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The Timing of Public Policies: Political Budget Cycles and Credit Claiming

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Abstract: *Why do politicians cluster the distribution of benefits in the run-up to elections? I suggest that credit claiming is an explanation for political budget cycles. Brazilian rules banning credit claiming before elections while allowing the distribution of benefits until Election Day provides an opportunity to differentiate between distribution and credit claiming combined with distribution as an engine that reinforces political budget cycles. Evidence from housing and conditional-cash-transfer programs demonstrates that officials expand these programs before the credit-claiming ban and halt expansion after the ban yet prior to Election Day. Drawing on social media and qualitative data, I show that politicians use credit claiming to convey information about their competence and attribution. Distribution without attribution reduces the likelihood of political budget cycles compared to distribution with attribution, which together reinforces pre-election expansion of policy benefits. I rule out rival explanations of clientelism and party favoritism.*

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Politicians often engineer pre-election expansion and post-election contraction of the government's budget. Despite their ubiquity, wide variations exist in the shape and intensity of such political budget cycles. Many theories attempt to explain these variations in relation to contextual factors, such as levels of development, electoral systems, fiscal rules, and the visibility of the distributed good (Alt and Rose 2009). These various explanations are persuasive and often empirically supported, but they do not fully explain what lies behind the opportunistic timing of spending in election years.

In this article, I suggest that credit claiming is a vital engine for political budget cycles. When creating political budget cycles, politicians face the challenge of conveying information about pre-election government expenditures to voters. If voters do not learn about pre-election expansion of expenditures in the first place, or cannot attribute responsibility for them, politicians have weak incentives to incur pre-election spending. As a consequence, distribution *sans* attribution reduces the intensity of political budget cycles.

Claiming credit helps politicians to solve these attribution problems. During election years, politicians use ceremonies and messages to convey information not only to policy beneficiaries who receive the goods but also to the broader electorate. Politicians perceive credit claiming accompanied by the distribution of benefits as more effective in yielding electoral returns than the distribution of government benefits alone. Therefore, the ability to claim credit reinforces incentives for pre-election expansion of government expenditures.

To test these claims, I rely on Brazilian electoral rules that bar expressions of credit claiming during the electoral campaign, even though the distribution of benefits may proceed up to Election Day. These rules ban candidates from participating in inaugurations, restrict the types of communication used by candidates, and limit usage of official websites and media in the three months before Election Day.

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Drawing on novel individual-level data on one million beneficiaries of one of the largest public housing programs in the world, "My Home My Life" (*Minha Casa, Minha Vida*, MCMV), I show that the number of new MCMV beneficiaries increases substantially in the period when credit can be claimed but decreases precipitously during the campaigning period when credit claiming is prohibited. I extend this analysis to the conditional cash transfer (CCT) program *Bolsa Família* (BF). Drawing on monthly data, I find that the number of new beneficiaries expands in the months leading up to the credit-claiming ban and shrinks in the final months before Election Day. In sum, politicians forgo delivering valuable goods to voters while they are campaigning and just before an election because they are unable to make claims of credit.

I further investigate how politicians claim credit when boosting pre-election spending. Using qualitative evidence from field research at a house key handing-over ceremony, quantitative analysis of about 560,000 tweets from 158 municipalities, and speeches from five ceremonies collected from YouTube, I find that local politicians distribute MCMV benefits shortly before the credit-claiming ban to facilitate the creation of events with beneficiaries and to communicate with larger audiences via social media about their competence and effort and, to a lesser extent, about attribution and spending preferences. Drawing on official documents, I suggest that claiming credit for BF operates via visual branding: benefits cards and their cover letters come branded with government logos while those cards and letters distributed during the ban do not contain government branding.

The flurry of distribution before the credit-claiming ban could simply reflect pre-election vote buying or elite favoritism (Weitz-Shapiro 2014). However, deploying data on formal political connections between politicians and all one million beneficiaries of MCMV as well as novel survey data on informal political connections, I find little evidence indicating that politicians manipulate the MCMV program to buy votes. Using data on federal funding for MCMV and a regression-discontinuity design, I also find little evidence that the central government's allies have an undue advantage in creating these political cycles.

This article's contributions are threefold. First, my argument differs from standard accounts that emphasize the importance of 'visible' goods or clarity of responsibility for the creation of political budget cycles. My findings suggest that governmental benefits' visibility and institutional clarity of responsibility are not sufficient to explain political budget cycles. My explanation for political budget cycles also clarifies why politicians' claims of credit for expenditures may be credible: voters may attribute responsibility for spending to politicians only if distribution and credit claiming occur together. Credit claiming may thus be most powerful when attribution and distribution are combined—such as in a public event in which a politician hands over house keys to the beneficiaries of a housing program or when a benefits card comes branded with the government logo.

Second, my findings speak to debates on the political effects of programmatic policies. My findings offer new insight by shifting the focus to how politicians themselves perceive the electoral effects of policies. The varying ability to shape messages and influence voters' perception of policies may offer one answer to why we sometimes observe policies' electoral effect across different countries and policies, and sometimes do not. My findings suggest that if politicians believed that changes in welfare alone were the primary cause of government support, the distribution of benefits to maximize welfare would be more important than opportunities to claim credit. Unless both housing and conditional-cash-transfer policies maximize beneficiaries' welfare precisely three months before elections (at the ban), my findings suggest that politicians act to increase voters' ability to attribute credit.

Finally, my findings extend previous innovative work on credit claiming (Cruz and Schneider 2017; Grimmer, Westwood and Messing 2014). While credit claiming was originally conceptualized as a tool for politicians to cultivate the personal vote through particularistic spending, politicians use it for programmatic policies more to increase their appeal across a broad set of constituents than solely to harness support from policy beneficiaries. We know that Mayhewian politicians are credit seekers, but how the influence of credit-claiming compares to other motivations for expenditures is not always clear. My evidence shows that politicians prioritize claiming credit combined with distribution over handing out goods during campaigns and close to Election Day.

Credit Claiming and Political Budget Cycles

Scholars have long recognized the electoral payoffs for incumbents to ramp up spending prior to elections (Nordhaus 1975) because of either voters' myopia or as an opportunity to influence voters during an electorally auspicious moment. Yet political budget cycles may also backfire if voters recognize politicians' opportunism, leading to potential negative consequences in the aftermath of the election (Shi and Svensson 2006).

Voters cannot perfectly infer politicians' traits or preferences because of imperfect information, therefore they do not know election-year-spending politicians are competent and/or share their priorities (both of which would make voters more willing to accept pre-election distortion) or are disingenuous (which could lead to backlash). Theoretical signaling models solve this problem by showing that there are levels of spending that separate higher-quality incumbents from lower-quality ones (Rogoff 1990; Rogoff and Sibert 1988) and by showing that uncertainty about the targeted group's electoral importance allows politicians to use targeted spending as a signal of their preferences and type (Drazen and Eslava 2010).

Yet it remains unclear whether voters learn about these expenditures and priorities at all and how they attribute credit for this spending. While the literature has touched on the issues of attribution, scholars have focused on the "visibility" of spending. Visibility is defined as expenditures that are easily observed and monitored by voters and operationalized as both current expenditures, such as salaries, and capital expenditures, such as infrastructure (Baskaran, Min, and Uppal 2015). Focusing on visibility, however, eschews questions about whether voters are actually aware of governmental action; expenditures, like intergovernmental transfers and some social programs, may be visible to only a small subset of the electorate or only be easily observed by attentive voters. Even when incumbents utilize fiscal instruments, which arguably have impacts on the broader electorate, it may be difficult for voters to draw conclusion from these changes in fiscal policy. Consistent with those concerns about visibility, a meta-analysis shows that both types of visible expenditures have some of the weakest effects in engendering political budget cycles compared to other fiscal categories (Philips 2016).

