distribution bank). In April, approximately 66 million people were beneficiaries of the program and approximately R$46 billion were transferred (Brazil 2020).

In September 2020, an Executive order extended the EAT payments, but reduced the value by half (R$300,00), and introduced additional restrictions to obtaining the transfer

[2]The Unified Registry is a set of information about Brazilian families in situations of poverty and extreme poverty. This information is used by Federal Government, States and the Municipalities to implement public policies capable of promoting the improvement of the lives of these families. Available in: https://www.caixa.gov.br/servicos/cadastro-unico/Paginas/default.aspx

(Menezes-Filho, Komatsu, and Rosa 2021). Given the worsening of the pandemic and the economic crisis in the beginning of 2021, the transfers resumed in April with new rules.[3]

4 Data and Methodology

4.1 Data

We use data from the 2018, 2019 and 2020 Continuous National Household Sample Survey (PNADC) and the COVID-19 National Household Sample Survey (COVID19 PNAD), carried out by the Brazilian Institute of Geography and Statistics (IBGE). The Continuous PNAD (PNADC) is carried out quarterly since 2012 and is a rotating panel: the survey follows the same household over 5 interviews and in each quarter there is a rotation of households. Approximately 210,000 households are interviewed on a quarterly basis[4].

The COVID19 PNAD, carried out on a monthly basis between May and November, aimed at estimating the number of people with Covid-19-like symptoms and monitoring the impacts of the Covid-19 pandemic on the labor market. Interviews in the COVID19 PNAD were done monthly by telephone with the same households throughout the country. To define the Pnad-Covid sample, IBGE used the 211 thousand households who participated in the Continuous PNAD in the first quarter of 2019.[5]

We use the PNADCs from the 1st to the 4th quarters of 2018 and 2019, the 1st quarter of 2020 and the COVID19 PNAD from May to November 2020. Only women aged 25-65 years were considered. Women who entered the survey in any of the quarters of 2018 or in the 1st quarter of 2019 and who appear at least once in COVID19 PNAD were followed. Since COVID19 PNAD uses the sample of households who participated in PNADC in the 1st

[3]https://www.caixa.gov.br/auxilio/auxilio2021/Paginas/default.aspx
[4]Available in: https://www.ibge.gov.br/estatisticas/sociai
[5]Avaiable in: https://covid19.ibge.gov.br/pnad-covid/

quarter of 2019, all the women in our sample are present, at least, in the 1st quarter of 2019. It is important to point out that even though we have 16 periods in the total, the maximum number of periods that the same woman can participate is 12, five in PNADC and seven in COVID19 PAND. Such structure can be better visualized in Table 1 below:

Table 1: Number of the Interview by Period for each Group

Sample	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	Mai	Jun	Jul	Ago	Set	Out	Nov
Group 1	1	2	3	4	5					6	7	8	9	10	11	12
Group 2		1	2	3	4	5				6	7	8	9	10	11	12
Group 3			1	2	3	4	5			6	7	8	9	10	11	12
Group 4				1	2	3	4	5		6	7	8	9	10	11	12
Group 5					1	2	3	4	5	6	7	8	9	10	11	12

Our main sample is made up of women present in at least one of the PNADC period and one of the COVID19 PNAD period, an unbalanced panel[6]. We also work with another sample considering women who were present in all the 12 possible periods, a balanced panel. Table 4, in Appendix, shows the number of women present in each period for both samples.

It should be noted that the COVID19 PNAD does not indicate who in the household received the Emergency Aid. Thus, in the main regressions we allocate to the treatment group all woman living in a household that receives EA, meaning that at least one member of her household receives it. We also create a sub-sample, in order to be able to analyze the women who received the EAT for sure. For this, we consider 3 situations; (1) women who are the head of the household and the only adult in their household and receive a benefit of R$ 1200.00 or R$600.00; (2) women who live in households with two adults (she being one of the adults) and in total, the household receives R$1200.00 in benefits; and (3) women who

[6]Note that if the woman is present in exactly one PNADC interview, this interview will be in the 1st quarter of 2019.

live in households with three adults (she being one of the adults) and in total, the household receives R$1800.00 in benefits.

4.2 Econometric Methodology

In order to analyze the impact of the Emergency Aid Transfer on the labor force participation of women (LFP), we use a difference-in-differences (DID) methodology with multiple periods. In this paper, the treatment group consists of women who receive the EAT from May 2020, while the control group is made up of those who do not. The treatment takes place in May 2020, which corresponds to the 10th period in our sample.