Voters may also have difficulty attributing credit for spending. Many officials might legitimately deserve credit for a policy because some are involved in designing rules, some in implementing, and others in monitoring programs' execution. The literature has addressed this issue of attribution through the lens of clarity of responsibility for policies (Powell and Whitten 1993). While a relevant framework, clarity of responsibility was developed as an argument about institutions and government branches. In practice, even when the institutional setup may favor clarity of responsibility, pre-election expansion may go unnoticed because expenditures are low salience, because voters may be inattentive, or because of issue complexities that make it difficult for voters to draw conclusions about expenditures. Thus, because politicians are arguably aware of these challenges and have incentives to use pre-election spending to advance their electoral goals, we need to know what politicians themselves perceive to be the main benefits of pre-election spending. For politicians who have the capacity and incentives to electioneer, to what do they perceive that voters respond?

Credit claiming is a possibility as it helps to solve the attribution of responsibility and competence problem. Credit claiming refers to a set of actions (appearances, branding, etc.) politicians take to shape their message about spending. Credit claiming is aimed at creating a belief (Grimmer, Westwood, and Messing 2014), regardless of the type of good or whether it is easily observed and monitored by voters. Credit-claiming events convey information in addition to handing out benefits, creating opportunities for politicians to associate themselves with programs and expenditures. I suggest that politicians perceive "pure distribution" of benefits as less important than the opportunity to convey messages alongside the distribution of government benefits. If credit claiming is unimportant, then for visible goods and in contexts with clarity of responsibility, politicians should perceive distribution as equally consequential to voters than distribution and credit claiming combined.

In the context of the credit-claiming ban I study in this article, politicians may also trade-off the chance to take advantage of voters' recency bias, by bunching spending immediately before the election, against the possibility for credit claiming further from the election. If the fusion of distribution and attribution is more powerful than distribution alone, we may expect them to opt for distribution just prior to the credit-claiming ban, so that they can optimize on the dimension of recency, conditional on retaining the ability to claim credit.

An important question, then, is why officeholders feel the need to convey information in addition to the distribution of benefits. The answer is that voters may not have information regarding attribution for election-year spending and whether this spending is informative about politicians' competence. Credit claiming gives politicians an additional tool to offer information about attribution and to shape voters' perceptions of politicians' competence from pre-election spending.[1] Distribution sans attribution is less attractive to politicians because without learning about expenditures and without attribution,

[1] I follow the standard assumption that the information's value persists to some extent, and information is valuable in postelectoral periods. But it is more valuable to send signals in election years rather than earlier in the politicians' term because information may change over time.

voters have fewer pathways to infer incumbent competence from government spending, to infer responsibility for expenditures, thereby reducing officeholders' rewards to provide any benefits to voters. Importantly, distribution alone is better than not providing benefits to voters even if the fusion of distribution and credit claiming heighten rewards for politicians. This argument complements existing signaling models of political budget cycles by suggesting that credit claiming is an important pathway between pre-election government actions and voters.

This raises the question of whether credit-claiming efforts are effective in shaping voters' impressions of politicians. Existing research suggests that credit-claiming efforts can boost support: Grimmer, Westwood, and Messing (2014) find that US legislators who claim credit more often tend to have higher evaluations, and a study by Cruz and Schneider (2017) reveals that "undeserved" credit claiming boosts Filipino incumbents' re-election prospects. Moreover, Grimmer, Westwood, and Messing (2014), Cruz and Schneider (2017), and Guiteras and Mobarak (2016) find that politicians are able to reap credit in a wide range of circumstances even when public officials have little control over programs as long there is some uncertainty about the sources of funding and roles in implementation. Be it because voters have little motivation to learn about politics, or because these credit-claiming appearances reverberate in media, existing research suggests credit-claiming efforts are likely to pay off for incumbents under circumstances of disputed credit. When voters observe or learn about the distribution of goods and services in combination with acts of credit claiming (billboards, ribbon-cutting ceremonies, opening and naming ceremonies, labeling goods, branding), politicians can more credibly associate themselves to these programs.

Taking the above considerations together, I expect greater intensity of political budget cycles when politicians have more opportunities to associate themselves to pre-election expansion of spending and to communicate about this expansion to the electorate. I rely on electoral laws in Brazil that ban credit claiming in the three months leading up to Election Day, which is the period during which politicians are allowed to campaign. This credit-claiming ban is part of a larger set of electoral laws that aim to limit (mis)use of state resources in elections and level the playing field between candidates running for office. In particular, candidates cannot participate in inaugurations of public works and there are strict limits to the use of institutional media, like the ban of government logos and promotion of government actions, in the three months before Election Day. Yet state agencies are still allowed to distribute government benefits up to Election Day. This law creates a trade-off: politicians must choose between delivering a benefit while campaigning and as close to election as possible versus claiming credit for benefits at least three months prior to the election. If my theory is correct, because distribution and attribution are together more powerful than distribution alone, politicians choose to claim credit. I examine this argument in the context of Brazil, where I use data, primarily, from a housing policy, *Minha Casa, Minha Vida* (MCMV), and secondarily, from a conditional cash transfer, *Bolsa Família* (BF).

I use data from two separate programs to examine the scope conditions under which credit claiming may be important in the creation of political budget cycles and how credit claiming works by examining whom politicians attempt to influence and what type of information these expressions of credit are transmitting.

I expect credit claiming to be a particularly powerful engine in contexts in which attribution is unclear or under dispute, such as multilevel governance, and in contexts in which tools available to incumbents may be low salience or have limited impact on the electorate. To empirically investigate these claims, I draw on evidence from a housing policy (MCMV) and a conditional cash-transfer program (BF).

The use of two programs suggests generalizability of the importance of credit claiming because these policies differ from each other in terms of salience, scope, and clarity of attribution. Specifically, (1) MCMV has a direct impact on a much smaller share of the electorate than BF; (2) due to the "indivisibility" of the housing developments, MCMV's rollout is more limited than BF's monthly based benefits; (3) MCMV is a one-time large gift while BF consists of much more modest benefits; and (4) both policies are typically associated with the Workers' Party presidency, but mayors have more control to shape the messaging and distribution of MCMV while the federal government has more control over distribution and messaging around BF. Because of the variation in (1), I am able to assess if credit claiming is only useful to policies of limited impact on the electorate that would need credit claiming to reach a larger number of voters; the variation in (2) and (3) are important to examine whether credit claiming can be used for modest expenditures and "visible" capital expenditures; and the variation in (4) allows me to examine the extent to which institutional arrangements that affect the dispute for credit may shape the ability to create political budget cycles fueled by credit claiming.

The differences in scope (1) and type of good (2 and 3) between MCMV and BF are also helpful in learning about the targets of credit claiming. In a policy that directly affects a smaller share of the electorate, politicians aim to make the electorate aware of the spending in addition to conveying information about attribution of responsibility and competence. Claiming credit events for MCMV can be used to reach a broader audience, not just policy beneficiaries. However, for policies that cover a sizable share of the electorate, such as BF, there is less necessity of raising awareness for spending, and politicians can focus on reinforcing attribution on beneficiaries via, for example, visual branding.