The equation to be taken to the data is:

$$LFP_{it} = \beta_0 + \sum_{k=1}^{16} \gamma_k Period_k + \sum_{k=1}^{16} \psi_k (EAT * Period_k) + \sum_{v=1}^{12} \gamma_v Interview_v + a_i + \epsilon_{it} \quad (1)$$

where LFP (Labor Force Participation) is the dependent variable; EAT represents the treatment, that is, receiving the Emergency Aid Transfer; the interval between Period 1-Period 16 represents periods before (1 to 9) and after (10 to 16) the start of EAT; Interviews controls for the interview fixed effects; a_i represents fixed effects that capture all unobserved factors constant over time; and ϵ_{it} is the idiosyncratic error. There are nine pre-intervention periods (1st quarter 2018 to 1st quarter 2020) and seven post-intervention periods (May 2020 to November 2020). The omitted period is the 5th, corresponding to the first quarter of 2019, when all women were interviewed.

Our empirical strategy will identify the causal effect of EAT on women labor supply if the time trajectory of the control group's labor supply represents what would have happened to the treatment group (women who received the EAT) if they had not received the benefits. Although this assumption is not testable, we provide evidence in Figure 1 that the trajectories

of the two groups in the pre-program period are parallel. Labor supply is always lower for women who receive the Emergency Aid, but the gap between both groups remains constant until the intervention happens. We provide additional evidence about these trends in the empirical analysis below.

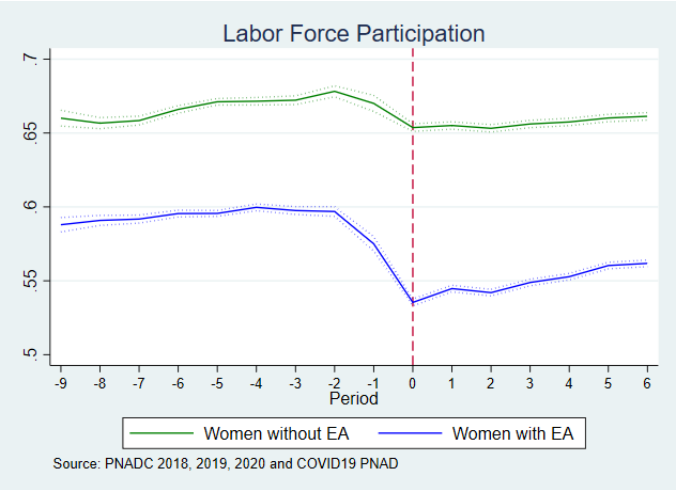

Figure 1

5 Results

Table 2 displays the estimated coefficients of the regressions relating the EAT to the labor supply of women living in households that received the transfer. The first column refers to the main sample and the second to the balanced sample. As discussed in the previous section, all regressions also include period, interview and individual fixed-effects. There are 9 pre-intervention periods (1st quarter 2018 to 1st quarter 2020), with the 5th period being the reference and 7 post-intervention periods (May 2020 to Nov 2020). Thus, the coefficient providing the instantaneous average treatment effect of the EAT on the labor supply of women is that associated with the interaction "Treat*t".

Table 2: Women Labor Force Participation

VARIABLES	Labor Force Participation	Balanced Sample
Treat*t-9	-0.000	-0.010
	(0.007)	(0.010)
Treat*t-8	0.000	-0.005
	(0.005)	(0.007)
Treat*t-7	0.000	0.000
	(0.003)	(0.005)
Treat*t-6	0.001	-0.001
	(0.003)	(0.004)
Treat*t-4	0.003	0.001
	(0.003)	(0.004)
Treat*t-3	0.000	0.002
	(0.003)	(0.005)
Treat*t-2	0.001	0.005
	(0.004)	(0.007)
Treat*t-1	-0.004	-0.004
	(0.007)	(0.009)
Treat*t	-0.030***	-0.018***
	(0.004)	(0.005)
Treat*t+1	-0.023***	-0.013**
	(0.004)	(0.005)
Treat*t+2	-0.0230***	-0.0116*
	(0.004)	(0.005)
Treat*t+3	-0.017***	-0.010*
	(0.004)	(0.005)
Treat*t+4	-0.013***	-0.007
	(0.004)	(0.005)
Treat*t+5	-0.009**	-0.002
	(0.004)	(0.005)
Treat*t+6	-0.007*	-0.000
	(0.005)	(0.004)
Constant	0.637***	0.638***
	(0.002)	(0.004)
Observations	1,090,326	510,996
R-squared	0.009	0.008
Number of id	110,391	42,583