I then investigate the type of information that is transmitted through these expressions of credit. Existing argument offers three possibilities, the first of which is that politicians wish to clarify their role in securing these benefits. Alternatively (or additionally), politicians' main goal may be to signal effort and competence. Another possibility is that politicians use these events to express that they share voters' spending priorities. Although conceptually different, these three possibilities are consistent with my theory: events and branding can be used to convey information of different kinds, and the most electorally valuable kind may vary by context. For example, during a MCMV inauguration, the mayor of Guidoval said during a speech: "That's how we got these houses . . . It was during my first administration, I went to Brasília . . . and mayors who do not take road trips, flights and search for resources for their people, do not get it [funds]." This example also shows that categories may overlap—mayors highlight their role in implementing a policy vis-à-vis other tiers, but they also stress their competence in obtaining these resources. To assess which possibility emerges in this study, I turn to evidence from qualitative fieldwork, official documents, textual data from Twitter, and speeches collected from YouTube.

Finally, I discuss alternative explanations by showing, via a regression-discontinuity design as well as administrative and novel survey data on political connections, that credit claiming in the context I study is not a function of top-down favoritism or clientelism.

Housing and Cash-Transfer Programs in Brazil

MCMV and BF are flagship programs created[2] by Brazil's central government during the Workers' Party administration. MCMV was created in 2009 and is typically popular among voters: in a nationally representative sample of Brazilian citizens, 94% approved of it. MCMV has several "tiers" that target different income levels and different actors are involved in its implementation. I focus on the lowest tier, which is geared toward lower-income families that do not own a home and in which the state is more involved in distribution.[3] MCMV is a housing policy that finances homes. Payments are based on the family's income, and recipient families make monthly payments varying from R$80 to R$270 for up to 120 months. Since the government subsidizes up to 90% of the value of the home, MCMV is a social policy in addition to a housing policy.

MCMV is a federally funded program with funding determined in the annual federal budget and disbursed by the central executive via the ministry of urban affairs. The ministry, along with the public bank *Caixa Econômica Federal*, largely controls the funding and the selection of housing projects. Local governments need to apply for MCMV funding and sign an agreement with the federal government. Then the local government, alongside private developers in charge of building the housing units, submit proposals to build MCMV projects. Local government should provide basic social services in MCMV neighborhoods and, sometimes, a matching grant to complement federal investments. Mayors are responsible for selecting and moving beneficiaries, which leads us to expect that local governments have more capacity and incentives than the central government to maneuver the timing of distribution.

In order to become beneficiaries, individuals must apply to the local government and meet income and other eligibility criteria. Applications are accepted throughout the year, and local governments use a set of nationally defined criteria to determine eligible recipients. Due to excess demand, many localities adopt lotteries to select beneficiaries. Local governments are in charge of determining when lotteries occur, selecting recipients, but the public bank also takes on the role of verifying selected beneficiaries' eligibility. Once recipients' eligibility is verified, they sign an agreement with the bank and move to their new homes. MCMV housing units are typically built as housing projects. MCMV housing units are largely nonreversible, which reduces politicians' ability to continually remind voters of their role in securing this program. Up to 2017, about one million individuals had received a MCMV Tier-1 housing unit.[4]

BF, created in 2003, covers about 15 million households (as of July 2020) and pays a monthly benefit to

[2] BF resulted from a unification of CCTs programs.

[3] Monthly income up to R$1,800.

[4] Governments have limited ability to penalize noncompliant beneficiaries.

families with income per capita under R$178. Benefits vary depending on income and family size but typically are not larger than R$ 132, and conditionalities compose of school attendance and health check-ups. Even though MCMV has a larger income cut-off, the budget and the larger per capita benefits allocated to MCMV implies that a much smaller share of eligible families become MCMV beneficiaries compared to BF beneficiaries. Therefore, BF directly affects a much larger share of the electorate than MCMV, and BF benefits are delivered through monthly stipends instead of as a "one-time" gift.

Like MCMV, responsibilities for running the program are also shared by the federal and local governments. Mayors are in charge of registering potential new beneficiaries, requesting cancellations, and collecting data on conditionalities and household information. The national government selects beneficiaries, cancels benefits, funds the program, pays beneficiaries directly with an ATM-style debit card and establishes general guidelines. So, although there is joint governance, the national government has more control over the timing in expanding of the program.

Do Governments Time the Distribution of Policy Benefits According to Electoral Cycles?

If my theory outlined earlier is correct, I expect to observe a larger number of new MCMV and BF beneficiaries in the months when candidates are allowed to claim credit. Brazilian law (*Lei* 9504/97) bans candidates from participating in inauguration ceremonies or expressions of credit claiming in the three months prior to the date of election, which occurs in October (first round on the first Sunday and runoffs three weeks later). Other aspects of electoral law limit the credit-claiming behavior during campaigns beyond appearances in inauguration ceremonies, including restrictions on the type of communications between voters and candidates via official means, the type of content on website and other official media, etc.[5] Campaigns officially start after the ban: parties officially launch their candidates in July, and radio and TV ads start in August. Thus, candidates who wish to claim credit for "public works" must do so by the ban deadline, before campaigning starts, or they risk penalties, which can range from a fine to exclusion from the race. Other bans in communicating with voters through the use of the state apparatus take place in the three months before the election. Article 73 places a ban on making use of goods or services as a way to promote candidates, on payments for advertisement campaigns for services, public works, benefits, and on making TV and radio announcements outside that do not conform to urgent and government-like functions according to the Electoral Justice. The dates for bans are in early July: July 3, 2010 (national elections); July 7, 2012 (local elections); July 5, 2014 (national elections); and July 2, 2016 (local elections). The law does not, however, prevent municipalities from signing up eligible beneficiaries for MCMV and BF and delivering benefits after those dates.

Electoral justice courts are in charge of examining violations of these laws. While the electoral justice system does not have a large staff of agents to inspect these behaviors by candidates, the electoral justice system compiles materials to instruct national, state, and local administrators on legal behaviors during elections. Furthermore, while enforcement may vary, anyone can file complaints that trigger court examinations. For example, members of an electoral coalition in the 2012 election in the municipality of Erechim brought a case against three candidates running for office for participating in an inauguration of a community gymnasium that was built with public funds. Social programs, like BF, are also affected by the credit-claiming ban. For example, BF cards cannot be distributed with government logos during elections, and BF agents are advised to avoid gathering when registering beneficiaries, delivering cards, or activating them. Overall, enforcement may vary, but, if the law were weakly enforced, it would be less likely to see any change in politicians' behavior pre and post the credit-claiming ban.

Minha Casa, Minha Vida

To examine the timing of the distribution, I analyze MCMV administrative records. I measure the timing of distribution of policy benefits by examining when MCMV applicants become beneficiaries. Becoming a beneficiary in MCMV involves signing an agreement with the financial organization in charge of administering the housing agreements, which is my best proxy for the date when beneficiaries receive keys to their new homes and attend credit-claiming events. Later, I describe one example from Rio de Janeiro in which beneficiaries finalize their agreements and received keys during a credit-claiming event. I measure the number of new beneficiaries for every month during election and nonelection years in all municipalities with MCMV

[5] See Section A in the online supporting information.

recipients, between 2010 and 2016, yielding 223,608 municipality-month observations.