Source: PNADC 2018, 2019, 2020 and COVID19 PNAD- IBGE. Dependent variable is labor force participation. Period, interview individual fixed-effects are included. The reference period is (t-5). Cluster standard error in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In the pre-intervention periods, the interaction coefficients are statistically insignificant in both models, which reinforces the plausibility of the assumption of parallel trends in the labor supply of treated and control groups before the treatment. Looking at the post-intervention period, the results of the first column shows that the Emergency Aid Transfer leads to a fall of 3 percentage points in the labor supply of women with respect to the 5th period. In the following months, the coefficients increase in absolute value, which indicates a gradual reestablishment of the LFP among women who receive the EAT back to reference values. In column two, which displays the results of the balanced panel, the short-run fall in the labor force participation due to the EAT is smaller, in the range of 1.8 percentage points.

These results can be visually analyzed in Figure 2, which displays the interaction coefficients between EAT and Period of the DID model with errors bars. The intervention is identified by the dotted red line. In the pre-treatement periods all coefficients are close to zero, which is reassuring. In the post-treatment periods the coefficients are negative, indicating a fall in the labor force participation, but a resumption of the labor supply can be seen in subsequent periods.

The fact that the labor force participation is returning to its pre-intervention value could be due to several factors. Firstly, the reopening of the economy after the peak of the first wave of Covid-19 could have encouraged women to leave home again and, consequently, look for a job. Secondly, the perception that the EAT transfer would not persist in the long run may have stimulated them to look for work again. Another factor that probably influences the increase in labor supply is the fact that as of September the value of the EA was reduced by half.

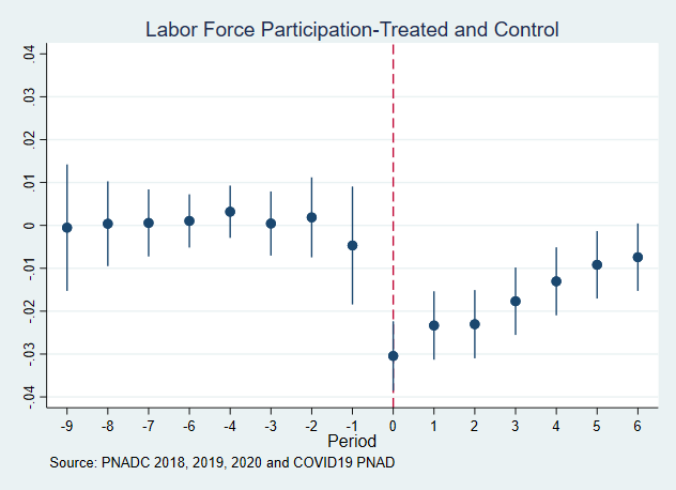

Figure 2

Table 3, in turn, shows the impact of the EAT on labor supply for the sub-sample of women who received the benefit themselves, using the procedure described in section 2. In column (1) we display the results for all such women; column (2) presents estimates for women who were the only adults in the household and received R$600,00 and column (3) displays estimates for single-mother who received the maximum amount of R$1200,00.

The results of the first column show that for women who receive the transfer themselves, the EAT led to a drop of 2.7 percentage points in the labor force participation in the same month, similarly to the case of the women who lived in households that received the transfer. This seems to suggest that that are no additional impacts on the LFP associated with bargaining inside the household. Column (2) shows that the LFP of women who were head of households declined 4.3 percentage points, suggesting that the effects are stronger when the women are responsible for the household labor income. In the case of single women with children the LFP declined 3.9 percentage points, with no significant difference with respect to heads. Therefore, the drop was greater in the case of women who are heads of household, which may be due to the fact that these women are the only adults in the household and need to be with their children, who had to stop going to schools and day care centers.

It is interesting to note that in the case of single women with children, the effect of the transfer

was higher immediately after the start of the transfer (t+1) and remained high until 4 months after the transfer. This may have to do with the fact that the benefit is greater, which could provide longer-term financial security for these women.

Table 3: Labor Force Participation- Women who Received the EAT

VARIABLES	All women	Single Women	Single Women
Treat*t-9	-0.002	-0.017	-0.018
	(0.007)	(0.017)	(0.018)
Treat*t-8	-0.003	-0.023*	-0.024*
	(0.005)	(0.013)	(0.013)
Treat*t-7	-0.001	-0.001	-0.005
	(0.004)	(0.010)	(0.010)
Treat*t-6	0.001	-0.009	-0.009
	(0.003)	(0.008)	(0.008)
Treat*t-4	0.004	0.004	0.004
	(0.003)	(0.008)	(0.008)
Treat*t-3	0.003	0.012	0.010
	(0.004)	(0.010)	(0.010)
Treat*t-2	0.006	0.007	0.010
	(0.005)	(0.012)	(0.012)
Treat*t-1	-0.000	0.025	0.031*
	(0.007)	(0.019)	(0.018)
Treat*t	-0.027***	-0.043***	-0.039***
	(0.005)	(0.014)	(0.015)
Treat*t+1	-0.010*	-0.024*	-0.041***
	(0.005)	(0.013)	(0.014)
Treat*t+2	-0.015***	-0.018	-0.031**
	(0.005)	(0.013)	(0.015)
Treat*t+3	-0.010*	-0.008	-0.029**
	(0.005)	(0.013)	(0.014)
Treat*t+4	-0.006	-0.011	-0.027*
	(0.005)	(0.013)	(0.014)
Treat*t+5	-0.003	-0.012	0.006
	(0.005)	(0.013)	(0.014)
Treat*t+6	0.000	-0.004	-0.008
	(0.005)	(0.014)	(0.016)
Constant	0.652***	0.698***	0.698***
	(0.003)	(0.007)	(0.008)
Observations	777,656	121,440	119,002
R-squared	0.007	0.015	0.016
Number of id	99,635	19,271	19,156

Source: PNADC 2018, 2019, 2020 and COVID19 PNAD- IBGE. Dependent variable is thelabor force participation. Period, treatment and interview dummies are included. The reference period is (t-5). Cluster standard error in parenthesis. *** p $<$ 0.01, ** p $<$ 0.05, * p $<$ 0.1 p $<$ 0.1

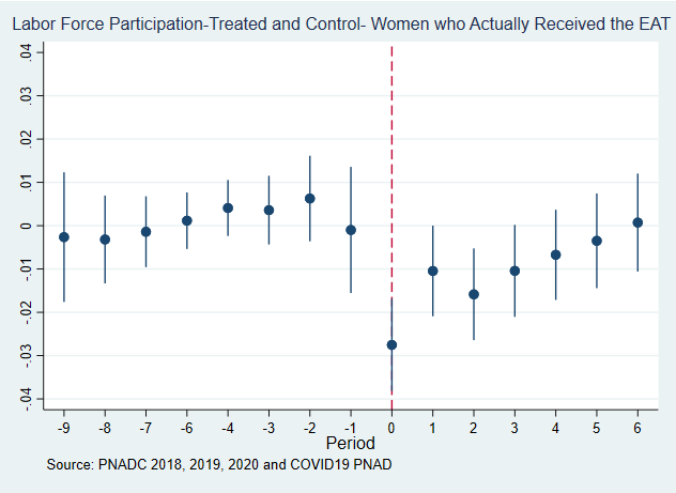

Figure 3

Figure 3 presents the interaction coefficients between EAT and Period in pre and post intervention periods, for the sample in the 1st column of Table 3. As can be seen, all coefficients are equal to zero in the pre-treatment periods, which corroborates with the hypothesis of parallel trends.

We also estimate the impacts of the EAT on the labor force participation of black women, who generally have the lowest wages in the Brazilian labor market. The trajectories of the LFP for treated and the control groups for that sample are described in Figure 5 in appendix. Once more, it is possible to see the parallel trends in the pre-intervetion period. The results of the regressions are displayed in Table 5. We find that the EAT leads to a drop of 2.8 percentage points in the labor supply, which is in line with what we find for women in general and for women who received the transfer themselves.

6 Conclusions

The literature that analyzes the impact of income transfer programs on the labor supply of women is extensive and heterogeneous, with results indicating impacts for opposite sides. However, there is a gap in the literature in studies which specifically analyze the impact of income transfers on the participation of women in the labor market in moments of crisis (public health, economic, etc.).

In this paper we find that the Emergency Aid Transfer during the Covid-19 pandemic in Brazil have negatively impacted the involvement of women in the labor market, but the effects are relatively small. When comparing the effect of the EAT in the situation presented here with previous studies, we find that the drop in LFP found here is smaller than that found in most of other studies. It is interesting to point out that even in a pandemic scenario, when women have incentives to stay at home to avoid contamination, the fall in LFP was not so sharp. This may be related to the fact that, unlike other cash transfer programs, the EAT was an emergency benefit and it was not known how long it would last. Furthermore, most women are poor and some of them cannot live only with benefits.

Thus, although this study found a negative impact of the Emergency Aid on the labor force participation of women, this result cannot be generalized. Actually it should be interpreted with caution, taking the whole scenario into account. Future studies, using qualitative methods, are welcome with the aim of further investigating why the effect was so small, given all incentives for women to stay at home and be protected.