The challenge is estimating changes in the number of beneficiaries in the months before and after the credit-claiming ban. Months closer to the ban, when compared to months further from it, may have very different characteristics that could explain when individuals become policy beneficiaries. Furthermore, the number of beneficiaries is largely correlated with the size of the housing deficit and other socioeconomic variables that vary dramatically across municipalities. Fortunately, elections in Brazil are exogenous,[6] and thus these possible confounding variables do not influence the timing of elections and the ban.

I use two main models with different sets of fixed effects to account for these differences across municipalities, trends, and seasons. I rely on the following estimators, described in Equations (1) and (2):

$$Y_{imy} = \beta_t \, D_{imy} + \beta_p P_{iy} + \gamma_i + \varepsilon_{imy}, \qquad (1)$$

$$Y_{imy} = \Sigma_{t=-8}^{2} \, \beta_t D_{imy} + \phi X_{imy} + \lambda_{iy} + \zeta_m + \varepsilon_{imy}, \qquad (2)$$

where Y_{imy} denotes number (and natural logarithmic transformation) of new beneficiaries in municipality i, in month m and year y. The β_t coefficient represents the change in beneficiaries in period t months away from Election Day, ranging from eight months away from Election Day (February) to two months after the election (December), and D refers to variables indicating that municipality i, in month m and year y is t months away from Election Day in an election year. In the month-by-month model shown in Equation (1), I directly compare the number of new beneficiaries in a month in election years against that same month in nonelection years. I subset the data by month so that I compare changes in beneficiaries in each month in an election versus in nonelection year within municipalities (via municipal fixed effects, γ), and I control for annual population P. In the full model shown in Equation (2), I include an interaction of municipality and year fixed effects (λ_{iy}) as well as month (ζ_m) fixed effects in order to account for municipality-year attributes as well as monthly seasonality trends. In the full model, January is used as the baseline category, but the comparison is less clear than in the month-by-month model. I also include monthly time-varying controls (X_{imy}), banking taxes, cash deposits, and flow that measure, to some extent, fluctuations in local economic activity which may affect demand for social benefits.[7] I cluster all standard errors at the level of the municipality.

The findings displayed in Figure 1 show substantial increases in the number of new beneficiaries in the months leading up to the credit-claiming ban, followed by no changes or smaller ones during the campaign and local election months, across both models.[8] Figure 1 includes data for local election and nonelection years only.

In Figure 1(a), we can observe an increase of about five (a percentage increase of 10%) new beneficiaries in June during local election years. This increase corresponds to 7% of the median total number of beneficiaries (65) in municipalities and to about 42% of the average standard deviation of the number of new beneficiaries (within a municipality-year) in nonelection years. These boosts in new beneficiaries in the months before the ban are substantially larger than the increases in the campaign months of August, September, and October. While there is an increase in logged number of beneficiaries in the election month in Figure 1(b), this result is not robust to different specifications, and the month immediately preceding the ban has an increase in new beneficiaries that is about three times larger than the increase in the election month. These findings suggest that there might be an increase of new beneficiaries in the election month, but this increase is small, often statistically indistinguishable from zero, and not robust to different specifications. In contrast, the increases in the number of new beneficiaries found before the credit-claiming ban are sizable and robust to different specifications.[9] My findings also suggest that mayors, who are responsible for distributing these MCMV houses, are creating political budget cycles. Although Table C.7 in the online supporting information shows that there are political cycles when local and national elections are combined, the cycles are smaller in magnitude because they are driven by local election years.

Election Day and the ban occur at the same time for all municipalities, and they occur later in the year which may lead to trends that partially drive the supply for these houses due to seasonality in, for example, local budgets. I address the plausibility that estimates are sensitive to these confounding factors by showing that the results are robust to different approaches shown in Section D of the online supporting information. First, I show that the results are robust

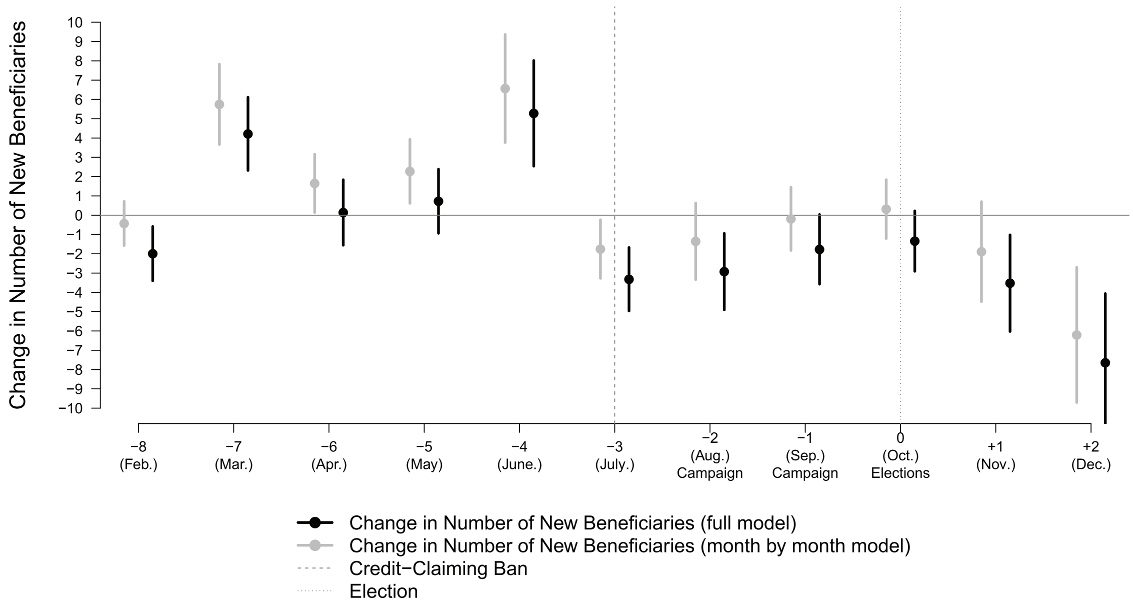
[6] I do not include by-elections.

[7] Due to missing data in these controls, I include these results in Section C in the online supporting information.

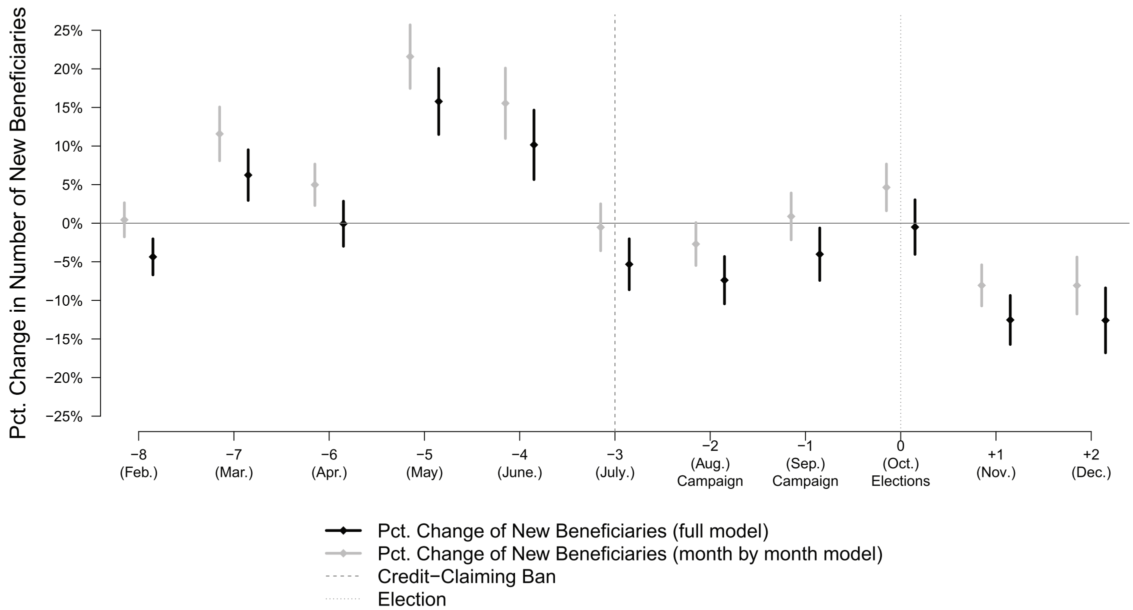
[8] Figures B.1 and B.2 in the online supporting information show that these patterns can also be detected in the raw data.

[9] See Section E in the online supporting information for additional analyses by party, reelection, and municipality size.

FIGURE 1 Minha Casa Minha Vida Political Budget Cycles, 2010–16



(a) Number of New Beneficiaries



(b) Logged Number of New Beneficiaries

Notes. No national elections data. Estimates without municipality-level time-varying controls. Table C.1 in the online supporting information shows estimates with and without municipality-level time-varying controls for the full model. Tables C.2 and C.3 contain the estimates for the month-by-month model. Standard errors are clustered at the municipality level. The estimates for models using the natural logarithmic transformation of number of new beneficiaries are obtained using exponential functions and confidence intervals via the delta method to different approaches: two-way fixed effects, random effects, weighted fixed effects, and lagged dependent variable. Lastly, I aggregate data by municipality-year, instead of analyzing data at the municipality-year-month level. This aggregated data allows me to compare pooled preban election months (January–June) in election years against those same months (January–June) in nonelection years and election months (July–October) in election years against those same months in nonelection years (July–October). Results are robust. I also use nonelection years to examine whether unobserved recurring trends in these municipalities could be driving the results; the trend in nonelection years is a steady increase in the second half of the year, peaking in the last two months of the years, which is different from the trend in election years.[10]

Bolsa Família

Given the limited supply of new houses and the "indivisibility" of the housing developments, few families directly benefit from MCMV, and the roll out of new housing developments may be limited during a mayor's cycle, either before or after the ban but not in both periods. What is more, they are delivered as one-time gifts by the handing out of keys and there are no salient monthly reminders of the government's subsidy. Therefore, any electoral boost from distributing houses will probably be small if voters who are nonbeneficiaries do not learn about the distribution of these houses.

Conditional cash transfers in general, and BF in particular, directly impact a larger number of voters and are delivered through monthly stipends. CCTs have an impact on vote choice that is often attributed to its impact on voters' welfare. Studying the Mexican CCT, Diaz-Cayeros, Estévez, and Magaloni "expect beneficiaries of *Pogresa/Oportunidades* to reward incumbents for improvements in their welfare" (2016, 161). If politicians believed that policies and their welfare consequences alone were responsible for a policy's electoral effects, the credit-claiming ban should not alter the timing of distribution—unless the arbitrarily placed credit-claiming ban occurs at precisely the same time as the policy maximizes welfare.

Using the same models shown in Equations (1) and (2) and administrative data on the number of new BF ATM-style cards issued to municipalities on a monthly basis (between January 2004 and December 2016) as a proxy measure of new BF beneficiaries, I test whether the number of new BF beneficiaries expands before the credit-claiming ban during national election years. The reason for doing so is because, unlike MCMV, the national government is in charge of authorizing new beneficiaries for BF and issuing the BF ATM-style cards.

Figure 2 shows increases in the number of new beneficiaries in the months leading up to the credit-claiming ban, followed by decreases during the campaign and election months. For example, in the month prior to the credit-claiming ban, there is an increase of 181 new families. In the campaign months, we see an average decrease of 39 beneficiaries. These are very large estimates, but they are partly driven by changes in the program that took place in 2006. In 2006, the federal government sped up enrollment in May and June 2006 to hit a target number of beneficiaries that had been announced by President Lula in 2003 (Garay 2016). The courts interpreted this sudden increase as appropriate because the target number of beneficiaries was planned in multiyear budget plans. Regardless of whether the 2006 expansion prior to the ban was caused by implementation issues or whether it also aimed at expansion during auspicious moments prior to the ban, the results in Tables D.13 and D.16 in the online supporting information show that, if the 2006 election cycle is excluded, there is still an increase in new beneficiaries before the ban—or at least a larger decrease during election months (Table D.10). This increase is more muted since the program's largest expansion took place between 2004 and 2006. Overall, the evidence suggests that the credit-claiming ban also influences the expansion of the BF program.

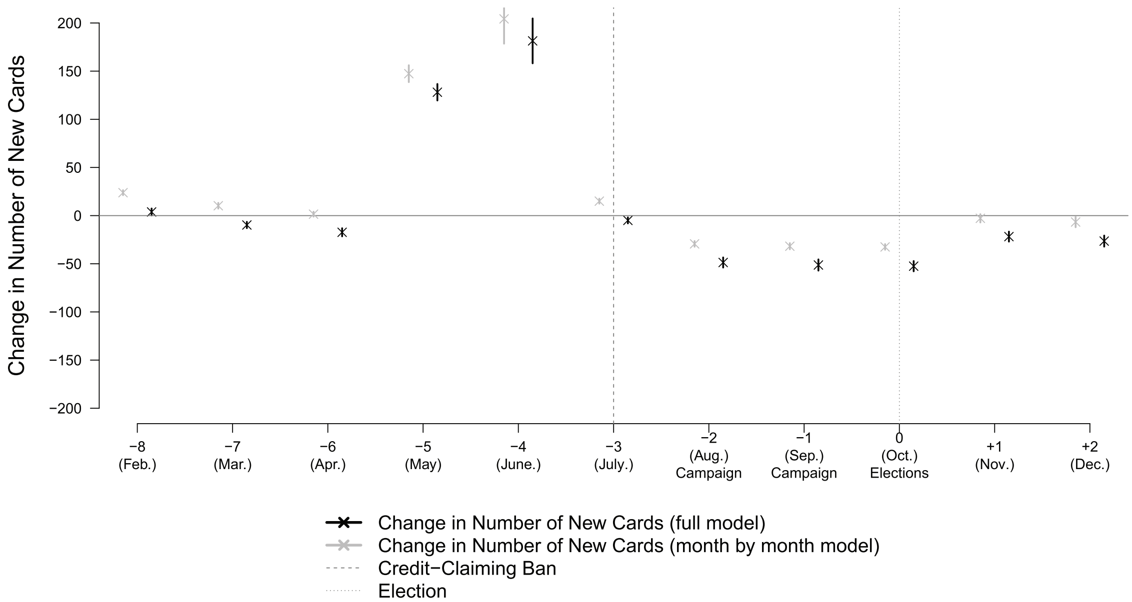
Determining the Drivers of Social Programs' Political Budget Cycles

If credit claiming is driving the pre-election expansion of social programs, we should observe politicians actually claiming credit. And, if they are, who is the audience? What type of information do politicians seek to convey? I use evidence from MCMV first and then from BF to answer these questions.