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A Appendix

Table 4 indicates the number of women present in each period for the main sample (unbalanced) and, also, for the balanced sample.

Table 4: Unbalanced Sample

Period	Main Sample	Balanced Sample
1	18,141	8,260
2	36,857	16,476
3	57,925	25,110
4	79,575	33,815
5	105,497	42,583
6	80,847	34,323
7	59,449	26,107
8	38,320	17,473
9	17,818	8,768
10	80,387	42,583
11	86,306	42,583
12	86,389	42,583
13	86,472	42,583
14	86,384	42,583
15	84,856	42,583
16	85,103	42,583
Total	1,090,326	510,996

Source: PNADC 2018, 2019, 2020 and COVID19 PNAD- IBGE.

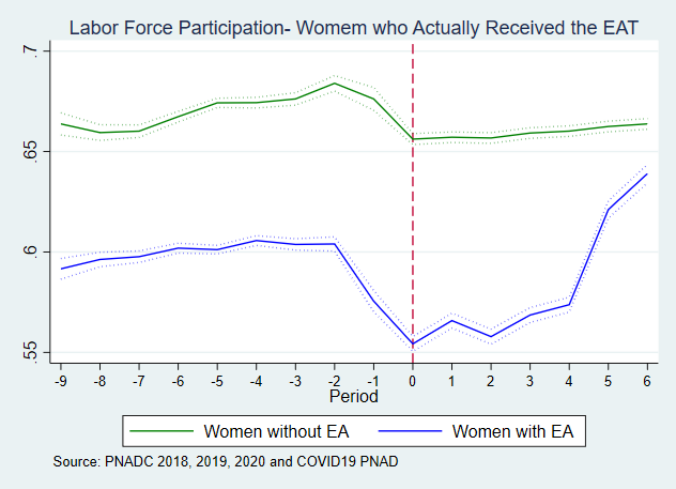

Figure 4

Figure 4 shows the trajectories of the two groups in the pre-program period for the women who actually received the EAT. Figure 5, in turn, presents the trajectories of the treated and control groups for black women.

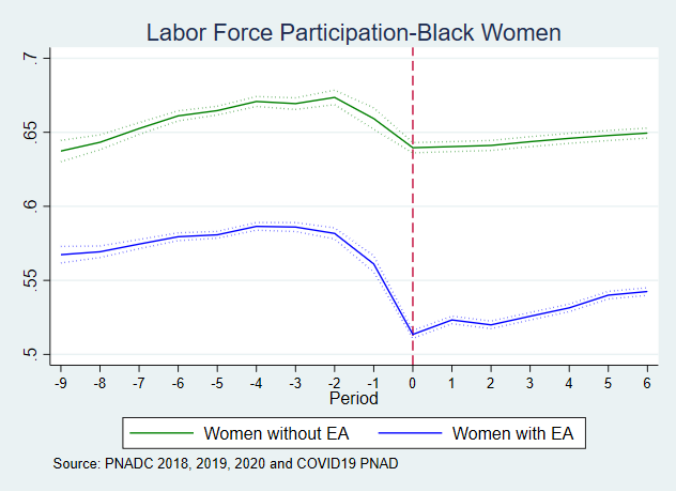

Figure 5

Table 5 presents the result of the impact of the EAT on the labor supply of black women. It can be said that EAT led to a drop of 2.8 percentage points in the women labor supply.

Table 5: Black Women

VARIABLES	Labor Force Participation
Treat*t-9	0.004
	(0.009)
Treat*t-8	0.000
	(0.006)
Treat*t-7	-0.001
	(0.005)
Treat*t-6	-0.000
	(0.004)
Treat*t-4	-0.000
	(0.003)
Treat*t-3	-0.003
	(0.004)
Treat*t-2	-0.007
	(0.005)

Treat*t-1	-0.004
	(0.008)
Treat*t	-0.028***
	(0.005)
Treat*t+1	-0.021***
	(0.005)
Treat*t+2	-0.023***
	(0.005)
Treat*t+3	-0.018***
	(0.005)
Treat*t+4	-0.014***
	(0.005)
Treat*t+5	-0.008*
	(0.004)
Treat*t+6	-0.005
	(0.004)
Constant	0.620***
	(0.003)
Observations	743,956
R-squared	0.011
Number of id	75,895

Source: PNADC 2018, 2019, 2020 and COVID19 PNAD- IBGE. Dependent variable are labor force participation and probability of working. Interview, treatment and period dummies are included. The reference period is (t-5). Cluster standard error in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$