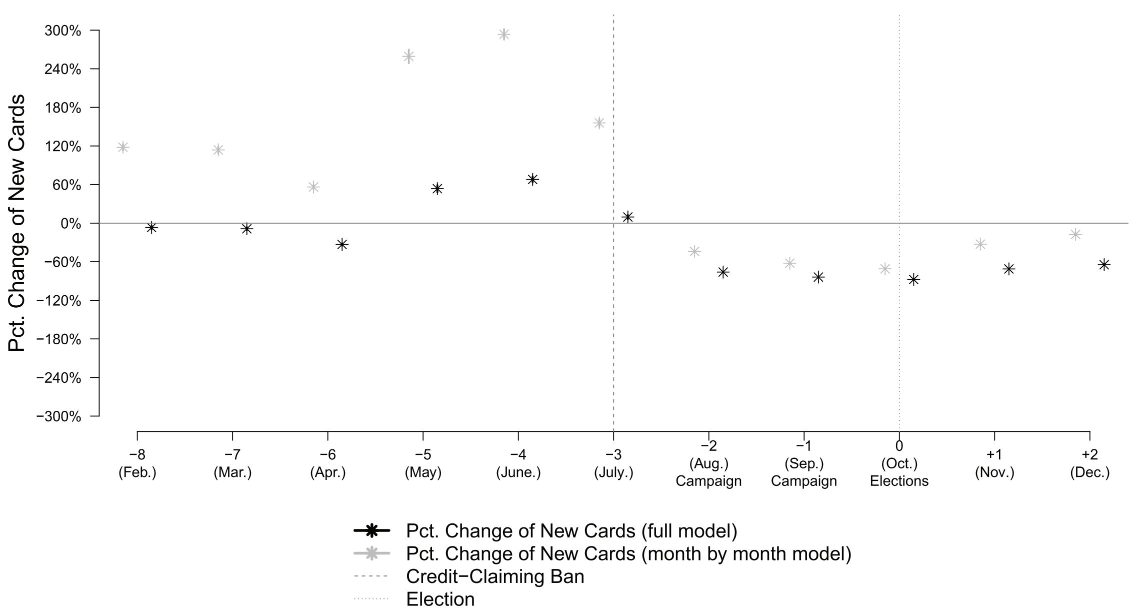
Qualitative evidence from Rio de Janeiro (Rio) suggests that mayors attempt to claim credit. On June 26, 2016, a few days before the credit-claiming ban, three research assistants attended an MCMV event where keys were handed to 4,500 new beneficiaries. The research assistants' reports show that this was a credit-claiming event: beneficiaries were supposed to receive keys, but these administrative tasks only happened after public

[10]The results hold if I use an unbalanced panel; see Section D in the online supporting information.

FIGURE 2 Bolsa Família Political Budget Cycles, 2004–16



(a) Number of New Cards



(b) Logged Number of New Cards

Notes. No data for municipal elections. Estimates without municipality-level time-varying controls. Table C.4 in the online supporting information shows estimates with and without municipality-level time-varying controls for the full model. Tables C.5 and C.6 contain the estimates for the month-by-month model. Standard errors are clustered at the municipality level. The estimates for models using the natural logarithmic transformation of number of new beneficiaries are obtained using exponential functions and confidence intervals via the delta method officials spoke. As the beneficiaries arrived, they were told that there would be a delay in handing out keys, and everyone should head to the gymnasium where the mayor and other officials would address them. The pictures in Section F in the online supporting information show the setup: a gymnasium with chairs for beneficiaries and their families, with a stage at the center. The mayor spoke the longest, highlighting his efforts in bringing these homes to Rio and handing out a symbolic key to beneficiaries. The minister of urban affairs and a federal deputy were the other relevant politicians at the event. The (term-limited) mayor also spoke about the candidate he was supporting for the city of Rio. After the speeches and celebrations were concluded, beneficiaries and their families were instructed to go outside towards the stands to receive their keys. These types of events are not restricted to Rio, but it is difficult to systematically document them.

I turn to Twitter data as a source of information regarding when and what local officials communicate to constituents. Using social media is advantageous because newspapers often do not cover public officials or may have editorial bias. Twitter is useful here because tweets are not used for messaging beneficiaries: city bureaucracies contact beneficiaries by phone and telegrams, and Twitter users are typically younger and higher status than MCMV beneficiaries. Thus, local administrations possibly use tweets about MCMV to communicate to a broader audience than beneficiaries, presumably in an attempt to influence public opinion. Tweets should be a proximate measure of mayors' credit-claiming activities.

To gather the collection of tweets that mention MCMV, I first found official Twitter accounts for all cities with more than 50,000 inhabitants[11] that had any beneficiaries enrolled in MCMV in 2012, 2014, or 2016 during the months May to July. This resulted in 367 municipalities, 158 official Twitter accounts active between 2010 and 2016, and about 560,000 tweets.

If mayors use local administrations' Twitter accounts to claim credit—not simply to communicate "politically neutral" implementation information—about the MCMV program, I would expect a change in behavior before and after the credit-claiming ban. Since the number of distributed housing units is an important predictor for tweets mentioning MCMV, these changes should be conditional on the number of housing units.

Thus, to measure whether there could be any change in these tweets, I use the (logged) number of tweets per municipality-month that contained any mention of MCMV[12] or of MCMV together with the mayor, vice-mayor, or city councillors as the dependent variables and an indicator variable of whether the tweet was posted prior to or post the credit-claiming ban month (prior = 1 and post = 0) and the (logged) number of housing units in a given municipality as predictors, in addition to municipality-fixed effects.

The results shown in Table 1 suggest that local administrations increase their Twitter mentions of MCMV prior to the credit-claiming ban by about 19% even after controlling for the number of housing units distributed. Local administrations are also more likely to tweet about MCMV along with a local politician (2% increase) before the credit-claiming ban in local election years, while we fail to find such an increase in nonelection years. Furthermore, in local elections, a 1% increase in the number of housing units distributed is a weaker predictor (not statistically significant in half of the specifications and smaller in magnitude) of tweets about MCMV alone and about MCMV and a local politician. These correlations suggest that tweeting about MCMV also increases prior to the credit-claiming ban, but these instances of publicity via Twitter are not simply a function of the program's expansion (measured by number of housing units distributed).

The content of the tweets also supports the interpretation that distribution of housing units prior to the ban was accompanied by expressions of credit claiming. Figure G.1 in the online supporting information shows the top 20 most distinctive words that were more likely to come from tweets before than after the ban. Before the credit-claiming ban, tweets are more likely to refer to the mayor and use action words ("signing/signatures"; "take place") than after the ban. After the ban, the word usage becomes more "neutral," with fewer references to the program's brand (*minhacasaminhavida*) or to the mayor. The analysis of word usage in the tweets finds few words referring to spending priorities, suggesting that mayors were not tweeting to signal to voters that they share their preferences.

In an effort to understand what mayors were communicating to voters, I also analyze mayors' speeches in five ceremonies collected from YouTube. I classify each paragraph in every speech based on a six-criterion coding scheme designed to classify the speeches' content into three categories. The first category identifies paragraphs in which mayors express that their spending matches the population's preferences, for example: "It is my immense

[11] Section G in the online supporting information contains details.

[12] Any of these terms: "mcmv"; "minha casa minha vida"; "minha casa, minha vida"; "casas"; "minhacasaminhavida"; "apartamentos"; "contrato"; "#minhacasaminhavida"; "#mcmv"; and "unidades habitacionais."

TABLE 1 Twitter Activity Pre and Post Credit-Claiming Ban, 2010–16

	Dependent Variable: (Logged) Number of Tweets Containing			
	MCMV	MCMV and Local Politician	MCMV	MCMV and Local Politician
	(1)	(2)	(3)	(4)
Local Election Years				
Before Ban	0.174***	0.023***	0.181***	0.023***
	(0.039)	(0.011)	(0.039)	(0.011)
Log Housing Units	0.040***	0.003	0.028	0.008**
	(0.012)	(0.003)	(0.020)	(0.004)
Observations	1,440	1,440	1,440	1,440
Adj. R^2	0.269	0.050	0.261	0.055
Housing Units	Monthly	Monthly	Yearly	Yearly
Municipality FE	Yes	Yes	Yes	Yes
Nonelection Years				
Before Ban	−0.011	−0.011†	−0.025	−0.013†
	(0.025)	(0.007)	(0.024)	(0.007)
Log Housing Units	0.052***	0.006	0.032**	0.004
	(0.014)	(0.005)	(0.012)	(0.004)
Observations	2,413	2,413	2,413	2,413
Adj. R^2	0.294	0.055	0.288	0.053
Housing Units	Monthly	Monthly	Yearly	Yearly
Municipality FE	Yes	Yes	Yes	Yes

Note. Units are tweets aggregated by municipality-month. Standard errors are clustered by municipality.
†$p < .1$.
**$p < .05$.
***$p < .01$.

pleasure to be here this morning to deliver the dream of owning your own home. This is an asset that every human being wants and everyone has a right to it." The second category expresses mayors' competence and effort in providing these houses, for example: 'This is not an easy fight. We beat dengue, during our first year … and now we will bring more *Minha Casa, Minha Vida* housing units to everyone who needs them!" The third category reflects instances in which the mayor highlights the role of the mayor, along with other tiers and branches of government, in MCMV: "We didn't stop there. We are waiting for *Minha Casa Minha Vida* [Phase] 3, we put our faith in God that President Dilma will authorize, and we have a project more than 300 houses in our municipality." Each paragraph was hand coded independently by two research assistants; I built an index for each paragraph indicating whether it conveyed effort, spending preference, or clarity of responsibility and allowed for paragraphs to be coded as belonging to more than one category.

I found that 56% of the paragraphs include a reference to competence and effort and about 39% to spending preferences and clarity of responsibility (based on the average of the two research assistants' coding). Furthermore, competence is the category that overlaps the most with the other categories: about 60% of the paragraphs that include any reference to other tiers and branches of government and 77% of the paragraphs that express spending priorities also underscore the mayor's effort and competence. In sum, mayors use these events to communicate different types of information, but their primary focus is the mayor's own competence and effort.

Does credit claiming also shape *Bolsa Família*'s political budget cycles? The credit-claiming ban also prohibits candidates and governments from associating themselves with the distribution of BF benefits. Notably, all ATM-style cards that beneficiaries use to withdraw their monthly stipend issued between the credit-claiming ban and Election Day are printed without any government logos (Figure A.1, online supporting information).

Furthermore, the cover letter sent by the federal authorities that comes with the card also comes without any government logos (Figures A.3 and A.2) during the period covered by the ban. Since most cards are delivered via mail, the card and the cover letters are the main tools to claim credit directly with millions of beneficiaries.[13]

Eventually, there are events for registering possible beneficiaries (done by local governments), events to help beneficiaries activate their cards (activation is done in branches of the public bank), to deliver cards to beneficiaries who are not accessible via mail, and media campaigns to inform possible and future beneficiaries about BF. These are also affected by the credit claiming ban. All banners with government's logo must be covered in offices handing out BF benefits. When signing up applicants or meeting with BF beneficiaries, public employees cannot use candidates' shirts or campaign stickers/hats during their shifts, any publicity materials about BF cannot be handed out during the election period. Also, political officials cannot participate in events delivering BF ATM-style cards to beneficiaries or in events to activate the cards, and billboards and the use of media to communicate about the delivery of new cards are not allowed during the ban period. As official documents show,[14] BF agents are also directed to avoid radio stations associated with politicians. These prohibitions in associating BF to politicians are plausible drivers of the pre-ban increases and post-ban drops in new BF cards issued.[15]

Visual branding and cover letters can be a useful and low-cost strategy to claim credit for a social benefit affecting millions of voters, but one could raise the question of whether this type of strategy is effective. Niedzwiecki suggests that "[a] recipient who gets an ATM card with the logo of the national government knows she can thank this particular government level every time she withdraws cash" (2018, 29). Evidence from the impact of visual branding on foreign aid also suggest that branding may be particularly effective after multiple exposures and for individual who have experienced a benefit, which is the case of BF cardholders (Dietrich, Mahmud, and Winters 2018, 140). Furthermore, as explained by Niedzwiecki (2018), credit attribution becomes blurry over time as policies, such as BF, become more established, thereby creating the need for "reminders" about attribution.

[13]See Section A in the online supporting information for information on enforcement and Fabri (2015) for a discussion about BF budget cycles.

[14]Section A in the online supporting information.

[15]Mayors also set up events to celebrate the expansion of BF, but these events appear to be uncommon.

Granted, BF has a clearer attribution than MCMV, and voters tend to associate the program with the federal government. Yet there is plenty of room for officials to benefit from claiming credit for BF. A 2015 nationally representative survey with a sample of 15,000 respondents showed that, when asked about which government programs respondents remembered, 12.8% cited BF, 8% cited MCMV, and the next program was remembered by only 2.4%. About 70% of respondents could not cite a single program. When asked about each of the programs, 59% reported knowing BF, 50% reported knowing MCMV, and only 28% reported knowing the next program in the list. Although BF and MCMV are more salient, most citizens cannot remember a single government program when asked without prompts. Credit claiming can be useful even for a policy with higher levels of attribution, such as BF, given baseline low-levels of knowledge about social policy (Bueno, Nunes, and Zucco 2021).

Conceptually, speeches, appearances, and social media activity done by local officials to claim credit for MCMV and visual branding and cover letters in BF cards may have different targets and convey different messages to voters. Whereas the former aim at the broader electorate, the latter mainly impacts BF beneficiaries (who comprise a much larger share of the electorate than MCMV beneficiaries). Furthermore, the speeches' content was focused on competence and effort whereas the logos and cover letters are presumably influencing attribution rather than competence. Overall, these findings raise conjectures to be explored in further research about how the nature of a policy, its benefits, and the share of beneficiaries relative to the electorate may shape the feasible strategies for credit claiming.

Rival Explanations

It could be that public officials use pre-election expansion of government benefits to buy votes. In this section, I examine clientelism and top-down favoritism as alternative explanations.

Credit claiming and clientelism are closely related: "[o]bservers of clientelism in diverse settings emphasize the crucial role that credit claiming plays in clientelist exchange . . . To establish their identity as gatekeepers, politicians must effectively appropriate credit for goods" (Weitz-Shapiro 2014, 29). To address this possibility, I take complementary empirical approaches to test the extent to which politicians use the MCMV program to buy votes by gatekeeping access to citizens' applications for

MCMV and using political discretion to determine access to benefits.[16]

Registration for MCMV is open throughout the year; the list of applicants and of beneficiaries is public. Drawing on two novel surveys conducted in 2017 and 2020 with 795 and 2119 individuals respectively who signed up for MCMV lotteries in the city of Rio, the majority of MCMV applicants found out about applications through family and friends (about 51%), followed by TV/radio/internet/Facebook (about 36%), with fewer than 1% of respondents learning of it through political leaders (and 3% mentioned community associations and leaders). When asked if they needed help in applying for the program, 85% said no, and of those who needed help, fewer than 1% said either politicians or community leaders helped. When prompted if other people received any help from politicians and leaders in exchange for support, 90% said "no, never." A national evaluation finds evidence that 60% of local governments were actively and widely publicly communicating with citizens about registration reducing the scope for clientelist intermediation. In sum, there is little evidence that local politicians restrict access to the application process (Controladoria Geral da União 2016, 60).

The existence of lotteries to select beneficiaries reduces leeway for discretion in the selection process as well. Yet one could argue that discretion takes place when bureaucracies determine an individual's eligibility to receive the benefit, or even in places that do not implement lotteries. At first glance, manipulation seems unlikely. The same national evaluation cited earlier found that only 0.7% of the beneficiaries had assets inconsistent with program's eligibility criteria. To further test the possibility that officials manipulate the distribution of MCMV benefits, I use administrative panel individual-level data from 2002 to 2016 to build a broad measure of "political connection": individuals are politically connected if they ever provided any services or worked for any political parties and/or if they ever made a campaign contribution prior to becoming an MCMV beneficiary.

Out of one million MCMV beneficiaries, about 6% (60,391) had any political connection with a politician or a political party at any point prior to becoming a policy beneficiary. These 60,000 politically connected individuals were found in about 30% of the municipalities with an MCMV project, meaning that 70% of municipalities with an MCMV project had no beneficiary with a political connection. In fact, as shown in Figure H.1(a) in the online supporting information, if I remove all municipalities in which beneficiaries had any political connections, I still observe the same political cycles seen in Figure 1. These findings suggest that political connections are not creating the political cycle trends that I observe. Furthermore, even in places with politically connected beneficiaries, Figure H.1(b) shows a decrease in the share of politically connected relative to nonpolitically connected beneficiaries immediately before the credit-claiming ban, suggesting that the politically connected do not constitute most new beneficiaries in those localities either.

Nevertheless, connections to politicians do not have to be formal. The survey evidence suggests that beneficiaries do not often rely on help to receive their new homes; about 96% of beneficiaries indicated they were not offered help from anyone to sign the agreement—no one reported that a politician or a community leader offered help.

Yet another possibility is that the central government targets mayors by giving them more funds to build MCMV housing or giving them these funds earlier in the mayors' tenure in office. Mayors could repay this top-down favoritism to the central government either through political favors, such as endorsements, or by mobilizing voters come national election time.

To examine this possibility, I analyze the effects of alignment with the presidency and with the minister's parties on funds for MCMV using a close-race regression-discontinuity design. In this design, places where the president's (or the minister's) party won the local election by a narrow vote margin are considered aligned, and places where the president's party lost by a narrow vote margin are considered unaligned. Assuming the design's assumptions are valid, municipalities should, in expectation, differ only in the presence or absence of a mayor who belongs to the president's (or minister's) party.[17] Evidence from Table H.6 in the online supporting information shows no large or systematic partisan bias exists in the allocation of resources to fund MCMV. I also examine whether the central government provides aligned mayors with money earlier in their term to give them a head start. Table H.5 shows that partisanship is not a predictor for the average number of years it takes a municipality to receive funding for MCMV. In sum, I fail to find evidence suggestive of uneven distribution of funds or benefits across voters and localities that could explain the political budget cycles.[18]

[16]See Toral (2019) for a study of manipulation of hires and dismissals around electoral cycles in Brazil.

[17]Section H in the online supporting information.

[18]Perhaps the allocation immediately before the ban deadline is driven by public employees who may be brokers during the election period and will be busy with other tasks once campaigning starts (Pierskalla and Sacks 2018). Politicians would then shift the

Although my evidence here refers to MCMV, I expect that clientelism and favoritism play a small role in shaping BF budget cycles. Extensive research shows that BF is not typically subject to political manipulation in terms of beneficiaries' selection. For example, Fried "find[s] little evidence that political criteria explain the difference between the number of poor families that live in a municipality and the number of families that receive support" (2012, 1042).[19]

Conclusion

This article proposes that credit claiming plays a critical role in increasing the intensity of political budget cycles. I show that politicians increase the delivery of housing units and BF benefits in the last months in which they are allowed to claim credit. After the credit-claiming ban, politicians are allowed to continue distributing social benefits, but the distribution nevertheless comes to a steep halt. Credit claiming heightens the tendency to spark pre-election distribution, and the credit-claiming ban shifts the timing of the political budget cycles. While distribution of government benefits is important for creating political budget cycles, it is most powerful when fused with claiming credit in an effort to shape voters' impressions about competence, effort, and attribution.

If politicians perceived voters to react to the distribution of goods by keeping a tally of events that make them better or worse off and overweighting recent events compared to those in the more distant past, politicians would distribute these benefits as close to Election Day as possible. In this scenario, the credit-claiming ban would not significantly change politicians' behavior. Instead, politicians prioritize distributing goods while they can claim credit for them even if it means forgoing the opportunity of handing out goods closer to Election Day. This raises the possibility that policy feedback may depend upon incumbents' strategies to secure voters' support through messages and media relations. Politicians perceive that their policies can influence vote choices through other means in addition to actual changes in voters' well-being, thereby complementing our existing theories on policy feedback.

Yet note that these findings do not necessarily imply that politicians may perceive voters as completely free from all forms of cognitive biases such as recency bias. The strategy of time clustering during election year may also suggest that politicians are accounting, to some degree, for voters' forgetfulness. Temporal proximity is important to politicians, but it is outweighed by opportunities to claim credit.

The normative implications are multiple. On the one hand, timing programs' expansion by the electoral calendar undermines these policies' effectiveness as a safety net against extreme poverty and precarious housing. Some of those housing projects are completed without appropriate infrastructure as many mayors attempt to hasten production. On top of that, the opportunistic timing gives incumbents an unfair advantage over challengers. On the other hand, political budget cycles can be conduits of information about officeholders' performance (Rogoff 1990, Toral 2019). Politicians should claim credit for implementing policies if we want elections that are based on policy rather than on personality, charisma, or clientelism. Questions remain regarding the overall consequences for welfare provisions and the conditions under which credit claiming is a credible signal for voters to select good politicians. Such questions should be the subject of future research.

allocation of administrative work to the time before public employees start campaigning. Although plausible, this is an unlikely explanation for this context because even though campaigning can start in July (except for in 2016 and 2018 elections), the date the time in which radio and TV ads begin is typically in mid-August (except for 2016 and 2018 elections). If public employees are engaged in distributing benefits until the campaigning and radio and TV ads start, the spike in distribution of benefits would be in July or August. Furthermore, the distribution of BF benefits tends to occur via mail which is largely unaffected by the election.

[19]This does not mean that MCMV and BF are free from any form of political manipulation.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix A: Context Information
Appendix B: Descriptive statistics
Appendix C: Tables for Figures 1 and 2 (models including controls) and models using national elections years and non-election years
Appendix D: Robustness tests for political budget cycles
Appendix E: Political budget cycles by reelection-status, party and governing coalition, municipality size
Appendix F: Fieldwork pictures
Appendix G: Twitter and YouTube data collection
Appendix H: Additional and rival explanations
Appendix I: Data sources and transparency